

A guide to what works for anxiety

An evidence-based review



Nicola Reavley, Amy Morgan,
Anthony Jorm, Judith Wright, Bridget Bassilios,
Malcolm Hopwood, Nick Allen, Rosemary Purcell

 beyondblue.org.au

 1300 22 4636

Copyright: Copyright: Beyond Blue Ltd, Reavley, Jorm, Wright, Morgan, Bassilios, Hopwood, Allen, Purcell. Suggested citation: Reavley NJ, Jorm AF, Wright J, Morgan AJ, Bassilios B, Hopwood M, Allen NB, Purcell R. *A guide to what works for anxiety*: 3rd Edition. Beyond Blue: Melbourne, 2019.

About the authors

The authors of this guide are researchers at the Melbourne School of Population and Global Health, the Centre for Youth Mental Health, Department of Psychiatry and the Melbourne School of Psychological Sciences, The University of Melbourne, Victoria.

Acknowledgements

The authors wish to thank Professor Sandra Eades, Dr Lina Gubhaju and Dr Bridgette McNamara for the Depression and Aboriginal and Torres Strait Islander Peoples page, and the focus group members who provided valuable feedback on revising this booklet, including the rating system used throughout. Thanks to Dr Grant Blashki for reviewing and commenting on drafts of this guide.

Contents

What is anxiety?	6	Mindfulness-based therapies	40
What causes anxiety?	7	Morita therapy	41
Types of anxiety, their signs and symptoms	8	Music therapy	42
Anxiety and Aboriginal and Torres Strait Islander peoples	12	Narrative therapy	43
Who can assist?	14	Neurolinguistic programming (NLP)	44
How to use this booklet	17	Observed and experiential integration (OEI)	45
A summary of what works for anxiety	19	Present-centred therapy (PCT)	45
Psychological interventions	22	Psychoanalysis	46
Acceptance and commitment therapy (ACT)	23	Psychodynamic psychotherapy	46
Applied muscle tension	24	Psychoeducation	47
Art therapy	24	Rational emotive therapy (RET)	48
Autobiographical episodic memory-based training (AET)	25	Reconsolidation of traumatic memories (RTM)	49
Behaviour therapy (including exposure therapy)	26	Relationship therapy	49
Biofeedback	28	Reminiscence therapy	50
Cognitive behaviour therapy (CBT)	29	Social skills training (SST)	50
Cognitive bias modification (CBM)	29	Solution-focused therapy (SFT)	51
Cognitive processing therapy (CPT)	30	Spiritually-based interventions	52
Computer-aided psychological therapy (CAP)	31	Supportive counselling	53
Dance and movement therapy (DMT)	32	Systematic desensitisation	54
Dialectical behaviour therapy (DBT)	32	Time perspective therapy (TPT)	54
Dialogical exposure therapy	33	Virtual reality exposure (VRE) therapy	55
Emotion-focused therapy (EFT)	33		
Eye movement desensitisation and reprocessing (EMDR)	34	Medical interventions	56
Family therapy	35	5-HT3 blockers	57
Flooding (aka 'implosion therapy')	36	Alpha-1 adrenergic blockers	58
Haptotherapy	36	Amantadine	58
Hypnosis (hypnotherapy)	37	Anti-convulsant drugs	59
Interpersonal psychotherapy (IPT)	38	Anti-glucocorticoid (AGC) drugs	60
In vivo exposure	39	Antidepressant drugs	61
Metacognitive therapy (MCT)	39	Antihistamine drugs	63
		Antipsychotic drugs	63
		Azapirone drugs	65
		Baclofen	66
		Benzodiazepines	66
		Beta-blockers	67
		Bupropion	68
		D-Cycloserine	69
		Deep brain stimulation (DBS)	70

Electroconvulsive therapy (ECT)	71
Glucocorticoid drugs	72
Lithium	73
Memantine	74
Psychosurgery (aka 'neurosurgery')	75
Riluzole	76
Sirolimus	76
Stimulant drugs	77
Thyroid hormones	78
Transcranial magnetic stimulation (TMS)	79
Trigeminal nerve stimulation (TNS)	80
Vagus nerve stimulation (VNS)	81
Yohimbine	82

Complementary and lifestyle interventions

83

Acupuncture	84
Aikido	85
Alcohol	85
Aromatherapy	86
Ashwagandha	87
Autogenic training	87
Ayurveda	88
Bach flower remedies	89
Bibliotherapy	89
Black cohosh	91
Body therapies	91
Brainspotting	92
Breathing training	92
Caffeine consumption	93
Caffeine reduction or avoidance	94
Chamomile	94
Creatine monohydrate	95
Energy psychology (aka meridian tapping)	95
Exercise	96
Flotation-REST (Reduced Environmental Stimulation Therapy)	97
Foods rich in tryptophan	98
Gamisoyo-San	98

Ginkgo	99
Glycine	99
Gotu kola	100
Holy basil	100
Homeopathy	101
Inositol	102
Juggling therapy	102
Kampo	103
Kava	103
L-carnosine	104
L-theanine	104
Lavender	105
Lemon balm	105
Massage	106
Meditation	106
Milk thistle	107
N-acetylcysteine (NAC)	108
Omega-3 fatty acids (fish oil)	108
Outdoor therapeutic recreation programs	109
Painkillers	110
Passionflower	111
Power posing	111
Rapid eye movement desensitisation (REM-D)	112
Relaxation training	112
Rhodiola rosea	113
Smartphone apps	114
St John's wort	115
Sympathyl	116
Tai chi	116
Therapeutic horseback riding	117
Traditional Chinese medicine	117
Valerian	118
Water-based treatments	118
Wet cupping	119
Yoga	120
Zinc	121

Interventions not routinely available 122

Anti-inflammatory drugs	123
Borage	123
Galphimia glauca	124
Ketamine	124
Marijuana and other cannabinoids	125
MDMA	126
Neurosteroids	127
Oxytocin	128
Psilocybin	128
Sweet flag	129
Xenon	129

Interventions reviewed but where no evidence was found 130

References 131

The information in this document is general advice only. The advice within it may therefore not apply to your circumstances and is not intended to replace the advice of a healthcare professional.

What is anxiety?

Anxiety is more than just feeling stressed or worried. While stress and anxious feelings are a common response to pressure, they usually pass once the stressful situation has passed, or 'stressor' is removed.

Anxiety is when these anxious feelings are ongoing and exist without any particular reason or cause. It's a serious condition that makes it hard for a person to cope with daily life. We all feel anxious from time to time, but for a person experiencing anxiety, these feelings cannot be easily controlled.

The symptoms of anxiety can often develop gradually over time. Given that we all experience some anxiety, it can be hard to know how much is too much. In order to be diagnosed with anxiety, the condition must have a disabling impact on the person's life.

There are many types of anxiety. While the symptoms for each type are different, some general signs and symptoms include:

- feeling very worried or anxious most of the time
- finding it difficult to calm down
- feeling overwhelmed or frightened by sudden feelings of intense panic/anxiety
- experiencing recurring thoughts that cause anxiety, but may seem silly to others
- avoiding situations or things which cause anxiety (e.g. social events or crowded places)
- experiencing ongoing difficulties (e.g. nightmares/flashbacks) after a traumatic event.

For more information about symptoms of anxiety, see 'Types of anxiety, their signs and symptoms' on page 8, or visit beyondblue.org.au/anxiety

What causes anxiety?

A combination of factors can lead to a person developing anxiety.

Family history of mental health conditions

People who experience anxiety may have a history of mental health conditions in their family. However, if a parent or close relative has had a mental health condition, this doesn't mean that a person will automatically develop anxiety.

Stressful life events

Stressful events can also trigger symptoms of anxiety. Common triggers include:

- job stress or changing jobs
- change in living arrangements
- pregnancy and giving birth
- family and relationship problems
- experiencing a major emotional shock following a stressful or traumatic event
- experiencing verbal, sexual, physical or emotional abuse or trauma
- death or loss of a loved one.

Physical health problems

Continuing physical illness can also trigger anxiety or complicate the treatment of the anxiety. Common conditions that can do this include:

- hormonal problems (e.g. overactive thyroid)
- diabetes
- asthma
- heart disease.

If you are concerned about any of these conditions, ask a doctor for medical tests to rule out a medical cause for the feelings of anxiety.

Substance use

Heavy or long-term use of substances such as alcohol, cannabis, amphetamines or sedatives (such as benzodiazepines) can actually cause people to develop anxiety, particularly as the effects of the substance wear off. People with anxiety may find themselves using more of the substance to cope with withdrawal-related anxiety, which can lead to them feeling worse.

Types of anxiety, their signs and symptoms

There are many types of anxiety, with a range of signs and symptoms. It's important to note that the following are only guides to recognising different types of anxiety. They will not provide a diagnosis – for that you need to see a health professional.

Generalised anxiety disorder (GAD)

A person feels anxious on most days, worrying about lots of different things, over a period of six months or more.

For six months or more, on more days than not, have you:

- felt very worried
- found it hard to stop worrying
- found that your anxiety made it difficult to carry out everyday activities (e.g. work, study, seeing friends and family)?

If you answered 'yes' to all of these questions, have you also experienced three or more of the following:

- felt restless or on edge
- felt tired easily
- had difficulty concentrating
- felt irritable
- had muscle pain (e.g. sore jaw or back)
- had trouble sleeping (e.g. difficulty falling or staying asleep or restless sleep)?

For more information visit beyondblue.org.au/GAD

Social anxiety disorder (or social phobia)

A person has an intense fear of criticism, being embarrassed or humiliated, even just in everyday situations, for example, public speaking, eating in public, being assertive at work or making small talk.

Have you:

- felt fear of one or more social or performance situations where you may be criticised
- avoided a situation or endured with anxiety and distress
- felt that the anxiety interferes with normal routine, working life, social functioning, or you are distressed about the problem
- felt that the fear is as unreasonable?

For more information visit beyondblue.org.au/social-phobia

Specific phobias

A person feels very fearful about a particular object or situation and may go to great lengths to avoid it, for example, having an injection or travelling on a plane. There are many different types of phobias.

Have you:

- felt very nervous when faced with a specific object or situation e.g.:
 - flying on an aeroplane
 - going near an animal
 - receiving an injection
- avoided a situation that might cause you to face the specific phobia e.g.:
 - needed to change work patterns
 - not getting health check-ups
- found it hard to go about daily life (e.g. working, studying or seeing friends and family) because you are trying to avoid such situations?

For more information visit
beyondblue.org.au/specific-phobias

Panic disorder

A person has panic attacks, which are intense, overwhelming and often uncontrollable feelings of anxiety combined with a range of physical symptoms.

Within a 10-minute period have you felt four or more of the following:

- sweaty
- shaky
- increased heart rate
- short of breath
- choked
- nauseous or pain in the stomach
- dizzy, lightheaded or faint
- numb or tingly
- derealisation (feelings of unreality) or depersonalisation (feeling detached from yourself or your surroundings)
- hot or cold flushes
- scared of going crazy
- scared of dying?

If you have experienced four or more of those feelings within a 10-minute period, have you also:

- felt scared, for one month or more, of experiencing these feelings again?

Having a panic attack does not always mean that a person will develop panic disorder. Some people may develop panic disorder after only a few panic attacks. Others may have many panic attacks without developing a panic disorder.

Some people who have panic attacks develop agoraphobia. They avoid situations because they worry about having a panic attack. They worry that it will be difficult or embarrassing to get away or that there will be no one to help them. Some people avoid situations like crowds, enclosed places such as shopping malls, or driving. Others may avoid leaving their homes altogether.

For more information visit
beyondblue.org.au/panic-disorder

Post-traumatic stress disorder (PTSD) and acute stress disorder (ASD)

PTSD and ASD can happen after a person experiences a distressing and traumatic event (e.g. war, assault, accident, disaster). They may have experienced the event or seen it happen to someone else. They also react with intense fear, helplessness or horror.

PTSD is diagnosed when a person has symptoms for at least a month. Have you:

- experienced or seen something that involved death, injury, torture or abuse and felt very frightened or helpless
- had upsetting memories or dreams of the event for at least one month
- found it hard to go about daily life (e.g. difficulty working, studying or getting along with family and friends)?

If you answered 'yes' to all of these questions have you also experienced at least three of the following:

- avoided activities that are a reminder of the event
- had trouble remembering parts of the event
- felt less interested in doing things you used to enjoy
- had trouble feeling intensely positive emotions (e.g. love or excitement)

- thought less about the future (e.g. about career or family goals)?

And have you experienced at least two of the following:

- had difficulty sleeping (e.g. had bad dreams or found it hard to fall or stay asleep)
- become angry or irritated easily
- had trouble concentrating
- felt on guard
- been easily startled?

For more information visit beyondblue.org.au/ptsd

Obsessive compulsive disorder (OCD)

A person has ongoing unwanted/intrusive thoughts and fears that cause anxiety. Although the person may acknowledge these thoughts as silly, the person often finds themselves trying to relieve their anxiety by carrying out certain behaviours or rituals. For example, a fear of germs and contamination can lead to constant washing of hands and clothes.

Have you:

- had repetitive thoughts or concerns that are not about real-life problems (e.g. thoughts that you or people close to you will be harmed)
- performed the same activity repeatedly and in a very ordered, precise and similar way each time, e.g.:
 - constantly washing hands or clothes, showering or brushing teeth
 - constantly cleaning, tidying or rearranging in a particular way things at home, at work or in the car
 - constantly checking that doors and windows are locked and/or appliances are turned off
- felt relieved in the short term by doing these things, but soon felt the need to repeat them
- recognised that these feelings, thoughts and behaviour patterns are unreasonable
- found that these thoughts or behaviour patterns take up more than one hour a day and/or interfered with your normal routine (e.g. working, studying or seeing friends and family)?

For more information visit beyondblue.org.au/ocd

The Diagnostic and Statistical Manual of Mental Disorders (DSM) is a handbook published by the American Psychiatric Association and is used by health professionals in many countries around the world as a guide to the diagnosis of mental disorders. The DSM is periodically reviewed and in May 2013, DSM-5 (an update on DSM-IV) was released.

The DSM-5 chapter on anxiety disorders no longer includes obsessive compulsive disorder (which is included with the obsessive compulsive and related disorders) or post-traumatic stress disorder and acute stress disorder (which is included with the trauma and stressor-related disorders). However, the DSM-5 does reflect the close relationships among anxiety, OCD and PTSD.

Mixed anxiety, depression and substance abuse

Many people have symptoms of more than one type of anxiety. In addition, it is not uncommon for depression and anxiety to occur together – over half of those who experience depression also experience symptoms of anxiety – and in some cases, one can lead to the onset of the other.

Substance abuse also frequently occurs with anxiety. People may use alcohol or other drugs to try to help them cope. However, alcohol and other drug use can lead to increased anxiety.

Anxiety is common, but often untreated

Anxiety is the most common mental health condition in Australia. On average, one in four people – one in three women and one in five men – will experience an anxiety condition at some stage in their life.¹

A national survey of the mental health of Australians was carried out in 2007. This survey asked people about a range of symptoms of anxiety conditions and other mental health conditions. A special computer program was used to make a diagnosis based on the answers provided. Shown below are the percentages of people found to be affected by particular types of anxiety in any given year. Specific phobias were not asked about.

Percentage of Australians aged 16 years or over affected by anxiety¹

Type of disorder	Percentage affected in previous 12 months	Percentage affected at any time in their life
Post-traumatic stress disorder	6.4%	12.2%
Social phobia	4.7%	10.6%
Agoraphobia	2.8%	6.0%
Generalised anxiety disorder	2.7%	5.9%
Panic disorder	2.6%	5.2%
Obsessive compulsive disorder	1.9%	2.8%

Although anxiety is common, many people affected do not get treatment. In the national survey, many of those who had anxiety in the previous 12 months did not receive any professional support.

Anxiety and Aboriginal and Torres Strait Islander peoples

Aboriginal and Torres Strait Islander peoples have a holistic view of health and mental health. Mental health is thought of in terms of social and emotional wellbeing. This is underpinned by the connections between spiritual, cultural, social, emotional, and physical influences on health. Family and community relationships are the basis of culture and are important to community wellbeing. Mental health conditions can arise when there is a problem in one of the above areas, or when the balance is upset.

Rates of anxiety in Aboriginal and Torres Strait Islander peoples

The national survey of the mental health of Australians carried out in 2007 did not report on the number of Aboriginal and Torres Strait Islander peoples with mental health conditions. We don't have good data on the prevalence of clinically diagnosed anxiety and other mental health conditions among Aboriginal and Torres Strait Islander peoples. However, the research available suggests that rates of psychological distress and anxiety are significantly higher than in non-Aboriginal and Torres Strait Islander people. Data from the latest Australian Aboriginal and Torres Strait Islander Health Survey (AATSIHS) found that nearly one-in-three Aboriginal and Torres Strait Islander adults have experienced high levels of psychological distress (which includes feelings of anxiety). The percentage affected by any mood disorder in the previous 12 months was reported to be 19.5 per cent and up to 32.2 per cent were affected at any time in their life.²

Causes of Anxiety in Aboriginal and Torres Strait Islander peoples

These higher rates of anxiety need to be understood in the historical context of intergenerational trauma. In addition to the causes of anxiety described on page 7, there are specific social, historical, cultural and spiritual factors that can lead to anxiety in Aboriginal and Torres Strait Islander peoples. These include racism and discrimination, loss of cultural identity, being away from country, and not being able to have ceremony.³ Furthermore, Aboriginal and Torres Strait Islanders who were forcibly removed from their families as part of the Stolen Generation are also at higher risk of life stressors listed above and poorer mental health compared to other Aboriginal peoples who were not removed.⁴

According to the 2014-15 National Aboriginal and Torres Strait Islander Social Survey (NATSISS), the most common causes of stress for Aboriginal and Torres Strait Islander peoples were⁵: death of a family member or close friend (28 per cent), not being able to get a job (19 per cent), serious illness (12 per cent), other work-related stressors (11 per cent) and mental illness (10 per cent).

Treatment of anxiety in Aboriginal and Torres Strait Islander peoples

Culturally safe and trauma-informed services, that recognise the role of trauma in anxiety, may be particularly important for Aboriginal and Torres Strait Islander Australians.⁶

As well as the health professionals described on page 15, Aboriginal and Torres Strait Islander peoples can access support for anxiety from a national network of Aboriginal Community Controlled Health Services. These services are based in local Aboriginal communities and deliver holistic and culturally appropriate health care. Further information is also available through the National Aboriginal Community Controlled Health Organisation (NACCHO). In addition, there is potential for further development of e-mental health services to improve mental health outcomes for Aboriginal and Torres Strait Islander peoples. A study by Titov and colleagues (2019) found that MindSpot treatments (part of the Commonwealth Government's eMental Health strategy) were effective in treating anxiety among a small sample of Indigenous Australians (as shown through significant decreases in the Kessler-10, Patient Health Questionnaire 9-Item and the Generalized Anxiety Disorder Scale 7-Item).⁷

Who can assist?

Different health professionals (such as GPs, psychologists and psychiatrists) offer different types of services and treatments for anxiety. Below is a guide to the range of practitioners available and what kind of treatment they provide.

General Practitioners (GPs)

GPs are the best starting point for someone seeking professional help. A good GP can:

- make a diagnosis
- check for any physical health problem or medication that may be contributing to the anxiety
- discuss available treatments
- work with the person to draw up a Mental Health Treatment Plan (which also entitles them to get a Medicare rebate for psychological treatment if need be)
- provide brief counselling or, in some cases, talking therapy
- prescribe medication if appropriate
- refer a person to a mental health specialist such as a psychologist or psychiatrist.

Before consulting a GP about anxiety, it's important to ask the receptionist to book a longer or double appointment, so there is plenty of time to discuss the situation without feeling rushed.

It is recommended that people consult their regular GP if possible or if consulting another GP, it is better to choose one in the same clinic for better continuity of care.

In reality some GPs are better at dealing with mental health conditions than others, and so it may be worth asking the receptionist or friends or colleagues for a recommendation.

It is also a good idea to raise the issue of anxiety early in the consultation. This gives the GP more time to assess the condition, discuss the various treatment options and to understand the person's treatment preferences.

Psychologists

Psychologists are health professionals who provide psychological therapies (talking therapies) such as cognitive behaviour therapy (CBT), interpersonal therapy (IPT) and other approaches.

Clinical psychologists specialise in the assessment, diagnosis and treatment of mental health conditions. Psychologists and clinical psychologists are not doctors and cannot prescribe medication in Australia.

It is not necessary to have a referral from a GP or psychiatrist to see a psychologist. However, a Mental Health Treatment Plan from a GP is needed to claim rebates through Medicare. People with private health insurance and extras cover may be able to claim part of a psychologist's fee. Contact your health fund to check.

Psychiatrists

Psychiatrists are doctors who have undergone further training to specialise in mental health. They also specialise in the assessment, diagnosis and treatment of mental health conditions. They can make medical and psychiatric assessments, conduct medical tests, provide therapy and prescribe medication. Psychiatrists often use psychological treatments such as cognitive behaviour therapy (CBT), interpersonal therapy (IPT) and/or medication.

If the anxiety is severe and hospital admission is required, a psychiatrist will be in charge of the person's treatment.

A referral from a GP is needed to see a psychiatrist. Rebates can also be claimed through Medicare.

A GP may suggest the person sees a psychiatrist if:

- the nature of the anxiety is unclear
- the anxiety is severe
- the anxiety lasts for a long time, or comes back
- the anxiety is associated with a high risk of self-harm
- the anxiety has failed to respond to treatment
- the GP thinks that they don't have the appropriate skills required to treat the person effectively.

Mental health nurses

Mental health nurses are specially trained to care for people with mental health conditions. They work with psychiatrists and GPs to review the state of a person's mental health and monitor their medication. They also provide people with information about mental health conditions and treatment. Some have training in psychological therapies. For a referral to a mental health nurse who works in a general practice, ask your GP.

Accredited Mental Health Social Workers

Accredited Mental Health Social Workers specialise in working with and treating mental health conditions, such as anxiety and depression. Many Accredited Mental Health Social Workers are registered with Medicare to provide focused psychological strategies, such as CBT, IPT, relaxation training, psycho-education, interpersonal skills training and other evidence-based approaches.

Occupational therapists in mental health

Occupational therapists in mental health help people who have difficulty functioning because of a mental health condition (such as anxiety or depression) to participate in regular, everyday activities. They can also provide focused psychological strategies.

Medicare rebates are also available for individual or group sessions with social workers and occupational therapists in mental health.

Aboriginal and Torres Strait Islander health workers

Aboriginal and Torres Strait Islander health workers are health workers who understand the health issues of Aboriginal and Torres Strait Islander peoples and what is needed to provide culturally safe and accessible services. Some workers may have undertaken training in mental health and psychological therapies. Support provided by Aboriginal and Torres Strait Islander health workers might include, but not be limited to, case management, screening, assessment, referrals, transport to and attendance at specialist appointments, education, improving access to mainstream services, advocacy, counselling, support for family and acute distress response.

Counsellors

'Counsellor' is a generic term used to describe various professionals who offer some type of talking therapy. A counsellor may be a psychologist, nurse, social worker, occupational therapist, or they may have a specific counselling qualification such as a Bachelor or Master of Counselling degree. Counsellors can work in a variety of settings, including private practices, community health centres, schools, universities and youth services.

A counsellor can talk through different problems you may be experiencing and look for possible solutions. However, it is important to note that not all counsellors have specific training in treating mental health conditions like anxiety and depression.

While there are many qualified counsellors who work across different settings, unfortunately, anyone can call themselves a 'counsellor', even if they don't have training or experience. For this reason, it's important to ask for information about the counsellor's qualifications and whether they are registered with a state board or a professional society.

Complementary health practitioners

There are many alternative and complementary treatment approaches for anxiety. It's a good idea to make sure the practitioner uses treatments which are supported by evidence that shows they are effective. However, many of these services are not covered by Medicare. Some services may be covered by private health insurance. If you don't have private health insurance, you may have to pay for these treatments. When seeking a complementary treatment, it's best to check whether the practitioner is registered by a national registration board or a professional society.

Low intensity interventions

Low intensity interventions for treating people experiencing, or at risk of, mild anxiety conditions are usually based on cognitive behaviour therapy (CBT, see page 29). Low intensity interventions may be delivered face-to-face, by telephone or online (see page 31: computer-aided psychological therapy).

These interventions may be delivered by coaches who are members of the community who are appropriately trained and work under the supervision of a registered mental health professional. An example of a low intensity intervention is Beyond Blue's NewAccess program. It provides coaching services from CBT-trained people in many regions around Australia. Visit beyondblue.org.au/get-support/newaccess for more information.

People living in a rural or remote area

People living in rural and remote communities may find it difficult to access the mental health professionals listed here. If a GP or other mental health professional is not readily available, there are a number of help and information lines that may be able to assist and provide information or advice. For people with internet access, it may also be beneficial in some cases to try online e-therapies. More information can be found on the Beyond Blue website beyondblue.org.au or by calling the Beyond Blue Support Service on **1300 22 4636**.

The cost of getting treatment for anxiety from a health professional varies. However, in the same way that people can get a Medicare rebate when they see a doctor, they can also claim part or all of the consultation fee subsidised when they see a mental health professional for treatment of anxiety. It's a good idea to find out the cost of the service and the available rebate before making an appointment. The receptionist should be able to provide this information.

How family and friends can support a loved one

Family members and friends play an important role in a person's recovery. They can offer support and understanding and can assist the person to get appropriate professional help.

When someone is experiencing anxiety, it can be hard to know what the right thing is to do. Sometimes, it can be overwhelming and cause worry and stress. It is very important that people supporting a friend or family member with anxiety take the time to look after themselves and monitor their own feelings.

Information about anxiety and practical advice on how to support someone you are worried about is available at beyondblue.org.au/supporting-someone. Beyond Blue also has a range of helpful resources, including fact sheets, booklets, wallet cards and videos about anxiety and depression, available treatments and where to get support – visit beyondblue.org.au/resources

How to use this booklet

There are many different approaches to treating anxiety. These include medical treatments (such as medications or medical procedures), psychological therapies (including talking therapies) and self-help (such as complementary and alternative therapies or lifestyle approaches).

All of the interventions included in this booklet have been investigated as possible 'treatments' for anxiety – see 'How this booklet was developed' on page 18.

We have rated the evidence for the effectiveness of each intervention covered in this booklet using a 'thumbs up' scale:



There are a lot of good-quality studies showing that the approach works.



There are a number of good-quality studies showing that the intervention works, but the evidence is not as strong as for the best approaches.



There are at least two good-quality studies showing that the approach works.



The evidence shows that the intervention does not work.



There is not enough evidence to say whether or not the approach works.



The intervention has potential risks, mainly in terms of side-effects.

However, the amount of evidence supporting the effectiveness of different interventions varies greatly. In addition, some of the approaches listed are not available or used as treatments – for example, kava is not readily available in Australia but it has been used in research studies to see if it reduces anxiety. This booklet provides a summary of the scientific evidence for each approach. When an intervention is shown to have some effect in research this does not mean it is available or used in clinical practice. It may not be recommended or work equally well for every person. There is no substitute for the advice of a mental health practitioner, who can advise on the best available treatment options.

When a treatment is shown to work scientifically, this does not mean it will work equally well for every person. While it might work for some people, others may have complications, side-effects or incompatibilities with their lifestyle. The best strategy is to try an approach that works for most people and that they are comfortable with. If you do not recover quickly enough, or if you experience problems with the treatment, then try another.

Another factor to consider is beliefs about treatment. A treatment is more likely to work if a person believes in it and is willing to commit to it.^{8, 9, 10} Even the most effective treatments will not work if they are not used as recommended.

Some people have strong beliefs about particular types of treatment. For example, some do not like taking medications in general, whereas others have great faith in medical treatments. However, strong beliefs in a particular treatment may not be enough, especially if there is no good evidence that the treatment works.

This booklet provides a summary of what the scientific evidence says about different approaches that have been studied to see if they improve anxiety conditions. The reviews in this booklet are divided into the following sections:

Psychological interventions

These interventions can be provided by a range of health practitioners, but particularly psychologists, clinical psychologists and psychiatrists.

Medical Interventions

These interventions are generally provided by a doctor (usually a GP or a psychiatrist).

Complementary and lifestyle interventions

These interventions can be provided by a range of health practitioners, including complementary health practitioners. Some of them can be used as self-help.

Interventions not routinely available

Interventions that are not typically available or used as a treatment for anxiety, but have been used in research studies.

Within each of these areas, we have reviewed the scientific evidence for each intervention to determine whether or not they are supported as being effective.

We recommend that people seek treatments that they believe in and are also supported by evidence. Whatever treatments are used, they are best done under the supervision of a GP or mental health professional. This is particularly important where more than one treatment is used. Often combining treatments that work is the best approach. However, sometimes there can be side-effects from combinations, particularly prescribed or complementary medications.

How this booklet was developed

Searching the literature

To produce these reviews, the scientific literature was searched systematically on the following online databases: the Cochrane Library, PubMed, PsycINFO and Web of Science.

Evaluating the evidence

Studies were excluded if they involved people who had not been diagnosed with an anxiety disorder or sought help. Where there was an existing recent systematic review or meta-analysis, this was used as the basis for drawing conclusions. Where a systematic review did not exist, individual studies were read and evaluated. A study was considered to be 'good quality' if it had an appropriate control group (with at least 64 participants in each group, as this is the number needed to find an effect that is more than trivial in size) and participants were randomised.

For the complementary, lifestyle and psychological interventions, we included studies that tested the effects of adding treatments to commonly-used medical treatments e.g. a lifestyle intervention was evaluated in people already taking prescribed medication.

Writing the reviews

The reviews were written to be at the 8th grade reading level or less. Each review was written by one of the authors and checked for readability and clarity by a second author. All authors discussed and reached consensus on the 'thumbs up' rating for each treatment. When studies showed that a treatment did not work, it was given a 'thumb down' rating.

If a treatment gets the 'thumbs up' does that mean it will work for me?

When a treatment is shown to work in research studies, this does not mean it will work equally well for every person. While it might work for some people, others may have complications, side-effects, or the treatment may not fit well with their lifestyle.

If you have any concerns about a treatment that has received a 'thumb down' rating, you should discuss the pros and cons of it with a GP or mental health professional to decide whether the treatment is suitable for you. It is not recommended that you stop using your current treatments until you have consulted a professional.

A summary of what works for anxiety

Psychological interventions

	Generalised anxiety disorder (GAD)	Post-traumatic stress disorder (PTSD)	Social anxiety disorder	Panic disorder and agoraphobia	Specific phobias	Obsessive compulsive disorder (OCD)
Acceptance and commitment therapy (ACT)	👍	?	👍	?	?	👍
Applied muscle tension	?	?	?	?	👍 For blood and injury phobia	?
Behaviour therapy (including exposure therapy)	?	👍👍👍	👍👍	👍👍	👍👍👍	👍👍👍
Cognitive behaviour therapy (CBT)	👍👍👍	👍👍👍	👍👍👍	👍👍👍	👍👍👍	👍👍👍
Computer-aided psychological therapy (CAP)	👍👍👍	👍👍👍	👍👍👍	👍👍👍	👍👍	👍
Eye movement desensitization and reprocessing (EMDR)	?	👍👍👍	?	?	?	?
Hypnosis (hypnotherapy)	?	👍	?	?	?	?
Mindfulness-based therapies	?	👍	?	?	?	?
Morita therapy	?	?	?	?	?	👍
Present-centred therapy (PCT)	?	👍	?	?	?	?
Psychodynamic psychotherapy	👍	?	👍	?	?	?
Psychoeducation	?	👍	?	?	?	?
Social skills training (SST)	?	?	👍 For children and adolescents ? For adults	?	?	?
Virtual reality exposure (VRE) therapy	?	👍	👍	👍	👍 For fear of flying ? For other phobias	?

Medical interventions

	Generalised anxiety disorder (GAD)	Post-traumatic stress disorder (PTSD)	Social anxiety disorder	Panic disorder and agoraphobia	Specific phobias	Obsessive compulsive disorder (OCD)
Alpha-1 adrenergic blockers ⚠️	?	👍	?	?	?	?
Anti-convulsant drugs ⚠️	👍👍	👎	?	?	?	👍 When added to antidepressants
Antidepressant drugs ⚠️	👍👍👍	👍👍👍	👍👍👍	👍👍👍	?	👍👍👍
Antihistamine drugs ⚠️	👍	?	?	?	?	?
Antipsychotic drugs ⚠️	👍	👍	?	?	?	👍 As an additional treatment in people who have not responded to other treatment
Azapirone drugs ⚠️	👍👍	?	?	👎	?	?
Benzodiazepines ⚠️	👍👍	👎	👍	👍	👎	?
D-Cycloserine ⚠️	?	👎	👍	👎	?	👎
Deep brain stimulation (DBS) ⚠️	?	?	?	?	?	👍 For severe OCD that hasn't responded to other treatment
Glucocorticoid drugs ⚠️	?	👍 In combination with exposure therapy	?	?	👍 In combination with exposure therapy	?
Transcranial magnetic stimulation (TMS) ⚠️	👍	👍	?	?	?	👍👍

Complementary and lifestyle interventions

	Generalised anxiety disorder (GAD)	Post-traumatic stress disorder (PTSD)	Social anxiety disorder	Panic disorder and agoraphobia	Specific phobias	Obsessive compulsive disorder (OCD)
Acupuncture	👍	👍	?	?	?	?
Bibliotherapy	?	?	👍	👍👍	?	👍
Energy psychology (aka meridian tapping)	?	👍	?	?	?	?
Meditation	?	👍👍	?	?	?	?
Relaxation training	👍👍	👍	👍	👍👍	👍	?
Yoga	👍	👍	?	?	?	?

Interventions not routinely available







	Generalised anxiety disorder (GAD)	Post-traumatic stress disorder (PTSD)	Social anxiety disorder	Panic disorder and agoraphobia	Specific phobias	Obsessive compulsive disorder (OCD)
Galphimia glauca	👍	?	?	?	?	?

Psychological interventions

The background is a solid light blue. At the bottom, there is a large, dark blue shape that curves upwards from the left and right edges, resembling a wide, shallow 'U' or a stylized wave. The text 'Psychological interventions' is positioned in the upper left quadrant, in a bold, white, sans-serif font.

Acceptance and commitment therapy (ACT)

Evidence rating

GAD		Panic disorder and agoraphobia	
PTSD		Specific phobias	
Social anxiety disorder		OCD	

What is it?

Acceptance and commitment therapy (ACT) is a type of cognitive behaviour therapy (CBT, see page 29). However, it is different to CBT because it does not teach a person how to change their thinking and behaviour. Rather, ACT teaches them to 'just notice' and accept their thoughts and feelings, especially unpleasant ones that they might normally avoid. This is because ACT therapists believe it is unhelpful to try to control or change distressing thoughts or feelings. In this way it is similar to mindfulness-based cognitive therapy (see page 40).

How is it meant to work?

ACT is thought to work by helping people accept difficult emotions and avoid 'overthinking' these experiences. Overthinking occurs when people focus on their 'self-talk' rather than the experiences themselves. ACT encourages people to accept their reactions and to experience them without trying to change them. Once the person has done this, they are encouraged to respond to situations in ways that are consistent with their life values. They are then encouraged to put those choices into action.

Does it work?

GAD

Four small studies have tested ACT or a form of ACT called acceptance-based behaviour therapy for GAD. Most treatments involved 12-16 individual sessions. Two studies found ACT more effective than no treatment or delayed treatment. The other two studies found ACT was as effective as CBT and applied relaxation (see page 112).

PTSD

One good-quality study has tested ACT as a treatment for PTSD. The participants were military veterans with anxiety or depression but most had PTSD. ACT was compared with a form of supportive psychotherapy called present-centered therapy (see page 45). Both treatments improved PTSD symptoms by a similar amount.

Social anxiety disorder

Several good-quality studies have tested ACT as a treatment for social anxiety disorder. These have found that 12 individual or group sessions of ACT are more effective than delayed treatment. Three studies have also compared ACT with CBT. Two of these studies suggested that ACT improved social anxiety as much as CBT. The third study found that ACT was less effective than CBT.

Panic disorder and agoraphobia

There are only a few small studies looking at ACT for people with panic disorder. One study compared ACT plus CBT with CBT delivered in a group setting. After 10 sessions both treatments showed similar benefits. Another study looked at ACT as a treatment for adults with panic disorder that hadn't improved with other treatments. Over the four-week study period, participants received either delayed treatment or eight sessions of ACT. ACT improved panic disorder symptoms more than delayed treatment. Both of these studies suggest that ACT may be a promising treatment for panic disorder, but more research is needed to be sure.

Specific phobias

One study found that ACT helped reduce the severity of spider phobia in four adults.

OCD

Several small studies have compared ACT with other treatments for OCD. Three studies have found that ACT in combination with an antidepressant was more effective than an antidepressant on its own. Other small studies have found ACT reduced OCD symptoms more than relaxation treatment or delayed treatment.

Are there any risks?

None are known.

Recommendation

ACT is a promising treatment for GAD, social anxiety disorder and OCD. There is not enough evidence to say whether ACT works for PTSD, panic disorder and agoraphobia and specific phobias.

Applied muscle tension

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	👍 For blood and injury phobia
Social anxiety disorder	?	OCD	?

What is it?

Applied muscle tension was specifically designed for blood and injury phobias. People who have strong anxiety reactions to blood or injuries often show a unique response. Their blood pressure initially rises, then drops dramatically. When the blood pressure drops, these people sometimes faint.

Applied muscle tension teaches people to raise their blood pressure by tensing their muscles when they are around blood or injuries to prevent this response.

How is it meant to work?

Teaching people to raise their blood pressure using muscle tension reduces the chance of fainting. It also helps people to gain confidence that they can cope with seeing blood or injuries. In this way they are progressively able to confront and overcome their fear.

Does it work?

Specific phobias

There have been a small number of studies that have found that applied muscle tension works as well as relaxation training (see page 112) for blood and injury phobias. One study found it to be better than behaviour therapy (see page 26).

Other types of anxiety

There is no evidence on whether applied muscle tension works in GAD, panic disorder, PTSD, social anxiety disorder or OCD.

Are there any risks?

None are known.

Recommendation

There is some evidence that applied muscle tension helps blood and injury phobias.

Art therapy

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Art therapy uses artwork instead of spoken words to explore feelings and improve coping. In art therapy, the person works with a therapist, who combines other techniques with drawing, painting or other types of artwork. Therapy may focus on the emotional qualities of the different art materials.

How is it meant to work?

Art therapy is based on the belief that the process of making a work of art can be healing. Issues that come up during art therapy are used to help the person to cope better with stress, work through traumatic experiences, improve their decisions, and have better relationships with family and friends.

Does it work?

GAD

One case study of a person with GAD examined the effect of combining art therapy and cognitive behaviour therapy (CBT, see page 29). The therapy lasted for seven weeks. There was a small decrease in general anxiety. However, no good-quality studies have been conducted.

PTSD

Four studies have looked at the effect of adding art therapy to other treatments such as psychological therapies. Adding art therapy either did not change PTSD symptoms or did not add any benefit to the other treatments. However, three of the studies were small.

Panic disorder and agoraphobia

One case study of a person with panic disorder with agoraphobia examined the effect of combining art therapy and CBT. The therapy lasted for seven weeks. Symptoms were reduced. However, no good-quality studies have been conducted.

Art therapy continued over page.

Art therapy (continued)

Other types of anxiety

There is no evidence on whether art therapy works in social anxiety disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether art therapy works for anxiety.

Autobiographical episodic memory-based training (AET)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Autobiographical episodic memory-based training (AET) is a type of therapy that involves changing the way life events are remembered. Two types of AET are competitive memory training and memory specificity training.

How is it meant to work?

Memory specificity training is based on the finding that people with anxiety have difficulty remembering specific details of life events. They practice remembering details of events that may be positive, negative or neutral. Competitive memory training is based on the idea that biases in the way people remember life experiences are linked to anxiety symptoms. People with anxiety may be more likely to remember past events as negative or threatening. Competitive memory training aims to change the way these emotional memories are processed. This may then reduce anxiety symptoms.

Does it work?

PTSD

One very small study compared memory specificity training with no treatment in people with PTSD. There were five treatment sessions. People in the competitive memory training group had lower symptoms after the treatment finished and when followed up three months later. Another very small study compared competitive memory training with cognitive processing therapy (see page 30). There were six weekly sessions. Both treatments were effective. However, there was no comparison group that did not receive treatment.

Autobiographical episodic memory-based training (AET) continued over page.

Autobiographical episodic memory-based training (AET) (continued)

Panic disorder and agoraphobia

One good-quality study compared competitive memory training with relaxation training (see page 112) in people with panic disorder. Both treatments were equally effective. However, there was no comparison group that did not receive treatment.

OCD

One very small study tested the effect of adding competitive memory training to other treatment in people with OCD. Symptoms improved but there was no comparison group that did not receive treatment. Another small study compared competitive memory training to no treatment in people with OCD. In this study, competitive memory training was delivered online as a self-help intervention. There were no differences between groups after four weeks.

Other types of anxiety

There is no evidence on whether AET works for GAD, social anxiety disorder or specific phobias.

Are there any risks?















None are known.

Recommendation

There is not enough evidence to say whether AET is effective.

Behaviour therapy (including exposure therapy)

Evidence rating

GAD		Panic disorder and agoraphobia	 
PTSD	  	Specific phobias	  
Social anxiety disorder	 	OCD	  

What is it?

Behaviour therapy for anxiety mainly relies on a treatment called exposure. There are several different approaches to exposure therapy. They are all based on exposing the person to the things that make them anxious. Behaviour therapy is often combined with cognitive approaches as part of cognitive behaviour therapy (CBT, see page 29). However, behaviour therapy is also provided as a treatment on its own. This section reviews evidence for using behaviour therapy alone.

Behaviour therapy approaches include:

Flooding (also called implosion)

This involves intensive rather than gradual exposure to the situations the person fears. The exposure can be in real life or using mental images.

In vivo exposure

This involves confronting the feared situation, usually in a gradual way. 'In vivo' means 'in real life'. The treatment usually lasts a few hours. It can be completed in one long session or across multiple sessions. This treatment might also include being exposed to body sensations of anxiety (like giddiness or shortness of breath). Applied muscle tension (see page 24) is a treatment of this type used for phobias of blood, injection or injury.

Narrative exposure therapy

This involves exposure to the trauma and reorganising related memories to include other autobiographical information.

Systematic desensitisation

This involves gradually exposing the person to fearful mental images and thoughts or to actual situations, while the person has relaxed using relaxation training (see page 112). The exposure starts with situations that produce mild fears and works up to the most fearful.

Behaviour therapy (including exposure therapy) continued over page.

Behaviour therapy (including exposure therapy) (continued)

Virtual reality exposure

Virtual reality exposure (see page 55) uses a computer program to create the feared situation. It is often used for fears that are difficult to confront in real life, such as fears of flying or heights.

How is it meant to work?

Anxiety problems often persist because the person avoids fearful situations. Avoiding these situations means that the person does not have the opportunity to learn that they can cope with the fear. The person needs to learn that their fear will reduce without the need to avoid or escape the situation and that their fears about the situation often do not come true or are not as bad as they thought.

Does it work?

There are different types of exposure treatments that are specifically designed for particular types of anxiety conditions.

GAD

One study tested an approach called 'worry exposure', where a person purposely focuses on their worries. Worries are the main problem in GAD. In this study, the exposure therapy was compared to relaxation, and both approaches appeared to be equally helpful.

PTSD

PTSD is often treated using an approach called prolonged exposure, which uses exposure in real life or in imagination to help the person confront memories of their traumatic experiences. A pooling together of data from good-quality studies shows strong support for this approach for PTSD.

Social anxiety disorder

Several studies have evaluated the effectiveness of exposure treatment for social anxiety disorder. Exposure treatment for social anxiety disorder is generally done in groups. In these groups, the person can expose themselves to difficult situations like meeting new people or public speaking. A pooling together of data from these studies showed that exposure treatments for social anxiety disorder were more helpful than no treatment. It was also as effective as group CBT but not as effective as individual CBT.

Panic disorder and agoraphobia

Several studies have evaluated the effectiveness of different types of behaviour therapy approaches for panic disorder. Exposure to body sensations of anxiety was tested in one study and found to be more helpful than no treatment. 'In vivo' and 'virtual reality' exposure have also been found to be effective in a small number of studies. However, CBT seems to be more effective in the short term. Panic disorder can also be treated by a type of exposure therapy called applied relaxation, which is like systematic desensitisation. Two studies have compared applied relaxation to cognitive-based treatments and found that both interventions were helpful. In one study, CBT was more helpful.

Specific phobias

There is strong evidence from many studies that in vivo exposure and virtual reality exposure work for specific phobias. Indeed, exposure is one of the best treatments available for these problems.

OCD

OCD is treated with a type of exposure called exposure and response prevention. This involves exposing the person to anxiety-producing thoughts or situations and then preventing them from using rituals or compulsions to reduce the anxiety. For example, a person might be asked to get dirt on their hands and then not wash them, even though they are worried about being infected. There have been many good-quality studies evaluating the effectiveness of this approach for OCD. A pooling together of data from these studies showed that this approach works. Behaviour therapy may be most effective when combined with antidepressants (see page 61).

Are there any risks?

Confronting fearful situations can be extremely distressing and behaviour therapy is best done with the support of a professional. If exposure is not done carefully it can make a person's anxiety worse.

Recommendation

There is strong evidence that behaviour therapies work for panic disorder, PTSD, social anxiety disorder, specific phobias and OCD.

Biofeedback

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

In biofeedback, people are trained to recognise and control body functions that they are not normally aware of. These include blood pressure, heart rate, skin temperature, sweat gland activity, muscle tension, breathing and brain activity.

How is it meant to work?

Many body functions change during times of stress. In biofeedback, machines are used to feed back information about these changes to people. As biofeedback helps people to control these responses to stress, it may also help to reduce anxiety.

Does it work?

GAD

One small study compared muscle biofeedback and two types of brain wave biofeedback with 'fake' meditation and with no treatment. People with GAD received two one-hour sessions weekly for four weeks. People in the muscle biofeedback group and one of the brain wave groups had lower anxiety symptoms. Improvements were maintained six weeks after treatment. Another recent study in people with GAD compared training to change their brain waves, with training to change the temperature of their earlobes. The brain wave training resulted in a greater reduction in anxiety.

PTSD

Three small studies have tested biofeedback for PTSD. The first study found that brain activity biofeedback produced more improvement than no treatment. The second study added heart rate biofeedback to usual treatment and found weak evidence of greater improvement. The third study tested whether there was benefit to adding breathing biofeedback to exposure therapy (see page 26) and also found weak evidence of greater improvement.

Specific phobias

One small study looked at the effects of brain activity biofeedback on spider phobia. People who received biofeedback did not differ in their spider fear from people who received no treatment.

OCD

Pooling of data from a number of small studies showed a positive effect of brain activity biofeedback on OCD symptoms. However, most of these studies lacked a comparison group that was not treated.







Other types of anxiety

There is no evidence on whether biofeedback works for panic disorder or social anxiety disorder.

Recommendation

There is not enough evidence to say whether biofeedback works for anxiety.

Cognitive behaviour therapy (CBT)

Evidence rating	
GAD 	Panic disorder and agoraphobia 
PTSD 	Specific phobias 
Social anxiety disorder 	OCD 

What is it?

In cognitive behaviour therapy (CBT), clients work with a therapist to look at patterns of thinking (cognition) and acting (behaviour) that are making them more likely to have problems with anxiety or are keeping them from improving once they become anxious. Once these patterns are recognised, then the person can make changes to replace these patterns with ones that reduce anxiety and improve coping. It can be provided to one client or a group of clients. Treatment length can vary but is usually conducted over four to 24 weekly sessions. CBT is often combined with behaviour therapy (see page 26).

How is it meant to work?

CBT is thought to work by helping people to recognise patterns in their thinking and behaviour that make them more vulnerable to anxiety. For example, thinking that is focussed on threats and dangers is often linked with anxiety. In CBT, the person works to change these patterns to use more realistic and problem-solving thinking. Anxiety is often increased when a person deliberately avoids things they are afraid of. Therefore, learning to cope with situations that are anxiety provoking is also often helpful.

