

Appendix 1: Preparing to administer an antipsychotic depot injection

Preparation and equipment

Gloves: NHS Borders recommend the use of gloves to protect the nurse from contact with body fluids and allergic injection compounds. They may contribute to a reduction in a sense of control over the injections' materials, especially in individuals who have learned the technique without them, however this can be minimized by ensuring that gloves fit well.

Sharps: To reduce the risk of injury, sharp equipment such as needles and glass vials need to be handled and disposed of carefully. Used needles should not be re-sheathed and all used and unwanted sharp equipment should be disposed of in appropriate containers, not in clinical waste bags. Other waste can be collected in the disposal bag then placed in clinical waste bags.

Needles: Needles should be long enough to allow injection to the intended depth of muscle with a quarter of the needle length remaining external to the skin. A variety of lengths are available and an assessment of the length of the needle required to reach the muscle should be made by an assessment of the individual patient, taking into account any subcutaneous fat and remembering to allow for approximately 2-3mm of the needle length to be left outside the skin to allow the needle to be removed should it break. In obese patients care must be taken to ensure administration into muscle and not subcutaneous fat. Longer than standard needles are required. The most common used for deep intra-muscular injection is 21g x 1.5 inch (green needle) or 23g x 1.25 inch (blue needle). In order to minimize the likelihood of drawing up small slivers of glass from glass drug vials, a smaller bore needle may be used to draw up the drug. The drugs' viscosity will determine whether this can be done.

Syringes: Selection of syringes should take account of the volume of medication to be given as well as the syringes' suitability to measure dosage. Syringes range in size from under 1ml to over 50ml, however, for injections other than insulin you will generally choose from:

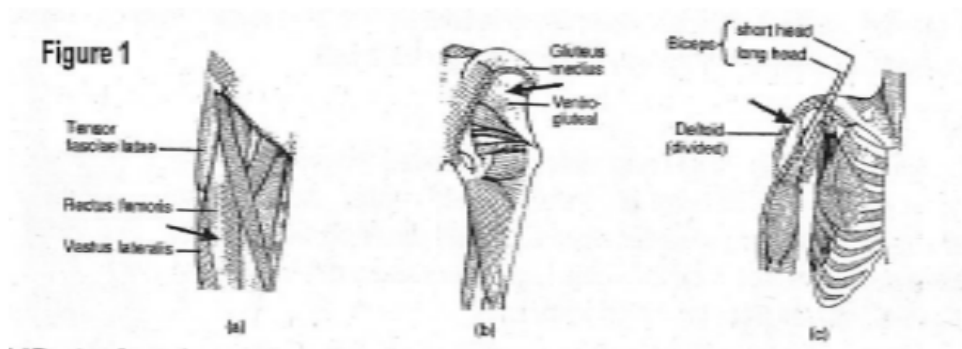
- a. 1ml which has markers showing each 0.1 of a ml
- b. 2ml which has markers showing each 0.1 of a ml
- c. 5ml which has markers showing each 0.2 of a ml

These markers are important, as prior to drawing up an injection it is necessary to calculate the volume of medication that will provide the prescribed dose. To accurately calculate the dose requires selection of a syringe which is suitably marked for measurement of the dose.

Dose selection: The administration of depot antipsychotic drugs is a skilled procedure. Intra-muscular injections can be painful. Pain can be minimized by using the smallest volume possible. Ideally, no more than 2ml should be given to one if possible. See Appendix 2 for dose selection.

Criteria for selection of injection site

Care must be taken to use concentrations in the smallest appropriate dose (ideally no more than 2ml). Prior to injecting, inspect the chosen site for signs of inflammation, swelling or infection and any skin lesions should be avoided. Following the injection, inspect the site for any adverse reaction. Document where the injection is given and alternate the site to allow an even rotation. This reduces the risk of abscess due to poor absorption and muscle atrophy.



- (a) Rectus femoris: used for anti-emetics, narcotics, sedatives, injections in oil, deep intra-muscular and Z track injections. It is rarely used in adults but is the preferred site for infants and for self-administration of injections.
- (b) Gluteus medius: used for deep intra-muscular injections and Z track injections. The gluteus muscle has the lowest absorption rate. The muscle mass is also likely to have atrophied in elderly, non-ambulant and emaciated patients. This site carries with it the danger of the needle hitting the sciatic nerve and superior gluteal arteries.
- (b) Ventr-gluteal: used for antibiotics, anti-emetics, deep intra muscular and Z track injections in oil, narcotics and sedatives, typical volume is 1 – 4ml. It is best used when large volume intra muscular injections are required and for injections in the elderly, non-ambulant and emaciated patient as it provides the safer option to accessing the gluteus medius muscle. This is because the site is away from major nerves and vascular structures and there have been no reported complications.
- (a) Vastus lateralis: used for deep intra-muscular and Z track injections. This site is free from major nerves and blood vessels. It is a large muscle and can accommodate repeated injections.
- (c) Deltoid: should only be used with Paliperidone Palmitate, Risperidone Consta and Aripiprazole.

NHS Borders accept that if the patient is physically clean and the nurse maintains a high standard of hand hygiene and asepsis during the procedure, skin disinfecting is not necessary.

Any other injection sites are considered off label and require confirmation with the consultant and documented in the patient notes.

Injection Techniques:

As the angle of the needle entry may contribute to the pain of the injection, intra- muscular injections should be given at an angle of between 70-90°. This reduces the pain and increases the likelihood of the needle reaching the muscle.

To reduce the pain of injections:

- Prepare the patient
- Using of ice or freezing spray to numb the skin
- Correct choice of injection site
- Technique
- Positioning of the patient so that muscles are relaxed.
- Ask the patient to lie on their stomach to relax more