

## **Intramuscular injection of pigs**

### **Category**

Teaching – 2

Research - 4

### **Objective**

The objective of this Standard Operating Procedure is to provide guidance to Charles Sturt University students to deliver appropriate solutions for intramuscular (IM) absorption.

### **Alternatives to animal use**

Use of video presentations and demonstration and/or practice using cadaveric material may be carried out prior to use of live animals.

### **Details of Procedure**

#### **Safety measures:**

Wear clean overalls, appropriate rubber boots and sun protection as needed.

Do not use electric prodders or hit animals.

Be aware that sows with young piglets may become aggressive towards staff in their environment.

Be careful when working with piglets while within reach of the sow's head as the sow may attack the person who is interfering with her piglets.

Wash hands and exposed body parts thoroughly with soap and water after handling animals.

For your own safety, make sure that all OH&S conditions are met.

#### **Procedure:**

Pigs may need to be restrained depending on age and the volume of the injection. For piglet: try not to handle piglet within earshot of the sow during Intramuscular injection. The easiest way to move young pigs (<8 weeks age) is simply to pick them up by the back legs, with their back against you. The needle should be directed into the pig at an angle perpendicular to the skin surface. A long needle (35 mm) is needed to reliably deliver injected material deep into the muscle body of a pig over 10 kg in weight. With smaller pigs, shorter needle may be used, or the needle may be directed at a more oblique angle. Needle gauge depends on the viscosity of the solution and the thickness of the pig's skin. An 18 gauge needle is usually required in adult pigs and an 21-25 gauge needle is usually required in piglet (<8 weeks age).

It is recommended that an IM injection should be made into the muscle on the side of the neck (70 mm behind the base of the ear) or in the back of the ham of the hind leg for small piglets, because there is not much muscle on the neck. The side of the neck is the preferred site due to possible carcass condemnation.

### **Drugs, chemicals or biological agents**

Use only drugs, chemicals or biological agents recommended for intramuscular delivery. The use of chemicals in NSW is controlled by the Poisons and Therapeutic Goods ACT 1966 and regulations 2008, and the Stock Medicines ACT 1989. Visit Australian Pesticides and Veterinary Medicines Authority website and search for registered chemical products (pubCRIS) permitted to be used in pigs (<https://portal.apvma.gov.au/pubcris>).

Take care that sterile solutions remain sterile during delivery and dispose of used needles in a proper sharps bin.

## **Impact of procedure on wellbeing of animal or animals**

The procedure is well tolerated. Low impact, associated with restraint.

A variable degree of pain may be caused depending on the nature of the injection. Non-irritant materials (e.g. saline) should be used if the procedure is being conducted purely for teaching purposes.

Intramuscular injections must be done carefully to avoid complications. Complications with IM include muscle atrophy, injury to bone, cellulitis, sterile abscesses, pain, and nerve injury.

## **Reuse and repeated use**

Animals should not be reused except in the course of normal husbandry.

No more than two injections should be administered per animal per day.

## **Care of animals during / after procedure(s)**

Nil

## **Pain relief measures**

Nil

## **Qualifications, experience or training necessary to perform this procedure**

Demonstrator: Must be competent in the correct techniques and familiar with the anatomy of the region.

Students: Basic understanding of anatomy, familiarity with technique by using cadaveric material.

## **Additional information can be found at:**

The Pig Site <http://www.thepigsite.com/pighealth/article/84/sites-of-injection/>