Does it work?

CBT has been assessed in a large number of good-quality studies. It has been applied to all the types of anxiety covered in this book and has been found to be effective in both the short-term (immediately after treatment) and the long-term (many years after treatment). A statistical pooling of data from all these studies showed that CBT is one of the best treatments available for anxiety.







Are there any risks?

None are known.

Recommendation

CBT is a highly recommended treatment for all types of anxiety.

Cognitive bias modification (CBM)

Evidence rating	
GAD 	Panic disorder and agoraphobia 
PTSD 	Specific phobias 
Social anxiety disorder 	OCD 

What is it?

Cognitive bias modification (CBM) involves computer training programs that aim to change what a person pays attention to, or how they interpret ambiguous information. Computer tasks include viewing words or photographs on a screen or listening to audio clips. Training is often delivered in a laboratory but can also be completed over the internet.

How is it meant to work?

People with anxiety tend to focus attention on negative or threatening information in their environment. Training to change this habit is thought to reduce negative thinking and improve anxiety.

Does it work?

GAD

Two small studies have tested CBM in people with GAD. The studies compared 8-10 sessions of CBM training with a control training task. One study found reduced anxiety after the treatment ended. The second study only found benefits a month after the end of the training.

PTSD

Four small studies have looked at CBM for people with PTSD, with mixed findings. One study found CBM to be more effective than a control training task, but another found no difference between them. In the other two studies, CBM was not as effective as a comparison therapy.

Social anxiety disorder

CBM as a treatment for social anxiety disorder has been tested in quite a few small studies. Pooling the results of these studies together suggests that CBM is not effective.

*Cognitive bias modification (CBM)
continued over page.*

Cognitive bias modification (CBM) (continued)

Specific phobias

Two small studies have tested CBM in people with fear of spiders or heights. One study found that CBM was no better than a control in reducing phobia symptoms. A second study found benefits at the end of training compared to a control. However, the effect was not maintained one month later.

OCD

One small study has evaluated CBM in adults with OCD. This tested an app that aimed to help shift attention away from intrusive thoughts. There was no improvement in OCD symptoms after three weeks.

A second very small study has tested the effect of adding CBM to treatment with cognitive behaviour therapy (see page 29) in adolescents with OCD. Eight sessions of CBM were compared with a control training task. CBM reduced OCD symptoms more than the control.

Other types of anxiety

There is no evidence on whether CBM works for panic disorder.

Are there any risks?

None are known.







Recommendation

CBM is not effective for social anxiety disorder. There is not enough good-quality evidence to know whether CBM is effective for other types of anxiety.

Cognitive processing therapy (CPT)

Cognitive processing therapy (CPT) is particularly suited to people affected by traumatic experiences. In CPT, a person works with a therapist to modify and challenge unhelpful beliefs that have developed after experiencing trauma. It uses cognitive techniques to help the person create a new understanding of the trauma. This is a type of cognitive behaviour therapy and is covered on page 29.

Computer-aided psychological therapy (CAP)

Evidence rating	
GAD 	Panic disorder and agoraphobia 
PTSD 	Specific phobias 
Social anxiety disorder 	OCD 

What is it?

Computer-aided psychological therapy (CAP) consists of structured sessions of behaviour therapy (see page 26) or cognitive behaviour therapy (CBT, see page 29) delivered through a computer, usually over the internet. An individual works through the computer program on their own. CAP can be used with or without support from a therapist, though most programs involve some form of support. Therapists may offer support via telephone, email, text, or instant messaging, to help the person successfully apply what they are learning to their life. The headtohealth.gov.au website gives a list of available online treatments for anxiety disorders.

How is it meant to work?

CBT and behaviour therapy are helpful for anxiety disorders when delivered by a professional. The structured nature of these treatments means they are well suited to computerised delivery. The computer or web programs teach people to identify and change patterns of thinking and behaviour that might be keeping them from overcoming their anxiety. Because learning new information and skills is a key part of CBT, internet delivery is a way to make CBT more widely available at low cost.

Does it work?

GAD

Nine good-quality studies have evaluated CAP for GAD. These studies took place over the internet and most included supportive contact from a therapist. Pooling the results from all these studies showed that CAP was more effective than no treatment.

PTSD

There have been 12 good-quality studies of CAP in people with PTSD. All took place over the internet and most included support from a therapist. Pooling the results from these studies showed that CAP was effective. CAP with therapist support was more effective than CAP without therapist contact.

Social anxiety disorder

There have been 11 good-quality studies of CAP in people with social anxiety disorder. Pooling the results from these studies showed that CAP was more effective than no treatment. All of these studies took place over the internet and most had support from a therapist.

Panic disorder and agoraphobia

Twelve studies have tested CAP in people with panic disorder. All of these studies took place over the internet and most had some form of therapist contact. Pooling the results from these studies showed that CAP was more effective than comparison conditions (e.g. delayed treatment or information about panic).

Specific phobias

A number of studies have tested CAP in people with specific phobias (e.g. spider phobia, dental phobia, snake phobia or flight phobia). The CAP treatment varied from a single session to longer programs completed over weeks. Most of these studies showed that CAP was more effective than no treatment or control treatments such as relaxation. One study found similar benefits from an unguided version compared with a therapist-supported version. There were mixed findings when comparing CAP with face-to-face therapy (such as exposure).

OCD

Three studies have compared CAP with a comparison condition in adults and adolescents with OCD. All three included support from a therapist. Pooling the results from these studies showed that CAP was more effective than no treatment, progressive relaxation and supportive therapy delivered online. One of these studies found that CAP was not as effective as face-to-face therapy.

Are there any risks?

CAP is relatively safe.

Recommendation

CAP is an effective treatment for anxiety. Better results are achieved with therapist contact.

Dance and movement therapy (DMT)

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Dance and movement therapy (DMT) combines expressive dancing with discussion of a person's life difficulties. A DMT session usually involves a warm up and a period of expressive dancing or movement. This is followed by discussion of the person's feelings and thoughts about the experience and how it relates to their life situation.

How is it meant to work?

DMT is based on the idea that the body and mind interact. It is thought that a change in the way someone moves will have an effect on their patterns of feeling and thinking. It is also assumed that dancing and movement may help to improve the relationship between the person and the therapist and may help the person to express feelings of which they are not aware. Learning to move in new ways may help people to discover new ways of expressing themselves and to solve problems.

Does it work?

PTSD

One small study has been done in women with PTSD. DMT was compared to no treatment and also to yoga. DMT decreased PTSD symptoms more than no treatment. The effects were similar to yoga.

Other types of anxiety

There is no evidence on whether DMT works for GAD, panic disorder, specific phobias, social anxiety disorder or OCD.

Are there any risks?

None are known.

Recommendation

DMT has not yet been properly evaluated in well-designed studies. More research is needed to say whether DMT is effective for PTSD.

Dialectical behaviour therapy (DBT)

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Dialectical behaviour therapy (DBT) is a modified form of cognitive behaviour therapy (CBT, see page 29) that was designed to treat borderline personality disorder. More recently, it has been used to treat other mental health conditions including PTSD. In addition to CBT strategies, DBT teaches skills to reduce harmful actions and improve positive coping.

How is it meant to work?

The term 'dialectical' means working with opposites. DBT uses opposing strategies of 'acceptance' and 'change'. Acceptance skills include mindfulness and distress tolerance. Change skills include managing emotions and communicating effectively.

Does it work?

PTSD

Two small studies have looked at the benefit of DBT for PTSD in people who also had borderline personality disorder. One study found DBT reduced PTSD symptoms more than no treatment. The other study compared standard DBT to DBT modified with exposure therapy (see page 26). While PTSD symptoms improved in both groups, the modified version was more effective. However, this study did not include a comparison group who did not receive treatment.

Other types of anxiety

There is no evidence on whether DBT works for GAD, panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether DBT works.

Dialogical exposure therapy

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

In dialogical exposure therapy, a therapist helps a person identify and process negative emotions. It includes some aspects of cognitive behaviour therapy (CBT, see page 29) and emotion-focused therapy (see following entry) as well as imagined exposure to a traumatic event. Unlike CBT, the focus is on emotions rather than changing thoughts or behaviours.

How is it meant to work?

Dialogical exposure therapy helps a person to experience, process and accept emotional reactions to trauma in a safe environment. This may help to build skills to manage anxiety.

Does it work?

PTSD

One good-quality study compared dialogical exposure therapy with cognitive processing therapy (see page 30) in people with PTSD. Treatment lasted for a maximum of 24 sessions. People in both groups had lower symptoms after the treatment finished, although cognitive processing therapy was more effective. There was no comparison group that did not receive treatment.

Other types of anxiety

There is no evidence on whether dialogical exposure therapy works for GAD, panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether dialogical exposure therapy is effective.

Emotion-focused therapy (EFT)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

In emotion-focused therapy (EFT), a therapist helps a person identify and process negative emotions. Like supportive therapy (see page 53), the therapist listens empathically to a person's problems. Unlike cognitive behaviour therapy (CBT, see page 29), the focus is on emotions rather than changing thoughts or behaviours.

How is it meant to work?

EFT is based on the idea that safe emotional connections with loved ones are important to wellbeing. It is thought that negative emotions around relationships can lead to anxiety. Therapist support to process these emotions and solve life problems may help to reduce anxiety.

Does it work?

GAD

One very small study has evaluated EFT for GAD. Therapy was given in 12-25 sessions. The study found that symptoms reduced over time and up to six months after the end of treatment. However, there was no comparison with a group who did not receive treatment.

PTSD

One small study compared EFT with CBT and no treatment in adults with PTSD. Therapy was given in 12 sessions over three months. EFT was more effective than no treatment but less effective than CBT.

Panic disorder and agoraphobia

One small study tested EFT in adults with panic disorder. The therapy was given weekly for three months. Symptoms improved as much as those given placebo (dummy pills) but less than those given CBT or antidepressant drugs (see page 61).

Emotion-focused (EFT) therapy continued over page.

Emotion-focused therapy (EFT) (continued)

Social anxiety disorder

One very small study has evaluated EFT for social anxiety disorder. Therapy was given in up to 28 sessions. The study found that symptoms reduced over time and up to 12 months after the end of treatment. However, there was no comparison with a group who did not receive treatment.

Other types of anxiety

There is no evidence on whether EFT works for specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether EFT is an effective treatment for anxiety.

Eye movement desensitisation and reprocessing (EMDR)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	👍👍👍	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Eye movement desensitisation and reprocessing (EMDR) was developed to treat symptoms resulting from disturbing or traumatic experiences. It involves recalling these life experiences for short periods (15-30 seconds) while also moving the eyes back and forth. Sometimes another task, such as hand tapping or listening to tones, is used instead of eye movements.

How is it meant to work?

There are two theories about how EMDR works. One says that eye movements specifically help the person to deal with traumatic memories at a biological and psychological level. The other says that the eye movements do not have a special role in dealing with the trauma. Rather they simply help the person to expose themselves to disturbing memories (see behaviour therapy, page 26), which is really responsible for the improvements.

Does it work?

GAD

One very small study examined the effect of EMDR in three women with GAD. It found that symptoms reduced. However, there was no comparison group.

PTSD

There have been a large number of good-quality studies of EMDR for PTSD. A pooling of data from these studies showed that it is more effective than no treatment and several other treatments. Another study pooled data from trials comparing EMDR and cognitive behaviour therapy (CBT, see page 29). It found that EMDR was slightly better than CBT.

Eye movement desensitisation and reprocessing (EMDR) continued over page.

Eye movement desensitisation and reprocessing (EMDR) (continued)

Panic disorder and agoraphobia

Several small studies have tested the effect of EMDR in people with panic disorder. EMDR was compared with a placebo (dummy) treatment or with other psychological treatments. Findings from the studies were mixed.

Specific phobias

One small study compared the effect of adding EMDR or exposure therapy (see page 26) to CBT for fear of flying. Symptoms improved in both groups. Another small study compared the effect of adding EMDR, exposure therapy or virtual reality exposure therapy to CBT for fear of flying. Symptoms improved in all three groups.

OCD

One small study compared the effect of EMDR and CBT on OCD. Symptoms improved equally in both groups.

Other types of anxiety

There is no evidence on whether EMDR works for social anxiety disorder.

Are there any risks?

Confronting traumatic memories can be extremely distressing for some people and may be best done with the support of a professional.

Recommendation

EMDR is a recommended treatment for PTSD. There is not enough evidence to say whether it works for other types of anxiety.

Family therapy

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Family therapy involves changing the family system or pattern of interaction rather than focusing on just the person with anxiety. Usually, the whole family (or at least some family members) will attend treatment sessions. The therapist helps the family change their pattern of communication, so that their relationships are more supportive and there is less conflict.

How is it meant to work?

Family therapists take the view that, even if the problem mainly involves one family member, involving the whole family in the solution will be the most helpful approach. This is especially true when a child or adolescent is affected. This is because relationships play a large role in how we feel about ourselves and our ability to cope with fears. When family relationships are supportive and honest, this will often help to resolve problems and improve the ability of family members to cope with anxiety.

Does it work?

There have been no studies testing whether family therapy that focuses on family relationships reduces anxiety. However, there have been a large number of studies showing the benefits of involving the family to help with cognitive behaviour therapy (CBT, see page 29) for anxiety in children. Involving the family to help with CBT is not the same as family therapy.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether family therapy works.

Flooding (aka ‘implosion therapy’)

Flooding involves intensive rather than gradual exposure to situations that a person fears. The exposure can be in real life or using mental images. This is a type of behaviour therapy and is covered on page 26.

Haptotherapy

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Haptotherapy is designed to reduce fear of childbirth. During treatment, a therapist helps a pregnant woman to become more familiar with physical sensations and practice skills necessary for childbirth.

How is it meant to work?

Haptotherapy aims to develop skills and change the way a woman thinks about childbirth. This may help to promote a more positive attitude towards pregnancy and childbirth and build confidence. This can help to reduce anxiety.

Does it work?

Specific phobias

One small study compared haptotherapy with psychoeducation (see page 47) or usual treatment in pregnant women with a fear of childbirth. Treatment involved eight 1-hour sessions between weeks 20 and 36 of pregnancy. Women in the haptotherapy group had lower fear symptoms than women in the other two groups. They also had less PTSD symptoms after birth.

Other types of anxiety

Haptotherapy is not applicable to other types of anxiety.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether haptotherapy is effective.

Hypnosis (hypnotherapy)

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	👍	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Hypnosis involves a therapist helping the person to get into a hypnotic state. In this state, a person can experience vivid mental imagery. Time may pass more slowly or more quickly than usual and the person often notices things that they might not otherwise notice. The person might also find that they are able to ignore or forget about painful or unpleasant emotional experiences, including physical pain.

How is it meant to work?

Hypnosis is usually used along with another type of treatment, such as cognitive behaviour therapy (CBT, see page 29) or psychodynamic psychotherapy (see page 46). This means that there are many different types of hypnosis treatment. However, all of the treatments use hypnosis to help the person to make important changes, such as resolving emotional conflicts, focusing on strengths, becoming more active, tolerating anxious feelings or changing ways of thinking. It is believed that these changes are easier to make when the person is in a hypnotic state.

Does it work?

PTSD

A number of small studies have looked at the effectiveness of hypnosis for PTSD. Pooling the results from these studies showed that hypnosis was more effective than no treatment. One study looked at the benefit of adding hypnosis to CBT for PTSD. This did not improve symptoms.

Social anxiety disorder

One case study found hypnosis helped improve social anxiety after three sessions in an adolescent. However, no good-quality studies have been carried out.

Panic disorder and agoraphobia

One small study has looked at the effect of adding hypnosis to in vivo exposure therapy (see page 26) for panic disorder with agoraphobia. Adding hypnosis was not found to be more effective than exposure therapy alone.

Other types of anxiety

There is no evidence on whether hypnosis works for GAD, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is some promising evidence that hypnosis is helpful for PTSD. There is not enough evidence to say whether or not hypnosis is helpful for other types of anxiety.

Interpersonal psychotherapy (IPT)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Interpersonal psychotherapy (IPT) was originally designed to treat depression. It focuses on problems in personal relationships, and on building skills to deal with these problems. IPT is based on the idea that these interpersonal problems are a significant part of the cause of emotional problems. It focuses on personal relationships rather than what is going on in the individual's mind (e.g. thoughts and feelings). Treatment length can vary, with IPT usually conducted over four to 24 weekly sessions.

How is it meant to work?

IPT is thought to work by helping people to recognise patterns in their relationships with others that make them more vulnerable to emotional problems like depression and anxiety. In this treatment, the person and therapist focus on specific interpersonal problems, such as grief over lost relationships, different expectations in relationships between the person and others, giving up old roles to take on new ones, and improving skills for dealing with other people. By helping people to overcome these problems, IPT aims to help them control their anxiety.

Does it work?

PTSD

One small study of women with PTSD found that IPT was more effective than no treatment. Another small study compared IPT with exposure therapy (see page 26) and relaxation training (see page 112). It showed that IPT worked as well as exposure therapy and better than relaxation training.

Social anxiety disorder

Two studies have compared IPT to cognitive behaviour therapy (CBT, see page 29), with mixed results. One small study found IPT worked as well as CBT. Another good-quality study found that IPT was less effective than CBT, but more effective than no treatment. A third small study compared IPT to supportive counselling (see page 53). It found IPT worked as well as supportive counselling.

Panic disorder and agoraphobia

One small study compared IPT to CBT in people with panic disorder with agoraphobia. It showed that IPT was less effective than CBT.

Other types of anxiety

There is no evidence on whether IPT works for GAD, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether IPT works for anxiety.

In vivo exposure

In vivo exposure involves confronting a feared situation, usually in a gradual way. This is a type of behaviour therapy and is covered on page 26.

Metacognitive therapy (MCT)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Metacognitive therapy (MCT) is a specific type of cognitive behavior therapy (CBT, see page 29) that focuses on how people understand their own and others' thought processes (or 'metacognitions').

How is it meant to work?

MCT focuses on how a person's beliefs lead to unhelpful actions or thoughts that make their anxiety worse. MCT shows the person different ways of responding to thoughts. It helps the person become more flexible in their thinking processes. MCT can be delivered face-to-face or through bibliotherapy (see page 89).

Does it work?

GAD

One study pooled findings from five small studies. Anxiety symptoms improved in people receiving MCT. However, some of these studies lacked comparison groups not receiving treatment.

PTSD

One study pooled findings from three small studies. Symptoms improved in people receiving MCT. However, one of these studies lacked a comparison group not receiving treatment.

Social anxiety disorder

Two small studies have examined the effect of MCT on social anxiety disorder. The results have been mixed. The first study found that people receiving MCT had improved symptoms, but this was not compared with no treatment or other treatments. The second study found that adding MCT to group CBT did not add any benefit.

Metacognitive therapy (MCT) continued over page.

Metacognitive therapy (MCT) continued

Panic disorder and agoraphobia

One case study of a person with panic disorder found that panic attacks stopped after using a specific type of MCT called attentional training. This technique involved the therapist guiding the person to focus their attention externally on certain sounds (rather than their own thoughts). By comparison, panic attacks increased when relaxation was used. Another case study of two people with panic disorder found that attentional training was effective.

Specific phobias

One study of three cases of adolescent girls with fear of vomiting found that symptoms improved after receiving MCT. However, MCT was not compared with no treatment or another treatment.

OCD

Three small studies found that symptoms improved after receiving MCT. However, there were no comparison groups without treatment. A fourth study showed that MCT was more effective than medication for improving OCD symptoms.

Are there any risks?

None are known.

Recommendation

It is not yet known if MCT is an effective treatment for anxiety. Better-quality studies are needed.

Mindfulness-based therapies

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	👍	Specific phobias	?
Social anxiety disorder	?	OCD	?

What are they?

Mindfulness-based therapies include a number of approaches, including mindfulness-based stress reduction (MBSR) and mindfulness-based cognitive therapy (MBCT). These approaches involve learning a type of meditation called mindfulness meditation. This type of meditation teaches people to focus on the present moment. People just notice whatever they are experiencing, including pleasant and unpleasant experiences, without trying to change them. At first, this approach is used to focus on physical sensations such as breathing. Mindfulness therapies often also include gentle yoga (see page 120). These therapies are generally delivered in groups.

How are they meant to work?

Mindfulness-based therapies help people to change their state of mind so that they can experience what is happening right now. People with anxiety often worry about future events. Focusing on the present stops their minds wandering off into thoughts about the future or the past. This is thought to be helpful in preventing anxiety. It may also help to prevent people from behaving in unhelpful ways as they try to avoid unpleasant thoughts and feelings. Yoga may also have some physical health benefits.

Do they work?

GAD

Two studies have compared mindfulness-based therapies with other treatments in people with GAD. In one small study, people received MBSR or stress management education. Anxiety symptoms improved to a similar extent in both groups. In a good-quality study, people received MBCT, psychoeducation (see page 47) using cognitive behaviour therapy (CBT, see page 29) principles or usual care. Both MBCT and psychoeducation produced more improvement than usual care.

Mindfulness-based therapies continued over page.

Mindfulness-based therapies (continued)

PTSD

A pooling of data from 18 studies of different sizes showed that mindfulness-based treatments improved PTSD symptoms more than no treatment or other treatments.

Social anxiety disorder

A pooling of data from three small studies has shown that mindfulness-based treatments were not more effective than no treatment.

Panic disorder and agoraphobia

One small study tested MBCT in people with panic disorder. All patients were also taking antidepressants or benzodiazepines. After MBCT, participants' anxiety levels were reduced. However, there was no comparison group that did not receive any treatment.

OCD

Three small studies have tested MBCT for OCD and findings were mixed. The first study showed that MBCT helped improve OCD symptoms more than no treatment in a group of people who had previously received CBT (but continued to have symptoms). The second study found that MBCT helped improve symptoms of OCD both on its own and as an extra treatment for people who only partly responded to CBT. The third compared mindfulness-based exposure to exposure alone. Adding the mindfulness component was not helpful.

A fourth, good-quality study compared the effect of MBCT and psychoeducation on OCD symptoms that continued after CBT. MBCT led to improvement in some symptoms.

Other types of anxiety

There is no evidence on whether mindfulness-based therapies work for specific phobias.

Are there any risks?

None are known.

Recommendation

Mindfulness-based therapies appear to work for PTSD. There is not enough evidence to say that mindfulness-based therapies are effective for other types of anxiety.

Morita therapy

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	👍

What is it?

Morita therapy is a psychological therapy based on Eastern philosophy. It is mainly used in Asian countries such as Japan and China as an alternative therapy for anxiety disorders. It involves four phases of rest and increasing activity. It can be provided as a treatment during a hospital stay or as an outpatient.

How is it meant to work?

Morita therapy aims to help people accept that anxiety is a natural feeling and to complete their life goals. It is thought to work by redirecting attention away from anxiety and towards constructive behaviour.

Does it work?

GAD

One small study looked at the benefit of adding Morita therapy to medication for GAD. The medication was either a benzodiazepine (see page 66) or an azapirone (see page 65). Both treatments were effective in the short term (up to 12 weeks). However, the Morita therapy group seemed to improve more over the longer term.

Social anxiety disorder

Two small studies have compared Morita therapy to benzodiazepines. More people improved with the Morita therapy treatment than the drug treatment.

OCD

Three small studies have compared Morita therapy plus an antidepressant (see page 61) with anti-depressants on their own. These found that OCD symptoms were lower in the Morita therapy group after treatment.

Other types of anxiety

There is no evidence on whether Morita therapy works specifically for panic disorder, PTSD or specific phobias.

Morita therapy continued over page.

Morita therapy (continued)

Are there any risks?

None are known.

Recommendation

There is some evidence that Morita therapy may be helpful for OCD. However, all studies have been carried out in China and were not high in quality. More research needs to be carried out in Australian health care settings before we can be sure that Morita therapy works.

Music therapy

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

In music therapy, a therapist uses music to help someone overcome their problems. Music therapy is often combined with another approach to psychological therapy, such as behaviour therapy (see page 26), cognitive behaviour therapy (CBT, see page 29), or psychodynamic psychotherapy (see page 46). Different approaches to music therapy can include people playing, composing or listening to music.

How is it meant to work?

Through their relationship with the therapist, music therapy may help a person to express their emotions and explore difficult memories. Listening to or creating music may also help release tension and reduce anxiety.

Does it work?

GAD

One very small study has tested music therapy for GAD. It found that 12 sessions of group music therapy were beneficial. However, there was no comparison with a group that did not receive any treatment.

PTSD

One small study has tested group music therapy in adults with PTSD who had not responded to CBT. The study found 10 weeks of music therapy reduced symptoms more than no treatment.

Social anxiety disorder

There has been one case report of music therapy reducing symptoms of social anxiety disorder. However, no high-quality studies have been carried out.

Music therapy continued over page.

Music therapy (continued)

OCD

One small study has tested the effect of adding 12 sessions of music therapy to treatment with antidepressants (see page 61) and CBT. Symptoms improved more in the group receiving music therapy.

Other types of anxiety

There is no evidence on whether music therapy works for panic disorder or specific phobias.

Are there any risks?

None are known.

Recommendation

There is not enough good evidence to say whether music therapy works for anxiety.

Narrative therapy

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Narrative therapy is an approach to psychological therapy that views people as separate from their problems. It focuses on how people think about themselves and their life situations in terms of narratives, or stories. People come for this therapy either alone, with their partner, or with their families.

How is it meant to work?

Narrative therapy proposes that human problems are partly caused by the language we use to describe them. In particular, people tell themselves stories about their difficulties and the life situations in which they occur. Some of these stories can increase anxiety, especially stories where the person sees themselves as powerless or unacceptable. Narrative therapy helps people change these stories so that they are less likely to cause anxiety.

Does it work?

Social anxiety disorder

One small study showed that group narrative therapy improved symptoms of social anxiety disorder in children compared to no treatment. There have been no studies with adults.

Panic disorder and agoraphobia

One case study of a person with panic disorder found that five sessions of narrative therapy resulted in symptom improvement. However, no good-quality studies have been conducted.

Other types of anxiety

There is no evidence on whether narrative therapy works for GAD, PTSD, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether narrative therapy is an effective treatment for anxiety.

Neurolinguistic programming (NLP)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Neurolinguistic programming (NLP) was developed in the 1970s. It was based on observing people who were thought to be expert therapists. NLP tries to teach people to use language in a similar way to these people. In this way they may also be effective therapists.

How is it meant to work?

NLP emphasises changing the language we use. This may then change the way we see ourselves and the things that happen to us. In NLP, a therapist uses specific patterns of communication with a person. This may include matching their preferred sensory mode – vision, hearing or touch. Some NLP techniques involve asking people to watch themselves experiencing traumatic events at a distance (e.g. as if in a movie). They may then be asked to process the experience differently.

The aim is to change negative and self-defeating perceptions into positive ones. This helps to change the way a client interprets their world. In this way, NLP aims to reduce anxiety.

Does it work?

Panic disorder and agoraphobia

One small study compared NLP to cognitive behaviour therapy (CBT, see page 29) for panic disorder. The results showed that both treatments improved symptoms, but there was no difference between the treatments.

Specific phobias

In one study, NLP was used to treat people with claustrophobia who had to undergo a brain scan in an enclosed scanner. In this study, 50 people who had refused an MRI because of claustrophobia had an NLP session. After the session, 38 people were then able to undergo the MRI. These people were also less anxious. However, since there was no comparison group it is not possible to say how effective the NLP was.

Another small study looked at the benefit of NLP for height phobia. It showed that a single session was better than a 15-minute meditation at reducing height phobia symptoms.

Other types of anxiety

There is no evidence on whether NLP works for GAD, PTSD, social anxiety disorder or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether NLP is effective for anxiety.

Observed and experiential integration (OEI)

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Observed and experiential integration (OEI) involves covering and uncovering a single eye at a time or moving the eyes back and forth. This is done while experiencing a disturbing thought, feeling or memory. It also includes observation of differences between the two eyes' perceptions.

How is it meant to work?

In OEI, people may experience changes in thoughts, emotions, and physical sensations, depending on which eye they cover. This is thought to help people see life situations differently or more accurately. This may help to reduce anxiety.

Does it work?

PTSD

One very small study has compared OEI with no treatment in people with PTSD. There were three 1-hour sessions. Anxiety symptoms were reduced more in the OEI group.

Other types of anxiety

There is no evidence on whether OEI works for GAD, panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether OEI is effective.

Present-centred therapy (PCT)

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	👍	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Present-centred therapy (PCT) is a psychological therapy for PTSD. In comparison to other types of therapy, it does not focus on the trauma. It focuses on a person's present life circumstances and the connection between PTSD symptoms and day-to-day challenges. It also teaches the use of effective strategies to help people deal with these.

How is it meant to work?

PCT works by improving coping skills so a person can cope better with day-to-day life. This can help to reduce anxiety.

Does it work?

PTSD

One review has pooled the results of five studies of PCT for PTSD. PCT was as effective as other treatments, including behaviour therapy (see page 26), cognitive behaviour therapy (see page 29), and cognitive processing therapy (see page 30). PCT was also more effective than no treatment in three studies.

Other types of anxiety

There is no evidence on whether PCT works for GAD, panic disorder, social anxiety disorder, specific phobias or OCD.

Recommendation







There is emerging evidence to suggest PCT works for PTSD. There is no evidence to support its effectiveness for other types of anxiety.

Psychoanalysis

Psychoanalysis focuses on the unconscious patterns in the mind and the roles these play in psychological problems. Unconscious patterns include thoughts and feelings of which a person is not aware. There are many different types of psychoanalysis. In traditional psychoanalysis, a person may see a therapist three to five times per week and the therapy may last for a number of years. Often the person lies on a couch during psychoanalytic sessions. Psychoanalysis is a particular type of psychodynamic psychotherapy and is covered in the following entry.

Psychodynamic psychotherapy

Evidence rating

GAD		Panic disorder and agoraphobia	
PTSD		Specific phobias	
Social anxiety disorder		OCD	

What is it?

Psychodynamic psychotherapy focuses on the unconscious patterns in the mind and the roles these play in psychological problems. Unconscious patterns include thoughts and feelings of which a person is not aware. Short-term psychodynamic psychotherapy usually takes about 20-30 weeks. Long-term psychodynamic psychotherapy can take more than a year and, in some cases, it takes many years. Psychoanalysis is a type of long-term psychodynamic psychotherapy. In psychoanalysis, the person may lie on a couch and talk about whatever is going through their mind. However, most often in psychodynamic psychotherapy the person and therapist sit and talk to each other face-to-face, in a similar way to other types of psychological therapy.

How is it meant to work?

In psychodynamic psychotherapy, therapists work with a person's thoughts, images and feelings. The therapist's relationship with the person is also used to understand emotional problems that the person is not aware of. These are often issues related to experiences early in life. By making the person more aware of these unconscious conflicts, they can deal with them. This can help to resolve issues that can cause anxiety.

Does it work?

GAD

Several studies have tested the effectiveness of short-term psychodynamic psychotherapy in treating GAD. Most of these suggest that it is helpful. However, the studies have mostly not been good-quality. Some used groups of people with different types of anxiety. Others have not used large enough numbers of people or comparison groups.

Psychodynamic psychotherapy continued over page.

Psychodynamic psychotherapy (continued)

Psychodynamic psychotherapy has also been compared with cognitive behaviour therapy (CBT, see page 29) in two small studies. In one study, the results showed that while both types of therapy improved symptoms, CBT was more effective. A second study also compared short-term psychodynamic psychotherapy and CBT. Both types of therapy helped reduce anxiety symptoms, although CBT was better at reducing worry and depression. Another small study compared psychodynamic psychotherapy alone, medication alone and combined treatment. All treatments were equally effective.

PTSD

One small study compared psychodynamic psychotherapy, systematic desensitisation (see page 54), hypnotherapy (see page 37) and no treatment in people with PTSD. Results showed that all three treatments were more effective than no treatment.

Social anxiety disorder

A review pooled findings from three small studies. It found that psychodynamic psychotherapy was better than no treatment, but not better than CBT.

Panic disorder and agoraphobia

One review pooled findings from two small studies that tested the effect of psychodynamic psychotherapy on panic disorder. Panic symptoms improved more than with no treatment, but there was no difference from placebo (dummy) treatment.

Other types of anxiety

There is no evidence on whether psychodynamic psychotherapy works for specific phobias or OCD.

Are there any risks?

No major risks are known. However, the long-term therapy can be expensive and time consuming. It might be important to consider whether a short-term treatment might be as effective, if not more so.

Recommendation

Psychodynamic psychotherapy is a promising treatment for GAD and social anxiety disorder. However, some larger studies need to be done before we can be more confident of this. It is not yet known whether psychodynamic psychotherapy works for other types of anxiety.

Psychoeducation

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	👍	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Psychoeducation involves giving people information to help them understand anxiety, its causes, treatments, and strategies to cope. It can be given via leaflets, emails or websites, or by a therapist to families, groups or individuals face-to-face. Psychoeducation is cheaper and easier to deliver than many other psychological interventions.

How is it meant to work?

Psychoeducation helps people to develop better knowledge about anxiety and how they can deal with symptoms.

Does it work?

GAD

One good-quality study has evaluated psychoeducation for GAD. The study compared group psychoeducation, group mindfulness-based cognitive behaviour therapy (see page 40), and usual care from a general practitioner. Psychoeducation was given by a therapist for eight weeks and included homework tasks. The study found that psychoeducation was more effective than usual care. It was also as effective as the mindfulness-based treatment.

PTSD

One study pooled findings from eight studies of group psychoeducation for PTSD. In all studies, psychoeducation was given in multiple sessions with a therapist. It showed that psychoeducation was more effective than usual care. However, the studies were of variable quality.

Social anxiety disorder

One small study tested the effect of adding psychoeducation to computer-aided cognitive behaviour therapy (CBT, see page 29). Half the participants were given psychoeducation by a therapist in a 90-minute session. All participants then received 10 weeks of internet-based CBT, with support by a therapist. The psychoeducation session did not improve anxiety levels.

Psychoeducation continued over page.

Psychoeducation (continued)

Panic disorder and agoraphobia

One small study tested the effectiveness of a psychoeducational brochure in people with panic disorder. All participants received an antidepressant (see page 61) and half were also given the brochure. The group given the brochure improved more after three weeks, but the benefit did not last three months later.

Specific phobias

One small study compared psychoeducation with one session of exposure (see page 26) or no treatment in children with a specific phobia. Psychoeducation was given by a therapist to individual children. Psychoeducation was found to be beneficial, and the benefit was maintained a year after treatment.

OCD

One good-quality study compared a self-help version of metacognitive training (MCT, see page 39) with psychoeducation. The psychoeducation was given as a pdf with no therapist contact. Both treatments reduced OCD symptoms, but psychoeducation was less effective than MCT.

Are there any risks?

It is possible that detailed health information could increase anxiety and worry for some people.

Recommendation

Group psychoeducation is a promising treatment for PTSD. There is not enough evidence to say whether it is helpful for other types of anxiety.

Rational emotive therapy (RET)

In rational emotive therapy (RET), a person works with a therapist to look at unreasonable beliefs that may stop them achieving their goals and lead to anxiety. They then work to replace these with more reasonable beliefs. This is done by challenging beliefs through philosophical discussions with the therapist and experimenting with new types of behaviour. This is a type of cognitive behaviour therapy and is covered on page 29.

Reconsolidation of traumatic memories (RTM)

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

In reconsolidation of traumatic memories (RTM) treatment, a person's traumatic memory is reactivated. The person is then asked to modify the memory by changing aspects of it, such as colour, perspective or safety-related information.

How is it meant to work?

Changing aspects of a traumatic memory may help to reduce PTSD symptoms such as nightmares and flashbacks.

Does it work?

PTSD

Two small studies have compared RTM with no treatment in people with PTSD. Treatment involved three 120-minute sessions delivered within a week. Both studies found RTM was more effective than no treatment.

Other types of anxiety

There is no evidence on whether RTM works for GAD, panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether RTM is effective for anxiety.

Relationship therapy

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Relationship therapy aims to help an anxious person by improving their relationship with their partner. Both partners come for a series of counselling sessions over a period of eight to 24 weeks. A person does not have to be married to use this approach, but needs to be in a long-term relationship.

How is it meant to work?

Relationship therapy has three main aims. The first is to reduce negative interactions between partners, such as arguments, criticisms and abuse. The second aim is to increase supportive interactions, such as praise, empathy, forgiveness and problem solving. The third is to make sure that the partner is not doing anything to keep the anxious person from overcoming their problems. By changing the couple's behaviour in a positive way, it is believed that their satisfaction with their relationship will improve, and this will help the partner who is anxious.

Does it work?

There have been no studies testing whether relationship therapy that focuses on intimate relationships works for anxiety. However, there have been a large number of studies on involving partners to assist with cognitive behaviour therapy (see page 29) or behaviour therapy (see page 26). This involves the partner assisting directly with the treatment program and appears to be an effective approach.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether relationship therapy works for anxiety.

Reminiscence therapy

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Reminiscence therapy has been used mainly with older people with anxiety. It involves encouraging people to remember and review memories of past events in their lives. Reminiscence therapy is generally delivered in a group format, where people are encouraged to share memories with others. It can also be used in a more structured way, sometimes called 'life review'. This involves focusing on resolving conflicts and regrets linked with past experiences. The person can take a new perspective or use strategies to cope with thoughts about these events.

How is it meant to work?

Reminiscing might be particularly important during later life. It is thought that how you feel about your own 'life story' can strongly affect your wellbeing. Resolving conflicts and developing feelings of gratitude are thought to help reduce feelings of anxiety.

Does it work?

PTSD

One very small study tested group reminiscence therapy in older people with PTSD. One group received six months of group reminiscence therapy and then six months of group supportive counselling (see page 53). The other group received six months of group supportive counselling then six months of group reminiscence therapy. Symptoms improved with both treatments. However, there was no comparison group that did not receive treatment.

Other types of anxiety

There is no evidence on whether reminiscence therapy works for GAD, panic disorder, social anxiety disorder, specific phobias or OCD.



Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether reminiscence therapy is effective.

Social skills training (SST)

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	 For children and adolescents  For adults	OCD	?

What is it?

Social skills training (SST) is mainly used for social anxiety disorder. It involves learning how to interact in social situations with the help of a therapist. Sometimes SST is used on its own. However, it is more often used as part of cognitive behaviour therapy (CBT, see page 29) package.

How is it meant to work?

Some people with social anxiety disorder may not know how to act in some social situations. SST teaches them these skills. Other people may have the social skills but be afraid to use them. For these people, SST gives them a chance to practise using their skills in a non-threatening situation.

Does it work?

Social anxiety disorder

The effect of SST, on its own and combined with psychological treatments, has been tested in people with social anxiety disorder. No studies have compared SST on its own with no treatment. However, a number of small studies have compared it to other psychological therapies. These have shown mixed results. Two studies found that it worked as well as CBT and another found that it did not. One study found that it worked as well as behaviour therapy.

Several small studies have tested the effect of adding SST to psychological therapy in adults. These have had mixed results. Two studies found the addition of SST to behaviour therapy (see page 26) or CBT to be helpful. Two other studies did not find that adding SST to behaviour therapy was helpful.

One review pooled findings from 14 small studies of the effect of combined CBT and SST on social anxiety in children and adolescents. The addition of SST to CBT was found to be beneficial.

Social skills training (SST) continued over page.

Social skills training (SST) (continued)

Other types of anxiety

There is no evidence on whether social skills training works for GAD, panic disorder, PTSD, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is promising evidence that combined SST and CBT is helpful for social anxiety disorder in children and adolescents. There is not enough good evidence to say whether SST on its own or combined with other psychological therapies works for social anxiety disorder in adults.

Solution-focused therapy (SFT)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Solution-focused therapy (SFT) is a brief therapy that helps people focus on solutions rather than their problems.

How is it meant to work?

SFT uses people's strengths and resources to help them make positive change. This may be useful for people with anxiety if their symptoms are related to specific situations or problems.

Does it work?

One good-quality study compared SFT with brief guided parent-delivered cognitive behaviour therapy (see page 29) for children with anxiety. Both treatments equally improved symptoms.

GAD

One very small study examined the effect of brief SFT delivered to a group of people with GAD. SFT was found to improve symptoms. However, there was no comparison group that did not receive treatment.

Other types of anxiety

There is no evidence on whether SFT works for panic disorder, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough research to say whether SFT is helpful for anxiety.

Spiritually-based interventions

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What are they?

Spiritually-based interventions include those that involve religious or spiritual ideas in psychological interventions. Some of these focus on one religion while others involve spiritual teachings found across different religions.

How are they meant to work?

For some people, religious or spiritual issues might contribute to anxiety. Other people might use faith as a source of strength and support for meeting treatment goals.

Do they work?

GAD

Several small studies have tested spiritually-based interventions in people with GAD. These have had mixed results. One study found a spiritually-based intervention to be more helpful than supportive counselling (see page 53). Another found no difference between a spiritually-based intervention and cognitive behaviour therapy (see page 29). One study tested Buddhist counseling for Buddhists with GAD. It was found to be helpful, but there was no comparison group that did not receive treatment.

PTSD

One small study compared a spiritually-based intervention with no treatment in women with trauma-related distress. The intervention involved discussing spiritual struggles related to abuse and developing spiritual coping resources. It was found to be beneficial for up to three months.

Other types of anxiety

There is no evidence on whether spiritually-based interventions work for panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether spiritually-based interventions are helpful for anxiety.

Supportive counselling

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Supportive counselling is a type of psychological therapy that aims to help a person to function better by providing personal support. In general, the therapist does not ask the person to change; rather they act as a support person, allowing the person to reflect on their life situation in an environment where they are accepted.

How is it meant to work?

It is thought that, for some people with long-term problems, the most helpful approach is to provide them with a reliable, accepting environment. This helps them cope with the challenges of day-to-day life and is especially useful for dealing with long-term problems that are difficult to change. This supportive relationship is critical to helping them to cope better with these problems.

Does it work?

GAD

Several studies have compared supportive counselling to other types of therapy, including cognitive behaviour therapy (CBT, see page 29) and spiritually-based interventions (see page 52) for people with GAD. These other treatments were more effective than supportive counselling. There are no studies comparing supportive counselling to no treatment.

PTSD

Many studies have compared supportive counselling to CBT in people with PTSD. These studies found that it did not work as well as CBT. One study compared supportive counselling with no treatment. This study found that supportive counselling worked better.

Social anxiety disorder

One study pooled findings from two studies that tested supportive counselling in people with social anxiety disorder. It found that supportive counselling was not more effective than no treatment. Several studies have compared supportive counselling to CBT and found that it did not work as well. One study compared it to interpersonal psychotherapy (see page 38) and found no difference in effects.

Panic disorder and agoraphobia

One study pooled findings from three small studies. It suggested that supportive counselling was better than no treatment. It also found weak evidence for no difference between supportive counselling and CBT.

Specific phobias

One small study has been done on school phobia in children. This found that supportive counselling was as effective as CBT. There are no studies comparing supportive counselling to no treatment.

Other types of anxiety

There is no evidence on whether supportive counselling works for OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether supportive counselling works for anxiety. However, it does not work as well as CBT for most types of anxiety.

Systematic desensitisation

Systematic desensitisation involves gradually exposing a person to fearful mental images and thoughts or to actual situations, while the person has relaxed using relaxation training. This is a type of behaviour therapy and is covered on page 26.

Time perspective therapy (TPT)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Time perspective therapy (TPT) helps people learn to think differently about past, present and future.

How is it meant to work?

According to TPT, people have different perspectives on time. For example, when thinking about the past, some people focus on the good things that happened, whereas others focus on what went wrong. Similarly, when thinking about the present and future, some people feel they have little control over what happens, whereas others plan for the future. The aim of TPT is to create a better balance of these different time perspectives, so that the person does not focus heavily on one.

Does it work?

OCD

One small study compared TPT, acceptance and commitment therapy (see page 23), narrative therapy (see page 43) and no treatment in people with OCD. TPT was not more helpful than no treatment and was not as helpful as the other therapies.








Other types of anxiety

There is no evidence on whether TPT works for GAD, panic disorder, PTSD, social anxiety disorder or specific phobias.

Recommendation

There is not enough evidence to say whether TPT works for anxiety.

Virtual reality exposure (VRE) therapy

Evidence rating			
GAD		Panic disorder and agoraphobia	
PTSD		Specific phobias	 For fear of flying
			 For other phobias
Social anxiety disorder		OCD	

What is it?

Exposure therapy (see page 26) aims to reduce anxiety by having the person confront what they fear. Exposure can be carried out in different ways, such as in real life or using imagery. Another way is using virtual reality, where the person is exposed to a computer-generated environment. This simulated environment changes in a natural way depending on the person's head or body movements. Getting the exposure through virtual reality has a number of advantages. The person can be exposed safely (e.g. to spiders or heights) in a convenient and private location (e.g. an office). For some feared situations (e.g. flying), it is cheaper to use virtual reality than real life exposure. Virtual reality exposure (VRE) therapy is mainly used in the treatment of phobias. However, it has been used with some other types of anxiety. This treatment is provided by practitioners with specialist equipment.

How is it meant to work?

Through exposure to a feared situation, the person gets used to that situation. Their fear reduces and their sense of control improves as they feel less need to avoid the situation.

Does it work?

GAD

One small study compared VRE therapy to no treatment. VRE therapy was not better.

PTSD

VRE therapy has been used to treat PTSD, particularly in war veterans. Several small studies have showed that VRE as part of cognitive behaviour therapy (CBT, see page 29) improved PTSD symptoms more than no treatment. However, no difference was found between VRE therapy and other forms of exposure therapy.

Social anxiety disorder

Pooling findings from three small studies showed that VRE therapy was more effective than no treatment. However, no difference was found between VRE and other forms of exposure therapy.

Panic disorder and agoraphobia

Pooling data from five small studies showed that including VRE therapy as part of CBT improved symptoms. It worked better than no treatment and its effects were similar to those of real-life exposure.

Specific phobias

VRE therapy has been used to treat various types of specific phobias, particularly fear of heights, flying and spiders. Results have been mixed. A pooling of data from two studies in people with a fear of heights found that VRE therapy was not more effective than no treatment in reducing anxiety. Pooling data from five small studies involving people with a fear of flying showed that VRE therapy was more helpful than no treatment. It was as effective as other treatments, including (CBT or behaviour therapy, see page 26). Pooling data from two studies involving participants with spider phobia showed that VRE therapy was not helpful.

Other types of anxiety

There is no evidence on whether VRE therapy works for OCD.

Are there any risks?

None are known.

Recommendation

VRE therapy seems to work for some types of specific phobias, such as fear of flying. It may also be helpful for PTSD, social anxiety disorder and panic disorder, although more research is needed. There is not enough evidence to say whether it works for other types of anxiety.

Medical interventions



5-HT3 blockers

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



5-HT3 blockers may cause dry mouth, constipation, headache, stomach problems, nausea and dizziness.

What are they?

5-HT3 blockers are usually used to treat nausea and vomiting caused by cancer treatment or surgery. They can only be prescribed by a doctor. Examples include ondansetron and granisetron.

How are they meant to work?

5-HT3 blockers affect the action of brain chemicals related to mood, memory, learning and concentration.

Do they work?

GAD

A small study compared a 5-HT3 blocker (ondansetron) with a benzodiazepine (see page 66) or placebo (dummy pills) in people with GAD. Treatment lasted for eight weeks. Ondansetron was as effective as a benzodiazepine and more effective than placebo. Another small study compared three different doses of another 5-HT3 blocker (tropisetron) with placebo in people with GAD. People in the highest dose group had lower symptoms after three weeks.

Panic disorder and agoraphobia

One small study has tested the effect of ondansetron in people with panic disorder. The treatment lasted for 12 weeks. Symptoms were reduced at the end of treatment. However, there was no comparison group in this study.

OCD

Several small studies have compared the effects of adding a 5-HT3 blocker or placebo to other treatments for people with OCD. These have all shown some benefits of 5-HT3 blockers. One small study tested the effects of ondansetron in people with OCD who were not taking other medications. Their symptoms improved. However, there was no comparison group.

Other types of anxiety

There is no evidence on whether 5-HT3 blockers work for PTSD, social anxiety disorder or specific phobias.

