

## Routes of Administration Part Two (Parenteral)

Parenteral administration always means that the medication will be injected. This route of administration allows for a higher concentration of the drug to enter into the blood stream, initially bypassing the GI and liver, and avoiding the first pass effect. Some parenteral administrations are only to be administered by a trained specialist, but a nurse may still need to monitor the patient after administration.



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### Parenteral Administration

#### Intradermal

##### In-skin

Intradermal (ID) injections are administered just under the epidermis. The most common ID injection is the TB skin test.

#### Subcutaneous

##### Sub-q-tips

Subcutaneous (SubQ) injections are given into the tissue just under the dermis. This allows for a slow release of the medication, as it slowly gets absorbed into the system. Common SubQ injections are insulin and heparin. If an insulin needle is not being used, a 22G or smaller needle can be used. Inject medication at a 45 degree or 90 degree angle about ½-1 inches into the skin.

#### Intramuscular (IM)

##### In-muscle

Intramuscular (IM) injections are administered into the muscle. A 2-inch needle length 22G can be used. Administer at a 90 degree angle 1-2 inches into the skin.

#### Intravenous

##### In-veins

Intravenous (IV) injections are administered into the vein, typically via patients IV catheter. Onset is usually immediate, and the rate of administering a medication should always be double-checked.

#### Epidural

##### E-pick-drill

Epidurals catheters are placed in the epidural space by an anesthesiologist. Used to administer regional analgesia for a procedure and can be left in after a procedure for a short time. Specialized nurses can manage continuous infusions that are entering via the epidural catheter.

#### Intrathecal

##### In-thimble

Intrathecal catheters are surgically placed into the subarachnoid space or a ventricle in the brain. Used to administer chemo to a specific area. Only physicians or specialized nurses can administer medication through this route.

## **Intraosseous**

### **In-bone**

Intraosseous (IO) are used in emergency situations when IV access is limited. A needle is injected directly into the patient's bone marrow, which is a direct access to the blood stream.

## **Intraperitoneal**

### **In-parrot-toe**

With intraperitoneal injections, medication is administered directly into the peritoneal cavity. This is a surgically placed catheter. These injections can be used for peritoneal dialysis, chemotherapy, or administration of antibiotics.