WHAT IS IT?
- An intramuscular (IM) injection is the administration of medication through the cutaneous and subcutaneous layers, into the muscle.
- Solutions up to a volume of 5ml in large muscles, and 2ml in smaller muscles, may be used.
- The IM route is often used for medications that will not irritate soft tissue and can be suitably dissolved.
- The delivery of medication into skeletal muscles, with fewer pain receptors and good blood perfusion, minimises pain.

INJECTION SITES
- The dorsogluteal site: the injection is administered into the gluteus maximus muscle in the buttock. The upper outer quadrant of this area must be used to avoid any damage to the sciatic nerve.
- The vastus lateralis site: a large muscle in the thigh free from major nerves and vascular structures.
- The deltoid site: this site, on the lateral upper aspect of the arm, is used for the administration of smaller volumes of solution.
- The ventrogluteal site: the injection is administered into the gluteus medius and maximus muscles of the hip area.

INJECTING INTRAMUSCULARLY
- The debate continues as to whether skin cleansing is necessary when the patient is physically clean and hand hygiene is maintained (Workman, 1999). Local trust policy should be noted and adhered to.
- When the skin is to be cleansed, an alcohol swab should be used and the site allowed to dry for 30 seconds.
- The needle should be long enough to penetrate the muscle and still leave at least one third of its length exposed to facilitate its removal should it snap from the hub.
- 21 (green) and 23 (blue) gauge needles are most commonly used.
- The needle should be held at a 90º angle to the skin (see diagram) and gently aspirated preinjection to ensure that the needle has not entered a blood vessel. If this happens the needle should be withdrawn and the process repeated with a sterile needle.

NURSING IMPLICATIONS
- IM injections can be an unpleasant experience for patients, making appropriate explanation and psychological support vital.
- Extra caution is required when administering IM injections to children. Injection sites may vary depending on age.
- Look at the skin to ensure there are no signs of infection, damage or poor blood supply. There must also be consideration of muscle mass to ensure patient safety and comfort.
- Where frequent IM injections are given the injection sites should be rotated to prevent damage, protect the administration route and maximise patient comfort. The use of a rotation chart may be considered.
- Oedematous limbs will not absorb medication as effectively as well-perfused limbs.
- The nurse must have a good knowledge of the appropriate technique and anatomy to avoid any damage to surrounding structures.
- IM injections should be avoided in patients with thrombocytopenia (a decreased number of platelets), in whom clotting problems may occur.
- Caution must be exercised to ensure that the medication is suitable for IM injection.

REFERENCES


FURTHER READING

The information given serves as a general reference. Nurses should consult their individual trust policies on clinical procedures.