Are there any risks?

5-HT3 blockers may cause dry mouth, constipation, headache, stomach problems, nausea and dizziness.

Recommendation

There is some promising research about the effect of 5-HT3 blockers for OCD, but better-quality studies are needed. There is not enough evidence to say whether 5-HT3 blockers are effective for other anxiety disorders.

Alpha-1 adrenergic blockers

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	👍	Specific phobias	?
Social anxiety disorder	?	OCD	?



Alpha-1 adrenergic blockers may cause low blood pressure, headaches, dizziness, lack of energy, weakness, palpitations and nausea. They should be avoided by people with low blood pressure and angina.

What are they?

Alpha-1 adrenergic blockers are usually used to treat high blood pressure or prostate problems. Examples include Prazosin and Doxazosin. They can only be prescribed by a doctor.

How are they meant to work?

Alpha-1 adrenergic blockers limit the action of brain chemicals related to alertness, arousal and 'readiness for action'.

Do they work?

PTSD

Several small studies have compared the effects of adding an alpha-1 adrenergic blocker (Prazosin) with placebo (dummy pills) to other treatments for people with PTSD. Pooling the results of some of these studies suggests that alpha-1 adrenergic blockers are helpful for people with PTSD, particularly for sleep disturbance.

Other types of anxiety

There is no evidence on whether alpha-1 adrenergic blockers work for GAD, panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

Alpha-1 adrenergic blockers may cause low blood pressure. Other common side-effects include headaches, dizziness, lack of energy, weakness, palpitations and nausea.

Recommendation

There is promising research about the benefits for adding alpha-1 adrenergic blockers to other treatments for PTSD. No studies have examined this treatment in other types of anxiety.

Amantadine

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Side-effects include nausea, stomach upset, dizziness, dry mouth, headache and sleep problems.

What is it?

Amantadine was originally used to prevent and treat influenza (flu). It is also used to treat Parkinson's disease. It can only be prescribed by a doctor.

How is it meant to work?

Amantadine acts on the brain chemicals that have a role in memory, learning, concentration and emotions.

Does it work?

OCD

One good-quality study has tested the effect of adding amantadine or placebo (dummy pills) to an antidepressant (see page 61) in people with moderate to severe OCD. People in the amantadine group had lower symptoms after 12 weeks.

Other types of anxiety

There is no evidence on whether amantadine works for other types of anxiety.

Are there any risks?







Common side-effects of amantadine include nausea, stomach upset, dizziness, dry mouth, headache and sleep problems.

Recommendation

There is some research suggesting that amantadine may be helpful for OCD. However, more studies are needed. There are no studies on the use of amantadine for other types of anxiety.

Anti-convulsant drugs

Evidence rating

GAD		Panic disorder and agoraphobia	
PTSD		Specific phobias	
Social anxiety disorder		OCD	 When added to antidepressants



Side-effects of these drugs include the risk of developing a serious rash, dizziness, feeling sedated (sleepy), nausea and weight gain. Prolonged use of pregabalin can cause dependence (or addiction).

What are they?

Anti-convulsant drugs are mainly used in the treatment of epilepsy. However, they are also used as mood stabilisers, which means that they help to reduce intense changes in mood. Some examples of anti-convulsants that have been used for anxiety are gabapentin (brand name Gabapentin) and pregabalin (brand name Lyrica). Anti-convulsants have mainly been used in bipolar disorder, as well as major depression that has not responded to other medications or psychological therapies. They have also been used for anxiety disorders, since depression frequently co-occurs with these conditions. These drugs can be used together with another medication, e.g. an antidepressant (see page 61), a benzodiazepine (see page 66) or on their own. These drugs can only be prescribed by a doctor.

How are they meant to work?

Anti-convulsants work by reducing excessive activity of neurons (nerve cells) in the fear circuits in the brain. It is not known exactly how they work, but the effect is to calm 'hyperactivity' in the brain.

Do they work?

GAD

Good-quality studies have compared anti-convulsants to placebo (dummy pills) as a short-term treatment for GAD (i.e. four to eight weeks). Pooling data from these studies shows that the anti-convulsant pregabalin is more effective than placebo in reducing anxiety symptoms. However, other anti-convulsants (such as tiagabine) have not been found to be effective compared to placebo. There are no good-quality studies of whether these drugs are helpful over longer periods of time.

PTSD

Several good-quality studies have compared anti-convulsants to placebo alone or when added to other medications in people with PTSD. Overall, anti-convulsants were not more effective than placebo.

Social anxiety disorder

Several good-quality studies have compared anti-convulsants to placebo with mixed findings. Three studies found that anti-convulsants pregabalin and gabapentin were more effective than placebo in reducing phobic symptoms. In two studies, the anti-convulsant levetiracetam was no more effective than placebo.

Panic disorder and agoraphobia

There have been three good-quality studies that have compared an anti-convulsant to placebo in people with panic disorder. In the larger study, treatment was given to 103 adults for eight weeks. The results showed no difference in panic symptoms between groups at the end of treatment. The other two studies had smaller numbers of people. Both of these showed that anti-convulsants were more effective than placebo.

Specific phobias

There is no evidence on whether anti-convulsants work for specific phobias.

Anti-convulsant drugs continued over page.

Anti-convulsant drugs (continued)

OCD

There have been no good-quality studies comparing an anti-convulsant to placebo in people with OCD. There is limited evidence from case studies that people who have been prescribed an anti-convulsant for OCD may experience some benefit. A review found five high-quality studies comparing adding an anti-convulsant or placebo to antidepressants in people with OCD that had not responded to treatment. Anti-convulsants were more effective than placebo.

Are there any risks?

Common side-effects of anti-convulsants include the risk of developing a serious rash, as well as feeling dizzy, heavily sedated (sleepy), nausea, tremor (shakes) and weight gain. Different types of anti-convulsants have different side-effects. Most side-effects lessen over time. Prolonged use of pregabalin can cause dependence (or addiction).

Recommendation

There are mixed results for the use of anti-convulsants for anxiety. Overall, the evidence is not as strong as for other treatments. There is evidence that these drugs are effective for GAD, but only in the short term and only for one type of anti-convulsant (pregabalin). There is evidence that adding anti-convulsants to antidepressants may be helpful in OCD. There are mixed findings as to whether these drugs work for social anxiety disorder and more research is needed in this area. These drugs do not appear to be effective for PTSD and panic disorder.

Anti-glucocorticoid (AGC) drugs

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Side-effects of these drugs include developing a rash, fatigue, constipation, changes in appetite and sleep problems.

What are they?

Anti-glucocorticoid (AGC) drugs reduce the body's production of cortisol which is a stress hormone. AGCs are prescribed by a doctor. Examples include mifepristone.

How are they meant to work?

High levels of anxiety, especially over long periods of time, can lead to over-activity of the body's stress system. This can cause the body to produce too much cortisol. It is believed that drugs that target the stress system might also help treat anxiety. Different AGCs work in different ways.

Do they work?

GAD

A small study compared the AGC drug mifepristone with placebo (dummy pills) in people aged over 60. After three or four weeks of treatment, people with higher cortisol levels were less anxious. People with normal or low cortisol levels did not benefit.

PTSD

The use of AGCs was studied in five women who had severe, long-lasting PTSD. All reported an improvement in general anxiety symptoms after taking the AGC drug, as well as some specific PTSD symptoms, such as nightmares, difficulty concentrating and feeling numb. However, there was no comparison group in this study and no long-term follow-up.

One very small study compared mifepristone with placebo in people with PTSD. After one-month people in the mifepristone group had less symptoms.

Anti-glucocorticoid (AGC) drugs continued over page.

Anti-glucocorticoid (AGC) drugs (continued)

Other types of anxiety

There is no evidence on whether AGCs work for panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

















AGCs can cause a number of side-effects, including rash, fatigue, constipation, appetite changes, and sleep problems.

Recommendation

There has not been enough research on whether AGCs are useful for treating anxiety.

Antidepressant drugs

Evidence rating

GAD	  	Panic disorder and agoraphobia	  
PTSD	  	Specific phobias	
Social anxiety disorder	  	OCD	  



Common side-effects of these drugs include headache, nausea, drowsiness and sexual problems. Some types of antidepressants have worse side-effects than others.

What are they?

Antidepressants are drugs that are mostly used to treat depression. These drugs can only be prescribed by a doctor. There are many different types of antidepressants. The types that are used the most are called selective serotonin re-uptake inhibitors (SSRIs). Some examples of SSRIs are sertraline (brand name Zoloft), escitalopram (Lexapro), citalopram (Cipramil), paroxetine (Aropax), fluoxetine (Prozac) and fluvoxamine (Luvox). There are also serotonin and noradrenaline reuptake inhibitors (SNRIs), such as venlafaxine (Efexor) and duloxetine (Cymbalta). Older style drugs that are still used are called tricyclic antidepressants and include imipramine (Tofranil) and clomipramine (Anafranil).

How are they meant to work?

Different types of antidepressants work in slightly different ways, but they all act on chemicals in the brain related to emotions and motivation.

Do they work?

GAD

Many good-quality studies show that antidepressants are more effective than placebo (dummy pills) in improving anxiety symptoms in adults with GAD. It is not clear whether one type of antidepressant is better than others, although one review suggests that venlafaxine, duloxetine and escitalopram may be most effective. Five good-quality studies have found antidepressants to be more effective than placebo in children and adolescents.

Antidepressant drugs continued over page.

Antidepressant drugs (continued)

PTSD

There have been a number of good-quality studies comparing an SSRI to placebo in adults with PTSD. A review that pooled the data from these studies found that SSRIs are more effective than placebo in the short term for reducing symptoms in adults with PTSD. The results suggested that some types of SSRIs (for example paroxetine, fluoxetine and sertraline) might be more effective than others. Two studies have also found that the SNRI drug venlafaxine is more effective than placebo for adults with PTSD. The handful of studies on antidepressants for children or adolescents with PTSD have shown mixed results.

Social anxiety disorder

A recent review has pooled the results of high-quality studies comparing antidepressants to placebo in adults with social anxiety disorder. These studies involve well over 5,000 adults. Overall, these studies show that antidepressants are more effective than placebo in the short term. A smaller number of studies also show longer-term benefits where the drugs have prevented relapse. A handful of good-quality studies in children and adolescents have shown that antidepressants are better than placebo in the short term.

Panic disorder and agoraphobia

A review of 41 good-quality studies shows that antidepressants are more effective than placebo in the short term for improving symptoms of panic disorder in adults. There are no good-quality studies of antidepressants for panic disorder in children or adolescents.

Specific phobias

There is no research testing whether antidepressants work for specific phobias.

OCD

A review of a number of studies, involving more than 3,000 adults, found that antidepressants were more effective than placebo in treating OCD. There have also been 11 studies that have tested antidepressants for OCD in children and adolescents. Pooling results from these studies shows that antidepressants are moderately effective. Some types of antidepressants (e.g. SSRIs and clomipramine [brand name Anafranil]) are more effective for OCD than others. They may also need to be given in higher doses and take longer to work.

Are there any risks?

Side-effects of antidepressants have been noted in people who are taking these drugs for depression. As anxiety and depression often occur together it is important to be aware of possible side-effects. Some antidepressants have worse side-effects than others. SSRIs appear to have fewer side-effects than other types of antidepressants. Some common side-effects of SSRIs are mild headache, nausea, drowsiness and sexual problems. Some of these last for only a short time. Some adolescents and young people have higher rates of suicidal thinking compared to placebo groups when prescribed antidepressants for depression (although not for anxiety disorders). Extra caution is required for this age group.

There may be risks to an unborn child if SSRIs are taken in early pregnancy.







For everyone who begins taking an antidepressant, a doctor should frequently check if they are improving and whether there are side-effects.

Recommendation

Evidence indicates that antidepressants are effective for treating most types of anxiety.

Antihistamine drugs

Evidence rating

GAD		Panic disorder and agoraphobia	
PTSD		Specific phobias	
Social anxiety disorder		OCD	



Antihistamines can cause sedation

What are they?

Antihistamines are drugs that are commonly used to treat allergies. These drugs can make people feel drowsy and calm. It is for this reason that they have been used to treat anxiety. Some antihistamines can be bought without a prescription. However, people should consult their doctor about whether these drugs may be helpful for treating their anxiety disorder, and if so, which type of antihistamine to use.

How are they meant to work?

Antihistamines work by blocking the neurotransmitter (chemical messenger) histamine, which is involved in the body's alertness.

Do they work?

GAD

Reviews have pooled the results of good-quality studies that compared the antihistamine drug hydroxyzine to placebo (dummy pills) or another treatment in patients with GAD. Most studies lasted four weeks. The results showed that hydroxyzine is more effective than placebo in reducing anxiety symptoms, and just as effective as other types of anti-anxiety drugs (e.g. benzodiazepines, see page 66).

Other types of anxiety

There is no evidence on whether antihistamines alone work for panic disorder, PTSD, social anxiety disorder or OCD.

Are there any risks?







The most common side-effect is sedation. Other side-effects from high doses can include weakness and poor coordination.

Recommendation

There is evidence that the antihistamine hydroxyzine is helpful in the short term in reducing anxiety symptoms in people with GAD. There are no studies of this drug for the treatment of other types of anxiety disorders.

Antipsychotic drugs

Evidence rating

GAD		Panic disorder and agoraphobia	
PTSD		Specific phobias	
Social anxiety disorder		OCD	 As an additional treatment in people who have not responded to other treatment



Side-effects include dry mouth, weight gain, feeling sedated or drowsy, and movement problems in the limbs and face. Different antipsychotics may produce different side-effects.

What are they?

Antipsychotics are usually used to treat psychotic disorders, such as schizophrenia. They can only be prescribed by a doctor. Newer antipsychotic drugs (called 'atypical' antipsychotics) may also help to reduce anxiety symptoms. Older antipsychotics (called 'typical' antipsychotics) have more side-effects and are rarely used for treating anxiety disorders. Antipsychotics are usually used to treat more severe anxiety disorders that haven't responded to psychological therapies or other drugs. These drugs are most commonly used in combination with other drugs (e.g. antidepressants, see page 61) but can be used on their own.

How are they meant to work?

Different types of antipsychotics work in different ways, but they all act on chemicals in the brain.

Do they work?

GAD

A review pooled the results of three good-quality studies comparing the 'atypical' antipsychotic quetiapine to placebo (dummy pills). Quetiapine was more effective than placebo and as effective as antidepressants (SSRIs). However, more people dropped out of the studies due to the side-effects of quetiapine. Quetiapine has also shown benefit when added to other medications. Good-quality studies of other antipsychotics show mixed results.

Antipsychotic drugs continued over page.

Antipsychotic drugs (continued)

PTSD

Four small studies have compared an antipsychotic drug to placebo with mixed results. In one study, the antipsychotic was no better than placebo in reducing PTSD symptoms, but in the other three studies, the antipsychotic drug was more effective. Other small studies have compared adding antipsychotics or placebo to other medications (e.g. antidepressants or benzodiazepines). Most used risperidone. Antipsychotics were more effective in most of these studies.

Social anxiety disorder

Two small studies have compared an antipsychotic drug with placebo over eight weeks of treatment. One study showed that the antipsychotic drug was more effective than placebo, but the other study did not. Another study tested whether a single dose of an antipsychotic was better than placebo at reducing symptoms of anxiety associated with public speaking. The antipsychotic was no better than placebo and caused more unpleasant side-effects.

Panic disorder and agoraphobia

There has been one study comparing an antipsychotic drug with an antidepressant in adults with panic disorder. Both groups improved a similar amount. Another study compared adding an antipsychotic or placebo to an antidepressant. Adding the antipsychotic did not improve symptoms more than placebo.

Specific phobias

One study compared a single dose of an antipsychotic drug to a benzodiazepine or placebo. The treatments were given to people who were anxious prior to having minor dental surgery. The results showed that the antipsychotic drug was more effective than the other drug and placebo in reducing anxiety in the very short term (e.g. three hours after being taken).

OCD

There are no good-quality studies on whether antipsychotic drugs alone work for OCD. Several studies have tested the effects of adding an antipsychotic to existing treatments (such as medications or cognitive behaviour therapy (see page 29)). Most of these were small studies in people (including children) who had not responded to other treatment. These have shown benefits of antipsychotics. However, more research with longer follow-up is needed.

Are there any risks?







Common side-effects of antipsychotics include weight gain and increased risk of heart disease and diabetes. Some of these may need to be checked often. Others include dry mouth, feeling sedated or drowsy and movement problems in the limbs and face. There is some evidence that long-term use of antipsychotics for psychosis may potentially lead to brain shrinkage, although more research is needed to confirm this finding. Different antipsychotics may produce different side-effects.

Recommendation

Overall there is limited evidence for the effectiveness of antipsychotics alone to treat anxiety disorders. There is evidence that these drugs are helpful for people with GAD. There is emerging evidence that adding antipsychotics to other medications may be helpful in OCD and PTSD. There is not enough research on other types of anxiety disorder. More research is needed in this area.

Azapirone drugs

Evidence rating

GAD		Panic disorder and agoraphobia	
PTSD		Specific phobias	
Social anxiety disorder		OCD	



Side-effects include drowsiness, feeling dizzy, nausea, sleep problems (insomnia) and feeling lightheaded.

What are they?

Azapirones are drugs that are used to treat a range of mental health issues, including anxiety disorders, depression and psychosis. They can be used on their own, or with another drug (such as an antidepressant). The most commonly used azapirone is buspirone. These drugs can only be prescribed by a doctor.

How are they meant to work?

Azapirones work on chemicals in the brain. These drugs act in a similar way to benzodiazepines (see page 66) by working relatively fast to reduce anxiety symptoms. They usually take longer to work than benzodiazepines. However, unlike benzodiazepines, these drugs can be used for longer periods of time as they are not addictive.

Do they work?

GAD

A review pooled the results of good-quality studies that compared azapirones to either placebo (dummy pills) or another anti-anxiety drug. Azapirones were more than effective than placebo in most of the studies. However, they did not appear to be superior to other anti-anxiety drugs (e.g. benzodiazepines).

Social anxiety disorder

One small study gave adults with social anxiety disorder either buspirone or placebo for three months. The results showed no difference between groups in anxiety symptoms at the end of the study. Another study compared tandospirone with an antidepressant for eight weeks. Both groups improved.

Panic disorder and agoraphobia

Three good-quality trials have compared buspirone to placebo. In each study, buspirone was found to be no better than placebo in reducing panic attacks and anxiety symptoms.

Other types of anxiety

There is no evidence on whether azapirone drugs alone work for PTSD, specific phobias or OCD.

Are there any risks?

Azapirones can cause a number of side-effects, including drowsiness, dizziness, nausea, weakness, insomnia and lightheadedness.

Recommendation

There is mixed evidence for the effectiveness of azapirones for the treatment of anxiety disorders. These drugs appear to be effective for patients with GAD. However, they are not helpful for panic disorder. There is not enough evidence as to whether they are useful for social anxiety disorder.

Baclofen

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Baclofen may cause drowsiness, dizziness, weakness and fatigue.

What is it?

Baclofen is a drug used to treat painful muscle spasms caused by multiple sclerosis and injuries. It can only be prescribed by a doctor.

How is it meant to work?

Baclofen relaxes muscles. It may also reduce excessive activity of neurons (nerve cells) in the fear circuits in the brain.

Does it work?

PTSD

One very small study tested the effect of baclofen in people with PTSD. After eight weeks, some symptoms were reduced. However, there was no comparison group in this study. One small study compared the effect of adding baclofen or placebo (dummy pills) to an antidepressant (see page 61) in people with PTSD. Treatment lasted for eight weeks. People in the baclofen group had lower symptoms.

Other types of anxiety

There is no evidence on whether baclofen works for GAD, panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

Baclofen may cause drowsiness, dizziness, weakness and fatigue.

Recommendation

There is not enough research to say whether baclofen is effective for PTSD. No studies have examined this treatment in other types of anxiety.

Benzodiazepines

Evidence rating

GAD	👍👍	Panic disorder and agoraphobia	👍
PTSD	👎	Specific phobias	👎
Social anxiety disorder	👍	OCD	?



Prolonged use of benzodiazepines can cause dependence (or addiction). These drugs are also associated with a range of side-effects, including memory loss and drowsiness.

What are they?

Benzodiazepines (BZDs; also known as 'benzos') are used as a short-term treatment for intense anxiety. Common types of BZDs include alprazolam (brand name Xanax), clonazepam (Rivotril), diazepam (Valium) and oxazepam (Serepax). These drugs can only be prescribed by a doctor.

How are they meant to work?

BZDs work on chemicals in the brain. They may work by reducing excessive activity of neurons (nerve cells) in the fear circuits in the brain. They also relax muscles and help people sleep. These drugs tend to work very fast in reducing anxiety symptoms.

Do they work?

GAD

A review of a good-quality studies found that BZDs are generally more effective than placebo (dummy pills) in reducing anxiety symptoms. However, most studies only lasted for four weeks. This suggests that these drugs are only effective in the short term. There are no studies on the longer-term effectiveness of BZDs.

PTSD

Only a few small good-quality studies have tested BZDs for PTSD. The results suggest that BZDs are not more effective than placebo.

Benzodiazepines continued over page.

Benzodiazepines (continued)

Social anxiety disorder

Three good-quality studies have compared a BZD to placebo in people with social anxiety disorder. All found that the BZD was better than placebo in the short term (e.g. over three months). One good-quality study showed that adding clonazepam to an antidepressant (see page 61) was helpful in people whose social anxiety disorder had not responded to an antidepressant alone.

Panic disorder and agoraphobia

A number of good-quality studies have compared BZDs with placebo for the treatment of panic disorder (with and without agoraphobia). In the short term, these studies show that BZDs are more effective than placebo in reducing panic attacks and anxiety. They may also be as effective as antidepressants. However, most of the studies had small numbers of people in them. BZDs are not as effective as other drugs (e.g. antidepressants) in the longer term.

Specific phobias

Two good-quality studies have compared a BZD to placebo in people with specific phobias. In both studies, the BZD was better than placebo at reducing immediate anxiety levels. However, both studies showed poor outcomes when used over a longer period of time. After one week or three months, anxiety levels in the BZD groups had either returned to pre-treatment levels or become worse.

OCD

One small study compared a BZD to placebo in adults with OCD. Only three people had improved after 10 weeks of treatment. Overall, the BZD was not more effective than placebo.

Are there any risks?

Long-term use of benzodiazepines can cause addiction, and may impair cognition (e.g. cause problems with attention, memory or planning). There can also be a range of short-term side-effects: sleepiness, dizziness and headache.

Recommendation

There is evidence that benzodiazepines are effective in the immediate or short-term for reducing symptoms of GAD, panic disorder and social anxiety disorder. The evidence suggests that these drugs are not effective for specific phobias. There is not enough good-quality research as to whether they are useful for PTSD and OCD.

Beta-blockers

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Common side-effects of these drugs include nausea, diarrhoea, fatigue, dizziness, vision problems and poor concentration. These drugs should be avoided by people with asthma, as well as those with heart disease.

What are they?

Beta-blockers are drugs that can help reduce some symptoms of anxiety, such as a fast heart rate, rapid breathing or tremor (shakes). They are mainly used to treat heart conditions and high blood pressure. However, they are also used for social anxiety disorder and performance anxiety (e.g. stressful events such as public speaking or performing). They can only be prescribed by a doctor.

How are they meant to work?

Beta-blockers act on the body's 'fight-flight response'. They reduce a person's heart rate caused by over-excitement, physical activity or anxiety.

Do they work?

GAD

One study has tested the effects of beta-blockers in people with GAD. This showed benefits. However, there was no comparison group.

PTSD

There are low-quality studies in which beta-blockers have been used to treat PTSD in adults and children. The results of these studies are mixed, with only some showing benefit.

Beta-blockers continued over page.

Beta-blockers (continued)

Social anxiety disorder

One good-quality study compared a beta-blocker with placebo (dummy pills) in people with social anxiety disorder. Treatment lasted for four weeks. The beta-blocker was not better than the placebo. Another good-quality study compared a beta-blocker with placebo or behaviour therapy (see page 26). The beta-blocker was no more effective than placebo and not as effective as behaviour therapy.

Panic disorder and agoraphobia

Four good-quality studies have tested the effect of beta-blockers on panic disorder (with or without agoraphobia). The findings were mixed. Some studies showed that the beta-blocker was no better than placebo in reducing anxiety symptoms or the number of panic attacks. Some studies showed that it was as good as other medications (e.g. benzodiazepines, see page 66).

Specific phobias

Two good-quality studies have tested the effect of beta-blockers on specific phobias. One of these studies was in people with dental phobia. In this study, the beta-blocker reduced anxiety during dental treatment. The other study was in people with spider or snake phobia. This did not show any benefit.

Other types of anxiety

There is no evidence on whether beta-blockers work for OCD.

Are there any risks?

Beta-blockers can cause a range of side-effects, including nausea, diarrhoea, fatigue, dizziness, vision problems and poor concentration. However, most people can cope with these side-effects. These drugs should be avoided by people with asthma as they can affect the bronchial muscle. They should also be avoided by people with heart disease.

Recommendation

There is mixed evidence on beta-blockers for anxiety disorders. The evidence suggests that these drugs are not effective for social anxiety disorder. There is not enough good-quality research to say whether they are useful for other anxiety disorders.

Bupropion

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Side-effects skin reactions, headache, dizziness, sleep problems and nausea.

What is it?

Bupropion was developed as an antidepressant. It is only approved in Australia to help people quit smoking. However, doctors may decide to prescribe it when other antidepressant drugs have not worked well.

How is it meant to work?

It acts on chemical messengers in the brain (dopamine and noradrenaline). These are thought to be involved in anxiety. Unlike other antidepressants such as SSRIs, it does not affect serotonin.

Does it work?

GAD

One small study has compared bupropion with an antidepressant (see page 61) in people with GAD. Bupropion was given for 12 weeks and was as effective as the antidepressant. However, this needs to be confirmed in a much larger study. There also needs to be a comparison with placebo (dummy pills).

PTSD

One small study has compared adding bupropion or placebo to other medications in people with PTSD. Bupropion was given for eight weeks. There were no differences between the groups.

Social anxiety disorder

One small study tested the effect of bupropion in people with social anxiety disorder. People took bupropion for 12 weeks and found it helpful. However, there was no comparison group in this study.

Bupropion continued over page.

Bupropion (continued)

Panic disorder and agoraphobia

One small study tested the effect of bupropion in people with panic disorder. People took bupropion for eight weeks and found it helpful. However, there was no comparison group in this study.

OCD

One very small study tested the effect of bupropion in people with OCD. People took bupropion for eight weeks. Some showed improvements, but others had more symptoms. However, there was no comparison group in this study.

Other types of anxiety

There is no evidence on whether bupropion works for specific phobias.

Are there any risks?







The most common side-effects are skin reactions, headache, dizziness, sleep problems and nausea. Unlike other antidepressants (e.g. SSRIs), sexual problems and drowsiness are less common. Rarely, it has been linked with seizures.

Recommendation

There is not enough evidence to say whether bupropion is helpful for anxiety.

D-Cycloserine

Evidence rating

GAD		Panic disorder and agoraphobia	
PTSD		Specific phobias	
Social anxiety disorder		OCD	



Side-effects can include headache and irritability, and in more extreme cases, convulsions and depressive symptoms.

What is it?

D-Cycloserine (DCS) is an antibiotic that has mainly been used in the treatment of tuberculosis. This drug can only be prescribed by a doctor.

How is it meant to work?

Research indicates that DCS can stimulate or improve learning. It is not used on its own. Rather, it is taken before sessions of exposure therapy (see page 26) or cognitive behaviour therapy (CBT, see page 29), to help the person learn that the thing they fear is safe. DCS works by enhancing neurotransmitters, which helps to decrease over-activity of the central nervous system.

Does it work?

Panic disorder and agoraphobia

Four good-quality studies compared DCS or placebo (dummy pills), added to psychological therapies for people with panic disorder. The medications (DCS or placebo) were given one hour before the therapy sessions. The results showed that DCS may speed up the response to treatment but did not have lasting benefit.

PTSD

Several studies have compared DCS or placebo, combined with psychological therapies in people with PTSD. Pooling the results from these studies showed no benefit from DCS.

D-Cycloserine continued over page.

D-Cycloserine (continued)

Social anxiety disorder

Several trials have compared DCS or placebo, added to psychological therapy for people with social anxiety disorder. Most of the studies have shown benefit.

Specific phobias

Several studies have tested the effect of DCS in people with specific phobias, including heights, spiders and snakes. The results of these studies are mixed.

OCD

A recent study pooled the results of studies of comparing adding DCS or placebo to CBT (see page 29) for people with OCD. There was no difference between the DCS and placebo groups at the end of treatment.

Other types of anxiety

There is no evidence on whether DCS works for GAD.

Are there any risks?


Side-effects can include headache and irritability, and in some cases, convulsions, psychosis and depression. However, very low doses of DCS are used in treatment, so the risk of side-effects is usually low.

Recommendation

More recent studies suggest that DCS is not effective for panic disorder, PTSD and OCD. There may be some benefit for social anxiety disorder. There are mixed findings for the effectiveness of DCS in specific phobias. No studies have examined this treatment for GAD.

Deep brain stimulation (DBS)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	 For severe OCD that hasn't responded to other treatment



Serious risks are associated with DBS, including infection from the surgery, damage to the brain, which might affect movement, memory, or the senses, and changes in personality.

What is it?

Deep brain stimulation (DBS) is a type of brain stimulation. It requires surgery to implant a device (called a 'brain pacemaker') and wiring under the skin into the chest, neck and brain. The pacemaker is usually placed under the skin near the shoulder. Wiring then goes from the pacemaker, into the neck and then connects to an 'electrode' that is placed in the brain. This sends electric impulses to the part of the brain that needs stimulating. Different brain areas are targeted for different disorders. DBS has mostly been used for people with Parkinson's disease. With anxiety disorders, DBS has mainly been used to treat severe OCD that has not responded to other treatments.

How is it meant to work?

It is not known exactly how DBS works, other than stimulating parts of the brain.

Does it work?

PTSD

A case study of one person with severe PTSD showed benefit without serious adverse events.

OCD

There have been several small good-quality studies of DBS for severe OCD. Pooling the results of these studies suggests that DBS is helpful for OCD. However there were a number of serious negative effects reported in the studies, including one person who had a brain haemorrhage (bleeding). Studies following up a small number of people suggest that the benefits may be long-term.

Deep brain stimulation (DBS) continued over page.

Deep brain stimulation (DBS) (continued)

Other types of anxiety

DBS has not been used in any studies of people with GAD, panic disorder, social anxiety disorder or specific phobias.

Are there any risks?

There are serious risks involved in DBS. These can include damage to the brain which might affect movement, memory, or the senses (e.g. seeing or hearing). It can also cause changes in personality. There are also risks of infection from surgery.

Recommendation

DBS appears promising for some people with severe, long-standing OCD that hasn't responded to other treatments such as exposure therapy or medication. But not all people benefit from DBS. More good-quality research is needed to understand on which parts of the brain and for which people DBS works best.

Electroconvulsive therapy (ECT)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Common side-effects of ECT are short-term confusion and memory problems.

What is it?

In electroconvulsive therapy (ECT), electrical currents are passed through the brain to cause a seizure. The treatment is given under a general anaesthetic, along with muscle relaxants. Usually a series of ECT treatments are given over several weeks. ECT is most often used for severe depression that has not responded to other treatments, or where there is a risk of suicide or refusal to eat or drink. It may also be used for severe anxiety that has not responded to other treatments. ECT may also be known as 'electroshock therapy'.

How is it meant to work?

It is not understood exactly how ECT works to treat anxiety, other than by stimulating parts of the brain.

Does it work?

PTSD

One study has tested ECT as a treatment for PTSD. Twenty people with severe PTSD that had not responded to other treatment, (e.g. antidepressant drugs, see page 61) or cognitive behaviour therapy (CBT, see page 29) received six ECT treatments, twice a week. The results showed that PTSD symptoms had reduced by the end of treatment. However, there was no comparison group (e.g. sham or fake ECT).

OCD

One study has compared ECT with an antidepressant drug in adults with severe OCD. The results showed that both treatments were helpful for 60 per cent of people. However, this was not a good-quality study.

Electroconvulsive therapy (ECT) continued over page.

Electroconvulsive therapy (ECT) (continued)

Other types of anxiety

There is no evidence on whether ECT works for GAD, panic disorder, social anxiety disorder or specific phobias.

Are there any risks?

The most common side-effects of ECT are confusion and memory problems. These usually only occur in the short term. There are also risks associated with having a general anaesthetic.

Recommendation

There is not enough good-quality evidence as to whether ECT is helpful for severe OCD or PTSD. ECT has not been tested in any other types of anxiety.

Glucocorticoid drugs

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	👍 In combination with exposure therapy	Specific phobias	👍 In combination with exposure therapy
Social anxiety disorder	?	OCD	?



Long-term use of these drugs can cause weight gain and easy bruising.

What are they?

Glucocorticoids are stress hormones that are released as part of the body's fight-or-flight system. There are drugs available that act like these hormones. These drugs can only be prescribed by a doctor.

How are they meant to work?

There is evidence that glucocorticoids can change memory processes, by making it easier to forget things. Traumatic or fearful memories are associated with PTSD and specific phobias. Glucocorticoids may make it harder to recall fearful memories and enhance the effect of exposure therapy (see page 26).

Do they work?

PTSD

Two small studies have compared glucocorticoid drugs to placebo (dummy pills) in men with PTSD. In both studies, the drug was paired with exposure therapy (see page 26). In the first study, people received either the drug or placebo at the same time as being asked to remember a trauma. They received one session per week for four weeks. One month after the study, people in the glucocorticoid group had more improvements in PTSD symptoms. However, the benefits were not seen at six-month follow-up. In the second study, people received eight sessions of treatment. People in the glucocorticoid drug group had lower symptoms at the end of the study.

Glucocorticoid drugs continued over page.

Glucocorticoid drugs (continued)

Social anxiety disorder

One small study compared glucocorticoid drugs to placebo in people with social anxiety disorder who were exposed to a stressful situation (performing in front of an audience). People who received the glucocorticoid drugs reported less fear and anxiety than the people in the placebo group. The same researchers also gave either a glucocorticoid drug or placebo to people who were not exposed to a stressful condition. There were no differences in fear symptoms between the two groups.

Specific phobias

Two good-quality studies have compared the effect of glucocorticoid drugs and placebo in people with spider phobias or fear of heights. In these studies, people were given either a glucocorticoid drug or a placebo an hour before a session of exposure therapy. This procedure was repeated between two and six times, depending on the study. People who received the glucocorticoid drugs had less phobia symptoms at the end of treatment and at follow-up.

Other types of anxiety

There is no evidence on whether glucocorticoid drugs are an effective treatment for GAD, panic disorder or OCD.

Are there any risks?

Prolonged use of glucocorticoid drugs can cause weight gain and easy bruising. It is not known whether these drugs cause other memory problems.

Recommendation

There is promising research that glucocorticoid drugs may be helpful for treating the fear and anxiety associated with specific phobias. There is some evidence that they may be helpful for people with PTSD. However more research is needed before we can be confident of the effectiveness of these drugs, either when used alone or with exposure therapy. Most studies show that they may temporarily reduce anxiety, rather than being helpful over longer periods of time.

Lithium

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Common side-effects include headaches, nausea, and feeling dazed. High levels of lithium in the blood can be toxic and cause more serious side-effects, including death. People taking lithium must have their blood monitored to make sure the dose is at a safe level.

What is it?

Lithium is a drug that is mainly used to treat bipolar disorder (previously called manic depression). It has also been used to treat depression. Because depression and anxiety often occur together, lithium may be used to treat severe anxiety disorders. Lithium can only be prescribed by a doctor. Lithium may be used in combination with other drugs. Here, we have reviewed studies in which lithium is used as the main treatment.

How is it meant to work?

It is not clear how lithium works to treat anxiety, other than to act on neurotransmitters (chemical messengers) in the brain.

Does it work?

PTSD

Lithium treatment for PTSD has only been examined in a series of case studies without comparison groups. The largest study involved 14 people who had not had any benefit from other drug treatments. Eight of the 14 people reported an improvement in nightmares, jumpiness ('startle responses') and feeling out of control. Of the remaining people, two did not improve on lithium and two stopped taking the drug due to side-effects.

Lithium continued over page.

Lithium (continued)

OCD

One small study compared the effect of adding lithium or thyroid hormone to an antidepressant (see page 61) in people with OCD. There were no differences in OCD symptoms between the groups.

Other types of anxiety

There is no evidence on whether lithium works for GAD, panic disorder, social anxiety disorder or specific phobias.

Are there any risks?

Common side-effects of lithium include headaches, nausea, and feeling dazed. High levels of lithium in the blood can be toxic and cause more serious side-effects, including tremor and convulsions, and in some cases death. People taking lithium must have their blood monitored to make sure the dose is at a safe level.

Recommendation

There is little evidence for the use of lithium as a treatment for anxiety.

Memantine

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Side-effects include tiredness, nausea, joint pain, dizziness, body aches and constipation.

What is it?

Memantine is usually used to treat Alzheimer's disease.

How is it meant to work?

Memantine is thought to work by blocking the brain chemical glutamate from sending its messages.

Does it work?

PTSD

A small study found memantine to be helpful in people with PTSD. However, there was no comparison group in this study.

OCD

A number of small studies have compared adding memantine or placebo (dummy pills) to antidepressants (see page 61) in people with OCD. Pooling the results from these studies showed that memantine was more helpful in reducing symptoms. Another larger good-quality study showed no benefit of memantine.

Other types of anxiety

There is no evidence on whether memantine works for GAD, panic disorder, social anxiety disorder or specific phobias.

Are there any risks?

Common side-effects of memantine include tiredness, nausea, joint pain, dizziness, body aches and constipation.

Recommendation

There is some research suggesting that memantine may be helpful for OCD. However, more studies are needed.

Psychosurgery (aka 'neurosurgery')

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



There are serious risks involved in psychosurgery, including damage to the brain, which might affect movement, memory, or the senses, and changes in personality. Psychosurgery cannot be reversed.

What is it?

In psychosurgery, a very small cut or burn (a 'lesion') is made to a part of the brain. In anxiety disorders, the lesions are made in the parts of the brain that control emotions. Psychosurgery has only been used for severe, chronic and very disabling OCD that has not improved with other types of treatment. It is considered a 'treatment of last resort' because the surgery cannot be reversed.

In Australia, psychosurgery must be approved by a State Psychosurgery Review Board (which might be named differently in each state or territory). Only certain neurosurgeons are allowed to perform this kind of surgery.

How is it meant to work?

It is not known exactly how psychosurgery works. It may work by 'interrupting' brain processes that are causing symptoms.

Does it work?

OCD

A number of studies have compared the severity of OCD symptoms before and after psychosurgery. In all studies, the people had severe, long-standing OCD that had not responded to other treatments. Overall, the studies show that many, but not all, people improve after the surgery. Some studies showed that the benefits lasted many years after the surgery.

Other types of anxiety

No studies have examined whether psychosurgery works for GAD, panic disorder, PTSD, social anxiety disorder or specific phobias.

Are there any risks?

There are many serious risks involved in psychosurgery. These can include damage to the brain, which might affect movement, memory, or the senses (e.g. seeing or hearing). It can also cause changes in personality. Psychosurgery cannot be reversed.

Recommendation

Psychosurgery has only been used in people with severe, chronic and disabling OCD. The evidence from these studies suggests there may be some benefit, but not for all people. Deep brain stimulation (DBS, see page 70) has mostly replaced psychosurgery as a treatment for severe OCD. This treatment has not been studied in people with other anxiety disorders.

Riluzole

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Side-effects include nausea, stomach upset, dizziness, numbness around the mouth and tiredness.

What is it?

Riluzole is used to treat a nerve disease called amyotrophic lateral sclerosis (ALS).

How is it meant to work?

Riluzole protects the nerves from too much of a natural substance called glutamate that may cause nerve damage.

Does it work?

GAD

One small study has tested the effect of riluzole in people with GAD. They took the drug for eight weeks and their symptoms showed improvement. However, there was no comparison group in this study.

OCD

Two small studies have tested the effect of adding riluzole or placebo (dummy pills) to an antidepressant (see page 61) in adults with moderate to severe OCD. One small study has tested this in children and adolescents. Results have been mixed, with possible benefits in some people but not others.

Other types of anxiety

There is no evidence on whether riluzole works for panic disorder, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

Side-effects include nausea, stomach upset, dizziness, numbness around the mouth and tiredness.

Recommendation

There is some research suggesting that riluzole may be helpful for OCD. However, more studies are needed.

Sirolimus

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Common side-effects of sirolimus include cold symptoms, headache and stomach pain.

What is it?

Sirolimus was originally used as an anti-fungal drug. It is also used to suppress the immune system after transplantation. It can only be prescribed by a doctor.

How is it meant to work?

Sirolimus may change the way memory works.

Does it work?

PTSD

One small study compared the effect of a single dose of sirolimus with placebo (dummy pills). The drug was given in a psychotherapy session that involved reactivation of traumatic memories. There were no differences between the groups.

Other types of anxiety

There is no evidence on whether sirolimus works for GAD, panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

No side-effects were found in the above study.

Recommendation

There is not enough evidence to say whether or not sirolimus works.

Stimulant drugs

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Side-effects include headache, insomnia, lack of appetite and nausea. Stimulants can be highly addictive and may lead to abuse or dependence. Because these drugs 'stimulate' the brain, they may trigger panic attacks or increase anxiety.

What are they?

Stimulants help improve alertness and energy levels and are usually used to treat attention deficit hyperactivity disorder (ADHD). They are rarely used to treat anxiety alone. They may be used to manage certain symptoms that may occur with anxiety, such as lack of energy or poor concentration. Only a doctor can prescribe these drugs.

Common types of stimulants include amphetamines, methylphenidate (brand name Ritalin) and modafinil.

How are they meant to work?

Most stimulants work by increasing the activity of neurotransmitters (chemical messengers) in the brain. The effect of these drugs is usually felt quite quickly.

Do they work?

PTSD

There are only case reports of the use of stimulants for treating PTSD. In one study, three people with combat-related PTSD who had not benefitted from a range of other medications were prescribed a stimulant. Each patient experienced an improvement in their PTSD symptoms, as well as their attention and ability to concentrate and focus at work or college. It is not clear how long these benefits lasted, or for how long the drugs were taken. In another case, an adult with PTSD experienced some improvement in symptoms after taking a stimulant drug for six weeks. However, the drug was prescribed to treat the person's obesity rather than their PTSD.

Other types of anxiety

There is no evidence on whether stimulant drugs work for GAD, panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

Side-effects include headache, difficulty sleeping, a lack of appetite and nausea. Because these drugs 'stimulate' the brain, there is the possibility that they may trigger panic attacks or increase symptoms of anxiety. Stimulants can be highly addictive and may lead to abuse or dependence in some people.

Recommendation

There is currently no good-quality evidence as to whether stimulant drugs are helpful for anxiety.

Thyroid hormones

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Thyroid hormones can cause side-effects including high blood pressure, heart problems, sweating, anxiety and trouble sleeping.

Are there any risks?

Thyroid hormones can cause side-effects including high blood pressure, heart problems, sweating, anxiety and trouble sleeping. Long-term treatment may cause bone problems.

Recommendation

There is not enough evidence to say whether thyroid hormones work.

What are they?

Thyroid hormones occur naturally in the body. They are involved in the way the body uses energy. When used as a treatment, thyroid hormones are usually supplied as a tablet. Thyroid hormones are prescribed by a doctor. They are usually used with antidepressants.

How are they meant to work?

Thyroid hormones affect cells and neurotransmitters (chemical messengers) in the brain. Abnormal thyroid hormone levels can cause changes in mood.

Do they work?

PTSD

One very small study has tested the effect of adding thyroid hormone to an antidepressant (see page 61) in people with PTSD. Adding thyroid hormone showed benefit. However, there was no comparison group in this study.

OCD








One small study tested the effect of adding thyroid hormone to an antidepressant in 16 people with OCD. Adding thyroid hormone showed no benefit.

Other types of anxiety

There is no evidence on whether thyroid hormones work for GAD, panic disorder, social anxiety disorder or specific phobias.

Transcranial magnetic stimulation (TMS)

Evidence rating

GAD		Panic disorder and agoraphobia	
PTSD		Specific phobias	
Social anxiety disorder		OCD	 



There is a low risk of seizure with TMS given the use of electric currents. TMS may cause headache and scalp pain.

What is it?

Transcranial magnetic stimulation (TMS) is a type of brain stimulation. A metal coil that contains an electric current is held to the side of the head. This produces a magnetic field that stimulates parts of the brain. TMS is usually given daily or several times a week. It is mainly used for people with severe and long-standing anxiety who have not benefited from other medical treatments or psychological therapies.

How is it meant to work?

It is not known exactly how TMS works, other than stimulating parts of the brain.

Does it work?

GAD

Three small studies have compared TMS with a sham (fake) treatment. The treatments were given across 10-30 sessions. Results showed an improvement in anxiety from the TMS compared with the sham treatment. Benefits remained for one to three months later.

PTSD

There have been several small studies testing TMS for adults with PTSD. Studies gave people 10-20 sessions of TMS or a sham treatment. Pooling the data from these studies showed that TMS reduced PTSD symptoms more than a sham treatment.

Social anxiety disorder

There are only case reports of TMS as a treatment for social anxiety disorder. Three adults showed reduced anxiety after the treatment. However, no scientific studies have been carried out.

Panic disorder and agoraphobia

Two small studies have given adults with panic disorder actual TMS or a sham treatment. Results were mixed. One study found no benefit from 10 sessions of TMS. The other study found 20 sessions of TMS over four weeks more helpful than the sham treatment.

Specific phobias

Two studies have looked at TMS for specific phobias with mixed results. One study tested a single session of a form of TMS in adults with a spider phobia. The treatment showed no benefits compared with a sham treatment. The second study tested two sessions of TMS in adults with a fear of heights. All participants were being treated with exposure therapy (see page 26). TMS reduced anxiety more than a sham treatment.

OCD

There have been 18 good-quality studies that have given adults with OCD either actual TMS or a sham treatment. A review pooled the findings from these studies and found actual TMS helpful for OCD. In six studies, benefits also remained up to four weeks after treatment ended.

Are there any risks?

There is a low risk of seizure with TMS. TMS may cause headache and scalp pain.

Recommendation

TMS appears to be a promising treatment for GAD and PTSD and an effective treatment for OCD. There is not enough evidence to say whether TMS is effective for treating panic disorder, social anxiety disorder or specific phobias.

Trigeminal nerve stimulation (TNS)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

Are there any risks?

TNS seems to be low risk. Headaches and skin irritation are the most common side-effects.

Recommendation

There is not enough evidence to say whether TNS works for anxiety.

What is it?

Trigeminal nerve stimulation (TNS) is a type of brain stimulation. It involves using electrical or magnetic signals to the trigeminal nerve, which sends signals from the face to the brain. TNS has mostly been used for people with severe depression or epilepsy.

How is it meant to work?

This is unclear, but it is thought to affect function in parts of the brain involved in symptoms of anxiety.

Does it work?

GAD

A case study tested the effect of TNS in a woman with GAD. Treatment involved 10 daily sessions in two weeks. Her symptoms improved.

PTSD

TNS has not been tested in people with PTSD only. However, a very small study tested the effect of combining TNS and medication in adults with PTSD and depression. The treatment lasted for eight weeks. PTSD symptoms improved at the end of the study. However, there was no comparison group.

Social anxiety disorder

A case study tested the effect of TNS in a man with social anxiety disorder. Treatment involved one session per day for 10 days. His symptoms improved.

Panic disorder and agoraphobia

A very small study tested the effect of combining 10 sessions of TNS with medication in adults with panic disorder. Symptoms improved at the end of the study and for one month after that. However, there was no comparison group.

Other types of anxiety

There is no evidence on whether TNS works for specific phobias or OCD.

Vagus nerve stimulation (VNS)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



There is a risk of infection from having surgery to insert the VNS device. Voice changes are common and neck pain can also occur.

What is it?

Vagus nerve stimulation (VNS) is a type of brain stimulation. It requires surgery to insert a device (like a pacemaker) and wiring under the skin in the chest and neck. This sends electric signals to the vagus nerve, which is connected to the brain. VNS has mostly been used for people with severe depression or epilepsy.

How is it meant to work?

This is unclear, but it is thought to affect brain chemistry and blood flow to different parts of the brain.

Does it work?

There has only been one study of VNS in people with anxiety that had not responded to previous medications or psychological treatments. VNS devices were implanted in seven people with OCD, two with PTSD and one with panic disorder. All were allowed to keep using any medications they were receiving. The results showed that only three people with OCD had improved by the end of the study (12 weeks later). Four people were reported to have continued using VNS four years after it was implanted (two with OCD, one with PTSD and one with panic disorder). Their anxiety symptoms were lower than at the start of treatment. However VNS was not compared to a control or fake treatment (e.g. 'sham') VNS.

Other types of anxiety

There is no evidence on whether VNS works for GAD, social anxiety disorders or specific phobias.

Are there any risks?

As surgery is involved in VNS, it is a highly invasive procedure. Voice changes are common, and neck pain can also occur.

Recommendation

There is not enough evidence to say whether or not VNS works for anxiety.

Yohimbine

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Yohimbine may increase anxiety in people with anxiety disorders. It may also cause stomach problems, sleep problems, agitation, high blood pressure, dizziness or headache.

Are there any risks?

Side-effects can include stomach problems, sleep problems, agitation, high blood pressure, dizziness or headache.

Recommendation

There is not enough evidence to say whether yohimbine is effective for anxiety.

What is it?

Yohimbine comes from the bark of the yohimbe tree, which is found in Africa.

How is it meant to work?

Yohimbine may stimulate or improve learning. It is taken before sessions of exposure therapy (see page 26), to help the person learn that the thing they fear is safe. Yohimbine acts on brain chemicals involved in fear.

Does it work?

Social anxiety disorder

One small study compared yohimbine or placebo (dummy pills), added to exposure therapy for people with social anxiety disorder. Each person had four sessions of treatment. Improvements in some symptoms were seen in the yohimbine group.

Specific phobias

One small study compared the effect of yohimbine or placebo added to exposure therapy in people with fear of flying. There was no benefit. Another similar small study compared the effect of yohimbine or placebo on claustrophobia. Those in the yohimbine group improved more.







Other types of anxiety

There is no evidence on whether yohimbine works for GAD, panic disorder, PTSD or OCD.

Complementary and lifestyle interventions



Acupuncture

Evidence rating			
GAD		Panic disorder and agoraphobia	
PTSD		Specific phobias	
Social anxiety disorder		OCD	

What is it?

Acupuncture is a technique of inserting fine needles into specific points on the body. The needles are usually rotated by hand. They can also have an electric current applied to them. A laser beam can be used instead of needles. Acupuncture can be given by a medical doctor or by a Chinese medicine practitioner. The Chinese Medicine Board of Australia regulates all Australian Chinese medicine practitioners. Acupuncture is not covered by Medicare unless it is provided by a medical doctor. It may be available as an extra with private health insurance.

How is it meant to work?

This is not clear. According to traditional Chinese medicine, it works by correcting the flow of energy in the body. According to Western medicine, it may stimulate nerves. This results in the release of neurotransmitters (chemical messengers) in the brain.

Does it work?

GAD

Seven small studies have evaluated acupuncture for GAD in adults. These compared acupuncture with sham (fake) acupuncture, behaviour therapy, or different drugs. Positive results for acupuncture were generally found. However, the studies were not high in scientific quality.

PTSD

A pooling of data from six studies found that acupuncture improved PTSD symptoms more than a range of other treatments. However, the quality of the studies was poor.

OCD

One small study was carried out in people with OCD. Treatment consisted of an antidepressant (see page 61), or an antidepressant plus daily acupuncture sessions. The study lasted for eight weeks. Most people improved, but the antidepressant plus acupuncture treatment was more effective.

Another very small study tested electro-acupuncture in people with OCD who had not improved with other treatment. Half of the participants received 12 sessions of acupuncture over three weeks. Both groups continued to take their medication. The acupuncture group improved more than the group that did not receive acupuncture.

Other types of anxiety

There is no evidence on whether acupuncture works for panic disorder, social anxiety disorder or specific phobias.

Are there any risks?

Acupuncture is not free of risk, but is relatively safe when practiced by an accredited professional. Minor bleeding and bruising may occur.

Recommendation

There is some evidence that acupuncture is effective for GAD and PTSD. There is not enough good evidence to say whether acupuncture works for other types of anxiety.

Aikido

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Aikido is a Japanese martial art that also has spiritual and philosophical elements. It focuses on self-defence and involves breathing techniques and meditation.

How is it meant to work?

This is unclear. It may work in a similar way to exercise or meditation practices (see pages 96 and 106). It may also help people relax in situations that cause them fear.

Does it work?

PTSD

One study tested the effect of adding Aikido to cognitive behaviour therapy (see page 29) for people with PTSD. One group did Aikido and another group did not. The addition of Aikido was found to be beneficial for lowering PTSD symptoms in women but not men.

Other types of anxiety

There is no evidence on whether Aikido works for GAD, panic disorder, social anxiety disorder, specific phobias and OCD.

Are there any risks?

There is a risk of injury when engaging in Aikido.

Recommendation

There is not enough good evidence to say whether Aikido works for anxiety.

Alcohol

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Repeated alcohol use can worsen anxiety. Alcohol abuse can have serious health consequences, such as liver disease and brain damage. Intoxication (drunkenness) may lead to violence and antisocial behaviour. It may also increase the risk of accidents and injury.

What is it?

Some people with anxiety drink alcohol in an attempt to relieve feelings of anxiety.

How is it meant to work?

Alcohol could reduce anxiety through its sedative effects on the brain. It could also work by reducing attention to what the person thinks is threatening. It may also help because the person drinking alcohol believes it will.

Does it work?

Social anxiety disorder

Three small studies have looked at whether alcohol reduces anxiety caused by having to give a public speech. People who drank alcohol had less anxiety than those who didn't. However, a non-alcoholic placebo drink reduced anxiety as much as the alcoholic drink. This suggests that alcohol reduced anxiety mainly because people expected it would.

Panic disorder and agoraphobia

Two small studies have been carried out in people with panic disorder. Participants drank an alcoholic drink or a non-alcoholic (placebo) drink. They then did a test designed to trigger panic attacks. Both studies showed that anxiety was lower in the alcohol group than the placebo group. However, one of these studies also showed that beliefs about alcohol and anxiety were important. Those who thought alcohol would reduce anxiety experienced less anxiety, even when they had consumed the placebo drink.

Alcohol continued over page.

Alcohol (continued)

Specific phobias

Four small studies have been carried out in people with specific phobias, such as fear of snakes and mice. Some of these studies showed that alcohol reduced anxiety, but not all.

Other types of anxiety

There is no evidence on whether alcohol works for GAD, PTSD or OCD.

Are there any risks?

Although alcohol may decrease anxiety for a short while, repeated use can worsen anxiety. This can occur through changes in the brain, by disrupting the learning processes that teach a person not to be anxious, or by disrupting social or work life. Alcohol abuse can lead to liver and brain damage.

Recommendation

Some studies suggest that alcohol can reduce anxiety in the short term, particularly if people believe it will. However, alcohol should not be used to cope with anxiety because with repeated use it may worsen anxiety. Repeated use can cause dependence and long-term use can cause severe health problems.

Aromatherapy

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Aromatherapy is the use of essential oils for healing. Essential oils are highly concentrated extracts of plants. They can be diluted in carrier oils and absorbed through the skin or heated and vaporised into the air. They are not taken by mouth.

How is it meant to work?

This is not known. Mood could be affected by the pleasant odour or by memories and emotions that are triggered by the smell. Alternatively, the oil's chemical components may have drug-like effects.

Does it work?

One very small study has been carried out in adults with anxiety and depression. They received an hour-long aromatherapy massage weekly for six weeks. Choice of essential oils was specific to each adult. Anxiety improved immediately after the massages, as well as over the six weeks. However, there was no comparison with a group that did not receive treatment.

Are there any risks?

Essential oils should not be used undiluted as they can irritate the skin. Some oils may interact with conventional medicine. Some essential oils are not recommended for use during pregnancy.

Recommendation

There is not enough good evidence to say whether aromatherapy works.

Ashwagandha

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Ashwagandha (*Withania somnifera*) is a herb that originated in India. It is used to treat a number of health problems, including stress and anxiety.

How is it meant to work?

This is not understood. It is thought that ashwagandha might act like the anti-anxiety medication diazepam (see page 66).

Does it work?

GAD

One small study has been carried out in people with GAD. They took a daily dose of 12mg ashwagandha or placebo (dummy pills) for 60 days. Ashwagandha did not appear to benefit anxiety symptoms overall.

OCD

One small study was carried out in people with OCD. They took a daily dose of 150mg ashwagandha or placebo (dummy pills) for six weeks in addition to an antidepressant (see page 61). OCD symptoms improved more in the ashwagandha group.

Other types of anxiety

There is no evidence on whether ashwagandha works for PTSD, specific phobias and social phobia.

Are there any risks?

None were found in the studies above.

Recommendation

While there is some initial positive evidence for OCD, more studies are needed to say whether ashwagandha works.

Autogenic training

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Autogenic training is a relaxation method. It involves regular practice of simple mental exercises in body awareness. These exercises involve concentrating on breathing, heartbeat, and warmth and heaviness of body parts.

How is it meant to work?

Autogenic training aims to improve a person's ability to relax by retraining the mind to calm itself.

Does it work?

GAD

One small study in adults with GAD compared autogenic training with either benzodiazepines (see page 66) or breathing training. Training sessions were three times a week for six weeks, followed by a session once a month for four months. All treatments led to decreases in anxiety symptoms. However, improvement was greater in the autogenic training and breathing training groups compared with the drug group.

Another small study compared autogenic training to progressive relaxation training in adults with specific phobias or GAD. Participants had 30-minute training sessions each week for six weeks plus daily practice at home with an audiotape. Many stopped treatment before the end of the study. Autogenic training was better than relaxation training in reducing anxiety. However, there was no comparison with a group that did not receive any treatment.

PTSD

There has been one case report of autogenic training successfully treating nightmares caused by PTSD. However, no scientific studies have been carried out.

Autogenic training continued over page.

Autogenic training (continued)

Social anxiety disorder

One small study compared the effects of adding autogenic training to cognitive behaviour therapy (CBT, see page 29) for social anxiety disorder. One group received CBT plus autogenic training. Another group received CBT only. More people recovered in the group that received autogenic training.

Panic disorder and agoraphobia

One small study compared autogenic training with exercise. Adults with panic disorder were trained in aerobic exercise or autogenic training for a 10 week period. Both treatments improved panic symptoms by a similar amount. However, there was no comparison with a group that did not receive treatment.

One small study compared autogenic training with hypnosis. Adults with panic disorder had group sessions of autogenic training or hypnosis for six weeks. Both groups benefited and improvements lasted for three months. However, there was no comparison with a group that did not receive treatment.

There are also case reports of autogenic training combined with behaviour therapy (see page 26) successfully treating panic disorder. However, better-quality studies are needed to confirm these findings.

Specific phobias

There is no evidence on whether autogenic training works for specific phobias, although one study looked at autogenic training for GAD and specific phobias (see study under GAD above).

OCD

One small study has been carried out on adults with OCD. Autogenic training was given with placebo (dummy pills) and compared with two treatments: behaviour therapy plus placebo and autogenic training plus an antidepressant (see page 61). The autogenic training and placebo treatment was less effective than the other two treatments.

Are there any risks?

None are reported.

Recommendation

The evidence for autogenic training for anxiety is not clear. Better-quality studies are needed before firm conclusions can be made.

Ayurveda

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Ayurveda is the traditional healing system of India. Ayurveda translates as 'knowledge of living'. It aims to improve health and vitality through nutrition, lifestyle and herbal medicines.

How is it meant to work?

Ayurvedic medicines are traditional treatments. They are derived from over thousands of years of use in India.

Does it work?

GAD

One small study tested a traditional Ayurvedic treatment in adults with both GAD and social anxiety disorder. These treatments were *Manasamitra Vataka*, which contains 73 herbs and minerals and *Shirodhara* which involves gently dripping medicated oil on to the forehead of a person. The study compared *Manasamitra Vataka*, *Manasamitra Vataka* plus *Shirodhara*, or benzodiazepines (see page 66) for 30 days. Anxiety improved in all groups, with no differences between them.

Another small study compared a traditional Ayurvedic herbal medicine called Worry Free with placebo (dummy pills) in people with GAD. Worry Free contains *Withania somnifera*, *Tinospora cordifolia*, *Bacopa monniera*, muskroot, aloeweed, licorice, pearl pisti and ginger. After three months of treatment, the Worry Free group had lower anxiety than the placebo group.

Other types of anxiety

There is no evidence on whether Ayurvedic treatments work for panic disorder, PTSD, specific phobias or OCD.

Are there any risks?

No side-effects were reported in the above studies.

Recommendation

More good-quality studies are needed before we can say whether or not Ayurvedic treatments work.

Bach flower remedies

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Bach (pronounced 'batch') flower remedies are a system of highly diluted flower extracts. A popular combination of five remedies is sold as Rescue Remedy®.

How is it meant to work?

Bach flower remedies are said to contain small amounts of the plant's life force energy, which heals emotional imbalances.

Does it work?

One small study compared Rescue Remedy® with placebo in people with anxiety. They either consumed Rescue Remedy® or alcohol drops and water when they felt anxious over a three-day period. There was no difference in anxiety levels between the two groups.

Are there any risks?

Bach flower remedies are thought to be safe because they are highly diluted.

Recommendation

There is not enough good evidence to say whether Bach flower remedies work.

Bibliotherapy

Evidence rating			
GAD	?	Panic disorder and agoraphobia	👍👍
PTSD	?	Specific phobias	?
Social anxiety disorder	👍	OCD	👍

What is it?

Bibliotherapy is a form of self-help that uses books or other written material, either in print or online. The books provide information and homework exercises that the reader works through on their own. Some of the books are based on psychological therapies, such as cognitive behaviour therapy (CBT, see page 29). Self-help books can be bought and read on their own without any contact with a health professional. However, they are also sometimes used as a treatment given by a therapist or GP. This review covers studies of bibliotherapy where there was no contact or minimal contact from a therapist during the treatment period.

How is it meant to work?

Books based on psychological therapies such as CBT work the same way as when the treatment is given by a therapist.

Does it work?

GAD

One small study compared bibliotherapy with no treatment in people with GAD. Adults with GAD worked through a self-help booklet for four weeks. The booklet taught problem-solving techniques and had 28 worksheets. Participants received short phone calls during which they could ask questions about the treatment. The study found that the bibliotherapy treatment was more effective than no treatment. Improvements from the booklet also lasted for at least three months.

Bibliotherapy continued over page.

Bibliotherapy (continued)

PTSD

One small study looked at bibliotherapy for PTSD. Adults who had recently had a car accident received three months of CBT, a self-help booklet based on CBT (*Understanding your reactions to trauma*), or no treatment. Participants had no contact with therapists after receiving the booklet. The study showed that therapy was better than the booklet, and that the booklet was no better than no treatment.

Social anxiety disorder

Four small studies have been carried out on bibliotherapy for social anxiety disorder. Three studies involved no contact with therapists during treatment. One study included regular meetings with a therapist during which participants could ask questions about the treatment. Overall, these studies showed that bibliotherapy was more effective than no treatment and may have been as effective as face-to-face therapy. Books used in these studies include *The Shyness and Social Anxiety Workbook* and *Overcoming Shyness and Social Phobia*.

Panic disorder and agoraphobia

Ten small studies have been carried out on bibliotherapy for panic disorder. The majority of these studies involved some minor contact from therapists during the study. Overall, these studies showed that bibliotherapy was more effective than no treatment but less effective than face-to-face therapy. Books used in these studies include *Living with Fear, Coping with Panic*, and *Mastery of Your Anxiety and Panic*.

Specific phobias

Several studies have evaluated bibliotherapy for specific phobias. Two small studies compared bibliotherapy with one session of behaviour therapy (see page 26) delivered by a therapist. One study involved minor contact with a therapist and one did not. Both studies showed that bibliotherapy was less effective than the face-to-face therapy. Another very small study looked at bibliotherapy for fear of the dark in children. Parents had to read a number of books on overcoming this fear with their child. Improvement was found, but there was no comparison group not receiving treatment.

OCD

Three small studies have compared a self-help manual on meta cognitive training (see metacognitive therapy, page 39) to no treatment. The manual is called *myMCT* and is available on the internet. These studies found that the manual improved obsessions, but not compulsions. Two other small studies looked at bibliotherapy for a technique called 'association splitting' which is part of meta-cognitive training. These studies compared association splitting to no treatment and also found that it improved obsessions but not compulsions.

One small study has been carried out on the self-help book, *Stop Obsessing!* Adults with OCD who had not improved with previous medication worked through the book for six weeks, or received equivalent psychological therapy from a therapist. Participants who received the book had no further contact with therapists during the study. Both groups improved. However the face-to-face therapy was more effective than the book.

One small study compared mindfulness training (see meditation, page 106) with relaxation training (see page 112), both delivered by bibliotherapy. Neither treatment produced any improvement.

Another small study looked at bibliotherapy involving 'attention training technique'. This was not better than no treatment.

Are there any risks?

Readers should be wary of books that claim to be easy cures or that are not based on effective therapies such as CBT. In addition, readers could feel worse if they do not apply the treatment correctly or give up early.

Recommendation

Bibliotherapy is effective for panic disorder and social anxiety disorder. However, it is generally not as effective as face-to-face therapy. Some types of bibliotherapy help with obsessions in OCD. There is not enough evidence to say whether it is effective for GAD, PTSD and specific phobias.

Black cohosh

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Black cohosh (*Cimicifuga racemosa*) is a plant native to North America. Plant extracts are available as supplements.

How is it meant to work?

Black cohosh is usually used as a complementary treatment for menopausal symptoms (e.g. hot flashes). How it works for anxiety is not clear.

Does it work?

GAD

One small study has been carried out in women with GAD due to menopause. They took either black cohosh or placebo (dummy pills) for 12 weeks. The dose of black cohosh was up to 128mg per day. Black cohosh did not appear to benefit anxiety symptoms.

Other types of anxiety

There is no evidence on whether black cohosh works for GAD unrelated to menopause, or for panic disorder, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

Use of black cohosh has been linked with liver damage. This risk appears to be very low, however. The Therapeutic Goods Administration recommends that black cohosh should only be taken under the supervision of a healthcare professional.

Recommendation

More research is needed to say whether black cohosh works.

Body therapies

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What are they?

Body therapies involve a focus on the physical symptoms of anxiety, including perceived body sensations. They include basic body awareness therapy, body psychotherapy and somatic experiencing.

How are they meant to work?

Body therapies help the person learn how to regulate body sensations with the aim of resolving symptoms of anxiety.

Do they work?

GAD

One small study compared body therapy with treatment as usual. Treatment involved one session of treatment per week for one year. Both groups showed improvement after this time.

PTSD

Two very small studies have tested the addition of body therapies to usual treatment in people with PTSD. Both studies showed improved symptoms but there were no comparison groups in these studies. A small study compared body therapy with no treatment. People had weekly sessions for 15 weeks. Symptoms were reduced after this time.

Other types of anxiety

There is no evidence on whether body therapies work for panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether body therapies are effective.

Brainspotting

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

During brainspotting, therapists help people position their eyes in ways that enable them to target sources of negative emotion. With the aid of a pointer, a therapist guides a person's eyes across their field of vision to find eye positions that activate a traumatic memory or painful emotion.

How is it meant to work?

Brainspotting is based on the idea that the direction in which people look can affect the way they feel. It is believed that this helps therapists to access emotions on a deeper level and target the physical effects of trauma.

Does it work?

PTSD

One small study compared brainspotting with eye movement desensitisation and reprocessing (EMDR, see page 34) in people with PTSD. Treatment involved three 60-minute sessions. Symptoms improved in both groups. However, the study was of poor quality.

Other types of anxiety

There is no evidence on whether brainspotting works for GAD, panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether brainspotting is effective.

Breathing training

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Breathing training teaches correct breathing habits to people with anxiety disorders. It is also known as breathing retraining. It is mainly used to treat panic attacks.

How is it meant to work?

People with anxiety disorders are thought to have abnormal breathing patterns. They may breathe faster and deeper than necessary and have high levels of carbon dioxide in the blood. This may increase anxiety. As breathing training helps to correct these breathing habits it may also help to reduce anxiety. Breathing training may also help people feel as if they have more control of their anxiety. Breathing training can be used by itself or in combination with other treatments.

Does it work?

Panic disorder and agoraphobia

Three small studies have compared breathing training to no treatment. In two of the studies breathing training produced more improvement. In the third study there was no difference. Two of these studies also compared different kinds of breathing training, but found no difference in effectiveness. They compared breathing training aimed at increasing or decreasing carbon dioxide in the blood.

There have also been a number of very small studies of breathing training used in combination with other treatments. The findings were inconsistent, with some studies finding an added benefit of breathing training and others not.

Breathing training continued over page.

Breathing training (continued)

Specific phobias

Two small studies have looked at breathing training for specific phobias. One study compared breathing training with applied muscle tension (see page 24) and relaxation training (see page 112) for blood and injury phobia. Breathing training worked better than relaxation training, but was not different from applied muscle tension. The second study compared breathing training with an energy psychology treatment (see page 95) for small animal phobias. Breathing training produced less improvement.

Other types of anxiety

There is no evidence on whether breathing training works for GAD, PTSD, social anxiety disorder or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether breathing training is effective in treating anxiety.

Caffeine consumption

Evidence rating

GAD		Panic disorder and agoraphobia	
PTSD		Specific phobias	
Social anxiety disorder		OCD	

What is it?

Caffeine is a nervous system stimulant. It can be found in coffee, tea, cola, and chocolate.

How is it meant to work?

Consuming large amounts of caffeine can cause similar symptoms to anxiety (e.g. restlessness, nervousness). Caffeine consumption may cause anxiety because it blocks the action of a substance in the brain that calms down the body. By contrast, caffeine might help OCD by increasing the level of the chemical messenger dopamine in the brain.

Does it work?

OCD

One very small study compared the effectiveness of an amphetamine (see stimulants, page 77) with caffeine in adults with OCD. These treatments were taken in addition to antidepressant medication (see page 61). Participants took either a large dose of 300mg caffeine or 30mg amphetamines daily. The caffeine was not expected to be helpful. However, after one week, both treatments were helpful for about half of the participants. These improvements lasted for a further four weeks. These results need to be confirmed in further studies.

Other types of anxiety

Several studies have shown that consuming large doses of caffeine after a caffeine-free period briefly increases anxiety in those with GAD, panic disorder or social anxiety disorder. There is no evidence on whether caffeine is helpful for PTSD or specific phobias.

Are there any risks?

In very rare cases caffeine consumption has caused mania and psychosis symptoms.

Recommendation

There is not enough good evidence to say whether consuming caffeine works for OCD. Large doses are not recommended for GAD, panic disorder or social anxiety disorder.

Caffeine reduction or avoidance

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Caffeine is a nervous system stimulant. It can be found in coffee, tea, cola and chocolate.

How is it meant to work?

Caffeine may cause anxiety because it blocks the action of a substance in the brain that calms down the body. Consuming large amounts of caffeine can cause similar symptoms to anxiety (e.g. restlessness, nervousness). Hence, reducing or going without caffeine could be helpful for those with anxiety.

Does it work?

Reducing caffeine has not been properly evaluated in well-designed studies. There are only reports of treatments with a single person (case studies) with GAD, panic disorder or social anxiety disorder, in which reducing caffeine has lowered anxiety levels.

Other types of anxiety

There is no evidence on whether caffeine reduction or avoidance works for PTSD, specific phobias or OCD.

Are there any risks?

Symptoms of caffeine withdrawal include headache, fatigue, decreased energy and alertness, depressed mood, problems concentrating and feeling irritable. These symptoms may last for two to nine days.

Recommendation

There is not enough good evidence to say whether reducing or avoiding caffeine works.

Chamomile

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Chamomile (*Matricaria recutita*) is a herb. In traditional herbal medicine. It is thought to have a calming and relaxing effect.

How is it meant to work?

This is unclear. Some of its chemical components may affect parts of the brain related to anxiety, stress and mood.

Does it work?

GAD

Two small studies have been carried out in adults with GAD. In the first study, people received daily doses of chamomile extract (220mg to 1100mg) or placebo (dummy pills) for eight weeks. Chamomile reduced anxiety symptoms more than the placebo. The second study involved people whose GAD had previously improved from taking chamomile extract. They either continued to take a daily dose of 1500mg (three capsules) chamomile extract or placebo for 26 weeks. Again, chamomile reduced anxiety symptoms more than placebo.

Other types of anxiety

There is no evidence on whether chamomile works for panic disorder, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

Few side-effects were reported in the above studies. It should be noted that the benefits were found for this particular type of chamomile extract. It is also possible that taking chamomile in other forms (e.g. oil, vapour and tea) may have produced different effects.

Recommendation

While there is some initial positive evidence for GAD, more studies are needed to say whether chamomile works.

Creatine monohydrate

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Creatine monohydrate is a nutrient produced in the body. It is available in food such as meat and seafood or as a dietary supplement. It is often taken by athletes to improve strength and performance.

How is it meant to work?

This is unclear. It may work by improving energy metabolism within brain cells.

Does it work?

PTSD

One study has been carried out in adults with PTSD. They took creatine monohydrate for four weeks in addition to antidepressants (see page 61). PTSD symptoms improved over the four weeks. However, there was no comparison group that did not receive treatment.

Other types of anxiety

There is no evidence on whether creatine monohydrate works for GAD, panic disorder, specific phobias, social anxiety disorder or OCD.

Are there any risks?

Creatine monohydrate can cause mild stomach pain, diarrhea, muscle cramps and weight gain.

Recommendation

There is not enough good evidence to say whether creatine monohydrate works.

Energy psychology (aka meridian tapping)

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	👍	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Energy psychology includes a number of treatments derived from acupuncture and acupressure. It has been called 'acupuncture without needles'. Treatments involve some sort of physical activity, like tapping an acupuncture point, while thinking about something that is a target for change. Particular types of treatment include 'thought field therapy', 'energy tapping', the 'tapas acupressure technique' and 'emotional freedom techniques'.

How is it meant to work?

Energy psychology is based on the idea that mental health problems are related to disturbances in the body's electrical energies. The treatments help correct these disturbances. Because they involve thinking about something that is a target for change, these treatments also involve a component of exposure therapy (see page 26).

Does it work?

Panic disorder and agoraphobia

One small study compared thought field therapy with cognitive behaviour therapy (CBT, see page 29) and no treatment in people with agoraphobia. Thought field therapy was better than no treatment and similar in effect to CBT.

PTSD

A pooling of data has been carried out from seven small studies of emotional freedom techniques. This showed that emotional freedom techniques are more effective than no treatment. It also showed that they do not differ from other therapies such as CBT and Eye movement desensitisation and reprocessing (EMDR, see page 34). Another small study looked at thought field therapy in men receiving CBT. Half of them received thought field therapy over three months and the rest did not. No difference was found.

Energy psychology (aka meridian tapping) continued over page.

Energy psychology (aka meridian tapping) (continued)

Specific phobias

Three small studies have been carried out on emotional freedom techniques with specific phobias. One study found that emotional freedom techniques were more effective than diaphragmatic breathing. However, the other two studies found that it did not differ from diaphragmatic breathing or no treatment.

OCD

One small study has compared meridian tapping with relaxation training. People with OCD were recruited over the internet. Half of them were sent written instructions and videos on how to treat themselves with meridian tapping. The other half received written instructions on how to do muscle relaxation. Neither treatment produced any improvement.

Other types of anxiety

There is no evidence on whether energy psychology techniques work for GAD or social anxiety disorder.

Are there any risks?

None are reported.

Recommendation

There is some evidence supporting energy psychology treatments for PTSD. More evidence is needed to know whether they work for other types of anxiety.

Exercise

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

The two main types of exercise are aerobic and anaerobic. Aerobic exercise (e.g. jogging) exercises the heart and lungs. Anaerobic exercise (e.g. weight training) strengthens muscles.

How is it meant to work?

This is unclear, but it can be helpful for mild anxiety in people without anxiety disorders. It may work by changing brain chemistry, improving sleep, improving coping ability, or as a distraction from worries. Exercise can cause physical symptoms similar to panic attacks (e.g. shortness of breath). This can be helpful for panic disorder because the symptoms are experienced in a controlled way.

Does it work?

GAD

One small study evaluated exercise training in women with GAD. This study compared six weeks of supervised aerobic exercise or anaerobic exercise with no treatment. Exercise sessions were twice a week. Time spent exercising in each session was about 15 minutes at a moderate intensity. Both kinds of exercise were more effective than no treatment in reducing anxiety. The anaerobic exercise also seemed to be more effective than the aerobic exercise.

PTSD

Four small studies evaluated aerobic exercise for PTSD. Two studies were in adolescents and two were in adults. All found exercise was beneficial for PTSD. None of the studies had a comparison group that received no treatment, so it is difficult to draw conclusions. Another small study looked at the added benefits of exercise for people receiving in-patient treatment for PTSD. People either received an additional program of resistance training and walking, or standard hospital care. The exercise group improved more.

Exercise continued over page.

Exercise (continued)

Social anxiety disorder

One small study compared aerobic exercise with mindfulness-based stress reduction (MBSR, see page 40) in adults with social anxiety disorder. Half received training in MBSR for eight weeks. The other half completed three aerobic exercise sessions each week for eight weeks. Both treatments improved symptoms and these were still reduced three months after the end of treatment.

Panic disorder and agoraphobia

One very small study compared 12 sessions of exercise with no treatment in people with panic disorder but found no benefit.

Three small studies have compared exercise to other treatments for panic disorder. The first compared 10 weeks of regular aerobic exercise (running) with an antidepressant drug (see page 61) or placebo (dummy pills) in people with panic disorder. Exercise was more effective than placebo, but less effective than the drug. The second compared aerobic exercise with autogenic training (see page 87). Treatments were for 10 weeks. Both treatments improved panic symptoms a similar amount. However, there was no comparison with a group that did not receive treatment. The third compared group physical exercise to group cognitive behaviour therapy (CBT, see page 29) over 12 weeks. CBT produced greater improvement.

Another small study looked at the benefit of adding aerobic exercise to CBT. People did either moderate intensity or very low intensity exercise for eight weeks. There was greater improvement in those who did moderate intensity exercise.

Specific phobias

One small study looked at the effect of aerobic exercise on people with dental phobia. People did either moderate or low intensity exercise for 30 minutes before dental treatment. The moderate exercise was found to be more effective in reducing anxiety.

OCD

Two small studies have looked at the effects of aerobic exercise in people who were receiving other treatment for OCD, but had not recovered. They received either 12 weeks of exercise or health education sessions. No differences were found.

Are there any risks?

There is a risk of injury when exercising. Anyone considering a major change in exercise patterns is advised to consult their doctor.

Recommendation

The studies on exercise for anxiety have been of poor quality, so it is unknown whether it works.

Flotation-REST (Reduced Environmental Stimulation Therapy)

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Flotation-REST involves floating inside a quiet and dark tank, filled with heated water containing Epsom salt.

How is it meant to work?

Flotation-REST is thought to work by reducing input from the five senses (sight, hearing, smell, taste and touch) as well as awareness of gravity, balance and body position. This makes it easy to relax.

Does it work?

One small study has evaluated the short-term effects of Flotation-REST in people with anxiety disorders and depression. Anxiety levels improved after a one-hour float session. However, there was no comparison with a group that did not receive any treatment.

GAD

One small study compared Flotation-REST with no treatment in people with GAD. Treatment involved 12 sessions over seven weeks. Flotation-REST was found to be beneficial, and the benefit was maintained six months after treatment.

Other types of anxiety

There is no evidence on whether Flotation-REST works specifically for panic disorder, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough good evidence to say whether Flotation-REST works.

Foods rich in tryptophan

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Tryptophan is an essential amino acid. It is not created in the body but it can be obtained from diet or taken as a supplement. Foods rich in tryptophan are protein-based foods such as meat and dairy.

How is it meant to work?

Tryptophan is a building block of serotonin, a brain chemical that has a role in reducing anxiety. It is thought that one way of increasing levels of tryptophan in the brain is to consume foods rich in tryptophan along with high glycemic index (GI) carbohydrates.

Does it work?

Social anxiety disorder

One very small study has evaluated de-oiled pumpkin seed (a rich source of tryptophan) as a treatment for social anxiety disorder. Adults consumed one of two bars and then completed an anxiety-producing task. One bar contained pumpkin seed and sugar, and the other contained the same amount of sugar but no pumpkin seed. Results showed some benefit of the pumpkin seed bar, but the findings were not conclusive.

Other types of anxiety

There is no evidence on whether foods rich in tryptophan work for GAD, panic disorder, PTSD, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough good evidence to say whether foods rich in tryptophan work for anxiety disorders.

Gamisoyo-San

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Gamisoyo-San (GSS) is a traditional herbal medicine widely used in Asian countries, such as China, Japan and Korea. It is used in the treatment of both physical and mental health conditions.

How is it meant to work?

This is not clear. GSS is thought to have antioxidant effects and to reduce inflammation.

Does it work?

GAD

One study has compared GSS with placebo (lactose and starch mixture) in people with GAD. Treatment lasted for eight weeks. There was no difference in anxiety symptoms between groups.

Other types of anxiety

There is no evidence on whether GSS works for panic disorder, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None were found in the study above.

Recommendation

There is not enough evidence to say whether GSS works.

Ginkgo

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Extracts of the leaves of the ginkgo tree (*Ginkgo biloba*) are available as a supplement.

How is it meant to work?

This is not understood. It is thought it may play a role in suppressing the body's response to stress.

Does it work?

GAD

One small study has been carried out in adults with GAD or other anxiety conditions. They took daily doses of 480mg ginkgo, 240mg ginkgo or placebo (dummy pills) for four weeks. Ginkgo improved anxiety more than placebo and the higher dose of ginkgo was better than the lower dose.

Other types of anxiety

There is no evidence on whether ginkgo works for panic disorder, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None were found in the study above.

Recommendation

There is not enough good evidence to say whether ginkgo works.

Glycine

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Glycine is an amino acid, one of the building blocks of protein. It is created in the body but can also be taken as a supplement.

How is it meant to work?

This is unclear. It might work by acting on chemicals in the brain (neurotransmitters).

Does it work?

OCD

One small study compared a large dose of glycine with placebo powder in adults. They either took a daily dose of up to 60g glycine powder or placebo powder dissolved in liquid for 12 weeks. Glycine seemed to improve OCD symptoms more than placebo. Many participants stopped taking glycine because they felt nauseous or did not like the taste.

Other types of anxiety

There is no evidence on whether glycine works for GAD, panic disorder, PTSD, social anxiety disorder or specific phobias.

Are there any risks?

Large doses may cause nausea.

Recommendation

There is not enough evidence to say whether glycine works.

Gotu kola

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Gotu kola (*Centella asiatica*) is a plant found in Asia and the Middle East.

How is it meant to work?

Gotu kola is used in Ayurvedic medicine (see page 88). It is thought to help protect against stress.

Does it work?

GAD

One small study gave extracts of Gotu kola to adults with GAD. People took 500mg twice a day for two months. The treatment improved anxiety symptoms. However, there was no comparison group in this study.

Other types of anxiety

There is no evidence on whether Gotu kola works for panic disorder, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

No side-effects were reported in the above study.

Recommendation

There is not enough evidence to say whether or not Gotu kola works.

Holy basil

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Holy basil (*Ocimum sanctum* or *Ocimum tenuiflorum*, also known as Tulsi) is a plant native to tropical Asia. It is not the same as sweet basil (*Ocimum basilicum*). Teas made from the plant are available to buy.

How is it meant to work?

Holy basil is used traditionally in ancient Indian medicine. It is thought to help people adapt to stress.

Does it work?

GAD

One small study has evaluated holy basil for GAD. An alcohol extract of 1,000mg holy basil leaves per day was given to adults for two months. Results showed anxiety levels improved overall. However, there was no comparison group in this study.

Other types of anxiety

There is no evidence on whether holy basil works for panic disorder, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough good evidence to say whether holy basil works.

Homeopathy

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Homeopathy uses very small doses of various substances to stimulate healing. Substances are selected that produce, in a healthy person, symptoms similar to those of the illness when used undiluted. Treatments are also based on the patient's symptoms rather than their diagnosis. This means that two patients with the same illness may receive different treatments. Treatments are prepared by diluting substances with water or alcohol and shaking. This process is then repeated many times until there is little or none of the substance left. Homeopathic treatments are available by visiting a practitioner or buying over the counter.

How is it meant to work?

Homeopathy is based on the principle of 'like cures like'. The diluting and shaking process is thought to remove any harmful effects of the substance, while the water retains the memory of the substance.

Does it work?

GAD

Two small studies have tested homeopathy in people with GAD. In one study, adults with GAD received a homeopathic treatment for their specific symptoms or placebo (dummy pills). After 10 weeks, anxiety symptoms improved in both groups, with no difference between them. Another study compared homeopathy with cognitive behaviour therapy (CBT, see page 29). Adults with GAD received one of three treatments. These were homeopathy, three sessions of CBT plus placebo, or placebo only. After four weeks, anxiety had improved in all groups with no difference between them.

Other types of anxiety

There is no evidence on whether homeopathy works for panic disorder, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

Negative reactions are usually quite rare, mild, and short-lived. Examples are a short-lived worsening of symptoms and reappearance of old symptoms.

Recommendation

There is not enough good evidence to say whether homeopathy works for anxiety.

Inositol

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Inositol is a compound similar to glucose. The average adult consumes about 1g daily through diet. Supplements are also available at health food shops.

How is it meant to work?

This is unclear, however it may be because inositol helps produce substances that send signals within brain cells.

Does it work?

PTSD

One small study has evaluated inositol for PTSD. Daily doses of 12g inositol or placebo (dummy pills) were given to adults for four weeks. Inositol was not more helpful than placebo.

Panic disorder and agoraphobia

One small study found daily doses of 12g inositol better than placebo over four weeks. Another small study compared inositol with an antidepressant (see page 61). It found inositol was as helpful as the antidepressant after one month.

OCD

One very small study has evaluated inositol for OCD. Daily doses of 18g over six weeks were better than placebo in reducing OCD symptoms. A different study found it did not improve OCD symptoms when taken in addition to antidepressant drugs.

Other types of anxiety

There is no evidence on whether inositol works for GAD, social anxiety disorder or specific phobias.

Are there any risks?

Daily doses of 12g or more may cause mild nausea and diarrhoea.

Recommendation

More studies are needed to say whether inositol works for anxiety.

Juggling therapy

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Juggling therapy involves learning to juggle up to three small beanbags with the hands.

How is it meant to work?

It has been proposed that the rapid eye movements involved in juggling contribute to changes in emotional memory processing. It may act in a similar way to eye movement desensitisation and reprocessing (EMDR, see page 34).

Does it work?

One small study was carried out in women with GAD, panic disorder, PTSD or OCD. Everyone was treated with medication and psychological therapies for six months. Half were also taught juggling skills for three months. Anxiety symptoms improved more in the juggling group.

Other types of anxiety

There is no evidence on whether juggling therapy works for social anxiety disorder or specific phobias.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether or not juggling therapy works.

Kampo

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Kampo is Japanese herbal therapy. It was developed from traditional Chinese medicine. Kampo medicines contain combinations of herbs, fungi, minerals and insects.

How is it meant to work?

Kampo medicines are a traditional treatment. Treatments are derived from over a thousand years of use in Japan.

Does it work?

PTSD

One small study in adults with PTSD compared saikokeishikankyoto (SKK), a kampo herbal treatment, to no treatment. People in the SKK group received SKK three times a day for two weeks. SKK was found to be more beneficial than no treatment.

Panic disorder and agoraphobia

There are five reports of cases where kampo medicines were used successfully in adults with panic disorder. However, no scientific study has been carried out with an untreated comparison group.

Other types of anxiety

There is no evidence on whether kampo works for GAD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

A case has been reported where a kampo herbal treatment, kamishoyosan, caused liver damage.

Recommendation

There is not enough good evidence to say whether kampo works or not.

Kava

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Kava has been banned in some countries because it may cause liver damage in some people.

What is it?

Kava (*Piper methysticum*) is a herb from the South Pacific. It has been used as a social drink and in ceremonial rituals for hundreds of years. Because of safety concerns, kava is a prohibited import in Australia except under very specific conditions.

How is it meant to work?

Chemicals from the root are thought to affect brain chemistry.

Does it work?

GAD

A number of small studies have compared kava with placebo (dummy pills) for the treatment of GAD. Pooling the results from four studies showed that kava was no more effective than placebo.

Other types of anxiety

There is no evidence on whether kava works for panic disorder, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

High doses of kava have been linked with liver damage. However, it appears to be safe when used in typical treatment doses. Importing or selling kava in Australia is strictly controlled.

Recommendation

There is not enough evidence to say whether kava works for anxiety. There are also restrictions on its use because of concerns about its safety.

L-carnosine

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

L-carnosine is a protein building block naturally produced by the body. It is readily available in red meat and fish and is also available as a supplement.

How is it meant to work?

This is not known. It has antioxidant properties and is thought to help with anxiety by reducing levels of the brain chemical glutamate.

Does it work?

OCD

One small study compared adding L-carnosine or placebo (dummy pills) to an antidepressant in adults with OCD. Those in the L-carnosine group received 500mg of L-carnosine twice a day for 10 weeks. Adding L-carnosine improved OCD symptoms more than placebo.

Other types of anxiety

There is no evidence on whether L-carnosine works for GAD, panic disorder, PTSD, social anxiety disorder or specific phobias.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether L-carnosine works for anxiety.

L-theanine

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

L-theanine is an amino acid commonly found in black and green tea leaves. It is also available as a supplement.

How is it meant to work?

L-theanine affects levels of some neurotransmitters (chemical messengers) in the brain.

Does it work?

GAD

One small study compared adding L-theanine or placebo (dummy pills) to an antidepressant (see page 61) in people with GAD. Treatment lasted for eight weeks. Adding L-theanine did not improve symptoms more than placebo.

Other types of anxiety

There is no evidence on whether L-theanine works for panic disorder, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether L-theanine works for anxiety.

Lavender

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Lavender (*Lavandula angustifolia*) is a shrub. The oil from the plant has been used as a folk remedy for a range of illnesses.

How is it meant to work?

This is not known. Lavender oil contains a number of chemicals which might affect the brain.

Does it work?

GAD

Two studies have been carried out with a lavender preparation called Silexan. One of the studies used a higher dose and showed a benefit compared to placebo (dummy pills). However, the other study found no benefit using a lower dose. One of the studies also compared Silexan to an antidepressant (see page 61) and found similar effectiveness.

Other types of anxiety

There is no evidence on whether lavender works for PTSD, social anxiety disorder, panic disorder, specific phobias or OCD.

Are there any risks?

In the above study, some people reported gastrointestinal side-effects.

Recommendation

More evidence is needed to say whether or not lavender works.

Lemon balm

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Lemon balm (*Melissa officinalis* L.) is a plant that is part of the mint family. It is also available as a standardised extract.

How is it meant to work?

Lemon balm is thought to act like a sedative, inducing calming effects and reducing stress. However, the mechanism by which it might work for anxiety is not yet understood.

Does it work?

One study evaluated the effectiveness of a standardised extract of lemon balm in people with mild to moderate anxiety disorders. They took 300mg twice daily (in the morning and evening) for 15 days. The treatment improved anxiety symptoms, but there was no comparison group.

Other types of anxiety

There is no evidence on whether lemon balm works for GAD, panic disorder, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether lemon balm works for anxiety.

Massage

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Massage involves the manipulation of soft body tissues using the hands or a mechanical device. Massage is often done by a trained professional. One of the aims of massage is to relieve tension in the body.

How is it meant to work?

This is not known. However, it is possible that massage reduces stress hormones or reduces the body's physiological arousal.

Does it work?

GAD

Two small studies have evaluated the benefits of massage in people with GAD. One study found that massage was more beneficial than sham (fake) treatment. Another study found massage to be as effective as other relaxation-based treatments, including heat packs on various parts of the body, or listening to music while lying on a massage table. This study suggests that having a relaxing time was more important, rather than massage specifically.

PTSD

One small study of children with severe post-traumatic stress gave regular massages over a month. These children were compared to a group that watched fun videos while sitting on an adult's lap for the same amount of time. The children given massages had greater reduction in anxiety than the comparison group.

Other types of anxiety

There is no evidence on whether massage works for panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether massage works for anxiety.

Meditation

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	👍👍	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

There are many different types of meditation. However, they all train a person to focus their attention and awareness. Some types of meditation involve focusing attention on a silently repeated word (mantra) or on the breath. An example is transcendental meditation (TM). Others involve observing thoughts without judgment. An example is mindfulness meditation or *vipassana*. Although meditation is often done for spiritual or religious reasons, this is not always the case. Some meditation methods have been used within Western psychological treatments. These include mindfulness-based stress reduction and mindfulness-based cognitive therapy (see page 40).

How is it meant to work?

Meditation may reduce anxiety by aiding relaxation. Also, mindfulness meditation might help a person to distance themselves from negative thoughts.

Does it work?

GAD

There have been two small studies. One involved adults who received either TM, muscle biofeedback or relaxation therapy over six weeks. All treatment groups improved, with no difference between them. However, the study did not have a comparison group receiving no treatment. The other study involved people with either GAD or panic disorder. Meditation combined with exercise, relaxation and hypnosis over eight weeks was found to be more effective than education about anxiety disorders. However, it is unclear whether meditation or other components led to the benefit.

Meditation continued over page.

Meditation (continued)

PTSD

Two high-quality studies have been carried out with war veterans. The first compared TM with exposure therapy (see page 26) and education about PTSD in veterans. TM produced greater improvement than education and did not differ from exposure therapy. The other compared meditation on a repeated word with a treatment involving problem solving of stressful events in veterans. Meditation produced more improvement. Six earlier small studies also found that various types of meditation produced improvement in PTSD symptoms in war veterans. One small study has been carried out with children with PTSD following a natural disaster. The children received either meditation-relaxation or narrative exposure therapy (see page 43). Both groups improved equally. However, there was no comparison group which did not receive treatment.

Panic disorder and agoraphobia

See section on GAD.

OCD

There has been one small study comparing a combination of relaxation training and mindfulness meditation with Kundalini Yoga meditation in people with OCD. No difference was found between the groups after three months. However, this study did not have a comparison group receiving no treatment.

Other types of anxiety

There is no evidence on whether meditation works for social anxiety disorder or specific phobias.

Are there any risks?

In rare cases, meditation can bring on a psychotic state. Caution is needed in people who have had a psychotic disorder.

Recommendation

Meditation appears to work for PTSD. However, there is little or no evidence for other types of anxiety.

Milk thistle

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Milk thistle (*Silybum marianum*) is a medicinal plant native to Mediterranean regions.

How is it meant to work?

Milk thistle contains a substance that might increase the level of certain neurotransmitters (chemical messengers) in the brain that are thought to be affected in anxiety.

Does it work?

OCD

One small study has been carried out in adults with OCD. They received daily doses of either milk thistle extract (600mg) or an antidepressant (see page 61) for eight weeks. Both groups improved, with no difference between them.

Other types of anxiety

There is no evidence on whether milk thistle works for GAD, panic disorder PTSD, social anxiety disorder or specific phobias.

Are there any risks?

Side-effects were uncommon in the above study and similar for milk thistle and an antidepressant.

Recommendation

There is not enough evidence to say whether milk thistle works.

N-acetylcysteine (NAC)

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

N-acetylcysteine (NAC) is a chemical which acts as an antioxidant in the body. Antioxidants mop up destructive molecules called 'free radicals'. It is available as a supplement.

How is it meant to work?

As well as being an antioxidant, NAC affects levels of some neurotransmitters (chemical messengers) in the brain.

Does it work?

In one case study, NAC was given to a person with GAD and social anxiety disorder. Adding a 1200mg twice daily dose of NAC to an antidepressant led to improvement.

PTSD

One small study has been carried out in adults with PTSD and substance use disorder. Adults received daily doses of either NAC (2400mg) or placebo (dummy pills) for eight weeks. They were also treated with cognitive behaviour therapy (CBT, see page 29). NAC reduced PTSD symptoms more than placebo.

OCD

Five small studies have compared adding NAC or placebo to other medications (e.g. antidepressants or antipsychotics). These have shown mixed results. In two of the studies, NAC was no better than placebo in reducing OCD symptoms. In the other three studies, NAC was more effective.

Other types of anxiety

There is no evidence on whether NAC works for panic disorder or specific phobias.

Are there any risks?

Side-effects are minimal.

Recommendation

More evidence is needed to say whether or not NAC works.

Omega-3 fatty acids (fish oil)

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What are they?

Omega-3 fatty acids are types of polyunsaturated fats. The two main types are eicosapentanoic acid (EPA) and docosahexanoic acid (DHA). EPA and DHA are found in fish oil or can be made in the body from the oil found in foods like flaxseed, walnuts and canola oil. Omega-3 supplements containing EPA and DHA are available from health food shops and pharmacies.

How are they meant to work?

This is not known. One possibility is that omega-3 affects the outer wall of brain cells, making it easier to send messages between and within brain cells.

Do they work?

PTSD

A very small study of omega-3 fatty acids has been carried out in people with PTSD. There was no improvement and half of them got worse. However, there was no comparison group that did not receive treatment.

Panic disorder and agoraphobia

A single case study has been reported on treatment of long-term panic disorder. This person improved after being given omega-3 fatty acids in addition to their antidepressants (see page 61).

OCD

One small study has compared omega-3 fatty acids with placebo (paraffin oil) in people who were also taking antidepressants. No difference in improvement was found.

Other types of anxiety

There is no evidence on whether omega-3 fatty acids work for GAD, panic disorder, social anxiety disorder or specific phobias.

Omega-3 fatty acids (fish oil) continued over page.

Omega-3 fatty acids (fish oil) (continued)

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether omega-3 fatty acids work.

Outdoor therapeutic recreation programs

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What are they?

Outdoor therapeutic recreation programs involve group activities and physical challenges in safe outdoor environments. These activities include fishing, sailing and surfing.

How are they meant to work?

This is unclear. Outdoor therapeutic recreation programs are thought to work by building emotional, physical and thinking skills that help improve quality of life.

Do they work?

PTSD

Several types of outdoor therapeutic recreation programs have been investigated for PTSD.

One very small study looked at the benefit of a sailing intervention. People received weekly three-hour sailing sessions over 12 months or no treatment. The intervention reduced PTSD symptoms.

Another very small study looked at the benefit of adding a nature adventure rehabilitation program to in-patient treatment for PTSD. The program consisted of five days of courses involving ropes, rock climbing, hiking, camping and white-water river rafting. The addition of the nature adventure rehabilitation program improved symptoms.

One very small study tested the effect of a surfing program in people with PTSD. Treatment involved five weekly sessions. PTSD symptoms improved after this time but there was no comparison group that did not receive any treatment.

Outdoor therapeutic recreation programs continued over page.

Outdoor therapeutic recreation programs (continued)

Other types of anxiety

There is no evidence on whether outdoor therapeutic recreation programs work for GAD, panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether outdoor therapeutic recreation programs work for anxiety.

Painkillers

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What are they?

Painkillers are sold over-the-counter without prescription for the temporary relief of pain. They include aspirin, ibuprofen and paracetamol. Some people use these painkillers to help with anxiety and depression.

How are they meant to work?

This is unclear. It is thought that proteins produced during inflammation may play a role in anxiety disorders. Some painkillers act to reduce inflammation.

Do they work?

Panic disorder and agoraphobia

One small study compared ibuprofen with benzodiazepines (see page 66). The group given ibuprofen did not improve as much as those on benzodiazepines. However, there was no comparison group given placebo (dummy pills).

Other types of anxiety

There is no evidence on whether painkillers work for GAD, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

Over-the-counter painkillers are not meant to be treatments for anxiety disorders. There is always a risk in using medications for purposes they were not designed for.

Recommendation

There is not enough evidence to say whether or not various types of painkillers help with anxiety.

Passionflower

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Passionflower (*Passiflora incarnata*) is a plant native to the Americas. It is used as a traditional remedy for anxiety and insomnia.

How is it meant to work?

This is not understood.

Does it work?

GAD

Two studies have compared passionflower with benzodiazepines (see page 66) over a four-week period. Both studies found equal improvement with both treatments. However, there was no comparison group receiving placebo (dummy) pills.

Specific phobias

One small study has looked at whether passionflower extract reduces anxiety caused by having dental surgery. It compared passionflower extract with either placebo or no treatment. People in the passionflower and placebo groups took 20 drops the night before and the morning before surgery. Passionflower was more effective than placebo or no treatment.

Other types of anxiety

There is no evidence on whether passionflower works for panic disorder, PTSD, social anxiety disorder or OCD.

Are there any risks?

There has been a report that passionflower caused heart abnormalities, nausea and drowsiness.

Recommendation

There is not enough good evidence to say whether passionflower works.

Power posing

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Power posing involves people standing in postures associated with dominance and power.

How is it meant to work?

This is not known. One possible explanation is that power posing increases feelings of power and the ability to take risks, while decreasing fear.

Does it work?

Social anxiety disorder

One small study evaluated the benefit of adding power posing to exposure therapy in people with social anxiety disorder. People either participated in power posing, submissive posing or rest (no posture manipulation) prior to exposure therapy (see page 26). No difference in improvement was found between the three groups.

Other types of anxiety

There is no evidence on whether power posing works for GAD, panic disorder, PTSD, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether or not power posing works for anxiety.

Rapid eye movement desensitisation (REM-D)

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

REM-D is a sleep-based intervention. It involves helping the person make an association between soothing images and calming music. The person then wears glasses during sleep that detect rapid eye movements (which may occur during dreams) and activate the calming music for 30 seconds.

How is it meant to work?

This is not known. It is thought REM-D works by reducing the stress caused by nightmares due to PTSD.

Does it work?

PTSD

One small study has looked at the benefit of REM-D for PTSD in people who were also taking antidepressants (see page 61) and antipsychotics (see page 63). It compared REM-D to eye movement desensitisation and reprocessing (EMDR, see page 34) and no treatment. Both REM-D and EMDR improved PTSD symptoms and were more beneficial than no treatment.

Other types of anxiety

There is no evidence on whether REM-D works for GAD, panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None have been reported.

Recommendation

There is not enough good evidence to say whether REM-D works.

Relaxation training

Evidence rating			
GAD	👍👍	Panic disorder and agoraphobia	👍👍
PTSD	👍	Specific phobias	👍
Social anxiety disorder	👍	OCD	?

What is it?

There are a number of different types of relaxation training. The most common one is progressive muscle relaxation. This teaches a person to relax by tensing and relaxing specific groups of muscles. Another type of relaxation training involves thinking of relaxing scenes or places. Relaxation training can be learned from a professional or done as self-help.

How is it meant to work?

People with anxiety disorders are thought to have tense muscles. As relaxation training helps to relax muscles, it may also help to reduce anxious thoughts and behaviours. Relaxation training may also help people feel as if they have more control of their anxiety.

Does it work?

GAD

Researchers have pooled together the results of studies on relaxation training with GAD to get a clearer idea of the effects. Relaxation training has been shown to be better than no treatment in three studies. Data from 10 studies found similar effects to cognitive behaviour therapy (CBT, see page 29).

Relaxation training continued over page.

Relaxation training (continued)

PTSD

Relaxation training has been evaluated for PTSD, with mixed results. Several small studies have shown relaxation training to be better than no treatment, but less effective compared to other psychological treatments, including eye movement desensitisation and reprocessing (EMDR), social skills training and behaviour therapy (see pages 34, 50 and 26). A pooling of results has shown that relaxation training is less effective than CBT.

Social anxiety disorder

Pooling of data from four studies has shown that relaxation training is similar in effectiveness to CBT.

Panic disorder and agoraphobia

Pooling together the results of studies on relaxation and panic disorder showed that relaxation training was better than no treatment. Results also showed relaxation training to be as effective as CBT.

Specific phobias

Relaxation training has been studied as a treatment for different phobias. Pooling of data from 10 studies has shown that relaxation training is similar in effectiveness to CBT.

OCD

Pooling of the results of studies of relaxation training has shown it to be better than no treatment. However, it is less effective than behaviour therapy or CBT.

Are there any risks?

None are known.

Recommendation

Relaxation training appears to work for GAD, panic disorder, PTSD, social anxiety disorder and specific phobias. It is not as effective as psychological therapies for PTSD and OCD.

Rhodiola rosea

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Rhodiola rosea (golden root) is a plant that grows in cold regions of the world, such as the Arctic and high mountains. In some parts of the world, it has been used as a traditional remedy to cope with stress. Extracts of the plant have been marketed under the brand 'Arctic Root'.

How is it meant to work?

Rhodiola rosea is a traditional remedy that is supposed to increase the body's resistance to stress. However, the mechanism by which it might work is not understood.

Does it work?

GAD

One study looked at the effects of *Rhodiola rosea* in people with GAD. They were given a daily dose of 340mg for 10 weeks. After this time their anxiety symptoms were reduced. However, the study was small and there was no comparison with placebos (dummy pills).

Other types of anxiety

There is no evidence on whether *Rhodiola rosea* works for PTSD, panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

The study above reported only mild side-effects including dizziness and dry mouth.

Recommendation

There is not enough evidence to say whether *Rhodiola rosea* works for anxiety.

Smartphone apps

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What are they?

Many smartphone apps for anxiety are available. These apps can be used to support help from a professional or as a standalone treatment. Most apps have not been evaluated in scientific studies. Guides on the quality of available mental health apps can be accessed from psyberguide.org and au.reachout.com/tools-and-apps (apps for young people). Headtohealth.gov.au may also be a useful resource.

How are they meant to work?

Apps may include different components thought to be helpful for anxiety. These include elements of cognitive behaviour therapy (CBT, see page 29), mindfulness meditation (see page 40), psychoeducation (see page 47), and acceptance and commitment therapy (see page 23). Delivering these components via a smartphone may be helpful, as the apps can be accessed quickly and easily throughout the day. App features such as feedback and reminders may also be helpful to reach treatment goals. Apps that include artificially intelligent chatbots may increase engagement with therapeutic content.

Do they work?

PTSD

Two studies have examined the effectiveness of the app 'PTSD Coach'. One small study compared the app to no treatment and found some evidence of benefit, but a larger study is needed to be sure. A very small study compared the effects of using the app with and without support from a therapist. Although PTSD symptoms improved in both groups, therapist support appeared to be more effective.

Social anxiety disorder

One small study compared CBT delivered via a smartphone or computer with no treatment. Both CBT treatments were guided by support from a therapist. Social anxiety symptoms improved more in the smartphone and

computer CBT groups than the no treatment group. Another good-quality study tested whether adding a smartphone app to a computer-based CBT treatment (see page 31) was effective. Adults with social anxiety disorder either received no treatment, access to an online self-help program for social anxiety, or the online program plus a smartphone app targeting social fears. Both treatments were effective but adding the smartphone did not appear to lead to a greater reduction in symptoms.

Panic disorder and agoraphobia

One good-quality study has looked at smartphone apps for agoraphobia in adults. It compared the app 'Agoraphobia Free' with 'Stress Free', an app for stress which did not address agoraphobic symptoms. Both apps reduced agoraphobic and panic symptoms over 12 weeks of use.

Specific phobias

There has been one case report of a smartphone app reducing symptoms of cockroach phobia. However, no high-quality studies have been carried out.

OCD

Two small studies have tested smartphone apps in adults with OCD. One evaluated the app 'LiveOCDFree', a self-help version of exposure and response prevention (see page 26). Symptoms of OCD improved after 12 weeks. However, there was no comparison with a group that did not receive any treatment. The second study tested an app that aimed to help shift attention away from intrusive thoughts. There was no improvement in OCD symptoms after three weeks.

Other types of anxiety

There is no evidence on whether smartphone apps work for GAD.

Are there any risks?

Smartphone apps may claim to be effective or based on evidence when this is not the case. Many apps do not have a privacy policy and personal data could be misused by developers.

Recommendation

There is not enough good evidence to say whether smartphone apps work.

St John's wort

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



St John's wort interacts with a number of prescription medications, either affecting how these medications work or leading to serious side-effects. People who are taking other medications should check with their doctor first before using St John's wort.

What is it?

St John's wort (*Hypericum perforatum*) is a small flowering plant which has been used as a traditional herbal remedy for depression. The plant gets its name because it flowers around the feast day of St John the Baptist. In Australia, St John's wort extracts are widely available in health food shops and supermarkets.

How is it meant to work?

The most important active compounds in St John's wort are believed to be hypericin and hyperforin, but other compounds may also play a role. How it works is not entirely clear. However, it might increase the supply of certain neurotransmitters (chemical messengers) in the brain that are thought to be affected in anxiety. These are serotonin, norepinephrine and dopamine.

Does it work?

GAD

There have been six case reports of St John's wort successfully treating GAD. However, no scientific studies have been carried out.

Social anxiety disorder

One small study has been carried out in adults with social anxiety disorder. One group took St John's wort twice a day and one group took placebo (dummy pills). The minimum daily dose was 600mg of St John's wort and each person could increase the dose up to 1800mg if they wanted to. The study lasted for 12 weeks. St John's wort did not have any effect on anxiety symptoms.

OCD

One small study was carried out in adults with OCD. One group took St John's wort twice a day and one group took placebo (dummy pills). The minimum daily dose was 600mg St John's wort and each person could increase the dose up to 1800mg if they wanted to. The study lasted for 12 weeks. St John's wort did not have any effect on OCD symptoms.

Other types of anxiety

There is no evidence on whether St John's wort works for panic disorder, PTSD or specific phobias.

Are there any risks?

When taken alone, St John's wort has very few side-effects. However, St John's wort interacts with many prescription medications, either affecting how these medications work or producing serious side-effects. According to the Therapeutic Goods Administration, people taking any of the following medications should not start using St John's wort:

- HIV protease inhibitors (indinavir, nelfinavir, ritonavir, saquinavir)
- HIV non-nucleoside reverse transcriptase inhibitors (efavirenz, nevirapine, delavirdine)
- Cyclosporin, tacrolimus
- Warfarin
- Digoxin
- Theophylline
- Anti-convulsants (carbamazepine, phenobarbitone, phenytoin)
- Oral contraceptives ('the pill')
- SSRI antidepressants (see page 61) and related drugs (citalopram, fluoxetine, fluvoxamine, paroxetine, sertraline, nefazodone)
- Triptans (sumatriptan, naratriptan, rizatriptan, zolmitriptan).

Anyone who is taking any other medications and wishes to use St John's wort is advised to check with their doctor first.

Recommendation

Initial evidence suggests that St John's wort does not appear to be effective for OCD or social anxiety disorder. However, more research is needed.

Sympathyl

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Sympathyl is a herbal medicine made in France. It contains California poppy (*Escholtzia californica*), hawthorn (*Crataegus oxyacantha*) and magnesium.

How is it meant to work?

This is not understood. Hawthorn and California poppy are thought to have anti-anxiety properties. Magnesium deficiency can cause psychological problems.

Does it work?

GAD

One study has been carried out in adults with GAD. One group took two Sympathyl tablets twice a day and one group took placebo (dummy pills) for three months. Each tablet contained 75mg hawthorn, 20mg California poppy and 75mg magnesium. More people in the Sympathyl group responded to treatment and people in the Sympathyl group also had lower symptoms of anxiety overall.

Other types of anxiety

There is no evidence on whether Sympathyl works for panic disorder, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None were found in the study above.

Recommendation

There is not enough evidence to say whether Sympathyl works.

Tai chi

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Tai chi is a type of moving meditation that originated in China as a martial art. It involves slow purposeful movements and focused breathing and attention.

How is it meant to work?

In traditional Chinese medicine, tai chi is thought to benefit health through the effects of the particular hand and foot movements on important acupuncture points and body channels. Tai chi could also be beneficial because it is a type of moderate exercise and a form of relaxing distraction from anxiety and stress.

Does it work?

One small study tested tai chi in people with moderate to severe anxiety. People took part in one hour-long tai chi session twice a week for 10 weeks. Tai chi improved anxiety symptoms, but there was no comparison group. Another small study tested adding tai chi to an antidepressant in people with a range of anxiety disorders. Half the people were instructed to do tai chi every morning and evening while half were not. After 45 days of treatment, anxiety symptoms improved more in the tai chi group.

Other types of anxiety

There is no evidence on whether tai chi specifically works for GAD, panic disorder, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough evidence to say whether tai chi works.

Therapeutic horseback riding

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Therapeutic horseback riding is done under the supervision of a health professional. It can involve learning basic horsemanship skills, completing tasks and interacting with a horse.

How is it meant to work?

It has been claimed that interacting with horses has physiological benefits, both through increased levels of physical activity and the beneficial effects of being around horses. It is also believed that interacting with and caring for horses can have psychological benefits by improving confidence and reducing stress.

Does it work?

PTSD

One small study compared therapeutic horseback riding with no treatment in people with PTSD. People took part in sessions once a week for six weeks. Therapeutic horseback riding was more effective than no treatment.

Other types of anxiety

There is no evidence on whether therapeutic horseback riding works for GAD, panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

None are known. There is a small risk of injury related to therapeutic horseback riding.

Recommendation

There is not enough evidence to say whether therapeutic horseback riding works for anxiety.

Traditional Chinese medicine

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Traditional Chinese medicine uses combinations of herbs, minerals, and animal products to treat disease. Combinations of herbs are usually tailored to individuals, but there are also frequently used herbs and conventional formulas for treating different conditions. The Chinese Medicine Board of Australia regulates all Australian Chinese medicine practitioners.

How is it meant to work?

Traditional Chinese medicine follows a system of understanding and treating disease that is different to the one used in Western medicine. Treatments are based on clinical experience gained over thousands of years of use in China. Treatments are thought to work by restoring balance to the body and mind.

Does it work?

GAD

One good-quality study compared Yiqiyangxin (a frequently-used combination) with an antidepressant (see page 61) in people with GAD who were also receiving cognitive behaviour therapy (CBT, see page 29). There was no difference in effect on anxiety between the two groups after six months. This study did not have a comparison group that received no treatment, so it is hard to draw conclusions.

Other types of anxiety

There is no evidence on whether traditional Chinese medicine works for panic disorder, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

Generally, Chinese herbs are safe when prescribed by a knowledgeable Chinese medical practitioner. Chinese herbs may interact with Western medicines, such as warfarin, and some should not be used during pregnancy. There are some Chinese herbs that are toxic but most of these are not used in Western countries.

Recommendation

There is not enough good evidence to say whether traditional Chinese medicine works.

Valerian

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Valerian (*Valeriana officinalis*) is a herb. It is often used to treat sleeping difficulties and is also used for treating anxiety.

How is it meant to work?

This is not well understood. It is thought that valerian might act like the benzodiazepine diazepam (see page 66).

Does it work?

GAD

One small study has been carried out in adults with GAD. The study compared the effects of valerian, a benzodiazepine (see page 66) and placebo (dummy pills). The results showed no difference between valerian and placebo. There was also no difference between valerian and the benzodiazepine when the anxiety symptoms were rated by a doctor. When the people in the study rated their own symptoms, more benefit was found with the benzodiazepine.

OCD

One small study has been carried out in adults with OCD. They received either a daily dose of valerian (750mg) or placebo for eight weeks. The group receiving valerian improved more than the placebo group up to eight weeks after receiving the treatment.

Other types of anxiety

There is no evidence on whether valerian works for panic disorder, PTSD, social anxiety disorder or specific phobias.

Are there any risks?

Valerian is generally recognised as safe. However, because it causes sleepiness, it should be avoided by people who are driving or operating dangerous machinery.

Recommendation

There is not enough good-quality evidence to say whether valerian works.

Water-based treatments

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What are they?

Water-based treatments (e.g. hydrotherapy, crenotherapy) are treatments involving water, mud and steam. Different methods of application include jet sprays, mud bandages, spa baths, saunas and water massage.

How are they meant to work?

Water-based treatments are thought to work because they are relaxing. Mineral-water based treatments might also work by replenishing the body's supply of important elements such as calcium, copper and selenium.

Do they work?

One very small study has evaluated the effects of spa baths on anxiety. Adults with a range of anxiety disorders each spent 15 minutes in an individual spa bath. Results showed that anxiety was lower after the bath than before the bath. However, the study did not test how long the results lasted and there was no comparison group that did not receive treatment.

GAD

One study was carried out in adults with GAD. It compared eight weeks of treatment with spa baths, water massage and spa showers with an antidepressant (see page 61). The study found the spa treatment was better than the drug in reducing anxiety symptoms.

PTSD

One very small study looked at the effect of warm water therapy in veterans with PTSD. In warm water therapy, the person is immersed in water and their body is supported and lightly massaged by an aquatic therapist. Warm water therapy was not found to be beneficial in reducing PTSD symptoms.

[Water-based treatments continued over page.](#)

Water-based treatments (continued)

Other types of anxiety

There is no evidence on whether water-based treatments work specifically for panic disorder, specific phobias, social anxiety disorder or OCD.

Are there any risks?

None are known.

Recommendation

There is not enough good evidence to say whether water-based treatments work.

Wet cupping

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Wet cupping is a type of traditional healing practiced in Eastern Asia, the Middle East, and Europe. It involves drawing blood from a person by making small cuts in the skin and using special cups to create suction.

How is it meant to work?

This is not understood. It is thought that wet cupping might remove harmful substances and toxins from the body and promote healing.

Does it work?

GAD

One small study looked at the benefit of adding wet cupping to antidepressants for GAD. Half of the people received wet cupping three times a week. After four weeks, anxiety symptoms improved more in the wet cupping group.

Other types of anxiety

There is no evidence on whether wet cupping works for panic disorder, PTSD, social anxiety disorder, specific phobias or OCD.







Are there any risks?

Minor bleeding, bruising and skin infections may occur. Wet cupping is not recommended for people with physical health problems.

Recommendation

There is not enough evidence to say whether or not wet cupping works.

Yoga

Evidence rating			
GAD		Panic disorder and agoraphobia	
PTSD		Specific phobias	
Social anxiety disorder		OCD	

What is it?

Yoga is an ancient part of Indian culture. Most yoga practiced in Western countries is Hatha yoga. This type of yoga exercises the body and mind using physical postures, breathing techniques and meditation.

How is it meant to work?

Yoga is thought to reduce stress and improve relaxation. It may also increase feelings of mastery from learning difficult postures or improve body image from greater bodily awareness and control. It may also help to distract people from negative thoughts.

Does it work?

GAD

Seven small studies compared yoga with no treatment or other treatments in people with GAD. These used a variety of types of yoga. Overall, the results were positive. Yoga produced more improvement than no treatment. However, the studies were not well designed, making it difficult to come to firm conclusions.

PTSD

A pooling of data from seven small studies found that yoga was better than no treatment. However, yoga did not differ from simply meeting with a professional for a check-up or for health education. The quality of these studies was low.

Panic disorder and agoraphobia

One very small study compared yoga to yoga plus cognitive behaviour therapy (see page 29). Both groups improved with no difference found.

OCD

One small study compared yoga with mindfulness meditation (see page 40) and relaxation training (see page 112). Both groups had one-hour weekly treatments with an instructor and did daily practice. After three months the people in the yoga group had lower anxiety symptoms than the people in the meditation group. Another small study compared yoga with watching TV for the same period of time. There was a trend for more improvement in the yoga group, but the evidence is weak.

Other types of anxiety

There is no evidence on whether yoga works for social anxiety disorder or specific phobias.

Are there any risks?

To reduce the risk of injury, yoga should be practiced in a class with a qualified instructor.

Recommendation

Yoga may be helpful for GAD and PTSD, but more good-quality research is needed.

Zinc

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Zinc is an essential mineral found in many foods. It can also be taken as a supplement.

How is it meant to work?

This is not known. It might work by acting on chemicals in the brain (neurotransmitters).

Does it work?

OCD

One very small study has compared zinc with placebo (dummy pills) in people who were also taking antidepressants. Those in the zinc group took a daily dose of 440mg. After eight weeks, the zinc group had lower symptoms of OCD than the placebo group.

Other types of anxiety

There is no evidence on whether zinc works for GAD, panic disorder, PTSD, social anxiety disorder or specific phobias.

Are there any risks?

Taking zinc at higher than recommended doses can be toxic. The recommended upper limit for adults is 40mg a day (NHMRC Nutrient Reference Values for Australia and New Zealand).

Recommendation

More studies are needed to say whether zinc works for OCD.

**Interventions
not routinely
available**

Anti-inflammatory drugs

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What are they?

Nonsteroidal anti-inflammatory drugs (NSAIDs) have been researched as a potential treatment for anxiety. There are many different types of NSAIDs. The main one tested for anxiety is celecoxib, which is sold in Australia as Celebrex. Celecoxib requires a prescription from a doctor.

How are they meant to work?

Inflammation is a process the body uses to protect itself from infection. It is part of the immune system. However, in some diseases (e.g. arthritis), the body triggers inflammation when there is no infection to fight off. In these cases, the body's immune system can cause damage to its own tissues. There is a theory that inflammation plays a role in anxiety.

Do they work?

OCD

Two small studies have compared adding NSAIDs or placebo (dummy pills) to antidepressants (see page 61) in people with OCD. The treatments lasted for between eight and 10 weeks. Both studies reduced OCD symptoms.

Other types of anxiety

There is no evidence on whether anti-inflammatory drugs work for GAD, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

NSAIDs can have side-effects. They can cause problems in the gut, heart and blood vessels, and the body's response to infection. However, studies of NSAIDs as a short-term treatment for depression have not found side-effects to be a problem.

Recommendation

More research is needed before we can say whether NSAIDs are helpful for OCD.

Borage

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Borage (*Echium amoenum*) is a herb that grows in Iran. The plant is usually brewed and drunk as tea. However, when used for anxiety disorders it has been in the form of a special extract.

How is it meant to work?

This is not known. Borage is used in traditional Iranian medicine to help with anxiety.

Does it work?

GAD

One small study has been carried out in adults with GAD. One group took a daily dose of 500mg of borage extract and the other group took placebo (dummy pills). Both groups were also taking an antidepressant (see page 61). After eight weeks, the borage group had lower symptoms than the placebo group.

OCD

One small study has been carried out in adults with OCD. One group took a daily dose of 500mg of borage extract and the other group took placebo. After six weeks, the borage group had lower symptoms of OCD than the placebo group.

Other types of anxiety

There is no evidence on whether borage works for panic disorder, PTSD, social anxiety disorder or specific phobias.







Are there any risks?

None are known.

Recommendation

While there is some initial positive evidence, more studies are needed to say whether borage works for GAD and OCD.

Galphimia glauca

Evidence rating			
GAD		Panic disorder and agoraphobia	
PTSD		Specific phobias	
Social anxiety disorder		OCD	

What is it?

Galphimia glauca is a plant used in Mexican traditional medicine for its relaxing and calming effect.

How is it meant to work?

This is unclear. Its chemical components may affect brain chemistry.

Does it work?

GAD

Three good-quality studies have been carried out in adults with GAD. In these studies, adults received daily doses of *Galphimia glauca* extract or a benzodiazepine (see page 66). These studies lasted for four, 10 or 15 weeks respectively. In all the studies, the *Galphimia glauca* was more effective at reducing anxiety. However, there was no comparison with placebo (dummy pills) in any of these studies.

Social anxiety disorder

One small, good-quality study has been carried out in young adults with social anxiety disorder. They received daily doses of *Galphimia glauca* extract or an antidepressant (see page 61) drug for 10 weeks. Both treatments reduced anxiety, with no difference between them. However, there was no comparison with placebo.

Other types of anxiety

There is no evidence on whether *Galphimia glauca* works for panic disorder, PTSD, specific phobias or OCD.







Are there any risks?

Few side-effects were reported in the above studies.

Recommendation

There is promising evidence that *Galphimia glauca* works for GAD but not enough good evidence to say whether *Galphimia glauca* works for other types of anxiety.

Ketamine

Evidence rating			
GAD		Panic disorder and agoraphobia	
PTSD		Specific phobias	
Social anxiety disorder		OCD	



Serious side-effects may occur from using large doses of ketamine. This is an experimental treatment that is not routinely available from health professionals/doctors.

What is it?

Ketamine is usually used as an anaesthetic. It is also an illegal street drug. Ketamine is a new, experimental approach for anxiety. A low dose of ketamine is usually given by injection or through the nose. It is given in supervised sessions by a doctor.

How is it meant to work?

Ketamine is thought to work by blocking the chemical glutamate from sending messages in the brain.

Does it work?

GAD

One study tested ketamine in 20 people. Most of them had diagnoses of GAD and social anxiety disorder that had not responded to other treatment. They received a dose of ketamine once or twice a week for three months. Their symptoms reduced after this time. However, there was no comparison group in this study.

PTSD

One small study compared a single dose of ketamine with a benzodiazepine (see page 66) in people with long-term PTSD. People in the ketamine group had reduced symptoms after 24 hours. Another small study tested the use of a psychological treatment to make the effect of ketamine last longer. This showed benefit for up to three months.

Ketamine continued over page.

Ketamine (continued)

Social anxiety disorder

Two very small studies have tested the effect of ketamine on social anxiety disorder. One study tested ketamine in 20 people. Most of them had diagnoses of social anxiety disorder and GAD. They received a dose of ketamine once or twice a week for three months. Their symptoms reduced after this time. However, there was no comparison group in this study. Another study compared ketamine with placebo (dummy pills) treatment. Ketamine reduced symptoms more than placebo for up to 14 days.

OCD

Three very small studies tested the short-term effect of ketamine in people with OCD. In one study, ketamine improved symptoms more than a placebo treatment after one week. In another study, symptoms improved for up to three days. In this study, some of the people also had depression and these symptoms were reduced more than the OCD symptoms. Another small study tested the use of a psychological treatment to make the effect of ketamine last longer. This showed benefit for up to two weeks.

Other types of anxiety

There is no evidence on whether ketamine works for specific phobias.

Are there any risks?

Used under medical supervision, ketamine is relatively safe. However, side-effects can be serious. These include changes to vision or hearing, confusion, high blood pressure, feeling 'high', dizziness, and increased interest in sex. Abuse of this drug can produce very serious health effects.

Recommendation

There is not enough research to say whether ketamine is effective for anxiety.

Marijuana and other cannabinoids

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Side-effects can include light-headedness, forgetfulness, dizziness, and headache. Marijuana may increase the risk of psychosis.

What is it?

Marijuana (*Cannabis sativa*) is a plant that contains thousands of chemicals that can affect the brain. In Australia, it is an illegal street drug. Tetrahydrocannabinol (THC) and cannabidiol are two of the chemicals found in the plant. Cannabidiol pills have only been used in research studies and are not yet available as a treatment. There are also synthetic (man-made) chemicals that act like the chemicals found in the marijuana plant.

How is it meant to work?

Marijuana and other cannabinoids affect parts of the brain that control emotions such as fear.

Does it work?

PTSD

One small study tested the effect of adding THC to other medication in 10 people with PTSD. People in the study took this for three weeks and their symptoms were reduced. However, there was no comparison group in this study. Another study with no comparison group was also carried out in 47 people. This study involved a synthetic cannabinoid (nabilone) and also showed benefits.

One small study has been carried out in people with PTSD given either nabilone or placebo (dummy pills) for seven weeks. Those in the nabilone group had more improvement in nightmares (which are a symptom of PTSD).

Marijuana and other cannabinoids continued over page.

Marijuana and other cannabinoids (continued)

Social anxiety disorder

One small study compared the effect of one treatment session of cannabidiol or placebo in 10 people with social anxiety disorder. People in the cannabidiol group had lower anxiety symptoms.

Another study was carried out in 24 people with social anxiety disorder. They were given either a cannabidiol pill or a placebo 1.5 hours before speaking to an audience. Those given cannabidiol experienced less anxiety during the speech.

Other types of anxiety

There is no evidence on whether marijuana and other cannabinoids work for GAD, panic disorder, specific phobias or OCD.

Are there any risks?

Side-effects can include light-headedness, forgetfulness, dizziness, and headache. Marijuana may increase the risk of psychosis.

Recommendation

Cannabinoids may be a promising treatment for anxiety, but more research is needed.

MDMA

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



MDMA can cause heat stroke and dehydration and, in rare cases, death.

What is it?

MDMA (methylenedioxymethamphetamine) is best known as the street drug 'ecstasy'. When used to treat anxiety, it is usually given under the supervision of a doctor.

How is it meant to work?

MDMA increases the activity of brain chemicals related to emotions and motivation. It may increase feelings of wellbeing, empathy, compassion and pleasure. This may reduce anxiety and help people to process difficult emotions.

Does it work?

PTSD

Three small studies have tested the effect of MDMA in people with PTSD. The first study involved 20 people. They received two eight-hour psychotherapy sessions with MDMA or placebo (dummy pills). MDMA was more effective at reducing symptoms.

Two other studies compared the effect of full-dose MDMA with minimal-dose MDMA in people with PTSD. In one study, people had three sessions of MDMA treatment and weekly psychotherapy. The minimal dose was enough for people to feel the effects but not enough to reduce anxiety. Full-dose MDMA was more effective in reducing some symptoms. In the other study, people had two treatment sessions spaced one month apart. Full-dose MDMA was more effective in reducing symptoms. However, larger studies are needed to confirm these effects.

MDMA continued over page.

MDMA (continued)

Other types of anxiety

There is no evidence on whether MDMA works for GAD, panic disorder, social anxiety disorder, specific phobias or OCD.

Are there any risks?

Side-effects include paranoia, difficulty sleeping, teeth grinding, blurred vision, sweating, and a rapid heartbeat. MDMA can cause heat stroke and dehydration and, in rare cases, death.

Recommendation

There is some promising research on MDMA for PTSD but larger studies are needed. There are no studies on the use of MDMA for other types of anxiety.

Neurosteroids

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Mild side-effects include headache and stomach problems.

What are they?

Neurosteroids are an experimental treatment. They are usually given through a nasal spray. These drugs are not yet available from doctors.

How are they meant to work?

There is evidence that neurosteroids can change the way nerves in the brain respond to stressful events.

Do they work?

Social anxiety disorder

Two studies have tested the effects of neurosteroids in people with social anxiety disorder. One study compared a neurosteroid with placebo (dummy) treatment. People were given the treatments 15 minutes before a public speaking or social event. This study was done in a laboratory under experimental conditions. The neurosteroid reduced anxiety symptoms more than placebo. In another small study, people were given the neurosteroid spray or a placebo spray. They were told to use it whenever they needed it for two weeks. People in the neurosteroid group had less anxiety symptoms.

Other types of anxiety

There is no evidence on whether neurosteroids work for GAD, panic disorder, PTSD, specific phobias or OCD.

Are there any risks?

Neurosteroids appear to be safe. Mild side-effects include headache and stomach problems.

Recommendation

There is some promising research for social anxiety disorder, but more studies are needed. There is not enough research to say whether neurosteroids are effective for other types of anxiety.

Oxytocin

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Mild side-effects include headache and stomach problems.

What is it?

Oxytocin is a brain chemical that plays a role in memory and fear responses. It is given via a nasal spray. This treatment is not yet available from doctors.

How is it meant to work?

Oxytocin is thought to affect the way people respond to stress.

Does it work?

Social anxiety disorder

One small study compared oxytocin with placebo (dummy pills) treatment in people with social anxiety disorder. They were given oxytocin just before a public speaking event. This was done once a week for five weeks. Oxytocin did not reduce anxiety.

Specific phobias

One very small study looked at the effects of oxytocin in people with a fear of spiders. People were given either oxytocin or placebo when receiving a session of exposure therapy (see page 26). Oxytocin did not reduce anxiety.

OCD

Several small studies have compared the effect of oxytocin with placebo treatment in people with OCD. There was no effect on OCD symptoms in any of the studies.

Other types of anxiety

There is no evidence on whether oxytocin works for GAD, panic disorder or PTSD.

Are there any risks?

Oxytocin appears to be safe. Mild side-effects include headache and stomach problems.

Recommendation

There is not enough research to say whether oxytocin is effective for anxiety.

Psilocybin

Evidence rating

GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Psilocybin can cause anxiety and psychosis (losing contact with reality).

What is it?

Psilocybin is a compound produced by mushrooms (sometimes known as 'magic mushrooms'). It can cause hallucinations (e.g. seeing or hearing things that are not there) and other unusual thoughts and experiences. When treating anxiety, it is usually given under the supervision of a doctor.

How is it meant to work?

Psilocybin acts in the brain in a similar way to the chemical messenger serotonin. This brain chemical is important to emotions and motivation.

Does it work?

OCD

One small study of psilocybin has been carried out in people with OCD. They received four gradually-increasing doses of psilocybin in four weeks. OCD symptoms were reduced at the end of the study. However, there was no comparison group in the study.

Other types of anxiety

There is no evidence on whether psilocybin works for GAD, panic disorder, PTSD, social anxiety disorder or OCD.

Are there any risks?

Used under medical supervision, psilocybin appears relatively safe. However, side-effects can include anxiety and psychosis (losing contact with reality).

Recommendation

There is not enough good evidence that psilocybin is helpful for OCD. There are no studies on the use of psilocybin for other types of anxiety.

Sweet flag

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?

What is it?

Sweet flag (also known as *Acorus calamus* or Vaca) is a plant used in traditional Indian and Chinese medicine. The root is made into a powder.

How is it meant to work?

Sweet flag is used in Ayurvedic medicine (see page 88). It is thought to help protect against stress.

Does it work?

GAD

One small study gave extracts of sweet flag to adults with GAD. A dose of 500mg twice a day was taken for two months. The treatment improved anxiety symptoms, but there was no comparison group.

Other types of anxiety

There is no evidence on whether sweet flag works for PTSD, social anxiety disorder, panic disorder, specific phobias or OCD.

Are there any risks?

No side-effects were found in the above study.

Recommendation

There is not enough evidence to say whether or not sweet flag works.

Xenon

Evidence rating			
GAD	?	Panic disorder and agoraphobia	?
PTSD	?	Specific phobias	?
Social anxiety disorder	?	OCD	?



Mild side-effects include headache and dizziness.

What is it?

Xenon is a gas that has been used as an anaesthetic. It is given via inhalation.

How is it meant to work?

Xenon is thought to affect the action of brain chemicals related to memory and fear.

Does it work?

Panic disorder and agoraphobia

One small study tested the effect of a mixture of xenon and oxygen in people with panic disorder. Study participants had up to seven treatments in under two weeks. Xenon reduced anxiety symptoms for up to six months. However, there was no comparison group in this study.

Other types of anxiety

There is no evidence on whether xenon works for GAD, PTSD, social anxiety disorder, specific phobias or OCD.

Are there any risks?

Xenon appear to be safe. Mild side-effects include headache and dizziness.

Recommendation

There is not enough research to say whether xenon is effective for anxiety.

Interventions reviewed but where no evidence was found

American ginseng (<i>Panax quinquefolius</i>)	Ketogenic diet	Skullcap (<i>Scutellaria lateriflora</i>)
Astragalus (<i>Astragalus membranaceus</i>)	L-arginine	Sleep deprivation
Barley avoidance	L-lysine	Sleep hygiene
Berocca	Lecithin	Spirulina (<i>Arthrospira platensis</i>)
Biotin	Lemongrass leaves (<i>Cymbopogon citrates</i>)	St Ignatius bean (<i>Ignatia amara</i>)
Brahmi (<i>Bacopa monniera</i>)	Licorice (<i>Glycyrrhiza glabra</i>)	Sugar avoidance
California poppy (<i>Eschscholzia californica</i>)	Listening to music	Taurine
Catnip (<i>Nepeta cataria</i>)	Magnesium	Tension tamer
Cat's claw (<i>Uncaria tomentosa</i>)	Melatonin	Tissue salts
Chaste tree berry (<i>Vitex agnus castus</i>)	Mistletoe (<i>Viscum album</i>)	Tragerwork
Chinese medicinal mushrooms (<i>reishi</i> or <i>Lingzhi</i>) (<i>Ganoderma lucidum</i>)	Motherwort (<i>Leonurus cardiaca</i>)	Tyrosine
Choline	Naturopathy	Vervain (<i>Verbena officinalis</i>)
Chromium	Nettles (<i>Urtica dioica</i>)	Wild yam (<i>Dioscorea villosa</i>)
Coenzyme Q10	Oats (<i>Avena sativa</i>)	Wood betony (<i>Stachys officinalis</i> ; <i>Betonica officinalis</i>)
Cowslip (<i>Primula veris</i>)	Para-aminobenzoic acid (PABA)	Yeast
Craniosacral therapy	Peppermint (<i>Mentha piperita</i>)	Zizyphus (<i>Zizyphus spinosa</i>)
Dairy food avoidance	Phenylalanine	
Damiana (<i>Turnera diffusa</i>)	Pilates	
Dandelion (<i>Taraxacum officinale</i>)	Pleasant activities	
Flax seeds (<i>linseed</i>) (<i>Linum usitatissimum</i>)	Potassium	
Gamma-aminobutyric acid (GABA)	Prayer	
Ginger (<i>Zingiber officinale</i>)	Qigong	
Ginseng (<i>Panax ginseng</i>)	Recreational dance	
Glutamine	Reflexology	
Hawthorn (<i>Crataegus laevigata</i>)	Rehmannia (<i>Rehmannia glutinosa</i>)	
Hops (<i>Humulus lupulus</i>)	Reiki	
Humour	Sam-e (<i>S-adenosyl methionine</i>)	
Hyssop (<i>Hyssopus officinalis</i>)	Schizandra (<i>Schizandra chinensis</i>)	
	Sedariston	
	Selenium	
	Siberian ginseng (<i>Eleutherococcus senticosus</i>)	

References

- ¹ Australian Bureau of Statistics. (2008). *National Survey of Mental Health and Wellbeing: Summary of Results, 2007* (4326.0). Canberra: Australian Bureau of Statistics.
- ² Nasir BF, Toombs MR, Kondalsamy-Chennakesavan S, Kisely S, Gill NS, Black E, Hayman N, Ranmuthugala G, Beccaria G, Ostini R, Nicholson GC. Common mental disorders among Indigenous people living in regional, remote and metropolitan Australia: a cross-sectional study. *BMJ Open*. 2018;8(6):e020196.
- ³ Kanowski LG, Kitchener BA and Jorm AF (Eds) (2008) *Aboriginal and Torres Strait Islander Mental Health First Aid Manual*. ORYGEN Research Centre, Melbourne.
- ⁴ AIHW (Australian Institute of Health and Welfare) 2018. *Aboriginal and Torres Strait Islander Stolen Generations and descendants: numbers, demographic characteristics and selected outcomes*. Cat. no. IHW 195. Canberra: AIHW
- ⁵ Australian Bureau of Statistics (2016). *National Aboriginal and Torres Strait Islander Social Survey, 2014-15: Table 14. Stressors, by sex and remoteness [data cube]*. Retrieved from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4714.02014-15?OpenDocument>
- ⁶ Atkinson J (2013). *Trauma-informed services and trauma-specific care for Indigenous Australian children*. Resource sheet no. 21. Produced for the Closing the Gap Clearinghouse. Canberra: Australian Institute of Health and Welfare & Melbourne: Australian Institute of Family Studies
- ⁷ Titov N, Schofield C, Staples L, Dear BF, Nielssen O. A comparison of Indigenous and non-Indigenous users of MindSpot: an Australian digital mental health service. *Australasian Psychiatry*. 2019 Aug;27(4):352-357
- ⁸ Sotsky SM, Glass DR, Shea MT, Pilkonis PA, Collins JF, Elkin I, et al. Patient predictors of response to psychotherapy and pharmacotherapy: findings in the NIMH Treatment of Depression Collaborative Research Program. *American Journal of Psychiatry*. 1991; 148:997-1008.
- ⁹ Krell HV, Leuchter AF, Morgan M, Cook IA, Abrams M. Subject expectations of treatment effectiveness and outcome of treatment with an experimental antidepressant. *The Journal of Clinical Psychiatry*. 2004;65:1174-1179.
- ¹⁰ Priebe S, Gruyters T. The importance of the first three days: predictors of treatment outcome in depressed in-patients. *British Journal of Clinical Psychology*. 1995;34:229-236.

Psychological interventions

Acceptance and commitment therapy (ACT)

Avdagic, E., Morrissey, S. A., & Boschen, M. J. (2014). A randomised controlled trial of acceptance and commitment therapy and cognitive-behaviour therapy for generalised anxiety disorder. *Behaviour Change*, 31(2), 110-130.

Baghooli, H., Dolatshahi, B., Mohammadkhani, P., Moshtagh, N., & Naziri, G. (2014). Effectiveness of acceptance and commitment therapy in reduction of severity symptoms of patients with obsessive-compulsive disorder. *Advances in Environmental Biology*, 2519-2525.

Craske, M. G., Niles, A. N., Burklund, L. J., Wolitzky-Taylor, K. B., Vilaridaga, J. C. P., Arch, J. J., ... Lieberman, M. D. (2014). Randomized controlled trial of cognitive behavioral therapy and acceptance and commitment therapy for social phobia: Outcomes and moderators. *Journal of Consulting and Clinical Psychology*, 82(6), 1034-1048.

Esfahani, M., Kjbaf, M. B., & Abedi, M. R. (2015). Evaluation and comparison of the effects of time perspective therapy, acceptance and commitment therapy and narrative therapy on severity of symptoms of obsessive-compulsive disorder. *Journal of the Indian Academy of Applied Psychology*, 41(3), 148.

Gharraee, B., Tajrishi, K. Z., Farani, A. R., Bolhari, J., & Farahani, H. (2018). The effectiveness of acceptance and commitment therapy for social anxiety disorder. *International Journal of Life Science and Pharma Research*, 8(4), L1-L9.

Gloster, A. T., Sonntag, R., Hoyer, J., Meyer, A. H., Heinze, S., Ströhle, A., ... Wittchen, H. U. (2015). Treating treatment-resistant patients with panic disorder and agoraphobia using psychotherapy: A randomized controlled switching trial. *Psychotherapy and Psychosomatics*, 84(2), 100-109.

Hayes-Skelton, S. A., Roemer, L., & Orsillo, S. M. (2013). A randomized clinical trial comparing an acceptance-based behavior therapy to applied relaxation for generalized anxiety disorder. *Journal of Consulting and Clinical Psychology*, 81(5), 761.

Herbert, J. D., Forman, E. M., Kaye, J. L., Gershkovich, M., Goetter, E., Yuen, E. K., ... Berkowitz, S. (2018). Randomized controlled trial of acceptance and commitment therapy versus traditional cognitive behavior therapy for social anxiety disorder: Symptomatic and behavioral outcomes. *Journal of Contextual Behavioral Science*, 9, 88-96.

Karekla, M. (2004). *A comparison between acceptance-enhanced panic control treatment and panic control treatment for panic disorder* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global (305079985).

Kocovski, N. L., Fleming, J. E., Hawley, L. L., Huta, V., & Antony, M. M. (2013). Mindfulness and acceptance-based group therapy versus traditional cognitive behavioral group therapy for social anxiety disorder: A randomized controlled trial. *Behaviour Research and Therapy*, 51(12), 889-898.

Lang, A. J., Schnurr, P. P., Jain, S., He, F., Walser, R. D., Bolton, E., ... & Strauss, J. (2017). Randomized controlled trial of acceptance and commitment therapy for distress and impairment in OEF/OIF/OND veterans. *Psychological Trauma: Theory, Research, Practice, and Policy*, 9(51), 74.

Pompoli, A., Furukawa, T. A., Imai, H., Tajika, A., Efthimiou, O., & Salanti, G. (2016). Psychological therapies for panic disorder with or without agoraphobia in adults: a network meta-analysis. *Cochrane Database of Systematic Reviews*, 2016(4). doi: 10.1002/14651858.CD011004.pub2

Roemer, L., Orsillo, S. M., & Salters-Pedneault, K. (2008). Efficacy of an acceptance-based behavior therapy for generalized anxiety disorder: Evaluation in a randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 76(6), 1083.

Rohani, F., Rasouli-Azad, M., Twohig, M. P., Ghoreishi, F. S., Lee, E. B., & Akbari, H. (2018). Preliminary test of group acceptance and commitment therapy on obsessive-compulsive disorder for patients on optimal dose of selective serotonin reuptake inhibitors. *Journal of Obsessive-Compulsive and Related Disorders*, 16, 8-13.

Twohig, M. P., Hayes, S. C., Plumb, J. C., Pruitt, L. D., Collins, A. B., Hazlett-Stevens, H., & Woidneck, M. R. (2010). A randomized clinical trial of acceptance and commitment therapy versus progressive relaxation training for obsessive-compulsive disorder. *Journal of Consulting and Clinical Psychology*, 78(5), 705.

Vakili, Y., Gharraee, B., Habibi, M., Lavasani, F., & Rasoolian, M. (2014). The comparison of acceptance and commitment therapy with selective serotonin reuptake inhibitors in the treatment of obsessive-compulsive disorder. *Zahedan Journal of Research in Medical Sciences*, 16(10), 10-14.

Wagener, A. L. (2012). *The mechanisms of change associated with exposure in act versus CBT for treatment of arachnophobia* (Doctoral dissertation, Wichita State University). Retrieved from <http://soar.wichita.edu/handle/10057/5590>

Yadegari, L., Hashemiyan, K., & Abolmaali, K. (2015). Acceptance and commitment therapy for social anxiety disorder and agoraphobia: A preliminary investigation. *International Journal of Advanced Life Sciences*, 8, 101-109.

Zargar, F., Asgharnejad Farid, A. A., Atef-Vahid, M. K., Afshar, H., Maroofi, M., & Omranifard, V. (2012). Effect of acceptance-based behavior therapy on severity of symptoms, worry and quality of life in women with generalized anxiety disorder. *Iranian Journal of Psychiatry and Behavioral Sciences*, 6(2), 23-32.

Applied muscle tension

Choy, Y., Fyer, A. J., & Lipsitz, J. D. (2007). Treatment of specific phobia in adults. *Clinical Psychology Review*, 27(3), 266-286.

Art therapy

Baker, F. A., Metcalf, O., Varker, T., & O'Donnell, M. (2018). A systematic review of the efficacy of creative arts therapies in the treatment of adults with PTSD. *Psychological Trauma: Theory, Research, Practice, and Policy*, 10(6), 643.

Morris, F. J. (2014). Should art be integrated into cognitive behavioral therapy for anxiety disorders?. *The Arts in Psychotherapy*, 41(4), 343-352.

Autobiographical episodic memory-based training (AET)

Korrelboom, K., Gaag, M. V. D., Hendriks, V. M., Huijbrechts, I., & Berretty, E. W. (2008). Treating obsessions with Competitive Memory Training: A pilot study. *The Behavior Therapist*, 31(2), 28-36.

Korrelboom, K., Peeters, S., Blom, S., & Huijbrechts, I. (2014). Competitive memory training (COMET) for panic and applied relaxation (AR) are equally effective in the treatment of panic in panic-disordered patients. *Journal of Contemporary Psychotherapy*, 44(3), 183-190.

Maxwell, K., Callahan, J. L., Holtz, P., Janis, B. M., Gerber, M. M., & Connor, D. R. (2016). Comparative study of group treatments for posttraumatic stress disorder. *Psychotherapy*, 53(4), 433.

Schneider, B. C., Wittekind, C. E., Talhof, A., Korrelboom, K., & Moritz, S. (2015). Competitive Memory Training (COMET) for OCD: a self-treatment approach to obsessions. *Cognitive Behaviour Therapy*, 44(2), 142-152.

Behaviour therapy (including exposure therapy)

Arroll, B., Wallace, H. B., Mount, V., Humm, S. P., & Kingsford, D. W. (2017). A systematic review and meta-analysis of treatments for acrophobia. *Medical Journal of Australia*, 206(6), 263-267.

Choy, Y., Fyer, A. J., & Lipsitz, J. D. (2007). Treatment of specific phobia in adults. *Clinical Psychology Review*, 27(3), 266-286.

Cusack, K., Jonas, D. E., Forneris, C. A., Wines, C., Sonis, J., Middleton, J. C., ... Weil, A. (2016). Psychological treatments for adults with posttraumatic stress disorder: A systematic review and meta-analysis. *Clinical Psychology Review*, 43, 128-141.

Grös, D. F., & Antony, M. M. (2006). The assessment and treatment of specific phobias: A review. *Current Psychiatry Reports*, 8(4), 298-303.

Hoyer, J., Beesdo, K., Gloster, A. T., Runge, J., Höfler, M., & Becker, E. S. (2009). Worry exposure versus applied relaxation in the treatment of generalized anxiety disorder. *Psychotherapy and Psychosomatics*, 78(2), 106-115.

Korrelboom, K., Peeters, S., Blom, S., & Huijbrechts, I. (2014). Competitive memory training (COMET) for panic and applied relaxation (AR) are equally effective in the treatment of panic in panic-disordered patients. *Journal of Contemporary Psychotherapy*, 44(3), 183-190.

Mayo-Wilson, E., Dias, S., Mavranouzouli, I., Kew, K., Clark, D. M., Ades, A. E., & Pilling, S. (2014). Psychological and pharmacological interventions for social anxiety disorder in adults: A systematic review and network meta-analysis. *The Lancet Psychiatry*, 1(5), 368-376.

McMurtry, C. M., Noel, M., Taddio, A., Antony, M. M., Asmundson, G. J., Riddell, R. P., ... Shah, V. (2015). Interventions for individuals with high levels of needle fear: Systematic review of randomized controlled trials and quasi-randomized controlled trials. *The Clinical Journal of Pain*, 31(Suppl 10), S109.

Pompoli, A., Furukawa, T. A., Imai, H., Tajika, A., Efthimiou, O., & Salanti, G. (2016). Psychological therapies for panic disorder with or without agoraphobia in adults: A network meta-analysis. *Cochrane Database of Systematic Reviews*, 2016(4). doi:10.1002/14651858.CD011004.pub2

Pull, C. B. (2007). Current status of virtual reality exposure therapy in anxiety disorders. *Current Opinion in Psychiatry*, 18(1), 7-14.

Romanelli, R. J., Wu, F. M., Gamba, R., Mojtabai, R., & Segal, J. B. (2014). Behavioral therapy and serotonin reuptake inhibitor pharmacotherapy in the treatment of obsessive-compulsive disorder: A systematic review and meta-analysis of head-to-head randomized controlled trials. *Depression and Anxiety*, 31(8), 641-652.

Skapinakis, P., Caldwell, D. M., Hollingworth, W., Bryden, P., Fineberg, N. A., Salkovskis, P., ... Lewis, G. (2016). Pharmacological and psychotherapeutic interventions for management of obsessive-compulsive disorder in adults: a systematic review and network meta-analysis. *The Lancet Psychiatry*, 3(8), 730-739.

Tran, U. S., & Gregor, B. (2016). The relative efficacy of bona fide psychotherapies for post-traumatic stress disorder: a meta-analytical evaluation of randomized controlled trials. *BMC Psychiatry*, 16(1), 266.

Wide Boman, U., Carlsson, V., Westin, M., & Hakeberg, M. (2013). Psychological treatment of dental anxiety among adults: a systematic review. *European Journal of Oral Sciences*, 121(3pt2), 225-234.

Biofeedback

Ferreira, S., Pego, J. M., & Morgado, P. (2018). The efficacy of biofeedback approaches for obsessive-compulsive and related disorders: A systematic review and meta-analysis. *Psychiatry Research*, 272, 237-245.

Kerson, C., Sherman, R. A., & Kozlowski, G. P. (2009). Alpha suppression and symmetry training for generalized anxiety symptoms. *Journal of Neurotherapy*, 13(3), 146-155.

Polak, A. R., Witteveen, A. B., Denys, D., & Olff, M. (2015). Breathing biofeedback as an adjunct to exposure in cognitive behavioral therapy hastens the reduction of PTSD symptoms: A pilot study. *Applied Psychophysiology and Biofeedback*, 40(1), 25-31.

Rice, K. M., Blanchard, E. B., & Purcell, M. (1993). Biofeedback treatments of generalized anxiety disorder: Preliminary results. *Biofeedback and Self-regulation*, 18(2), 93-105.

Tan, G., Dao, T. K., Farmer, L., Sutherland, R. J., & Gevirtz, R. (2011). Heart rate variability (HRV) and posttraumatic stress disorder (PTSD): A pilot study. *Applied Psychophysiology and Biofeedback*, 36(1), 27-35.

van der Kolk, B. A., Hodgdon, H., Gapen, M., Musicaro, R., Suvak, M. K., Hamlin, E., & Spinazzola, J. (2016). A randomized controlled study of neurofeedback for chronic PTSD. *PLoS one*, 11(12), e0166752.

Zilverstand, A., Sorger, B., Sarkheil, P., & Goebel, R. (2015). fMRI neurofeedback facilitates anxiety regulation in females with spider phobia. *Frontiers in Behavioral Neuroscience*, 9, 148.

Cognitive behaviour therapy (CBT)

Carpenter, J. K., Andrews, L. A., Witcraft, S. M., Powers, M. B., Smits, J. A., & Hofmann, S. G. (2018). Cognitive behavioral therapy for anxiety and related disorders: A meta-analysis of randomized placebo-controlled trials. *Depression and Anxiety*, 35(6), 502-514.

Cuijpers, P., Cristea, I. A., Karyotaki, E., Reijnders, M., & Huibers, M. J. (2016). How effective are cognitive behavior therapies for major depression and anxiety disorders? A meta-analytic update of the evidence. *World Psychiatry*, 15(3), 245-258.

Cuijpers, P., Gentili, C., Banos, R. M., Garcia-Campayo, J., Botella, C., & Cristea, I. A. (2016). Relative effects of cognitive and behavioral therapies on generalized anxiety disorder, social anxiety disorder and panic disorder: A meta-analysis. *Journal of Anxiety Disorders*, 43, 79-89.

Cuijpers, P., Sijbrandij, M., Koole, S., Huibers, M., Berking, M., & Andersson, G. (2014). Psychological treatment of generalized anxiety disorder: a meta-analysis. *Clinical Psychology Review*, 34(2), 130-140.

Cusack, K., Jonas, D. E., Forneris, C. A., Wines, C., Sonis, J., Middleton, J. C., ... Weil, A. (2016). Psychological treatments for adults with posttraumatic stress disorder: A systematic review and meta-analysis. *Clinical Psychology Review*, 43, 128-141.

Öst, L. G., Havnen, A., Hansen, B., & Kvale, G. (2015). Cognitive behavioral treatments of obsessive-compulsive disorder. A systematic review and meta-analysis of studies published 1993-2014. *Clinical Psychology Review*, 40, 156-169.

Pompoli, A., Furukawa, T. A., Imai, H., Tajika, A., Efthimiou, O., & Salanti, G. (2016). Psychological therapies for panic disorder with or without agoraphobia in adults: A network meta-analysis. *Cochrane Database of Systematic Reviews*, 2016(4). doi:10.1002/14651858.CD011004.pub2

Cognitive bias modification (CBM)

Amir, N., Beard, C., Burns, M., & Bomyea, J. (2009). Attention modification program in individuals with generalized anxiety disorder. *Journal of Abnormal Psychology*, 118(1), 28.

Amir, N., Kuckertz, J. M., Najmi, S., & Conley, S. L. (2015). Preliminary evidence for the enhancement of self-conducted exposures for OCD using cognitive bias modification. *Cognitive Therapy and Research*, 39(4), 424-440.

Badura-Brack, A. S., Naim, R., Ryan, T. J., Levy, O., Abend, R., Khanna, M. M., ... & Bar-Haim, Y. (2015). Effect of attention training on attention bias variability and PTSD symptoms: Randomized controlled trials in Israeli and US combat veterans. *American Journal of Psychiatry*, 172(12), 1233-1241.

Haug, E. T., Havnen, A., Hansen, B., Bless, J., & Kvale, G. (2013). Attention training with dichotic listening in OCD patients using an iPhone/iPod app. *Clinical Neuropsychiatry*, 10(3).

Hirsch, C. R., Krahé, C., Whyte, J., Loizou, S., Bridge, L., Norton, S., & Mathews, A. (2018). Interpretation training to target repetitive negative thinking in generalized anxiety disorder and depression. *Journal of Consulting and Clinical Psychology*, 86(12), 1017.

Kampmann, I. L., Emmelkamp, P. M., & Morina, N. (2016). Meta-analysis of technology-assisted interventions for social anxiety disorder. *Journal of Anxiety Disorders*, 42, 71-84.

Kuckertz, J. M., Amir, N., Boffa, J. W., Warren, C. K., Rindt, S. E., Norman, S., ... McLay, R. (2014). The effectiveness of an attention bias modification program as an adjunctive treatment for post-traumatic stress disorder. *Behaviour Research and Therapy*, 63, 25-35.

Reese, H. E., McNally, R. J., Najmi, S., & Amir, N. (2010). Attention training for reducing spider fear in spider-fearful individuals. *Journal of Anxiety Disorders*, 24(7), 657-662.

Salemink, E., Wolters, L., & de Haan, E. (2015). Augmentation of treatment as usual with online cognitive bias modification of interpretation training in adolescents with obsessive compulsive disorder: A pilot study. *Journal of Behavior Therapy and Experimental Psychiatry*, 49, 112-119.

Schoorl, M., Putman, P., & Van Der Does, W. (2013). Attentional bias modification in posttraumatic stress disorder: a randomized controlled trial. *Psychotherapy and Psychosomatics*, 82(2), 99-105.

Steinman, S. A., & Teachman, B. A. (2014). Reaching new heights: Comparing interpretation bias modification to exposure therapy for extreme height fear. *Journal of Consulting and Clinical Psychology*, 82(3), 404.

Computer-aided psychological therapy (CAP)

Andersson, G., Waara, J., Jonsson, U., Malmaeus, F., Carlbring, P., & Öst, L. G. (2009). Internet-based self-help versus One-session exposure in the treatment of spider phobia: A randomized controlled trial. *Cognitive Behaviour Therapy*, 38(2), 114-120.

Andersson, G., Waara, J., Jonsson, U., Malmaeus, F., Carlbring, P., & Öst, L. G. (2013). Internet-based exposure treatment versus one-session exposure treatment of snake phobia: A randomized controlled trial. *Cognitive Behaviour Therapy*, 42(4), 284-291.

Andrews, G., Basu, A., Cuijpers, P., Craske, M. G., McEvoy, P., English, C. L., & Newby, J. M. (2018). Computer therapy for the anxiety and depression disorders is effective, acceptable and practical health care: An updated meta-analysis. *Journal of Anxiety Disorders*, 55, 70-78.

Campos, D., Bretón-López, J., Botella, C., Mira, A., Castilla, D., Mor, S., ... Quero, S. (2019). Efficacy of an internet-based exposure treatment for flying phobia (NO-FEAR Airlines) with and without therapist guidance: A randomized controlled trial. *BMC Psychiatry*, 19(1), 86.

Heaton, L. J., Leroux, B. G., Ruff, P. A., & Coldwell, S. E. (2013). Computerized dental injection fear treatment: A randomized clinical trial. *Journal of Dental Research*, 92(7_suppl), S37-S42.

Pozza, A., Andersson, G., Antonelli, P., & Dèttore, D. (2014). Computer-delivered cognitive-behavioural treatments for obsessive compulsive disorder: Preliminary meta-analysis of randomized and non-randomized effectiveness trials. *The Cognitive Behaviour Therapy*, 7, e16.

Sijbrandij, M., Kunovski, I., & Cuijpers, P. (2016). Effectiveness of internet-delivered cognitive behavioral therapy for posttraumatic stress disorder: A systematic review and meta-analysis. *Depression and Anxiety*, 33(9), 783-791.

Tellez, M., Potter, C. M., Kinner, D. G., Jensen, D., Waldron, E., Heimberg, R. G., ... Ismail, A. I. (2015). Computerized tool to manage dental anxiety: A randomized clinical trial. *Journal of Dental Research*, 94(9_suppl), 174S-180S.

Tortella-Feliu, M., Botella, C., Llabrés, J., Bretón-López, J. M., del Amo, A. R., Baños, R. M., & Gelabert, J. M. (2011). Virtual reality versus computer-aided exposure treatments for fear of flying. *Behavior Modification*, 35(1), 3-30.

Dance and movement therapy (DMT)

Jorm, A. F., Christensen, H., Griffiths, K. M., Parslow, R. A., Rodgers, B., & Blewitt, K. A. (2004). Effectiveness of complementary and self-help treatments for anxiety disorders. *Medical Journal of Australia*, 181, S29-S46.

Kirk, A. E. (2015). *Dance/movement therapy for adult women with posttraumatic stress disorder: A quasi-experimental study of symptom reduction and integration* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global (3631444).

Pratt, R. R. (2004). Art, dance, and music therapy. *Physical Medicine and Rehabilitation Clinics*, 15(4), 827-841.

Dialectical behaviour therapy (DBT)

Bohus, M., Dyer, A. S., Priebe, K., Krüger, A., Kleindienst, N., Schmahl, C., ... Steil, R. (2013). Dialectical behaviour therapy for post-traumatic stress disorder after childhood sexual abuse in patients with and without borderline personality disorder: A randomised controlled trial. *Psychotherapy and Psychosomatics*, 82(4), 221-233.

Harned, M. S., Korslund, K. E., & Linehan, M. M. (2014). A pilot randomized controlled trial of Dialectical Behavior Therapy with and without the Dialectical Behavior Therapy Prolonged Exposure protocol for suicidal and self-injuring women with borderline personality disorder and PTSD. *Behaviour Research and Therapy*, 55, 7-17.

Dialogical exposure therapy

Butollo, W., Karl, R., König, J., & Rosner, R. (2016). A randomized controlled clinical trial of dialogical exposure therapy versus cognitive processing therapy for adult outpatients suffering from PTSD after type I trauma in adulthood. *Psychotherapy and Psychosomatics*, 85(1), 16-26.

Emotion-focused therapy (EFT)

Ehlers, A., Hackmann, A., Grey, N., Wild, J., Liness, S., Albert, I., ... Clark, D. M. (2014). A randomized controlled trial of 7-day intensive and standard weekly cognitive therapy for PTSD and emotion-focused supportive therapy. *American Journal of Psychiatry*, 171(3), 294-304.

Shahar, B., Bar-Kalifa, E., & Alon, E. (2017). Emotion-focused therapy for social anxiety disorder: Results from a multiple-baseline study. *Journal of Consulting and Clinical Psychology*, 85(3), 238.

Shear, M. K., Houck, P., Greeno, C., & Masters, S. (2001). Emotion-focused psychotherapy for patients with panic disorder. *American Journal of Psychiatry*, 158(12), 1993-1998.

Timulak, L., McElvaney, J., Keogh, D., Martin, E., Clare, P., Chepukova, E., & Greenberg, L. S. (2017). Emotion-focused therapy for generalized anxiety disorder: An exploratory study. *Psychotherapy*, 54(4), 361.

Eye movement desensitisation and reprocessing (EMDR)

Chen, Y. R., Hung, K. W., Tsai, J. C., Chu, H., Chung, M. H., Chen, S. R., ... Chou, K. R. (2014). Efficacy of eye-movement desensitization and reprocessing for patients with posttraumatic-stress disorder: A meta-analysis of randomized controlled trials. *PLoS One*, 9(8), e103676.

Chen, L., Zhang, G., Hu, M., & Liang, X. (2015). Eye movement desensitization and reprocessing versus cognitive-behavioral therapy for adult posttraumatic stress disorder: Systematic review and meta-analysis. *The Journal of Nervous and Mental Disease*, 203(6), 443-451.

Faretta, E., & Leeds, A. (2017). EMDR therapy of panic disorder and agoraphobia: A review of the existing literature. *Clinical Neuropsychiatry*, 5, 330-340.

Farima, R., Dowlatabadi, S., & Behzadi, S. (2015). The effectiveness of eye movement desensitization and reprocessing (EMDR) in reducing pathological worry in patients with generalized anxiety disorder: A preliminary study. *Archives of Psychiatry and Psychotherapy*, 1, 33-43.

Marsden, Z., Lovell, K., Blore, D., Ali, S., & Delgadillo, J. (2018). A randomized controlled trial comparing EMDR and CBT for obsessive-compulsive disorder. *Clinical psychology & Psychotherapy*, 25(1), e10-e18.

Triscari, M. T., Faraci, P., D'Angelo, V., Urso, V., & Catalisano, D. (2011). Two treatments for fear of flying compared. *Aviation Psychology and Applied Human Factors*, 1, 9-14.

Family therapy

Asen, E. (2002). Outcome research in family therapy. *Advances in Psychiatric Treatment*, 8(3), 230-238.

Carr, A. (2009). The effectiveness of family therapy and systemic interventions for adult-focused problems. *Journal of Family Therapy*, 31(1), 46-74.

Creswell, C., & Cartwright-Hatton, S. (2007). Family treatment of child anxiety: Outcomes, limitations and future directions. *Clinical Child and Family Psychology Review*, 10(3), 232-252.

Tuerk, E. H., McCart, M. R., & Henggeler, S. W. (2012). Collaboration in family therapy. *Journal of Clinical Psychology*, 68(2), 168-178.

Haptotherapy

Klabbers, G. A., Wijma, K., Paarlberg, K. M., Emons, W. H., & Vingerhoets, A. J. (2019). Haptotherapy as a new intervention for treating fear of childbirth: A randomized controlled trial. *Journal of Psychosomatic Obstetrics & Gynecology*, 40(1), 38-47.

Hypnosis (hypnotherapy)

Bisson, J., & Andrew, M. (2007). Psychological treatment of post-traumatic stress disorder (PTSD). *Cochrane database of systematic reviews*, 2007(3). doi:10.1002/14651858.cd.003388

Bryant, R. A., Moulds, M. L., Guthrie, R. M., & Nixon, R. D. (2005). The additive benefit of hypnosis and cognitive-behavioral therapy in treating acute stress disorder. *Journal of Consulting and Clinical Psychology*, 73(2), 334.

Evans, B. J., & Coman, G. J. (2003). Hypnosis with treatment for the anxiety disorders. *Australian Journal of Clinical and Experimental Hypnosis*, 31(1), 1-31.

Galovski, T. E., Harik, J. M., Blain, L. M., Elwood, L., Gloth, C., & Fletcher, T. D. (2016). Augmenting cognitive processing therapy to improve sleep impairment in PTSD: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 84(2), 167-177.

Huynh, M. E., Vandvik, I. H., & Diseth, T. H. (2008). Hypnotherapy in child psychiatry: The state of the art. *Clinical Child Psychology and Psychiatry*, 13(3), 377-393.

Rotaru, T. S., & Rusu, A. (2016). A meta-analysis for the efficacy of hypnotherapy in alleviating PTSD symptoms. *International Journal of Clinical and Experimental Hypnosis*, 64(1), 116-136.

Van Dyck, R., & Spinhoven, P. (1997). Does preference for type of treatment matter?: A study of exposure in vivo with or without hypnosis in the treatment of panic disorder with agoraphobia. *Behavior Modification*, 21(2), 172-186.

Interpersonal psychotherapy (IPT)

Borge, F. M., Hoffart, A., Sexton, H., Clark, D. M., Markowitz, J. C., & McManus, F. (2008). Residential cognitive therapy versus residential interpersonal therapy for social phobia: A randomized clinical trial. *Journal of Anxiety Disorders*, 22(6), 991-1010.

Campanini, R. F., Schoedl, A. F., Pupo, M. C., Costa, A. C. H., Krupnick, J. L., & Mello, M. F. (2010). Efficacy of interpersonal therapy-group format adapted to post-traumatic stress disorder: An open-label add-on trial. *Depression and Anxiety*, 27(1), 72-77.

Krupnick, J. L., Green, B. L., Stockton, P., Miranda, J., Krause, E., & Mete, M. (2008). Group interpersonal psychotherapy for low-income women with posttraumatic stress disorder. *Psychotherapy Research*, 18(5), 497-507.

Lipsitz, J. D., Gur, M., Vermes, D., Petkova, E., Cheng, J., Miller, N., ... Fyer, A. J. (2008). A randomized trial of interpersonal therapy versus supportive therapy for social anxiety disorder. *Depression and Anxiety*, 25(6), 542-553.

Markowitz, J. C., Petkova, E., Neria, Y., Van Meter, P. E., Zhao, Y., Hembree, E., ... Marshall, R. D. (2015). Is exposure necessary? A randomized clinical trial of interpersonal psychotherapy for PTSD. *American Journal of Psychiatry*, 172(5), 430-440.

Ray, R. D., & Webster, R. (2010). Group interpersonal psychotherapy for veterans with posttraumatic stress disorder: A pilot study. *International Journal of Group Psychotherapy*, 60(1), 131-140.

Stangier, U., Schramm, E., Heidenreich, T., Berger, M., & Clark, D. M. (2011). Cognitive therapy vs interpersonal psychotherapy in social anxiety disorder: A randomized controlled trial. *Archives of General Psychiatry*, 68(7), 692-700.

Vos, S. P. F., Huibers, M. J. H., Diels, L., & Arntz, A. (2012). A randomized clinical trial of cognitive behavioral therapy and interpersonal psychotherapy for panic disorder with agoraphobia. *Psychological Medicine*, 42(12), 2661-2672.

Metacognitive therapy (MCT)

Helliwell, E. (2016). *Group metacognitive therapy for obsessive-compulsive disorder: Findings from a preliminary trial* (Master's thesis, University of Canterbury). Retrieved from <http://ir.canterbury.ac.nz/handle/10092/12162>

McEvoy, P. M., & Perini, S. J. (2009). Cognitive behavioral group therapy for social phobia with or without attention training: A controlled trial. *Journal of Anxiety Disorders*, 23(4), 519-528.

Normann, N., & Morina, N. (2018). The efficacy of metacognitive therapy: A systematic review and meta-analysis. *Frontiers in Psychology*, 9, 2211.

Rees, C. S., & van Koesveld, K. E. (2008). An open trial of group metacognitive therapy for obsessive-compulsive disorder. *Journal of Behavior Therapy and Experimental Psychiatry*, 39(4), 451-458.

Simons, M., & Vloet, T. D. (2016). Emetophobia—A metacognitive therapeutic approach for an overlooked disorder. *Zeitschrift für Kinder-und Jugendpsychiatrie und Psychotherapie*, 46, 57-66.

van der Heiden, C., van Rossen, K., Dekker, A., Damstra, M., & Deen, M. (2016). Metacognitive therapy for obsessive-compulsive disorder: A pilot study. *Journal of Obsessive-Compulsive and Related Disorders*, 9, 24-29.

Vogel, P. A., Hagen, R., Hjemdal, O., Solem, S., Smeby, M. C., Strand, E. R., ... Wells, A. (2016). Metacognitive therapy applications in social anxiety disorder: an exploratory study of the individual and combined effects of the attention training technique and situational attentional refocusing. *Journal of Experimental Psychopathology*, 7(4), 608-618.

Wells, A. (1990). Panic disorder in association with relaxation induced anxiety: An attentional training approach to treatment. *Behavior Therapy*, 21, 273-280.

Mindfulness-based therapies

Craigie, M. A., Rees, C. S., Marsh, A., & Nathan, P. (2008). Mindfulness-based cognitive therapy for generalized anxiety disorder: A preliminary evaluation. *Behavioural and Cognitive Psychotherapy*, 36(5), 553-568.

Evans, S., Ferrando, S., Findler, M., Stowell, C., Smart, C., & Haglin, D. (2008). Mindfulness-based cognitive therapy for generalized anxiety disorder. *Journal of Anxiety Disorders*, 22(4), 716-721.

Hoge, E. A., Bui, E., Marques, L., Metcalf, C. A., Morris, L. K., Robinaugh, D. J., ... Simon, N. M. (2013). Randomized controlled trial of mindfulness meditation for generalized anxiety disorder: Effects on anxiety and stress reactivity. *The Journal of Clinical Psychiatry*, 74(8), 786.

Hopwood, T. L., & Schutte, N. S. (2017). A meta-analytic investigation of the impact of mindfulness-based interventions on post traumatic stress. *Clinical Psychology Review*, 57, 12-20.

Key, B. L., Rowa, K., Bieling, P., McCabe, R., & Pawluk, E. J. (2017). Mindfulness-based cognitive therapy as an augmentation treatment for obsessive-compulsive disorder. *Clinical Psychology & Psychotherapy*, 24(5), 1109-1120.

Kim, B., Lee, S. H., Kim, Y. W., Choi, T. K., Yook, K., Suh, S. Y., ... Yook, K. H. (2010). Effectiveness of a mindfulness-based cognitive therapy program as an adjunct to pharmacotherapy in patients with panic disorder. *Journal of Anxiety Disorders*, 24(6), 590-595.

Külz, A. K., Landmann, S., Cludius, B., Rose, N., Heidenreich, T., Jelinek, L., ... Maier, J. G. (2019). Mindfulness-based cognitive therapy (MBCT) in patients with obsessive-compulsive disorder (OCD) and residual symptoms after cognitive behavioral therapy (CBT): A randomized controlled trial. *European Archives of Psychiatry and Clinical Neuroscience*, 269(2), 223-233.

Mayo-Wilson, E., Dias, S., Mavranetzouli, I., Kew, K., Clark, D. M., Ades, A. E., & Pilling, S. (2014). Psychological and pharmacological interventions for social anxiety disorder in adults: A systematic review and network meta-analysis. *The Lancet Psychiatry*, 1(5), 368-376.

Selchen, S., Hawley, L. L., Regev, R., Richter, P., & Rector, N. A. (2018). Mindfulness-based cognitive therapy for OCD: Stand-alone and post-CBT augmentation approaches. *International Journal of Cognitive Therapy*, 11(1), 58-79.

Strauss, C., Lea, L., Hayward, M., Forrester, E., Leeuwierik, T., Jones, A. M., & Rosten, C. (2018). Mindfulness-based exposure and response prevention for obsessive compulsive disorder: Findings from a pilot randomised controlled trial. *Journal of Anxiety Disorders*, 57, 39-47.

Wong, S. Y. S., Yip, B. H. K., Mak, W. W. S., Mercer, S., Cheung, E. Y. L., Ling, C. Y. M., ... Lee, T. M. C. (2016). Mindfulness-based cognitive therapy v. group psychoeducation for people with generalised anxiety disorder: Randomised controlled trial. *The British Journal of Psychiatry*, 209(1), 68-75.

Morita therapy

Wu, H., Yu, D., He, Y., Wang, J., Xiao, Z., & Li, C. (2015). Morita therapy for anxiety disorders in adults. *Cochrane Database of Systematic Reviews*, 2015(2). doi:10.1002/14651858.CD008619.pub2

Music therapy

Bidabadi, S. S., & Mehryar, A. (2015). Music therapy as an adjunct to standard treatment for obsessive compulsive disorder and co-morbid anxiety and depression: A randomized clinical trial. *Journal of Affective Disorders*, 184, 13-17.

Brabant, O., van de Ree, M., & Erkkilä, J. (2017). The effect of resonance frequency breathing when used as a preparatory exercise in music psychotherapy: A single-case experimental study of a client with anxiety disorder. *The Arts in Psychotherapy*, 56, 7-18.

Carr, C., d'Ardenne, P., Sloboda, A., Scott, C., Wang, D., & Priebe, S. (2012). Group music therapy for patients with persistent post-traumatic stress disorder—an exploratory randomized controlled trial with mixed methods evaluation. *Psychology and Psychotherapy: Theory, Research and Practice*, 85(2), 179-202.

Gutiérrez, E. O. F., & Camarena, V. A. T. (2015). Music therapy in generalized anxiety disorder. *The Arts in Psychotherapy*, 44, 19-24.

Narrative therapy

Looyeh, M. Y., Kamali, K., Ghasemi, A., & Tonawanik, P. (2014). Treating social phobia in children through group narrative therapy. *The Arts in Psychotherapy, 47*(1), 16-20.

Wetchler, J. L. (1999). Narrative treatment of a woman with panic disorder. *Journal of Family Psychotherapy, 10*(2), 17-30.

Neurolinguistic programming (NLP)

Arroll, B., Henwood, S. M., Sundram, F. I., Kingsford, D. W., Mount, V., Humm, S. P., ... Pillai, A. (2017). A brief treatment for fear of heights: A randomized controlled trial of a novel imaginal intervention. *The International Journal of Psychiatry in Medicine, 52*(1), 21-33.

Bigley, J., Griffiths, P. D., Prydderch, A., Romanowski, C. A. J., Miles, L., Lidiard, H., & Hoggard, N. (2010). Neurolinguistic programming used to reduce the need for anaesthesia in claustrophobic patients undergoing MRI. *The British Journal of Radiology, 83*(986), 113-117.

Field, E. S. (1990). Neurolinguistic programming as an adjunct to other psychotherapeutic/hypnotherapeutic interventions. *American Journal of Clinical Hypnosis, 32*(3), 174-182.

Simpson, S. D., & Dryden, W. (2011). Comparison between REBT and visual/kinaesthetic dissociation in the treatment of panic disorder: An empirical study. *Journal of Rational-Emotive & Cognitive-Behavior Therapy, 29*(3), 158.

Observed and experiential integration (OEI)

Bradshaw, R. A., McDonald, M. J., Grace, R., Detwiler, L., & Austin, K. (2014). A randomized clinical trial of Observed and Experiential Integration (OEI): A simple, innovative intervention for affect regulation in clients with PTSD. *Traumatology, 20*(3), 161.

Present-centred therapy (PCT)

Ford, J. D., Steinberg, K. L., & Zhang, W. (2011). A randomized clinical trial comparing affect regulation and social problem-solving psychotherapies for mothers with victimization-related PTSD. *Behavior Therapy, 42*(4), 560-578.

Frost, N. D., Laska, K. M., & Wampold, B. E. (2014). The evidence for present-centered therapy as a treatment for posttraumatic stress disorder. *Journal of Traumatic Stress, 27*(1), 1-8.

Psychodynamic psychotherapy

Bandelow, B., Reitt, M., Röver, C., Michaelis, S., Görlich, Y., & Wedekind, D. (2015). Efficacy of treatments for anxiety disorders: A meta-analysis. *International Clinical Psychopharmacology, 30*(4), 183-192.

Brom, D., Kleber, R. J., & Defares, P. B. (1989). Brief psychotherapy for posttraumatic stress disorders. *Journal of Consulting and Clinical Psychology, 57*(5), 607.

Durham, R. C., Murphy, T., Allan, T., Richard, K., Treliving, L. R., & Fenton, G. W. (1994). Cognitive therapy, analytic psychotherapy and anxiety management training for generalised anxiety disorder. *The British Journal of Psychiatry, 165*(3), 315-323.

Ferrero, A., Pierò, A., Fassina, S., Massola, T., Lanteri, A., Daga, G. A., & Fassino, S. (2007). A 12-month comparison of brief psychodynamic psychotherapy and pharmacotherapy treatment in subjects with generalised anxiety disorders in a community setting. *European Psychiatry, 22*(8), 530-539.

Hunot, V., Churchill, R., Teixeira, V., & de Lima, M. S. (2007). Psychological therapies for generalised anxiety disorder. *Cochrane Database of Systematic Reviews, 2007*(1). doi:10.1002/14651858.CD001848.pub4

Leichsenring, F., Salzer, S., Jaeger, U., Kächele, H., Kreische, R., Leweke, F., ... Leibing D Sc, E. (2009). Short-term psychodynamic psychotherapy and cognitive-behavioral therapy in generalized anxiety disorder: A randomized, controlled trial. *American Journal of Psychiatry, 166*(8), 875-881.

Leichsenring, F., & Rabung, S. (2008). Effectiveness of long-term psychodynamic psychotherapy: A meta-analysis. *JAMA, 300*(13), 1551-1565.

Mayo-Wilson, E., Dias, S., Mavranzouli, I., Kew, K., Clark, D. M., Ades, A. E., & Pilling, S. (2014). Psychological and pharmacological interventions for social anxiety disorder in adults: A systematic review and network meta-analysis. *The Lancet Psychiatry, 1*(5), 368-376.

Psychoeducation

Dannon, P. N., Iancu, I., & Grunhaus, L. (2002). Psychoeducation in panic disorder patients: Effect of a self-information booklet in a randomized, masked-rater study. *Depression and Anxiety, 16*(2), 71-76.

Flatt, N., & King, N. (2010). Brief psycho-social interventions in the treatment of specific childhood phobias: A controlled trial and a 1-year follow-up. *Behaviour Change, 27*(3), 130-153.

Hauschildt, M., Schröder, J., & Moritz, S. (2016). Randomized-controlled trial on a novel (meta-) cognitive self-help approach for obsessive-compulsive disorder ("myMCT"). *Journal of Obsessive-Compulsive and Related Disorders, 10*, 26-34.

Mahoney, A., Karatzias, T., & Hutton, P. (2019). A systematic review and meta-analysis of group treatments for adults with symptoms associated with complex post-traumatic stress disorder. *Journal of Affective Disorders, 243*, 305-321.

Nordmo, M., Sinding, A. I., Carlbring, P., Andersson, G., Havik, O. E., & Nordgreen, T. (2015). Internet-delivered cognitive behavioural therapy with and without an initial face-to-face psychoeducation session for social anxiety disorder: A pilot randomized controlled trial. *Internet Interventions, 2*(4), 429-436.

Wong, S. Y. S., Yip, B. H. K., Mak, W. W. S., Mercer, S., Cheung, E. Y. L., Ling, C. Y. M., ... Lee, T. M. C. (2016). Mindfulness-based cognitive therapy v. group psychoeducation for people with generalised anxiety disorder: Randomised controlled trial. *The British Journal of Psychiatry, 209*(1), 68-75.

Reconsolidation of traumatic memories (RTM)

- Gray, R., Budden-Potts, D., & Bourke, F. (2019). Reconsolidation of Traumatic Memories for PTSD: A randomized controlled trial of 74 male veterans. *Psychotherapy Research*, 29(5), 621-639.
- Tylee, D. S., Gray, R., Glatt, S. J., & Bourke, F. (2017). Evaluation of the reconsolidation of traumatic memories protocol for the treatment of PTSD: A randomized, wait-list-controlled trial. *Journal of Military, Veteran and Family Health*, 3(1), 21-33.

Relationship therapy

- Abramowitz, J. S., Baucom, D. H., Boeding, S., Wheaton, M. G., Pukay-Martin, N. D., Fabricant, L. E., ... Fischer, M. S. (2013). Treating obsessive-compulsive disorder in intimate relationships: A pilot study of couple-based cognitive-behavior therapy. *Behavior Therapy*, 44(3), 395-407.
- Monson, C. M., Fredman, S. J., Macdonald, A., Pukay-Martin, N. D., Resick, P. A., & Schnurr, P. P. (2012). Effect of cognitive-behavioral couple therapy for PTSD: A randomized controlled trial. *JAMA*, 308(7), 700-709.
- Sautter, F. J., Glynn, S. M., Cretu, J. B., Senturk, D., & Vaught, A. S. (2015). Efficacy of structured approach therapy in reducing PTSD in returning veterans: A randomized clinical trial. *Psychological Services*, 12(3), 199.

Reminiscence therapy

- Daniels, L. R., Boehnlein, J. K., & McCallion, P. (2015). Life-review and PTSD community counseling with two groups of Vietnam War veterans. *Traumatology*, 21(3), 161.

Social skills training (SST)

- Beidel, D. C., Alfano, C. A., Kofler, M. J., Rao, P. A., Scharfstein, L., & Sarver, N. W. (2014). The impact of social skills training for social anxiety disorder: A randomized controlled trial. *Journal of Anxiety Disorders*, 28(8), 908-918.
- Bögels, S. M., & Voncken, M. (2008). Social skills training versus cognitive therapy for social anxiety disorder characterized by fear of blushing, trembling, or sweating. *International Journal of Cognitive Therapy*, 1(2), 138-150.
- Cottraux, J., Note, I., Albuissou, E., Yao, S. N., Note, B., Mollard, E., ... Coudert, A. J. (2000). Cognitive behavior therapy versus supportive therapy in social phobia: A randomized controlled trial. *Psychotherapy and Psychosomatics*, 69(3), 137-146.
- Herbert, J. D., Gaudiano, B. A., Rheingold, A. A., Myers, V. H., Dalrymple, K., & Nolan, E. M. (2005). Social skills training augments the effectiveness of cognitive behavioral group therapy for social anxiety disorder. *Behavior Therapy*, 36(2), 125-138.
- Mersch, P. P. A., Emmelkamp, P. M., & Lips, C. (1991). Social phobia: individual response patterns and the long-term effects of behavioral and cognitive interventions. A follow-up study. *Behaviour Research and Therapy*, 29(4), 357-362.
- Mersch, P. P. A. (1995). The treatment of social phobia: The differential effectiveness of exposure in vivo and an integration of exposure in vivo, rational emotive therapy and social skills training. *Behaviour Research and Therapy*, 33(3), 259-269.

- Öst, L. G., Cederlund, R., & Reuterskiöld, L. (2015). Behavioral treatment of social phobia in youth: Does parent education training improve the outcome?. *Behaviour Research and Therapy*, 67, 19-29.

- Scaini, S., Belotti, R., Ogliari, A., & Battaglia, M. (2016). A comprehensive meta-analysis of cognitive-behavioral interventions for social anxiety disorder in children and adolescents. *Journal of Anxiety Disorders*, 42, 105-112.

- Stravynski, A., Arbel, N., Bounader, J., Gaudette, G., Lachance, L., Borgeat, F., ... Todorov, C. (2000). Social phobia treated as a problem in social functioning: a controlled comparison of two behavioural group approaches. *Acta Psychiatrica Scandinavica*, 102(3), 188-198.

- Wlazlo, Z., Schroeder-Hartwig, K., Hand, I., Kaiser, G., & Münchau, N. (1990). Exposure in vivo vs social skills training for social phobia: Long-term outcome and differential effects. *Behaviour Research and Therapy*, 28(3), 181-193.

Solution-focused therapy (SFT)

- Creswell, C., Violato, M., Fairbanks, H., White, E., Parkinson, M., Abitabile, G., ... Cooper, P. J. (2017). Clinical outcomes and cost-effectiveness of brief guided parent-delivered cognitive behavioural therapy and solution-focused brief therapy for treatment of childhood anxiety disorders: A randomised controlled trial. *The Lancet Psychiatry*, 4(7), 529-539.
- Knekt, P., Virtala, E., Härkänen, T., Vaarama, M., Lehtonen, J., & Lindfors, O. (2016). The outcome of short- and long-term psychotherapy 10 years after start of treatment. *Psychological Medicine*, 46(6), 1175-1188.
- Taylor Jr, W. F. (2013). *Effects of solution-focused brief therapy group counseling on generalized anxiety disorder* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global (3563462).

Spiritually-based interventions

- Bowland, S., Edmond, T., & Fallot, R. D. (2012). Evaluation of a spiritually focused intervention with older trauma survivors. *Social Work*, 57(1), 73-82.
- Koszycki, D., Bilodeau, C., Raab-Mayo, K., & Bradwejn, J. (2014). A multifaitth spiritually based intervention versus supportive therapy for generalized anxiety disorder: A pilot randomized controlled trial. *Journal of Clinical Psychology*, 70(6), 489-509.
- Koszycki, D., Raab, K., Aldosary, F., & Bradwejn, J. (2010). A multifaitth spiritually based intervention for generalized anxiety disorder: A pilot randomized trial. *Journal of Clinical Psychology*, 66(4), 430-441.
- Rungreangkulkij, S., & Wongtakee, W. (2008). The psychological impact of Buddhist counseling for patients suffering from symptoms of anxiety. *Archives of Psychiatric Nursing*, 22(3), 127-134.

Supportive counselling

- Ehlers, A., Hackmann, A., Grey, N., Wild, J., Liness, S., Albert, I., ... Clark, D. M. (2014). A randomized controlled trial of 7-day intensive and standard weekly cognitive therapy for PTSD and emotion-focused supportive therapy. *American Journal of Psychiatry*, 171(3), 294-304.
- Hunot, V., Churchill, R., Teixeira, V., & de Lima, M. S. (2007). Psychological therapies for generalised anxiety disorder. *Cochrane Database of Systematic Reviews*, 2007(1). doi:10.1002/14651858.CD001848.pub4

Kornør, H., Winje, D., Ekeberg, Ø., Weisæth, L., Kirkehei, I., Johansen, K., & Steiro, A. (2008). Early trauma-focused cognitive-behavioural therapy to prevent chronic post-traumatic stress disorder and related symptoms: A systematic review and meta-analysis. *BMC Psychiatry*, 8(1), 81.

Koszycki, D., Bilodeau, C., Raab-Mayo, K., & Bradwejn, J. (2014). A multifaith spiritually based intervention versus supportive therapy for generalized anxiety disorder: A pilot randomized controlled trial. *Journal of Clinical Psychology*, 70(6), 489-509.

Last, C. G., Hansen, C., & Franco, N. (1998). Cognitive-behavioral treatment of school phobia. *Journal of the American Academy of Child & Adolescent Psychiatry*, 37(4), 404-411.

Mayo-Wilson, E., Dias, S., Mavranouzouli, I., Kew, K., Clark, D. M., Ades, A. E., & Pilling, S. (2014). Psychological and pharmacological interventions for social anxiety disorder in adults: A systematic review and network meta-analysis. *The Lancet Psychiatry*, 1(5), 368-376.

Mendes, D. D., Mello, M. F., Ventura, P., de Medeiros Passarella, C., & de Jesus Mari, J. (2008). A systematic review on the effectiveness of cognitive behavioral therapy for posttraumatic stress disorder. *The International Journal of Psychiatry in Medicine*, 38(3), 241-259.

Pompoli, A., Furukawa, T. A., Imai, H., Tajika, A., Efthimiou, O., & Salanti, G. (2016). Psychological therapies for panic disorder with or without agoraphobia in adults: a network meta-analysis. *Cochrane Database of Systematic Reviews*, 2016(4). doi:10.1002/14651858.CD011004.pub2

Time perspective therapy (TPT)

Esfahani, M., Kjbaf, M. B., & Abedi, M. R. (2015). Evaluation and comparison of the effects of time perspective therapy, acceptance and commitment therapy and narrative therapy on severity of symptoms of obsessive-compulsive disorder. *Journal of the Indian Academy of Applied Psychology*, 41(3), 148.

Virtual reality exposure therapy (VRE)

Arroll, B., Wallace, H. B., Mount, V., Humm, S. P., & Kingsford, D. W. (2017). A systematic review and meta-analysis of treatments for acrophobia. *Medical Journal of Australia*, 206(6), 263-267.

Gonçalves, R., Pedrozo, A. L., Coutinho, E. S. F., Figueira, I., & Ventura, P. (2012). Efficacy of virtual reality exposure therapy in the treatment of PTSD: A systematic review. *PloS one*, 7(12), e48469.

Gorini, A., Pallavicini, F., Algeri, D., Repetto, C., Gaggioli, A., & Riva, G. (2010). Virtual Reality in the treatment of generalized anxiety disorders. Annual Review of Cybertherapy and Telemedicine as part of its Studies in Health Technology and Informatics (SHTI) series. In *The 15th Annual CyberPsychology and CyberTherapy Conference* (p. 5).

Kampmann, I. L., Emmelkamp, P. M., & Morina, N. (2016). Meta-analysis of technology-assisted interventions for social anxiety disorder. *Journal of Anxiety Disorders*, 42, 71-84.

Opriş, D., Pinte, S., García-Palacios, A., Botella, C., Szamosközi, S., & David, D. (2012). Virtual reality exposure therapy in anxiety disorders: A quantitative meta-analysis. *Depression and Anxiety*, 29(2), 85-93.

Medical Interventions

5-HT₃ blockers

Freeman, A. M., 3rd, Westphal, J. R., Norris, G. T., Roggero, B. A., Webb, P. B., Freeman, K. L., Rush, J. A., Hearne, E. M., 3rd, & Evoniuk, G. (1997). Efficacy of ondansetron in the treatment of generalized anxiety disorder. *Depression and Anxiety*, 5, 140-141.

Lecrubier, Y., Puech, A. J., Azcona, A., Bailey, P. E., & Lataste, X. (1993). A randomized double-blind placebo-controlled study of tropisetron in the treatment of outpatients with generalized anxiety disorder. *Psychopharmacology*, 112(1), 129-133.

Schneier, F. R., Garfinkel, R., Kenned, B., Campeas, R., Fallon, B., Marshall, R., ... Liebowitz, M. R. (1996). Ondansetron in the treatment of panic disorder. *Anxiety*, 2(4), 199-202.

Serata, D., Kotzalidis, G. D., Rapinesi, C., Janiri, D., Di Pietro, S., Callovi, G., ... Girardi, N. (2015). Are 5-HT₃ antagonists effective in obsessive-compulsive disorder? A systematic review of literature. *Human Psychopharmacology: Clinical and Experimental*, 30(2), 70-84.

Alpha-1 adrenergic blockers

De Berardis, D., Marini, S., Serroni, N., Iasevoli, F., Tomasetti, C., de Bartolomeis, A., Mazza, ... Di Giannantonio, M. (2015). Targeting the noradrenergic system in posttraumatic stress disorder: A systematic review and meta-analysis of prazosin trials. *Current Drug Targets*, 16, 1094-1106.

Simon, P. Y. R., & Rousseau, P. F. (2017). Treatment of post-traumatic stress disorders with the alpha-1 adrenergic antagonist prazosin: A review of outcome studies. *The Canadian Journal of Psychiatry*, 62(3), 186-198.

Anti-convulsant drugs

Bandelow, B., Reitt, M., Röver, C., Michaelis, S., Görlich, Y., & Wedekind, D. (2015). Efficacy of treatments for anxiety disorders: A meta-analysis. *International Clinical Psychopharmacology*, 30(4), 183-192.

Boutros, N. N., Ghosh, S., Khan, A., Bowyer, S. M., & Galloway, M. P. (2014). Anticonvulsant medications for panic disorder: A review and synthesis of the evidence. *International Journal of Psychiatry in Clinical Practice*, 18(1), 2-10.

Generoso, M. B., Trevizol, A. P., Kasper, S., Cho, H. J., Cordeiro, Q., & Shiozawa, P. (2017). Pregabalin for generalized anxiety disorder: An updated systematic review and meta-analysis. *International Clinical Psychopharmacology*, 32(1), 49-55.

Pollack, M. H., Tiller, J., Xie, F., & Trivedi, M. H. (2008). Tiagabine in adult patients with generalized anxiety disorder: Results from 3 randomized, double-blind, placebo-controlled, parallel-group studies. *Journal of Clinical Psychopharmacology*, 28(3), 308-316.

Wang, H. R., Woo, Y. S., & Bahk, W. M. (2014). Anticonvulsants to treat post-traumatic stress disorder. *Human Psychopharmacology: Clinical and Experimental*, 29(5), 427-433.

Williams, T., Hattingh, C. J., Kariuki, C. M., Tromp, S. A., van Balkom, A. J., Ipser, J. C., & Stein, D. J. (2017). Pharmacotherapy for social anxiety disorder (SAnD). *Cochrane Database of Systematic Reviews*, 2017(10). doi:10.1002/14651858.CD001206.pub3

Zhou, D. D., Zhou, X. X., Li, Y., Zhang, K. F., Lv, Z., Chen, X. R., ... Ai, M. (2019). Augmentation agents to serotonin reuptake inhibitors for treatment-resistant obsessive-compulsive disorder: A network meta-analysis. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 90, 277-287.

Anti-glucocorticoid (AGC) drugs

Golier, J. A., Caramanica, K., DeMaria, R., & Yehuda, R. (2012). A pilot study of mifepristone in combat-related PTSD. *Depression Research and Treatment*, 2012.

Lenze, E. J., Hershey, T., Newcomer, J. W., Karp, J. F., Blumberger, D., Anger, J., ... Dixon, D. (2014). Antigluco-corticoid therapy for older adults with anxiety and co-occurring cognitive dysfunction: Results from a pilot study with mifepristone. *International Journal of Geriatric Psychiatry*, 29(9), 962-969.

Sageman, S., & Brown, R. P. (2006). 3-acetyl-7-oxo-dehydroepiandrosterone for healing treatment-resistant posttraumatic stress disorder in women: 5 case reports. *Journal of Clinical Psychiatry*, 67(3), 493.

Antidepressant drugs

Bighelli, I., Castellazzi, M., Cipriani, A., Girlanda, F., Guaiana, G., Koesters, M., ... Barbui, C. (2018). Antidepressants versus placebo for panic disorder in adults. *Cochrane Database of Systematic Reviews*, 2018(4). doi:10.1002/14651858.CD010676.pub2

Cipriani, A., Williams, T., Nikolakopoulou, A., Salanti, G., Chaimani, A., Ipser, J., ... Stein, D. J. (2018). Comparative efficacy and acceptability of pharmacological treatments for post-traumatic stress disorder in adults: A network meta-analysis. *Psychological Medicine*, 48(12), 1975-1984.

Dobson, E. T., & Strawn, J. R. (2016). Pharmacotherapy for pediatric generalized anxiety disorder: A systematic evaluation of efficacy, safety and tolerability. *Pediatric Drugs*, 18(1), 45-53.

Gentile, S. (2014). Efficacy of antidepressant medications in children and adolescents with non-obsessive-compulsive disorder anxiety disorders: A systematic assessment. *Expert Opinion on Drug Safety*, 13(6), 735-744.

Hoffman, E. J., & Mathew, S. J. (2008). Anxiety disorders: A comprehensive review of pharmacotherapies. *Mount Sinai Journal of Medicine*, 75(3), 248-262.

Hoskins, M., Pearce, J., Bethell, A., Dankova, L., Barbui, C., Tol, W. A., ... Bisson, J. I. (2015). Pharmacotherapy for post-traumatic stress disorder: Systematic review and meta-analysis. *British Journal of Psychiatry*, 206(2), 93-100.

McGuire, J. F., Piacentini, J., Lewin, A. B., Brennan, E. A., Murphy, T. K., & Storch, E. A. (2015). A meta-analysis of cognitive behavior therapy and medication for child obsessive-compulsive disorder: Moderators of treatment efficacy, response, and remission. *Depression and Anxiety*, 32(8), 580-593.

Skapinakis, P., Caldwell, D. M., Hollingworth, W., Bryden, P., Fineberg, N. A., Salkovskis, P., ... Lewis, G. (2016). Pharmacological and psychotherapeutic interventions for management of obsessive-compulsive disorder in adults: A systematic review and network meta-analysis. *The Lancet Psychiatry*, 3(8), 730-739.

Slee, A., Nazareth, I., Bondaronek, P., Liu, Y., Cheng, Z., & Freemantle, N. (2019). Pharmacological treatments for generalised anxiety disorder: A systematic review and network meta-analysis. *The Lancet*, 393(10173), 768-777.

Strawn, J. R., Sakolsky, D. J., & Rynn, M. A. (2012). Psychopharmacologic treatment of children and adolescents with anxiety disorders. *Child and Adolescent Psychiatric Clinics*, 21(3), 527-539.

Williams, T., Hattingh, C. J., Kariuki, C. M., Tromp, S. A., van Balkom, A. J., Ipser, J. C., & Stein, D. J. (2017). Pharmacotherapy for social anxiety disorder (SAnD). *Cochrane Database of Systematic Reviews*, 2017(10). doi:10.1002/14651858.CD001206.pub3

Antihistamine drugs

Bandelow, B., Reitt, M., Röver, C., Michaelis, S., Görlisch, Y., & Wedekind, D. (2015). Efficacy of treatments for anxiety disorders: A meta-analysis. *International Clinical Psychopharmacology*, 30(4), 183-192.

Guaiana, G., Barbui, C., & Cipriani, A. (2010). Hydroxyzine for generalised anxiety disorder. *Cochrane Database of Systematic Reviews*, 2010(12). doi:10.1002/14651858.CD006815.pub2

Antipsychotic drugs

Albert, U., Carmassi, C., Cosci, F., De Cori, D., Di Nicola, M., Ferrari, S., ... Fiorillo, A. (2016). Role and clinical implications of atypical antipsychotics in anxiety disorders, obsessive-compulsive disorder, trauma-related, and somatic symptom disorders: A systematized review. *International Clinical Psychopharmacology*, 31(5), 249-258.

Ardic, U. A., Ercan, E. S., Kutlu, A., Yuce, D., Ipci, M., & Inci, S. B. (2017). Successful treatment response with aripiprazole augmentation of SSRIs in refractory Obsessive-Compulsive Disorder in childhood. *Child Psychiatry & Human Development*, 48(5), 699-704.

Donahue, C. B., Kushner, M. G., Thuras, P. D., Murphy, T. G., Van Demark, J. B., & Adson, D. E. (2009). Effect of quetiapine vs. placebo on response to two virtual public speaking exposures in individuals with social phobia. *Journal of Anxiety Disorders*, 23(3), 362-368.

Hollifield, M., Thompson, P. M., Ruiz, J. E., & Uhlenhuth, E. H. (2005). Potential effectiveness and safety of olanzapine in refractory panic disorder. *Depression and Anxiety*, 21(1), 33-40.

Maneeton, N., Maneeton, B., Woottituk, P., Likhitsathian, S., Suttajit, S., Boonyanaruthee, V., & Srisurapanont, M. (2016). Quetiapine monotherapy in acute treatment of generalized anxiety disorder: A systematic review and meta-analysis of randomized controlled trials. *Drug Design, Development and Therapy*, 10, 259.

Perna, G., Alessandra, A., Raffaele, B., Elisa, M., Giuseppina, D., Paolo, C., ... Daniela, C. (2016). Is there room for second-generation antipsychotics in the pharmacotherapy of panic disorder? A systematic review based on PRISMA guidelines. *International Journal of Molecular Sciences*, 17(4), 551.

Pignon, B., du Montcel, C. T., Carton, L., & Pelissolo, A. (2017). The place of antipsychotics in the therapy of anxiety disorders and obsessive-compulsive disorders. *Current Psychiatry Reports*, 19(12), 103.

Veale, D., Miles, S., Smallcombe, N., Ghezai, H., Goldacre, B., & Hodsoll, J. (2014). Atypical antipsychotic augmentation in SSRI treatment refractory obsessive-compulsive disorder: A systematic review and meta-analysis. *BMC Psychiatry*, 14(1), 317.

Villareal, G., Hamner, M. B., Cañive, J. M., Robert, S., Calais, L. A., Durklaski, V., ... Qualls, C. (2016). Efficacy of quetiapine monotherapy in posttraumatic stress disorder: A randomized, placebo-controlled trial. *American Journal of Psychiatry*, 173(12), 1205-1212.

Williams, T., Hattingh, C. J., Kariuki, C. M., Tromp, S. A., van Balkom, A. J., Ipser, J. C., & Stein, D. J. (2017). Pharmacotherapy for social anxiety disorder (SAnD). *Cochrane Database of Systematic Reviews*, 2017(10). doi:10.1002/14651858.CD001206.pub3

Wilner, K. D., Anziano, R. J., Johnson, A. C., Miceli, J. J., Fricke, J. R., & Titus, C. K. (2002). The anxiolytic effect of the novel antipsychotic ziprasidone compared with diazepam in subjects anxious before dental surgery. *Journal of Clinical Psychopharmacology*, 22(2), 206-210.

Zhou, D. D., Zhou, X. X., Li, Y., Zhang, K. F., Lv, Z., Chen, X. R., ... Ai, M. (2019). Augmentation agents to serotonin reuptake inhibitors for treatment-resistant obsessive-compulsive disorder: A network meta-analysis. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 90, 277-287.

Azapirone drugs

Chessick, C. A., Allen, M. H., Thase, M. E., da Cunha, A. A. B. M., Kapczinski, F., de Lima, M. S., & dos Santos Souza, J. J. (2006). Azapirone for generalized anxiety disorder. *Cochrane Database of Systematic Reviews*, 2006(3). doi:10.1002/14651858.CD006115

Fineberg, N. A., & Gale, T. M. (2005). Evidence-based pharmacotherapy of obsessive-compulsive disorder. *International Journal of Neuropsychopharmacology*, 8(1), 107-129.

Huang, X., Li, C., Li, W. H., Luo, Y. L., Wang, B., Zhang, W., ... Ji, J. L. (2013). Clinical evaluation of the efficacy and safety of tandospirone versus sertraline monotherapy for social anxiety disorder: A randomized open-label trial. *Human Psychopharmacology: Clinical and Experimental*, 28(6), 594-599.

Pohl, R., Balon, R., Yeragani, V. K., & Gershon, S. (1989). Serotonergic anxiolytics in the treatment of panic disorder: A controlled study with buspirone. *Psychopathology*, 22(Suppl. 1), 60-67.

Sheehan, D. V., Raj, A. B., Sheehan, K. H., & Soto, S. (1990). Is buspirone effective for panic disorder?. *Journal of Clinical Psychopharmacology*, 10, 3-11.

Sheehan, D. V., Raj, A. B., Harnett-Sheehan, K., Soto, S., & Knapp, E. (1993). The relative efficacy of high-dose buspirone and alprazolam in the treatment of panic disorder: A double-blind placebo-controlled study. *Acta Psychiatrica Scandinavica*, 88(1), 1-11.

Van Vliet, I. M., Den Boer, J. A., Westenberg, H. G. M., & Pian, K. H. (1996). Clinical effects of buspirone in social phobia, a double-blind placebo controlled study. *European Neuropsychopharmacology*, 6(6), S4-150.

Baclofen

Drake, R. G., Davis, L. L., Cates, M. E., Jewell, M. E., Ambrose, S. M., & Lowe, J. S. (2003). Baclofen treatment for chronic posttraumatic stress disorder. *Annals of Pharmacotherapy*, 37(9), 1177-1181.

Manteghi, A. A., Hebrani, P., Mortezaia, M., Haghighi, M. B., & Javanbakht, A. (2014). Baclofen add-on to citalopram in treatment of posttraumatic stress disorder. *Journal of Clinical Psychopharmacology*, 34(2), 240-243.

Benzodiazepines

Bandelow, B., Reitt, M., Röver, C., Michaelis, S., Görlich, Y., & Wedekind, D. (2015). Efficacy of treatments for anxiety disorders: A meta-analysis. *International Clinical Psychopharmacology*, 30(4), 183-192.

Bighelli, I., Trespidi, C., Castellazzi, M., Cipriani, A., Furukawa, T. A., Girlanda, F., ... Barbui, C. (2016). Antidepressants and benzodiazepines for panic disorder in adults. *Cochrane Database of Systematic Reviews*, 2016(9). doi:10.1002/14651858.CD011567.pub2

Choy, Y., Fyer, A. J., & Lipsitz, J. D. (2007). Treatment of specific phobia in adults. *Clinical Psychology Review*, 27(3), 266-286.

Davidson, J. R., Potts, N., Richichi, E., Krishnan, R., Ford, S. M., Smith, R., & Wilson, W. H. (1993). Treatment of social phobia with clonazepam and placebo. *Journal of Clinical Psychopharmacology*, 13, 423-428.

Guina, J., Rossetter, S. R., DeRHODES, B. J., Nahhas, R. W., & Welton, R. S. (2015). Benzodiazepines for PTSD: A systematic review and meta-analysis. *Journal of Psychiatric Practice*, 21(4), 281-303.

Hollander, E., Kaplan, A., & Stahl, S. M. (2003). A double-blind, placebo-controlled trial of clonazepam in obsessive-compulsive disorder. *The World Journal of Biological Psychiatry*, 4(1), 30-34.

Martin, J. L. R., Sainz-Pardo, M., Furukawa, T. A., Martin-Sanchez, E., Seoane, T., & Galan, C. (2007). Benzodiazepines in generalized anxiety disorder: Heterogeneity of outcomes based on a systematic review and meta-analysis of clinical trials. *Journal of Psychopharmacology*, 21(7), 774-782.

Ontiveros Sanchez de la Barquera, J. A. (2008). Double-blind controlled study with clonazepam and placebo in social anxiety disorder. *Salud Mental*, 31(4), 299-306.

Pollack, M. H., Van Ameringen, M., Simon, N. M., Worthington, J. W., Hoge, E. A., Keshaviah, A., & Stein, M. B. (2014). A double-blind randomized controlled trial of augmentation and switch strategies for refractory social anxiety disorder. *American Journal of Psychiatry*, 171(1), 44-53.

Versiani, M., Nardi, A. E., Figueira, I., Mendlowicz, M., & Marques, C. (1997). Double-blind placebo controlled trial with bromazepam in social phobia. *Jornal Brasileiro de Psiquiatria*, 46(3), 167-171.

Beta-blockers

Amos, T., Stein, D. J., & Ipser, J. C. (2014). Pharmacological interventions for preventing post-traumatic stress disorder (PTSD). *Cochrane Database of Systematic Reviews*, 2014(7). doi:10.1002/14651858.CD006239.pub2

Argolo, F. C., Cavalcanti-Ribeiro, P., Netto, L. R., & Quarantini, L. C. (2015). Prevention of posttraumatic stress disorder with propranolol: A meta-analytic review. *Journal of Psychosomatic Research*, 79(2), 89-93.

Turner, S. M., Beidel, D. C., & Jacob, R. G. (1994). Social phobia: A comparison of behavior therapy and atenolol. *Journal of Consulting and Clinical Psychology*, 62(2), 350-358.

Steenen, S. A., van Wijk, A. J., Van Der Heijden, G. J., van Westrhenen, R., de Lange, J., & de Jongh, A. (2016). Propranolol for the treatment of anxiety disorders: Systematic review and meta-analysis. *Journal of Psychopharmacology*, 30(2), 128-139.

Swartz, C. M. (1998). Betaxolol in anxiety disorders. *Annals of Clinical Psychiatry*, 10(1), 9-14.

Bupropion

Becker, M. E., Hertzberg, M. A., Moore, S. D., Dennis, M. F., Bukenya, D. S., & Beckham, J. C. (2007). A placebo-controlled trial of bupropion SR in the treatment of chronic posttraumatic stress disorder. *Journal of Clinical Psychopharmacology*, 27(2), 193-197.

Bystritsky, A., Kerwin, L., Feusner, J. D., & Vapnik, T. (2008). A pilot controlled trial of bupropion XL versus escitalopram in generalized anxiety disorder. *Psychopharmacology Bulletin*, 41(1), 46-51.

Emmanuel, N. P., Brawman-Mintzer, O., Morton, W. A., Book, S. W., Johnson, M. R., Lorberbaum, J. P., ... Lydiard, R. B. (2000). Bupropion-SR in treatment of social phobia. *Depression and Anxiety*, 12(2), 111-113.

Simon, N. M., Emmanuel, N., Ballenger, J., Worthington, J. J., Kinrys, G., Korbly, N. B., ... Pollack, M. H. (2003). Bupropion sustained release for panic disorder. *Psychopharmacology Bulletin*, 37(4), 66-72.

Vulink, N. C., Denys, D., & Westenberg, H. G. (2005). Bupropion for patients with obsessive-compulsive disorder: an open-label, fixed-dose study. *Journal of Clinical Psychiatry*, 66(2), 228-230.

D-Cycloserine

Bontempo, M. A., Panza, M. K. E., & Bloch, M. H. (2012). Meta-analysis: D-cycloserine augmentation of behavioral therapy for the treatment of anxiety disorders. *The Journal of Clinical Psychiatry*, 73(4), 533.

Bürkner, P. C., Bittner, N., Holling, H., & Buhlmann, U. (2017). D-cycloserine augmentation of behavior therapy for anxiety and obsessive-compulsive disorders: A meta-analysis. *PloS One*, 12(3), e0173660.

Caldirola, D., Alciati, A., Riva, A., & Perna, G. (2018). Are there advances in pharmacotherapy for panic disorder? A systematic review of the past five years. *Expert Opinion on Pharmacotherapy*, 19(12), 1357-1368.

Gu, W., Storch, E. A., Zhao, Q., Xu, T., & Wang, Z. (2017). Effects of D-cycloserine augmentation on cognitive behavioral therapy in patients with obsessive-compulsive disorder: A systematic review and meta-analysis. *Journal of Obsessive-Compulsive and Related Disorders*, 13, 24-29.

McGuire, J. F., Wu, M. S., Piacentini, J., McCracken, J. T., & Storch, E. A. (2017). A meta-analysis of d-cycloserine in exposure-based treatment: Moderators of treatment efficacy, response, and diagnostic remission. *The Journal of Clinical Psychiatry*, 78(2), 196.

Deep brain stimulation (DBS)

Alonso, P., Cuadras, D., Gabriëls, L., Denys, D., Goodman, W., Greenberg, B. D., ... Nuttin, B. (2015). Deep brain stimulation for obsessive-compulsive disorder: A meta-analysis of treatment outcome and predictors of response. *PloS One*, 10(7), e0133591.

Fayad, S. M., Guzick, A. G., Reid, A. M., Mason, D. M., Bertone, A., Foote, K. D., ... Ward, H. E. (2016). Six-nine year follow-up of deep brain stimulation for obsessive-compulsive disorder. *PloS One*, 11(12), e0167875.

Kisely, S., Hall, K., Siskind, D., Frater, J., Olson, S., & Crompton, D. (2014). Deep brain stimulation for obsessive-compulsive disorder: A systematic review and meta-analysis. *Psychological Medicine*, 44(16), 3533-3542.

Kohl, S., Schönherr, D. M., Luigjes, J., Denys, D., Mueller, U. J., Lenartz, D., ... Kuhn, J. (2014). Deep brain stimulation for treatment-refractory obsessive compulsive disorder: A systematic review. *BMC Psychiatry*, 14(1), 214.

Langevin, J. P., Koek, R. J., Schwartz, H. N., Chen, J. W., Sultzer, D. L., Mandelkern, M. A., ... Krah, S. E. (2016). Deep brain stimulation of the basolateral amygdala for treatment-refractory posttraumatic stress disorder. *Biological Psychiatry*, 79(10), e82-e84.

Roh, D., Chang, W. S., Chang, J. W., & Kim, C. H. (2012). Long-term follow-up of deep brain stimulation for refractory obsessive-compulsive disorder. *Psychiatry Research*, 200(2-3), 1067-1070.

Saleh, C., & Fontaine, D. (2015). Deep brain stimulation for psychiatric diseases: what are the risks?. *Current Psychiatry Reports*, 17(5), 33.

Electroconvulsive therapy (ECT)

Fontenelle, L. F., Coutinho, E. S., Lins-Martins, N. M., Fitzgerald, P. B., Fujiwara, H., & Yücel, M. (2015). Electroconvulsive therapy for obsessive-compulsive disorder: A systematic review. *Journal of Clinical Psychiatry*, 76(7), 949-957.

Margoob, M. A., Ali, Z., & Andrade, C. (2010). Efficacy of ECT in chronic, severe, antidepressant- and CBT-refractory PTSD: An open, prospective study. *Brain Stimulation*, 3(1), 28-35.

Youssef, N. A., McCall, W. V., & Andrade, C. (2017). The role of ECT in posttraumatic stress disorder: A systematic review. *Annals of Clinical Psychiatry*, 29(1), 62-70.

Glucocorticoid drugs

Dominique, J. F., Bentz, D., Michael, T., Bolt, O. C., Wiederhold, B. K., Margraf, J., & Wilhelm, F. H. (2011). Glucocorticoids enhance extinction-based psychotherapy. *Proceedings of the National Academy of Sciences*, 108(16), 6621-6625.

Dominique, J. F., & Margraf, J. (2008). Glucocorticoids for the treatment of post-traumatic stress disorder and phobias: A novel therapeutic approach. *European Journal of Pharmacology*, 583(2-3), 365-371.

Soravia, L. M., Heinrichs, M., Aerni, A., Maroni, C., Schelling, G., Ehler, U., ... Dominique, J. F. (2006). Glucocorticoids reduce phobic fear in humans. *Proceedings of the National Academy of Sciences*, 103(14), 5585-5590.

Soravia, L. M., Heinrichs, M., Winzeler, L., Fislér, M., Schmitt, W., Horn, H., ... de Quervain, D. J. F. (2014). Glucocorticoids enhance in vivo exposure-based therapy of spider phobia. *Depression and Anxiety*, 31(5), 429-435.

Surís, A., Holliday, R., Adinoff, B., Holder, N., & North, C. S. (2017). Facilitating fear-based memory extinction with dexamethasone: A randomized controlled trial in male veterans with combat-related PTSD. *Psychiatry*, 80(4), 399-410.

Yehuda, R., Bierer, L. M., Pratchett, L. C., Lehrner, A., Koch, E. C., Van Manen, J. A., ... Hildebrandt, T. (2015). Cortisol augmentation of a psychological treatment for warfighters with posttraumatic stress disorder: Randomized trial showing improved treatment retention and outcome. *Psychoneuroendocrinology*, 51, 589-597.

Lithium

Pigott, T. A., Pato, M. T., L'Heureux, F. R. A. N. C. I. N. E., Hill, J. L., Grover, G. N., Bernstein, S. E., & Murphy, D. L. (1991). A controlled comparison of adjuvant lithium carbonate or thyroid hormone in clomipramine-treated patients with obsessive-compulsive disorder. *Journal of Clinical Psychopharmacology*, 11(4), 242-248.

Van der Kolk, B. A. (1983). Psychopharmacological issues in posttraumatic stress disorder. *Psychiatric Services*, 34(8), 683-691.

Memantine

Farnia, V., Gharehbaghi, H., Alikhani, M., Almasi, A., Golshani, S., Tatari, F., ... Brand, S. (2018). Efficacy and tolerability of adjunctive gabapentin and memantine in obsessive compulsive disorder: Double-blind, randomized, placebo-controlled trial. *Journal of Psychiatric Research*, 104, 137-143.

Kishi, T., Matsuda, Y., & Iwata, N. (2018). Combination therapy of serotonin reuptake inhibitors and memantine for obsessive-compulsive disorder: A meta-analysis of double-blind, randomized, placebo-controlled trials. *Journal of Alzheimer's Disease*, 64(1), 1-6.

Ramaswamy, S., Madabushi, J., Hunziker, J., Bhatia, S. C., & Petty, F. (2015). An open-label trial of memantine for cognitive impairment in patients with posttraumatic stress disorder. *Journal of Aging Research*, 2015, 1-6.

Psychosurgery (aka 'neurosurgery')

Brown, L. T., Mikell, C. B., Youngerman, B. E., Zhang, Y., McKhann, G. M., & Sheth, S. A. (2016). Dorsal anterior cingulotomy and anterior capsulotomy for severe, refractory obsessive-compulsive disorder: A systematic review of observational studies. *Journal of Neurosurgery*, 124(1), 77-89.

Riluzole

Hirschtritt, M. E., Bloch, M. H., & Mathews, C. A. (2017). Obsessive-compulsive disorder: advances in diagnosis and treatment. *JAMA*, 317(13), 1358-1367.

Marinova, Z., Chuang, D. M., & Fineberg, N. (2017). Glutamate-modulating drugs as a potential therapeutic strategy in obsessive-compulsive disorder. *Current Neuropharmacology*, 15(7), 977-995.

Mathew, S. J., Amiel, J. M., Coplan, J. D., Fitterling, H. A., Sackeim, H. A., & Gorman, J. M. (2005). Open-label trial of riluzole in generalized anxiety disorder. *American Journal of Psychiatry*, 162(12), 2379-2381.

Sirolimus

Surís, A., Smith, J., Powell, C., & North, C. S. (2013). Interfering with the reconsolidation of traumatic memory: sirolimus as a novel agent for treating veterans with posttraumatic stress disorder. *Annals of Clinical Psychiatry*, 25(1), 33.

Stimulant drugs

Daly, O. E. (2000). The use of stimulants in the treatment of post traumatic stress disorder: Case report. *Human Psychopharmacology: Clinical and Experimental*, 15(4), 295-300.

Houlihan, D. J. (2011). Psychostimulant treatment of combat-related posttraumatic stress disorder. *Journal of Psychopharmacology*, 25(11), 1568-1572.

Thyroid hormones

Agid, O., Shalev, A. Y., & Lerer, B. (2001). Triiodothyronine augmentation of selective serotonin reuptake inhibitors in posttraumatic stress disorder. *The Journal of Clinical Psychiatry*, 62(3), 169-173.

Pigott, T. A., Pato, M. T., L'Heureux, F., Hill, J. L., Grover, G. N., Bernstein, S. E., & Murphy, D. L. (1991). A controlled comparison of adjuvant lithium carbonate or thyroid hormone in clomipramine-treated patients with obsessive-compulsive disorder. *Journal of Clinical Psychopharmacology*, 11(4), 242-248.

Transcranial magnetic stimulation (TMS)

Diefenbach, G. J., Bragdon, L. B., Zertuche, L., Hyatt, C. J., Hallion, L. S., Tolin, D. F., ... Assaf, M. (2016). Repetitive transcranial magnetic stimulation for generalised anxiety disorder: A pilot randomised, double-blind, sham-controlled trial. *British Journal of Psychiatry*, 209(3), 222-228.

Dilkov, D., Hawken, E. R., Kaludiev, E., & Milev, R. (2017). Repetitive transcranial magnetic stimulation of the right dorsal lateral prefrontal cortex in the treatment of generalized anxiety disorder: A randomized, double-blind sham controlled clinical trial. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 78, 61-65.

Huang, Z., Li, Y., Bianchi, M. T., Zhan, S., Jiang, F., Li, N., ... Wang, Y. (2018). Repetitive transcranial magnetic stimulation of the right parietal cortex for comorbid generalized anxiety disorder and insomnia: A randomized, double-blind, sham-controlled pilot study. *Brain Stimulation*, 11(5), 1103-1109.

Jaafari, N., Rachid, F., Rotge, J. Y., Polosan, M., El-Hage, W., Belin, D., ... Pelissolo, A. (2012). Safety and efficacy of repetitive transcranial magnetic stimulation in the treatment of obsessive-compulsive disorder: a review. *The World Journal of Biological Psychiatry*, 13(3), 164-177.

Li, H., Wang, J., Li, C., & Xiao, Z. (2014). Repetitive transcranial magnetic stimulation (rTMS) for panic disorder in adults. *Cochrane Database of Systematic Reviews*, 2014(9). doi:10.1002/14651858.CD009083.pub2

Paes, F., Baczynski, T., Novaes, F., Marinho, T., Arias-Carrión, O., Budde, H., ... Silva, A. C. (2013). Repetitive transcranial magnetic stimulation (rTMS) to treat social anxiety disorder: Case reports and a review of the literature. *Clinical Practice and Epidemiology in Mental Health*, 9, 180

Rehn, S., Eslick, G. D., & Brakoulias, V. (2018). A meta-analysis of the effectiveness of different cortical targets used in repetitive transcranial magnetic stimulation (rTMS) for the treatment of obsessive-compulsive disorder (OCD). *Psychiatric Quarterly*, 89(3), 645-665.

Trevizol, A. P., Barros, M. D., Silva, P. O., Osuch, E., Cordeiro, Q., & Shiozawa, P. (2016). Transcranial magnetic stimulation for posttraumatic stress disorder: An updated systematic review and meta-analysis. *Trends in Psychiatry and Psychotherapy*, 38(1), 50-55.

Vicario, C. M., Salehinejad, M. A., Felmingham, K., Martino, G., & Nitsche, M. A. (2019). A systematic review on the therapeutic effectiveness of non-invasive brain stimulation for the treatment of anxiety disorders. *Neuroscience & Biobehavioral Reviews*, 96, 219-231.

Yan, T., Xie, Q., Zheng, Z., Zou, K., & Wang, L. (2017). Different frequency repetitive transcranial magnetic stimulation (rTMS) for posttraumatic stress disorder (PTSD): A systematic review and meta-analysis. *Journal of Psychiatric Research*, 89, 125-135.

Trigeminal nerve stimulation (TNS)

Cook, I. A., Abrams, M., & Leuchter, A. F. (2016). Trigeminal nerve stimulation for comorbid posttraumatic stress disorder and major depressive disorder. *Neuromodulation: Technology at the Neural Interface*, 19(3), 299-305.

Trevizol, A. P., Sato, I. A., Cook, I. A., Lowenthal, R., Barros, M. D., Cordeiro, Q., & Shiozawa, P. (2016). Trigeminal nerve stimulation (TNS) for panic disorder: An open label proof-of-concept trial. *Brain Stimulation: Basic, Translational, and Clinical Research in Neuromodulation*, 9(1), 161-162.

Trevizol, A. P., Sato, I. A., Cook, I. A., Shiozawa, P., Lowenthal, R., & Cordeiro, Q. (2016). Trigeminal nerve stimulation (TNS) for posttraumatic stress disorder and major depressive disorder: An open-label proof-of-concept trial. *Epilepsy & Behavior*, 60, 240-241.

Trevizol, A. P., Shiozawa, P., Sato, I. A., Calfat, E. L. D. B., Alberto, R. L., Cook, I. A., ... Cordeiro, Q. (2015). Trigeminal nerve stimulation (TNS) for generalized anxiety disorder: A case study. *Brain Stimulation: Basic, Translational, and Clinical Research in Neuromodulation*, 8(3), 659-660

Trevizol, A. P., Taiar, I., Malta, R. C. R., Sato, I. A., Bonadia, B., Cordeiro, Q., & Shiozawa, P. (2016). Trigeminal nerve stimulation (TNS) for social anxiety disorder: A case study. *Epilepsy & Behavior*, 56, 170-171.

Vagus Nerve Stimulation (VNS)

George, M. S., Ward Jr, H. E., Ninan, P. T., Pollack, M., Nahas, Z., Anderson, B., ... Ballenger, J. C. (2008). A pilot study of vagus nerve stimulation (VNS) for treatment-resistant anxiety disorders. *Brain Stimulation*, 1(2), 112-121.

Yohimbine

Meyerbroeker, K., Powers, M. B., Van Stegeren, A., & Emmelkamp, P. M. (2012). Does yohimbine hydrochloride facilitate fear extinction in virtual reality treatment of fear of flying? A randomized placebo-controlled trial. *Psychotherapy and Psychosomatics*, 81(1), 29-37.

Powers, M. B., Smits, J. A., Otto, M. W., Sanders, C., & Emmelkamp, P. M. (2009). Facilitation of fear extinction in phobic participants with a novel cognitive enhancer: A randomized placebo controlled trial of yohimbine augmentation. *Journal of Anxiety Disorders*, 23(3), 350-356.

Smits, J. A., Rosenfield, D., Davis, M. L., Julian, K., Handelsman, P. R., Otto, M. W., ... Powers, M. B. (2014). Yohimbine enhancement of exposure therapy for social anxiety disorder: A randomized controlled trial. *Biological Psychiatry*, 75(11), 840-846.

Complementary and lifestyle interventions

Acupuncture

Feng, B., Liu, L., Fangzhong, X., Chen, J., Wang, P., Chen, W., & Yu, E. (2007). Thirty cases of obsession treated by point-stimulation and with small dose of chlorimipramine. *Journal of Traditional Chinese Medicine*, 27(1), 3-6.

Grant, S., Colaiaco, B., Motala, A., Shanman, R., Sorbero, M., & Hempel, S. (2018). Acupuncture for the treatment of adults with posttraumatic stress disorder: A systematic review and meta-analysis. *Journal of Trauma & Dissociation*, 19(1), 39-58.

Pilkington, K., Kirkwood, G., Rampes, H., Cummings, M., & Richardson, J. (2007). Acupuncture for anxiety and anxiety disorders—a systematic literature review. *Acupuncture in Medicine*, 25(1-2), 1-10.

Pilkington, K. (2010). Anxiety, depression and acupuncture: a review of the clinical research. *Autonomic Neuroscience*, 157(1-2), 91-95.

Samuels, N., Gropp, C., Singer, S. R., & Oberbaum, M. (2008). Acupuncture for psychiatric illness: a literature review. *Behavioral Medicine*, 34(2), 55-64.

Zhang, Z. J., Wang, X. Y., Tan, Q. R., Jin, G. X., & Yao, S. M. (2009). Electroacupuncture for refractory obsessive-compulsive disorder: a pilot waitlist-controlled trial. *The Journal of Nervous and Mental Disease*, 197(8), 619-622.

Aikido

Lukoff, D., & Strozzi-Heckler, R. (2017). Aikido: A martial art with mindfulness, somatic, relational, and spiritual benefits for veterans. *Spirituality in Clinical Practice*, 4(2), 81.

Weiss, T. C., Dickstein, B. D., Hansel, J. E., Schumm, J. A., & Chard, K. M. (2017). Aikido as an augment to residential posttraumatic stress disorder treatment. *Military Psychology*, 29(6), 615-622.

Alcohol

Battista, S. R., Stewart, S. H., & Ham, L. S. (2010). A critical review of laboratory-based studies examining the relationships of social anxiety and alcohol intake. *Current Drug Abuse Reviews*, 3(1), 3-22.

Cosci, F., Schruers, K. R., Abrams, K., & Griez, E. J. (2007). Alcohol use disorders and panic disorder: A review of the evidence of a direct relationship. *The Journal of Clinical Psychiatry*, 68(6), 874-880.

Kushner, M. G., Abrams, K., & Borchardt, C. (2000). The relationship between anxiety disorders and alcohol use disorders: A review of major perspectives and findings. *Clinical Psychology Review*, 20(2), 149-171.

Stevens, S., Cooper, R., Bantin, T., Hermann, C., & Gerlach, A. L. (2017). Feeling safe but appearing anxious: differential effects of alcohol on anxiety and social performance in individuals with social anxiety disorder. *Behaviour Research and Therapy*, 94, 9-18.

Aromatherapy

Edge, J. (2003). A pilot study addressing the effect of aromatherapy massage on mood, anxiety and relaxation in adult mental health. *Complementary Therapies in Nursing and Midwifery*, 9(2), 90-97.

Ashwagandha

Jahanbakhsh, S. P., Manteghi, A. A., Emami, S. A., Mahyari, S., Gholampour, B., Mohammadpour, A. H., & Sahebkar, A. (2016). Evaluation of the efficacy of *Withania somnifera* (Ashwagandha) root extract in patients with obsessive-compulsive disorder: A randomized double-blind placebo-controlled trial. *Complementary Therapies in Medicine*, 27, 25-29.

Khyati, S., & Anup, B. T. (2013). A randomized double blind placebo controlled study of ashwagandha on generalized anxiety disorder. *International Ayurvedic Medical Journal*, 1, 1-7.

Kulkarni, S. K., & Dhir, A. (2008). *Withania somnifera*: an Indian ginseng. *Progress in Neuropsychopharmacology and Biological Psychiatry*, 32(5), 1093-1105.

Autogenic training

Kohli, A., Varma, V. K., & Nehra, R. (2000). Comparison of efficacy of psychorelaxation and pharmacotherapy in Generalized Anxiety Disorder. *Journal of Personality and Clinical Studies*, 16(1), 43-48.

Nakatani, E., Nakagawa, A., Nakao, T., Yoshizato, C., Nabeyama, M., Kudo, A., ... Kawamoto, M. (2005). A randomized controlled trial of Japanese patients with obsessive-compulsive disorder—effectiveness of behavior therapy and fluvoxamine. *Psychotherapy and Psychosomatics*, 74(5), 269-276.

Sadigh, M. R. (1999). The treatment of recalcitrant post-traumatic nightmares with autogenic training and autogenic abreaction: A case study. *Applied Psychophysiology and Biofeedback*, 24(3), 203-210.

Sakai, M. (1996). A clinical study of autogenic training-based behavioral treatment for panic disorder. *Fukuoka Igaku Zasshi*, 87(3), 77-84.

Sakai, M., & Takeichi, M. (1996). Two cases of panic disorder treated with autogenic training and in vivo exposure without medication. *Psychiatry and Clinical Neurosciences*, 50(6), 335-336.

Shiga, F. F. (1999). The use of autogenic training in cognitive therapy to treat social phobia. *Japanese Journal of Autogenic Therapy*, 18, 68-75.

Stetter, F., Walter, G., Zimmermann, A., Zähres, S., & Straube, E. R. (1994). Ambulatory short-term therapy of anxiety patients with autogenic training and hypnosis. Results of treatment and 3 months follow-up. *Psychotherapie, Psychosomatik, Medizinische Psychologie*, 44(7), 226-234.

Takaishi, N. (2000). A comparative study of autogenic training and progressive relaxation as methods for teaching clients to relax. *Sleep and Hypnosis*, 2(3), 132-136.

Wedekind, D., Broocks, A., Weiss, N., Engel, K., Neubert, K., & Bandelow, B. (2010). A randomized, controlled trial of aerobic exercise in combination with paroxetine in the treatment of panic disorder. *The World Journal of Biological Psychiatry*, 11(7), 904-913.

Ayurveda

Mills, P. J., Farag, N. H., Newton, R. P., & Parry, B. L. (2002). Effects of a traditional herbal supplement on anxiety in patients with generalized anxiety disorder. *Journal of Clinical Psychopharmacology*, 22(4), 443-444.

Sharma, H., Chandola, H. M., Singh, G., & Basisht, G. (2007). Utilization of Ayurveda in health care: an approach for prevention, health promotion, and treatment of disease. Part 2—Ayurveda in primary health care. *The Journal of Alternative and Complementary Medicine*, 13(10), 1135-1150.

Tubaki, B. R., Chandrashekar, C. R., Sudhakar, D., Prabha, T. N. S., Lavekar, G. S., & Kutty, B. M. (2012). Clinical efficacy of Manasamitra Vataka (an Ayurveda medication) on generalized anxiety disorder with comorbid generalized social phobia: A randomized controlled study. *The Journal of Alternative and Complementary Medicine*, 18(6), 612-621.

Bach flower remedies

Ernst, E. (2002). "Flower remedies": A systematic review of the clinical evidence. *Wien Klinik Wochenschrift*, 114, 963-966.

Muhlack, S., Lemmer, W., Klotz, P., Müller, T., Lehmann, E., & Klieser, E. (2006). Anxiolytic effect of rescue remedy for psychiatric patients: A double-blind, placebo-controlled, randomized trial. *Journal of Clinical Psychopharmacology*, 26(5), 541-542.

Bibliotherapy

Antony M. M., & Swinson R. P. (2000). *The Shyness & Social Anxiety Workbook: Proven techniques for overcoming your fears*. Oakland, CA: New Harbinger Publications Inc.

Barlow D. H., & Craske M.G. (2007). *Mastery of your anxiety and panic*. Oxford, UK: Oxford University Press.

Bowman, D., Scogin, F., Floyd, M., Patton, E., & Gist, L. (1997). Efficacy of self-examination therapy in the treatment of generalized anxiety disorder. *Journal of Counseling Psychology*, 44(3), 267.

Cludius, B., Hottenrott, B., Alsleben, H., Peter, U., Schröder, J., & Moritz, S. (2015). Mindfulness for OCD? No evidence for a direct effect of a self-help treatment approach. *Journal of Obsessive-Compulsive and Related Disorders*, 6, 59-65.

Clum G. A. (1990). *Coping with panic*. Pacific Grove, CA: Brooks/Cole Publishing.

Ehlers, A., Clark, D. M., Hackmann, A., McManus, F., Fennell, M., Herbert, C., & Mayou, R. (2003). A randomized controlled trial of cognitive therapy, a self-help booklet, and repeated assessments as early interventions for posttraumatic stress disorder. *Archives of General Psychiatry*, 60(10), 1024-1032.

Foa E. B., & Wilson, R. (2001). *Stop obsessing! How to overcome your obsessions and compulsions*. New York: Bantam Books.

Haug, T., Nordgreen, T., Öst, L. G., & Havik, O. E. (2012). Self-help treatment of anxiety disorders: a meta-analysis and meta-regression of effects and potential moderators. *Clinical Psychology Review*, 32(5), 425-445.

Herbert C. (1996). *Understanding your reactions to trauma: A booklet for survivors of trauma and their families*. Witney, Oxon, England: Oxford Stress & Trauma Centre.

Lewis, K. M., Amatya, K., Coffman, M. F., & Ollendick, T. H. (2015). Treating nighttime fears in young children with bibliotherapy: Evaluating anxiety symptoms and monitoring behavior change. *Journal of Anxiety Disorders*, 30, 103-112.

Marks I. M. (2001). *Living with fear: Understanding and coping with anxiety*. London, UK: McGraw Hill.

Moritz, S., Wess, N., Treszl, A., & Jelinek, L. (2011). The attention training technique as an attempt to decrease intrusive thoughts in obsessive-compulsive disorder (OCD): From cognitive theory to practice and back. *Journal of Contemporary Psychotherapy*, 41(3), 135-143.

Moritz, S., & Russu, R. (2013). Further evidence for the efficacy of association splitting in obsessive-compulsive disorder. An internet study in a Russian-speaking sample. *Journal of Obsessive-Compulsive and Related Disorders*, 2(2), 91-98.

Moritz, S., Stepulovs, O., Schröder, J., Hottenrott, B., Meyer, B., & Hauschildt, M. (2016). Is the whole less than the sum of its parts? Full versus individually adapted metacognitive self-help for obsessive-compulsive disorder: A randomized controlled trial. *Journal of Obsessive-Compulsive and Related Disorders*, 9, 107-115.

Moritz, S., Hauschildt, M., Murray, S. C., Pedersen, A., Krausz, M., & Jelinek, L. (2018). New wine in an old bottle? Evaluation of myMCT as an integrative bibliotherapy for obsessive-compulsive disorder. *Journal of Obsessive-Compulsive and Related Disorders*, 16, 88-97.

Moritz, S., & Jelinek, L. (2011). Further evidence for the efficacy of association splitting as a self-help technique for reducing obsessive thoughts. *Depression and Anxiety*, 28(7), 574-581.

Moritz, S., Jelinek, L., Hauschildt, M., & Naber, D. (2010). How to treat the untreated: effectiveness of a self-help metacognitive training program (myMCT) for obsessive-compulsive disorder. *Dialogues in Clinical Neuroscience*, 12(2), 209.

Rapee, R. M. (1998). *Overcoming shyness and social phobia: A step-by-step guide*. Killara, NSW, Australia: Lifestyle Press.

Tolin, D. F., Hannan, S., Maltby, N., Diefenbach, G. J., Worhunsky, P., & Brady, R. E. (2007). A randomized controlled trial of self-directed versus therapist-directed cognitive-behavioral therapy for obsessive-compulsive disorder patients with prior medication trials. *Behavior Therapy*, 38(2), 179-191.

Black cohosh

Amsterdam, J. D., Yao, Y., Mao, J. J., Soeller, I., Rockwell, K., & Shults, J. (2009). Randomized, double-blind, placebo-controlled trial of Cimicifuga racemosa (black cohosh) in women with anxiety disorder due to menopause. *Journal of Clinical Psychopharmacology*, 29(5), 478.

Therapeutic Goods Administration. Black cohosh (Cimicifuga racemosa): New labelling requirements and consumer information for medicines containing Black cohosh. from <http://www.tga.gov.au/safety/alerts-medicine-black-cohosh-070529.htm>; 2007.

Body therapies

Blaauwendraat, C., Levy Berg, A., & Gyllensten, A. L. (2017). One-year follow-up of basic body awareness therapy in patients with posttraumatic stress disorder. A small intervention study of effects on movement quality, PTSD symptoms, and movement experiences. *Physiotherapy Theory and Practice*, 33(7), 515-526.

Brom, D., Stokar, Y., Lawi, C., Nuriel-Porat, V., Ziv, Y., Lerner, K., & Ross, G. (2017). Somatic experiencing for posttraumatic stress disorder: a randomized controlled outcome study. *Journal of Traumatic Stress*, 30(3), 304-312.

Levy Berg, A., Sandell, R., & Sandahl, C. (2009). Affect-focused body psychotherapy in patients with generalized anxiety disorder: Evaluation of an integrative method. *Journal of Psychotherapy Integration*, 19(1), 67.

Stade, K., Skammeritz, S., Hjortkjær, C., & Carlsson, J. (2015). "After all the traumas my body has been through, I feel good that it is still working."—Basic Body Awareness Therapy for traumatised refugees. *Torture*, 25(1), 33-50.

Brainspotting

Hildebrand, A., Grand, D., & Stemmler, M. (2017). Brainspotting—the efficacy of a new therapy approach for the treatment of Posttraumatic Stress Disorder in comparison to Eye Movement Desensitization and Reprocessing. *Mediterranean Journal of Clinical Psychology*, 5(1).

Breathing training

Kim, S., Wollburg, E., & Roth, W. T. (2012). Opposing breathing therapies for panic disorder: Randomized controlled trial of lowering vs raising end-tidal Pco₂. *The Journal of Clinical Psychiatry*, 73, 931-939.

Meuret, A. E., Wilhelm, F. H., Ritz, T., & Roth, W. T. (2008). Feedback of end-tidal pCO₂ as a therapeutic approach for panic disorder. *Journal of Psychiatric Research*, 42(7), 560-568.

Meuret, A. E., Wilhelm, F. H., Ritz, T., & Roth, W. T. (2003). Breathing training for treating panic disorder: Useful intervention or impediment?. *Behavior Modification*, 27(5), 731-754.

Meuret, A. E., Simon, E., Bhaskara, L., & Ritz, T. (2017). Ultra-brief behavioral skills trainings for blood injection injury phobia. *Depression and Anxiety*, 34(12), 1096-1105.

Wells, S., Polglase, K., Andrews, H. B., Carrington, P., & Baker, A. H. (2003). Evaluation of a meridian-based intervention, Emotional Freedom Techniques (EFT), for reducing specific phobias of small animals. *Journal of Clinical Psychology*, 59(9), 943-966.

Wollburg, E., Roth, W. T., & Kim, S. (2011). Effects of breathing training on voluntary hypo- and hyperventilation in patients with panic disorder and episodic anxiety. *Applied Psychophysiology and Biofeedback*, 36(2), 81-91.

Caffeine consumption

Koran, L. M., Aboujaoude, E., & Gamel, N. N. (2009). Double-blind study of dextroamphetamine versus caffeine augmentation for treatment-resistant obsessive-compulsive disorder. *The Journal of Clinical Psychiatry*, 70(11), 1530-1535.

Juliano, L. M., & Griffiths, R. R. (2004). A critical review of caffeine withdrawal: Empirical validation of symptoms and signs, incidence, severity, and associated features. *Psychopharmacology*, 176(1), 1-29.

Caffeine reduction or avoidance

Jorm, A. F., Christensen, H., Griffiths, K. M., Parslow, R. A., Rodgers, B., & Blewitt, K. A. (2004). Effectiveness of complementary and self-help treatments for anxiety disorders. *Medical Journal of Australia*, 181, S29-S46.

Juliano, L. M., & Griffiths, R. R. (2004). A critical review of caffeine withdrawal: empirical validation of symptoms and signs, incidence, severity, and associated features. *Psychopharmacology*, 176(1), 1-29.

Chamomile

Amsterdam, J. D., Li, Y., Soeller, I., Rockwell, K., Mao, J. J., & Shults, J. (2009). A randomized, double-blind, placebo-controlled trial of oral *Matricaria recutita* (chamomile) extract therapy of generalized anxiety disorder. *Journal of Clinical Psychopharmacology*, 29(4), 378.

Mao, J. J., Xie, S. X., Keefe, J. R., Soeller, I., Li, Q. S., & Amsterdam, J. D. (2016). Long-term chamomile (*Matricaria chamomilla* L.) treatment for generalized anxiety disorder: A randomized clinical trial. *Phytomedicine*, 23(14), 1735-1742.

Creatine monohydrate

Amital, D., Vishne, T., Roitman, S., Kotler, M., & Levine, J. (2006). Open study of creatine monohydrate in treatment-resistant posttraumatic stress disorder. *The Journal of Clinical Psychiatry*, 67(5), 836.

Energy psychology (aka meridian tapping)

Clond, M. (2016). Emotional freedom techniques for anxiety: A systematic review with meta-analysis. *The Journal of Nervous and Mental Disease*, 204(5), 388-395.

Irgens, A. C., Hoffart, A., Nysæter, T. E., Haaland, V. Ø., Borge, F. M., Pripp, A. H., ... Dammen, T. (2017). Thought Field Therapy compared to Cognitive Behavioral Therapy and wait-list for agoraphobia: A randomized, controlled study with a 12-month follow-up. *Frontiers in Psychology*, 8, 1027.

Kessler, R. A. (2002). *The differential impact of thought field therapy as a treatment modality for male perpetrators of domestic violence diagnosed with posttraumatic stress disorder* (Doctoral dissertation, Walden University). Retrieved from <https://elibrary.ru/item.asp?id=5439841>

Moritz, S., Aravena, S. C., Guetzka, S. R., Schilling, L., Eichenberg, C., Raubart, G., ... Jelinek, L. (2011). Knock, and it will be opened to you? An evaluation of meridian-tapping in obsessive-compulsive disorder (OCD). *Journal of Behavior Therapy and Experimental Psychiatry*, 42(1), 81-88.

Sebastian, B., & Nelms, J. (2017). The effectiveness of Emotional Freedom Techniques in the treatment of posttraumatic stress disorder: A meta-analysis. *Explore*, 13(1), 16-25.

Exercise

Abrantes, A. M., Brown, R. A., Strong, D. R., McLaughlin, N., Garnaat, S. L., Mancebo, M., ... Greenberg, B. D. (2017). A pilot randomized controlled trial of aerobic exercise as an adjunct to OCD treatment. *General Hospital Psychiatry*, 49, 51-55.

Abrantes, A. M., Farris, S. G., Brown, R. A., Greenberg, B. D., Strong, D. R., McLaughlin, N. C., & Riebe, D. (2019). Acute effects of aerobic exercise on negative affect and obsessions and compulsions in individuals with obsessive-compulsive disorder. *Journal of Affective Disorders*, 245, 991-997.

Broocks, A., Bandelow, B., Pekrun, G., George, A., Meyer, T., Bartmann, U., ... Rüther, E. (1998). Comparison of aerobic exercise, clomipramine, and placebo in the treatment of panic disorder. *American Journal of Psychiatry*, 155(5), 603-609.

Diaz, A. B., & Motta, R. (2008). The effects of an aerobic exercise program on posttraumatic stress disorder symptom severity in adolescents. *International Journal of Emergency Mental Health*, 10(1), 49-59.

Fetzner, M. G., & Asmundson, G. J. (2015). Aerobic exercise reduces symptoms of posttraumatic stress disorder: A randomized controlled trial. *Cognitive Behaviour Therapy*, 44(4), 301-313.

Gaudlitz, K., Plag, J., Dimeo, F., & Ströhle, A. (2015). Aerobic exercise training facilitates the effectiveness of cognitive behavioral therapy in panic disorder. *Depression and Anxiety*, 32(3), 221-228.

Herring, M. P., Jacob, M. L., Suveg, C., Dishman, R. K., & O'Connor, P. J. (2012). Feasibility of exercise training for the short-term treatment of generalized anxiety disorder: A randomized controlled trial. *Psychotherapy and Psychosomatics*, 81(1), 21-28.

Hovland, A., Nordhus, I. H., Sjøbø, T., Gjestad, B. A., Birknes, B., Martinsen, E. W., ... Pallesen, S. (2013). Comparing physical exercise in groups to group cognitive behaviour therapy for the treatment of panic disorder in a randomized controlled trial. *Behavioural and Cognitive Psychotherapy*, 41(4), 408-432.

Jazaieri, H., Goldin, P. R., Werner, K., Ziv, M., & Gross, J. J. (2012). A randomized trial of MBSR versus aerobic exercise for social anxiety disorder. *Journal of Clinical Psychology*, 68(7), 715-731.

Lattari, E., Budde, H., Paes, F., Neto, G. A. M., Appolinario, J. C., Nardi, A. E., ... Machado, S. (2018). Effects of aerobic exercise on anxiety symptoms and cortical activity in patients with panic disorder: A pilot study. *Clinical Practice and Epidemiology in Mental Health: CP & EMH*, 14, 11.

Lindenberger, B. L., Plag, J., Schumacher, S., Gaudlitz, K., Bischoff, S., Bobbert, T., ... Ströhle, A. (2017). Clinical and neurobiological effects of aerobic exercise in dental phobia: A randomized controlled trial. *Depression and Anxiety*, 34(11), 1040-1048.

Manger, T. A., & Motta, R. W. (2005). The impact of an exercise program on posttraumatic stress disorder, anxiety, and depression. *International Journal of Emergency Mental Health*, 7(1), 49-57.

Newman, C. L., & Motta, R. W. (2007). The effects of aerobic exercise on childhood PTSD, anxiety, and depression. *International Journal of Emergency Mental Health*, 9(2), 133-158.

Rosenbaum, S., Sherrington, C., & Tiedemann, A. (2015). Exercise augmentation compared with usual care for post-traumatic stress disorder: A randomized controlled trial. *Acta Psychiatrica Scandinavica*, 131(5), 350-359.

Wedekind, D., Brooks, A., Weiss, N., Engel, K., Neubert, K., & Bandelow, B. (2010). A randomized, controlled trial of aerobic exercise in combination with paroxetine in the treatment of panic disorder. *The World Journal of Biological Psychiatry*, 11(7), 904-913.

Flotation-REST (Reduced Environmental Stimulation Therapy)

Feinstein, J. S., Khalsa, S. S., Yeh, H. W., Wohlrab, C., Simmons, W. K., Stein, M. B., & Paulus, M. P. (2018). Examining the short-term anxiolytic and antidepressant effect of Flotation-REST. *PLoS One*, 13(2), e0190292.

Jonsson, K., & Kjellgren, A. (2016). Promising effects of treatment with flotation-REST (restricted environmental stimulation technique) as an intervention for generalized anxiety disorder (GAD): A randomized controlled pilot trial. *BMC Complementary and Alternative Medicine*, 16(1), 108.

Foods rich in tryptophan

Hudson, C., Hudson, S., & MacKenzie, J. (2007). Protein-source tryptophan as an efficacious treatment for social anxiety disorder: A pilot study. *Canadian Journal of Physiology and Pharmacology*, 85(9), 928-932.

Gamisoyo-San

Park, D. M., Kim, S. H., Park, Y. C., Kang, W. C., Lee, S. R., & Jung, I. C. (2014). The comparative clinical study of efficacy of Gamisoyo-San (Jiaweixiaoyaosan) on generalized anxiety disorder according to differently manufactured preparations: Multicenter, randomized, double blind, placebo controlled trial. *Journal of Ethnopharmacology*, 158, 11-17.

Ginkgo

Woelk, H., Arnoldt, K. H., Kieser, M., & Hoerr, R. (2007). Ginkgo biloba special extract EGb 761® in generalized anxiety disorder and adjustment disorder with anxious mood: A randomized, double-blind, placebo-controlled trial. *Journal of Psychiatric Research*, 41(6), 472-480.

Glycine

Greenberg, W. M., Benedict, M. M., Doerfer, J., Perrin, M., Panek, L., Cleveland, W. L., & Javitt, D. C. (2009). Adjunctive glycine in the treatment of obsessive-compulsive disorder in adults. *Journal of Psychiatric Research*, 43(6), 664-670.

Gotu kola

Jana, U., Sur, T. K., Maity, L. N., Debnath, P. K., & Bhattacharyya, D. (2010). A clinical study on the management of generalized anxiety disorder with *Centella asiatica*. *Nepal Medical College Journal*, 12(1), 8-11.

Holy basil

Bhattacharyya, D., Sur, T. K., Jana, U., & Debnath, P. K. (2008). Controlled programmed trial of *Ocimum sanctum* leaf on generalized anxiety disorders. *Nepal Medical College Journal*, 10(3), 176-179.

Homeopathy

Davidson, J. R., Crawford, C., Ives, J. A., & Jonas, W. B. (2011). Homeopathic treatments in psychiatry: a systematic review of randomized placebo-controlled studies. *Journal of Clinical Psychiatry*, 72(6), 795.

Ngobese, J. C. (2006). *The relative efficacy of homeopathic Simillimum treatment as compared to psychological counseling (cognitive therapy and behavioral therapy) in the management of Generalized Anxiety Disorder* (Master's thesis, Durban Institute of Technology). Retrieved from https://openscholar.dut.ac.za/bitstream/10321/26/15/Ngobese_2006.pdf

Inositol

Benjamin, J., Levine, J., Fux, M., Aviv, A., Levy, D., & Belmaker, R. H. (1995). Double-blind, placebo-controlled, crossover trial of inositol treatment for panic disorder. *American Journal of Psychiatry*, 152(7), 1084-1086.

Carlomagno, G., & Unfer, V. (2011). Inositol safety: clinical evidences. *European Review for Medical and Pharmacological Sciences*, 15(8), 931-6.

Fux, M., Benjamin, J., & Belmaker, R. H. (1999). Inositol versus placebo augmentation of serotonin reuptake inhibitors in the treatment of obsessive-compulsive disorder: a double-blind cross-over study. *International Journal of Neuropsychopharmacology*, 2(3), 193-195.

Fux, M., Levine, J., Aviv, A., & Belmaker, R. H. (1996). Inositol treatment of obsessive-compulsive disorder. *American Journal of Psychiatry*, 153(9), 1219-1221.

Kaplan, Z., Amir, M., Swartz, M., & Levine, J. (1996). Inositol treatment of post-traumatic stress disorder. *Anxiety*, 2(1), 51-52.

Kim, H., McGrath, B. M., & Silverstone, P. H. (2005). A review of the possible relevance of inositol and the phosphatidylinositol second messenger system (PI-cycle) to psychiatric disorders—focus on magnetic resonance spectroscopy (MRS) studies. *Human Psychopharmacology: Clinical and Experimental*, 20(5), 309-326.

Palatnik, A., Frolov, K., Fux, M., & Benjamin, J. (2001). Double-blind, controlled, crossover trial of inositol versus fluvoxamine for the treatment of panic disorder. *Journal of Clinical Psychopharmacology*, 21(3), 335-339.

Juggling therapy

Nakahara, T., Nakahara, K., Uehara, M., Koyama, K. I., Li, K., Harada, T., ... Inui, A. (2007). Effect of juggling therapy on anxiety disorders in female patients. *BioPsychoSocial Medicine*, 1(1), 10.

Kampo

Inoue, H., Yamazaki, S., Shimizu, M., Uozaki, H., Goto, T., Ohnishi, S., & Koike, K. (2011). Liver injury induced by the Japanese herbal drug kamishoyosan. *Gastroenterology & Hepatology*, 7(10), 692.

Mantani, N., Hisanaga, A., Kogure, T., Kita, T., Shimada, Y., & Terasawa, K. (2002). Four cases of panic disorder successfully treated with Kampo (Japanese herbal) medicines: Kami-shoyo-san and Hange-koboku-to. *Psychiatry and Clinical Neurosciences*, 56(6), 617-620.

Mantani, N., & Terasawa, K. (1996). A trial of Kampo therapy for panic disorder. *Kampo Medicine*, 46(4), 561-565.

Numata, T., GunFan, S., Takayama, S., Takahashi, S., Monma, Y., Kaneko, S., ... Kagaya, Y. (2014). Treatment of posttraumatic stress disorder using the traditional Japanese herbal medicine saikokeishikankyoto: A randomized, observer-blinded, controlled trial in survivors of the great East Japan earthquake and tsunami. *Evidence-Based Complementary and Alternative Medicine*, 2014.

Kava

Barić, H., Đorđević, V., Cerovečki, I., & Trkulja, V. (2018). Complementary and alternative medicine treatments for generalized anxiety disorder: Systematic review and meta-analysis of randomized controlled trials. *Advances in Therapy*, 35(3), 261-288.

Sarris, J., Stough, C., Teschke, R., Wahid, Z. T., Bousman, C. A., Murray, G., ... Schweitzer, I. (2013). Kava for the treatment of generalized anxiety disorder RCT: Analysis of adverse reactions, liver function, addiction, and sexual effects. *Phytotherapy Research*, 27(11), 1723-1728.

L-carnosine

Arabzadeh, S., Shahhosseni, M., Mesgarpour, B., Rezaei, F., Shalbafan, M. R., Ghiasi, Z., & Akhondzadeh, S. (2017). L-carnosine as an adjuvant to fluvoxamine in treatment of obsessive compulsive disorder: A randomized double-blind study. *Human Psychopharmacology: Clinical and Experimental*, 32(4), e2584.

L-theanine

Sarris, J., Byrne, G. J., Cribb, L., Oliver, G., Murphy, J., Macdonald, P., ... Ee, C. (2019). L-theanine in the adjunctive treatment of generalized anxiety disorder: A double-blind, randomised, placebo-controlled trial. *Journal of Psychiatric Research*, 110, 31-37.

Lavender

Kasper, S., Möller, H. J., Volz, H. P., Schläpke, S., & Dienel, A. (2017). Silexan in generalized anxiety disorder: Investigation of the therapeutic dosage range in a pooled data set. *International Clinical Psychopharmacology*, 32(4), 195-204.

Lemon balm

Cases, J., Ibarra, A., Feuillere, N., Roller, M., & Sukkar, S. G. (2011). Pilot trial of Melissa officinalis L. leaf extract in the treatment of volunteers suffering from mild-to-moderate anxiety disorders and sleep disturbances. *Mediterranean Journal of Nutrition and Metabolism*, 4(3), 211-218.

Massage

Field, T., Seligman, S., Scafidi, F., & Schanberg, S. (1996). Alleviating posttraumatic stress in children following Hurricane Andrew. *Journal of Applied Developmental Psychology*, 17(1), 37-50.

Rapaport, M. H., Schettler, P., Larson, E. R., Edwards, S. A., Dunlop, B. W., Rakofsky, J. J., & Kinkead, B. (2016). Acute Swedish massage monotherapy successfully remediates symptoms of generalized anxiety disorder: A proof-of-concept, randomized controlled study. *The Journal of Clinical Psychiatry*, 77(7), e883-91.

Sherman, K. J., Ludman, E. J., Cook, A. J., Hawkes, R. J., Roy-Byrne, P. P., Bentley, S., ... Cherkov, D. C. (2010). Effectiveness of therapeutic massage for generalized anxiety disorder: A randomized controlled trial. *Depression and Anxiety*, 27(5), 441-450.

Meditation

Bormann, J. E., Thorp, S. R., Smith, E., Glickman, M., Beck, D., Plumb, D., ... Herz, L. R. (2018). Individual treatment of posttraumatic stress disorder using mantram repetition: A randomized clinical trial. *American Journal of Psychiatry*, 175(10), 979-988.

Catani, C., Kohiladevy, M., Ruf, M., Schauer, E., Elbert, T., & Neuner, F. (2009). Treating children traumatized by war and Tsunami: A comparison between exposure therapy and meditation-relaxation in North-East Sri Lanka. *BMC Psychiatry*, 9(1), 22.

Gallegos, A. M., Crean, H. F., Pigeon, W. R., & Heffner, K. L. (2017). Meditation and yoga for posttraumatic stress disorder: A meta-analytic review of randomized controlled trials. *Clinical Psychology Review*, 58, 115-124.

Kuijpers, H. J., Van der Heijden, F. M. M. A., Tuinier, S., & Verhoeven, W. M. A. (2007). Meditation-induced psychosis. *Psychopathology*, 40(6), 461.

Nidich, S., Mills, P. J., Rainforth, M., Heppner, P., Schneider, R. H., Rosenthal, N. E., ... Rutledge, T. (2018). Non-trauma-focused meditation versus exposure therapy in veterans with post-traumatic stress disorder: A randomised controlled trial. *The Lancet Psychiatry*, 5(12), 975-986.

Raskin, M., Bali, L. R., & Peeke, H. V. (1980). Muscle biofeedback and transcendental meditation: A controlled evaluation of efficacy in the treatment of chronic anxiety. *Archives of General Psychiatry*, 37(1), 93-97.

Shannahoff-Khalsa, D. S., Ray, L. E., Levine, S., Gallen, C. C., Schwartz, B. J., & Sidorowich, J. J. (1999). Randomized controlled trial of yogic meditation techniques for patients with obsessive-compulsive disorder. *CNS Spectrums*, 4(12), 34-47.

Milk thistle

Sayyah, M., Boostani, H., Pakseresht, S., & Malayeri, A. (2010). Comparison of Silybum marianum (L.) Gaertn. with fluoxetine in the treatment of Obsessive-Compulsive Disorder. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 34(2), 362-365.

N-acetylcysteine (NAC)

Afshar, H., Roohafza, H., Mohammad-Beigi, H., Haghighi, M., Jahangard, L., Shokouh, P., ... Hafezian, H. (2012). N-acetylcysteine add-on treatment in refractory obsessive-compulsive disorder: A randomized, double-blind, placebo-controlled trial. *Journal of Clinical Psychopharmacology*, 32(6), 797-803.

Back, S. E., McCauley, J. L., Korte, K. J., Gros, D. F., Leavitt, V., Gray, K. M., ... Kalivas, P. W. (2016). A double-blind randomized controlled pilot trial of N-acetylcysteine in veterans with PTSD and substance use disorders. *The Journal of Clinical Psychiatry*, 77(11), e1439.

Costa, D. L., Diniz, J. B., Requena, G., Joaquim, M. A., Pittenger, C., Bloch, M. H., ... Shavitt, R. G. (2017). Randomized, double-blind, placebo-controlled trial of N-acetylcysteine augmentation for treatment-resistant obsessive-compulsive disorder. *The Journal of Clinical Psychiatry*, 78(7), e766-e773.

Dean, O., Giorlando, F., & Berk, M. (2011). N-acetylcysteine in psychiatry: Current therapeutic evidence and potential mechanisms of action. *Journal of Psychiatry & Neuroscience: JPN*, 36(2), 78.

Ghanizadeh, A., Mohammadi, M. R., Bahraini, S., Keshavarzi, Z., Firoozabadi, A., & Shoshtari, A. A. (2017). Efficacy of N-acetylcysteine augmentation on obsessive compulsive disorder: A multicenter randomized double blind placebo controlled clinical trial. *Iranian Journal of Psychiatry*, 12(2), 134.

Paydary, K., Akamaloo, A., Ahmadipour, A., Pishgar, F., Emamzadehfard, S., & Akhondzadeh, S. (2016). N-acetylcysteine augmentation therapy for moderate-to-severe obsessive-compulsive disorder: Randomized, double-blind, placebo-controlled trial. *Journal of Clinical Pharmacy and Therapeutics*, 41(2), 214-219.

Strawn, J. R., & Saldaña, S. N. (2012). Treatment with adjunctive N-acetylcysteine in an adolescent with selective serotonin reuptake inhibitor-resistant anxiety. *Journal of Child and Adolescent Psychopharmacology*, 22(6), 472-473.

Omega-3 fatty acids (fish oil)

Fux, M., Benjamin, J., & Nemets, B. (2004). A placebo-controlled cross-over trial of adjunctive EPA in OCD. *Journal of Psychiatric Research*, 38(3), 323-325.

Hou, Y. C., & Lai, C. H. (2016). Enhancing therapeutic effects after augmentation of omega-3 fatty acid with long-term antidepressant therapy in a chronic case of panic disorder. *Psychiatry and Clinical Neurosciences*, 70(1), 72-73.

Zeev, K., Michael, M., Ram, K., & Hagit, C. (2005). Possible deleterious effects of adjunctive omega-3 fatty acids in post-traumatic stress disorder patients. *Neuropsychiatric Disease and Treatment*, 1(2), 187.

Outdoor therapeutic recreation programs

Gelkopf, M., Hasson-Ohayon, I., Bikman, M., & Kravetz, S. (2013). Nature adventure rehabilitation for combat-related posttraumatic chronic stress disorder: A randomized control trial. *Psychiatry Research*, 209(3), 485-493.

Greer, M., & Vin-Raviv, N. (2019). Outdoor-based therapeutic recreation programs among military veterans with posttraumatic stress disorder: Assessing the evidence. *Military Behavioral Health*, 7(3), 286-303.

Hyer, L., Boyd, S., Scurfield, R., Smith, D., & Burke, J. (1996). Effects of outward bound experience as an adjunct to inpatient PTSD treatment of war veterans. *Journal of Clinical Psychology*, 52(3), 263-278.

Rogers, C. M., Mallinson, T., & Peppers, D. (2014). High-intensity sports for posttraumatic stress disorder and depression: Feasibility study of Ocean Therapy with veterans of Operation Enduring Freedom and Operation Iraqi Freedom. *American Journal of Occupational Therapy*, 68(4), 395-404.

Painkillers

Hoge, E. A., Brandstetter, K., Moshier, S., Pollack, M. H., Wong, K. K., & Simon, N. M. (2009). Broad spectrum of cytokine abnormalities in panic disorder and posttraumatic stress disorder. *Depression and Anxiety*, 26(5), 447-455.

Jorm, A. F., Medway, J., Christensen, H., Korten, A. E., Jacomb, P. A., & Rodgers, B. (2000). Public beliefs about the helpfulness of interventions for depression: effects on actions taken when experiencing anxiety and depression symptoms. *Australian & New Zealand Journal of Psychiatry*, 34(4), 619-626.

Sheehan, D. V., Coleman, J. H., Greenblatt, D. J., Jones, K. J., Levine, P. H., Orsulak, P. J., ... Watkins, D. A. V. I. D. (1984). Some biochemical correlates of panic attacks with agoraphobia and their response to a new treatment. *Journal of Clinical Psychopharmacology*, 4(2), 66-75.

Passionflower

Fisher, A. A., Purcell, P., & Le Couteur, D. G. (2000). Toxicity of *Passiflora incarnata* L. *Journal of Toxicology and Clinical Toxicology*, 38(1), 63-66.

Kaviani, N., Tavakoli, M., Tabanmehr, M. R., & Havaei, R. A. (2013). The efficacy of *Passiflora incarnata* Linnaeus in reducing dental anxiety in patients undergoing periodontal treatment. *Journal of Dentistry*, 14(2), 68.

Miyasaka, L. S., Atallah, Á. N., & Soares, B. (2007). *Passiflora* for anxiety disorder. *Cochrane Database of Systematic Reviews*, 2007(1). doi:10.1002/14651858.CD004518.pub2

Power posing

Davis, M. L., Papini, S., Rosenfield, D., Roelofs, K., Kolb, S., Powers, M. B., & Smits, J. A. (2017). A randomized controlled study of power posing before public speaking exposure for social anxiety disorder: No evidence for augmentative effects. *Journal of Anxiety Disorders*, 52, 1-7.

Rapid eye movement desensitization (REM-D)

Ahmadi, K., Hazrati, M., Ahmadizadeh, M., & Noohi, S. (2015). REM desensitization as a new therapeutic method for post-traumatic stress disorder: A randomized controlled trial. *Acta Medica Indonesiana*, 47(2).

Relaxation training

Bandelow, B., Reitt, M., Röver, C., Michaelis, S., Görlich, Y., & Wedekind, D. (2015). Efficacy of treatments for anxiety disorders: A meta-analysis. *International Clinical Psychopharmacology*, 30(4), 183-192.

Cuijpers, P., Sijbrandij, M., Koole, S., Huibers, M., Berking, M., & Andersson, G. (2014). Psychological treatment of generalized anxiety disorder: A meta-analysis. *Clinical Psychology Review*, 34(2), 130-140.

Jorm, A. F., Christensen, H., Griffiths, K. M., Parslow, R. A., Rodgers, B., & Blewitt, K. A. (2004). Effectiveness of complementary and self-help treatments for anxiety disorders. *Medical Journal of Australia*, 181, S29-S46.

Montero-Marin, J., Garcia-Campayo, J., López-Montoyo, A., Zabaleta-del-Olmo, E., & Cuijpers, P. (2018). Is cognitive-behavioural therapy more effective than relaxation therapy in the treatment of anxiety disorders? A meta-analysis. *Psychological Medicine*, 48(9), 1427-1436.

Rhodiola rosea (golden root)

Bystritsky, A., Kerwin, L., & Feusner, J. D. (2008). A pilot study of Rhodiola rosea (Rhodax®) for generalized anxiety disorder (GAD). *The Journal of Alternative and Complementary Medicine*, 14(2), 175-180.

Smartphone apps

Boettcher, J., Magnusson, K., Marklund, A., Berglund, E., Blomdahl, R., Braun, U., ... von Weber, K. (2018). Adding a smartphone app to internet-based self-help for social anxiety: A randomized controlled trial. *Computers in Human Behavior*, 87, 98-108.

Boisseau, C. L., Schwartzman, C. M., Lawton, J., & Mancebo, M. C. (2017). App-guided exposure and response prevention for obsessive compulsive disorder: An open pilot trial. *Cognitive Behaviour Therapy*, 46(6), 447-458.

Botella, C., Breton-Lopez, J., Quero, S., Baños, R. M., Garcia-Palacios, A., Zaragoza, I., & Alcañiz, M. (2011). Treating cockroach phobia using a serious game on a mobile phone and augmented reality exposure: A single case study. *Computers in Human Behavior*, 27(1), 217-227.

Christoforou, M., Fonseca, J. A. S., & Tsakanikos, E. (2017). Two novel cognitive behavioral therapy-based mobile apps for agoraphobia: Randomized controlled trial. *Journal of Medical Internet Research*, 19(11), e398.

Firth, J., Torous, J., Carney, R., Newby, J., Cosco, T. D., Christensen, H., & Sarris, J. (2018). Digital technologies in the treatment of anxiety: Recent innovations and future directions. *Current Psychiatry Reports*, 20(6), 44.

Haug, E. T., Havnen, A., Hansen, B., Bless, J., & Kvale, G. (2013). Attention training with dichotic listening in ocd patients using an iphone/ipod app. *Clinical Neuropsychiatry*, 10(3).

Miner, A., Kuhn, E., Hoffman, J. E., Owen, J. E., Ruzek, J. I., & Taylor, C. B. (2016). Feasibility, acceptability, and potential efficacy of the PTSD Coach app: A pilot randomized controlled trial with community trauma survivors. *Psychological Trauma: Theory, Research, Practice, and Policy*, 8(3), 384.

Possemato, K., Kuhn, E., Johnson, E., Hoffman, J. E., Owen, J. E., Kanuri, N., ... Brooks, E. (2016). Using PTSD Coach in primary care with and without clinician support: pilot randomized controlled trial. *General Hospital Psychiatry*, 38, 94-98.

Stolz, T., Schulz, A., Krieger, T., Vincent, A., Urech, A., Moser, C., ... & Berger, T. (2018). A mobile app for social anxiety disorder: A three-arm randomized controlled trial comparing mobile and PC-based guided self-help interventions. *Journal of Consulting and Clinical Psychology*, 86(6), 493.

St John's wort

Davidson, J. R., & Connor, K. M. (2001). St. John's wort in generalized anxiety disorder: Three case reports. *Journal of Clinical Psychopharmacology*, 21(6), 635-636.

Kobak, K. A., Futterer, R., & Warner, G. (2003). St. John's Wort in generalized anxiety disorder: Three more case reports. *Journal of Clinical Psychopharmacology*, 23(5), 531-532.

Kobak, K. A., Taylor, L. V., Bystritsky, A., Kohlenberg, C. J., Greist, J. H., Tucker, P., ... Vapnik, T. (2005). St John's wort versus placebo in obsessive-compulsive disorder: Results from a double-blind study. *International Clinical Psychopharmacology*, 20(6), 299-304.

Kobak, K. A., Taylor, L. V., Warner, G., & Futterer, R. (2005). St. John's wort versus placebo in social phobia: Results from a placebo-controlled pilot study. *Journal of Clinical Psychopharmacology*, 25(1), 51-58.

Sympathyl

Hanus, M., Lafon, J., & Mathieu, M. (2004). Double-blind, randomised, placebo-controlled study to evaluate the efficacy and safety of a fixed combination containing two plant extracts (*Crataegus oxyacantha* and *Eschscholtzia californica*) and magnesium in mild-to-moderate anxiety disorders. *Current Medical Research and Opinion*, 20(1), 63-71.

Tai chi

Hoffmann-Smith, K. A., Ma, A., Yeh, C. T., DeGuire, N. L., & Smith, J. P. (2009). The effect of tai chi in reducing anxiety in an ambulatory population. *Journal of Complementary and Integrative Medicine*, 6(1).

Sharma, M., & Haider, T. (2015). Tai chi as an alternative and complimentary therapy for anxiety: A systematic review. *Journal of Evidence-based Complementary & Alternative Medicine*, 20(2), 143-153.

Song, Q. H., Shen, G. Q., Xu, R. M., Zhang, Q. H., Ma, M., Guo, Y. H., ... & Han, Y. B. (2014). Effect of Tai Chi exercise on the physical and mental health of the elder patients suffered from anxiety disorder. *International Journal of Physiology, Pathophysiology and Pharmacology*, 6(1), 55.

Therapeutic horseback riding

Johnson, R. A., Albright, D. L., Marzolf, J. R., Bibbo, J. L., Yaglom, H. D., Crowder, S. M., ... Osterlind, S. (2018). Effects of therapeutic horseback riding on post-traumatic stress disorder in military veterans. *Military Medical Research*, 5(1), 3.

Traditional Chinese medicine

Liu, L., Liu, C., Wang, Y., Wang, P., Li, Y., & Li, B. (2015). Herbal medicine for anxiety, depression and insomnia. *Current Neuropharmacology*, 13(4), 481-493.

Wang, T., Ding, J. Y., Xu, G. X., Zeng, Y., & Xiao, S. R. (2012). Efficacy of Yiqiyangxin Chinese medicine compound combined with cognitive therapy in the treatment of generalized anxiety disorders. *Asian Pacific Journal of Tropical Medicine*, 5(10), 818-822.

Valerian

Andreatini, R., Sartori, V. A., Seabra, M. L., & Leite, J. R. (2002). Effect of valepotriates (valerian extract) in generalized anxiety disorder: A randomized placebo-controlled pilot study. *Phytotherapy Research*, 16(7), 650-654.

Miyasaka, L. S., Atallah, Á. N., & Soares, B. (2006). Valerian for anxiety disorders. *Cochrane Database of Systematic Reviews*, 2006(4). doi:10.1002/14651858.CD004515.pub2

Pakseresht, S., Boostani, H., & Sayyah, M. (2011). Extract of valerian root (*Valeriana officinalis* L.) vs. placebo in treatment of obsessive-compulsive disorder: A randomized double-blind study. *Journal of Complementary and Integrative Medicine*, 8(1).

Water-based treatments

Corcoran, R. P., O'Flaherty, J., Morrissey, L., Ross, S. M., & Cheung, A. (2016). An evaluation of the wave academy approach to reducing post-traumatic stress disorder. *Journal of Education & Social Policy*, 3(4), 36-42.

Dubois, O., Salamon, R., Germain, C., Poirier, M. F., Vaugeois, C., Banwarth, B., ... Olié, J. P. (2010). Balneotherapy versus paroxetine in the treatment of generalized anxiety disorder. *Complementary Therapies in Medicine*, 18(1), 1-7.

Wet cupping

Ma, H., Kui, Y., Li, Y., Huang, B. C., Li, S. Q., & Chen, X. H. (2013, December). Bloodletting therapy combined with paroxetine hydrochloride for generalized anxiety disorder: A randomized controlled trial. In *2013 IEEE International Conference on Bioinformatics and Biomedicine*(pp. 174-176). IEEE.

Yoga

Cramer, H., Anheyer, D., Saha, F. J., & Dobos, G. (2018). Yoga for posttraumatic stress disorder—a systematic review and meta-analysis. *BMC Psychiatry*, 18(1), 72.

Dermeyer, H. L. (2008). *The psychological effects of an integrative Fū-ZEN D2™ Yoga- Stretch Program for the symptom-based treatment of generalized anxiety disorder in randomly assigned adult participants* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global (3344880).

Gabriel, M. G., Curtiss, J., Hofmann, S. G., & Khalsa, S. B. S. (2018). Kundalini Yoga for Generalized Anxiety Disorder: An exploration of treatment efficacy and possible mechanisms. *International Journal of Yoga Therapy*, 28(1), 97-105.

Jahan, M., Singh, A. R., & Tripathi, K. M. (2018). Comparative therapeutic efficacy of shavasana and muscular relaxation in management of generalized anxiety disorder. *Indian Journal of Clinical Psychology*, 44(2), 138-141.

Kirkwood, G., Rampes, H., Tuffrey, V., Richardson, J., & Pilkington, K. (2005). Yoga for anxiety: A systematic review of the research evidence. *British Journal of Sports Medicine*, 39(12), 884-891.

Ranjbar, F., Broomand, M., & Akbarzadeh, A. (2013). The effect of yoga on anxiety symptoms in women with obsessive compulsive disorder. *Life Science Journal*, 10(4), 565-568.

Shannahoff-Khalsa, D. S. (2003). Kundalini Yoga meditation techniques for the treatment of obsessive-compulsive and OC spectrum disorders. *Brief Treatment & Crisis Intervention*, 3(3), 369-382.

Vorkapic, C. F., & Rangé, B. (2014). Reducing the symptomatology of panic disorder: The effects of a yoga program alone and in combination with cognitive-behavioral therapy. *Frontiers in Psychiatry*, 5, 177.

Zinc

Australian Government Department of Health and Ageing, New Zealand Ministry of Health. (2006). *Nutrient reference values for Australia and New Zealand including recommended dietary intakes*. Canberra: National Health and Medical Research Council.

Sayyah, M., Olapour, A., Shahhosseini Saeedabad, Y., Parast, R. Y., & Malayeri, A. (2012). Evaluation of oral zinc sulfate effect on obsessive-compulsive disorder: A randomized placebo-controlled clinical trial. *Nutrition*, 28(9), 892-895.

Interventions not routinely available

Anti-inflammatory drugs

Sayyah, M., Boostani, H., Pakseresht, S., & Malayeri, A. (2011). A preliminary randomized double-blind clinical trial on the efficacy of celecoxib as an adjunct in the treatment of obsessive-compulsive disorder. *Psychiatry Research*, 189(3), 403-406.

Shalbafan, M., Mohammadinejad, P., Shariat, S. V., Alavi, K., Zeinoddini, A., Salehi, M., ... Akhondzadeh, S. (2015). Celecoxib as an adjuvant to fluvoxamine in moderate to severe obsessive-compulsive disorder: A double-blind, placebo-controlled, randomized trial. *Pharmacopsychiatry*, 48(04/05), 136-140.

Borage

Sayyah, M., Boostani, H., Pakseresht, S., & Malaieri, A. (2009). Efficacy of aqueous extract of *Echium amoenum* in treatment of obsessive-compulsive disorder. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 33(8), 1513-1516.

Sayyah, M., Siahpoosh, A., Khalili, H., Malayeri, A., & Samaee, H. (2012). A double-blind, placebo-controlled study of the aqueous extract of *Echium amoenum* for patients with general anxiety disorder. *Iranian Journal of Pharmaceutical Research: IJPR*, 11(2), 697.

Galphimia glauca

Herrera-Arellano, A., Jiménez-Ferrer, J. E., Zamilpa, A., García-Alonso, G., Herrera-Alvarez, S., & Tortoriello, J. (2012). Therapeutic effectiveness of *Galphimia glauca* vs. Lorazepam in generalized anxiety disorder. A controlled 15-week clinical trial. *Planta Medica*, 78(14), 1529-1535.

Herrera-Arellano, A., Jiménez-Ferrer, E., Zamilpa, A., Morales-Valdéz, M., García-Valencia, C. E., & Tortoriello, J. (2007). Efficacy and tolerability of a standardized herbal product from *Galphimia glauca* on generalized anxiety disorder. A randomized, double-blind clinical trial controlled with lorazepam. *Planta Medica*, 73(08), 713-717.

Romero-Cerecero, O., Islas-Garduño, A. L., Zamilpa, A., Herrera-Arellano, A., Jiménez-Ferrer, E., & Tortoriello, J. (2019). Galphimimine-B standardized extract versus alprazolam in patients with generalized anxiety disorder: A ten-week, double-blind, randomized clinical trial. *BioMed Research International*, 2019, 1-9.

Romero-Cerecero, O., Islas-Garduño, A. L., Zamilpa, A., Pérez-García, M., & Tortoriello, J. (2018). Therapeutic effectiveness of Galphimia glauca in young people with social anxiety disorder: A pilot study. *Evidence-Based Complementary and Alternative Medicine*, 2018, 1-8.

Ketamine

Bloch, M. H., Wasylink, S., Landeros-Weisenberger, A., Panza, K. E., Billingslea, E., Leckman, J. F., ... Pittenger, C. (2012). Effects of ketamine in treatment-refractory obsessive-compulsive disorder. *Biological Psychiatry*, 72(11), 964-970.

Feder, A., Parides, M. K., Murrough, J. W., Perez, A. M., Morgan, J. E., Saxena, S., ... Iosifescu, D. (2014). Efficacy of intravenous ketamine for treatment of chronic posttraumatic stress disorder: A randomized clinical trial. *JAMA Psychiatry*, 71(6), 681-688.

Glue, P., Neehoff, S. M., Medlicott, N. J., Gray, A., Kibby, G., & McNaughton, N. (2018). Safety and efficacy of maintenance ketamine treatment in patients with treatment-refractory generalised anxiety and social anxiety disorders. *Journal of Psychopharmacology*, 32(6), 663-667.

Pradhan, B. K., Wainer, I. W., Moaddel, R., Torjman, M. C., Goldberg, M., Sabia, M., ... & Pumariega, A. J. (2017). Trauma Interventions using Mindfulness Based Extinction and Reconsolidation (TIMBER) psychotherapy prolong the therapeutic effects of single ketamine infusion on post-traumatic stress disorder and comorbid depression: A pilot randomized, placebo-controlled, crossover clinical trial. *Asia Pacific Journal of Clinical Trials: Nervous System Diseases*, 2(3), 80.

Taylor, J. H., Landeros-Weisenberger, A., Coughlin, C., Mulqueen, J., Johnson, J. A., Gabriel, D., ... Bloch, M. H. (2018). Ketamine for social anxiety disorder: A randomized, placebo-controlled crossover trial. *Neuropsychopharmacology*, 43(2), 325.

Rodriguez, C. I., Kegeles, L. S., Levinson, A., Feng, T., Marcus, S. M., Vermes, D., ... Simpson, H. B. (2013). Randomized controlled crossover trial of ketamine in obsessive-compulsive disorder: Proof-of-concept. *Neuropsychopharmacology*, 38(12), 2475.

Rodriguez, C. I., Wheaton, M., Zwerling, J., Steinman, S. A., Sonnenfeld, D., Galfalvy, H., & Simpson, H. B. (2016). Can exposure-based CBT extend IV ketamine's effects in obsessive-compulsive disorder? An open-label trial. *The Journal of Clinical Psychiatry*, 77(3), 408.

Marijuana and other cannabinoids

Bergamaschi, M. M., Queiroz, R. H. C., Chagas, M. H. N., De Oliveira, D. C. G., De Martinis, B. S., Kapczinski, F., ... Martín-Santos, R. (2011). Cannabidiol reduces the anxiety induced by simulated public speaking in treatment-naïve social phobia patients. *Neuropsychopharmacology*, 36(6), 1219-1226.

Crippa, J. A. S., Derenusson, G. N., Ferrari, T. B., Wichert-Ana, L., Duran, F. L., Martin-Santos, R., ... & Filho, A. S. (2011). Neural basis of anxiolytic effects of cannabidiol (CBD) in generalized social anxiety disorder: a preliminary report. *Journal of Psychopharmacology*, 25(1), 121-130.

Jetly, R., Heber, A., Fraser, G., & Boisvert, D. (2015). The efficacy of nabilone, a synthetic cannabinoid, in the treatment of PTSD-associated nightmares: A preliminary randomized, double-blind, placebo-controlled cross-over design study. *Psychoneuroendocrinology*, 51, 585-588.

Steenkamp, M. M., Blessing, E. M., Galatzer-Levy, I. R., Hollahan, L. C., & Anderson, W. T. (2017). Marijuana and other cannabinoids as a treatment for posttraumatic stress disorder: A literature review. *Depression and Anxiety*, 34(3), 207-216.

MDMA

Mithoefer, M. C., Wagner, M. T., Mithoefer, A. T., Jerome, L., & Doblin, R. (2011). The safety and efficacy of ± 3 , 4-methylenedioxymethamphetamine-assisted psychotherapy in subjects with chronic, treatment-resistant posttraumatic stress disorder: The first randomized controlled pilot study. *Journal of Psychopharmacology*, 25(4), 439-452.

Oehen, P., Traber, R., Widmer, V., & Schnyder, U. (2013). A randomized, controlled pilot study of MDMA (± 3 , 4-Methylenedioxymethamphetamine)-assisted psychotherapy for treatment of resistant, chronic Post-Traumatic Stress Disorder (PTSD). *Journal of Psychopharmacology*, 27(1), 40-52.

Ot'álora G, M., Grigsby, J., Poulter, B., Van Derveer III, J. W., Giron, S. G., Jerome, L., ... Mithoefer, M. C. (2018). 3, 4-Methylenedioxymethamphetamine-assisted psychotherapy for treatment of chronic posttraumatic stress disorder: A randomized phase 2 controlled trial. *Journal of Psychopharmacology*, 32(12), 1295-1307.

Neurosteroids

Liebowitz, M. R., Hanover, R., Draine, A., Lemming, R., Careri, J., & Monti, L. (2016). Effect of as-needed use of intranasal PH94B on social and performance anxiety in individuals with social anxiety disorder. *Depression and Anxiety*, 33(12), 1081-1089.

Liebowitz, M. R., Salman, E., Nicolini, H., Rosenthal, N., Hanover, R., & Monti, L. (2014). Effect of an acute intranasal aerosol dose of PH94B on social and performance anxiety in women with social anxiety disorder. *American Journal of Psychiatry*, 171(6), 675-682.

Oxytocin

Acheson, D. T., Feifel, D., Kamenski, M., McKinney, R., & Risbrough, V. B. (2015). Intranasal oxytocin administration prior to exposure therapy for arachnophobia impedes treatment response. *Depression and Anxiety*, 32(6), 400-407.

Cochran, D., Fallon, D., Hill, M., & Frazier, J. A. (2013). The role of oxytocin in psychiatric disorders: a review of biological and therapeutic research findings. *Harvard Review of Psychiatry*, 21(5), 219.

Guastella, A. J., Howard, A. L., Dadds, M. R., Mitchell, P., & Carson, D. S. (2009). A randomized controlled trial of intranasal oxytocin as an adjunct to exposure therapy for social anxiety disorder. *Psychoneuroendocrinology*, 34(6), 917-923.

Psilocybin

Moreno, F. A., Wiegand, C. B., Taitano, E. K., & Delgado, P. L. (2006). Safety, tolerability, and efficacy of psilocybin in 9 patients with obsessive-compulsive disorder. *Journal of Clinical Psychiatry*, 67(11), 1735-1740.

Sweet flag

Bhattacharyya, D., Sur, T. K., Lyle, N., Jana, U., & Debnath, P. K. (2011). A clinical study on the management of generalized anxiety disorder with Vaca (*Acorus calamus*). *Indian Journal of Traditional Knowledge*, 10, 668.

Mukherjee, P. K., Kumar, V., Mal, M., & Houghton, P. J. (2007). *Acorus calamus*: Scientific validation of Ayurvedic tradition from natural resources. *Pharmaceutical Biology*, 45(8), 651-666.

Xenon

Dobrovolsky, A., Ichim, T. E., Ma, D., Kesari, S., & Bogin, V. (2017). Xenon in the treatment of panic disorder: an open label study. *Journal of Translational Medicine*, 15(1), 137.



Beyond Blue acknowledges the Traditional Owners of the Land in which our head office is based, the Wurundjeri peoples of the Kulin Nation. We pay our respects to Elders past, present and future and as an organisation with national reach, we extend our respect to all Elders and Aboriginal and Torres Strait Islander peoples across Australia.

Where to find more information

Beyond Blue

 beyondblue.org.au

Learn more about anxiety, depression and suicide prevention, or talk through your concerns with our Support Service. Our trained mental health professionals will listen, provide information, advice and brief counselling, and point you in the right direction so you can seek further support.

 **1300 22 4636**

Email or chat to us online at beyondblue.org.au/getsupport

 [@beyondblue](https://www.facebook.com/beyondblue)

 [@beyondblue](https://twitter.com/beyondblue)

 [@beyondblueofficial](https://www.instagram.com/beyondblueofficial)

 [company/beyondblue](https://www.linkedin.com/company/beyondblue)

Head to Health

 headtohealth.gov.au

Head to Health can help you find free and low-cost, trusted online and phone mental health resources.

 Donate online: beyondblue.org.au/donations