



KINDS OF INJECTIONS

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Introduction

An injection is a way of administering a liquid to a person using a needle and syringe. It's also sometimes also called a 'shot' or 'jab'. Injections are used to give a wide variety of different medications, such as [insulin](#), [vaccines](#), and [Botox](#), but not all injections are the same.

What are the different types of injections?

Intravenous (IV) injections.

- An IV injection is the fastest way to inject medication and involves using a syringe to inject a medication directly into a vein. When people talk about receiving medication via IV, however, they are usually talking about an IV infusion or drip, which involves using a pump or gravity to infuse the medication into a vein, rather than a syringe. IV infusions allow a set amount of medication to be administered in a controlled manner over a period of time.

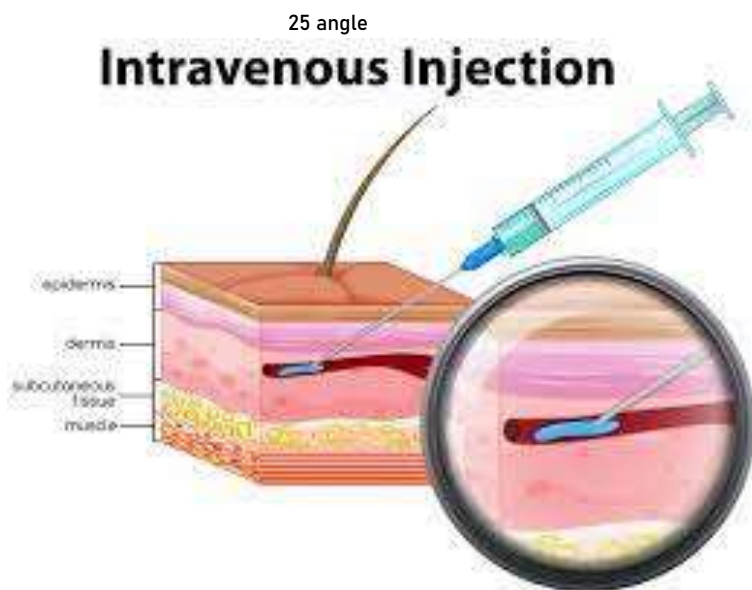
Where can intravenous injections be administered?

An IV injection is usually given by a healthcare professional. A small plastic tube called a catheter is typically inserted into the vein for an IV injection to be administered, especially when more than one injection is required. IV catheters are best placed where they are easy to access and the blood flow is good.

An IV catheter is most commonly placed into a vein in the:

- Forearm
- Back of the hand
- Antecubital fossa - the depression on the inside of the elbow joint
- Ankle, close to the foot - for small patients such as babies and neonates

When selecting a site to place an IV catheter it's important to avoid infected areas of skin and placing a catheter in a flexible joint where it may bend. Injured or sore areas and stiff or very thin veins should also be avoided.



Intramuscular (IM) injections.

IM injections are given deep into a muscle where the medication is then absorbed quickly by surrounding blood vessels.

Where can intramuscular injections be administered?

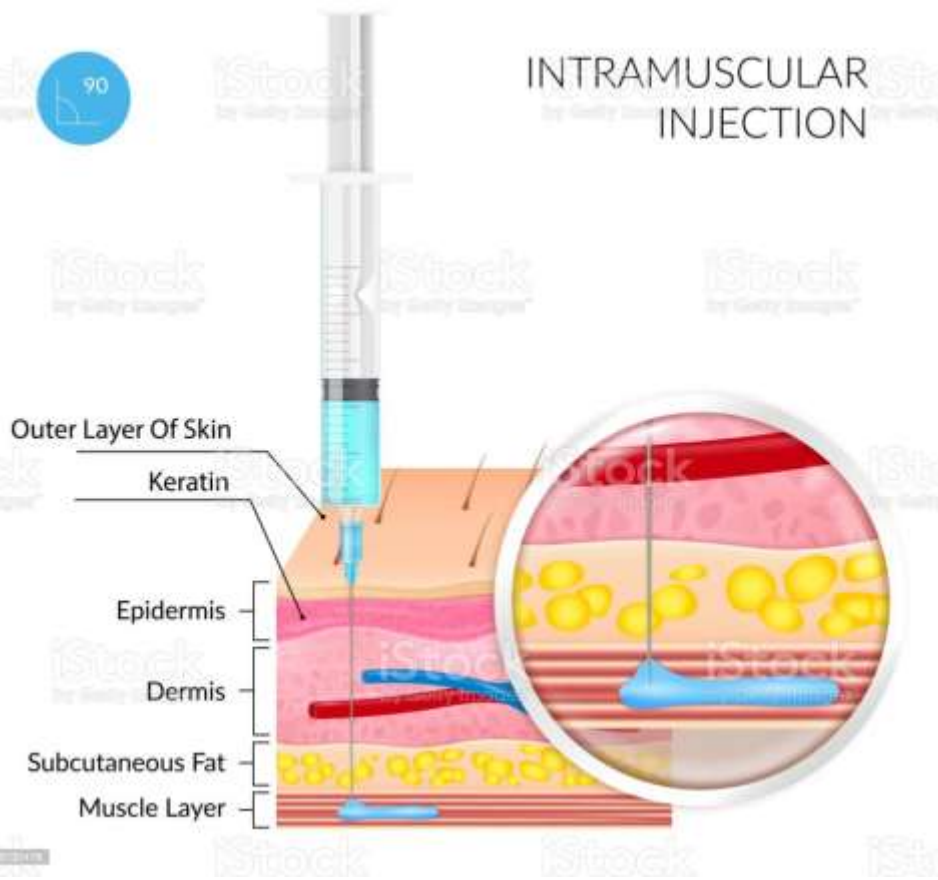
Usually, an IM injection, such as a vaccine, will be given by a healthcare professional. IM injections need to be injected into a muscle. It is recommended that an IM injection is given into a muscle in you're:

- Thigh - vastus lateralis muscle between the hip and knee
- Bottom - Ventrolateral muscle just below the hip on the side of the body
- Upper arm - the deltoid muscle between the top of the shoulder and the armpit

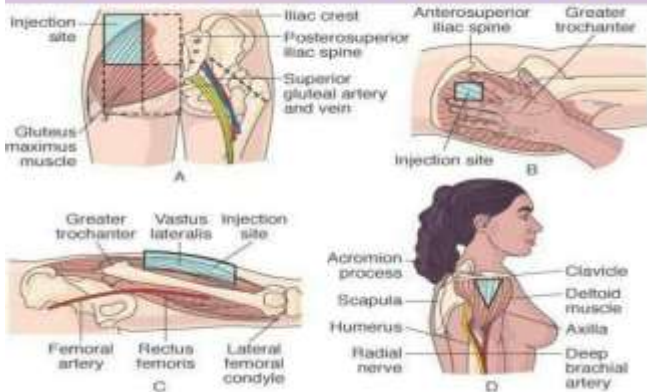
The best site for your IM injection may vary depending on the drug you are receiving. Some IM injections need to be administered into a larger muscle than the deltoid for example. When selecting an injection site for an IM injection it's important to pick one that is:

- A safe distance from the surrounding nerves, bones, and large blood vessels
- Large enough for the amount of medication
- Not the site of an injury, abscess, or dying skin
- Not a muscle that is emaciated or atrophied some people may need to administer an IM injection at home.

INTRAMUSCULAR INJECTION



INTRAMUSCULAR INJECTION SITES



Subcutaneous (SC) injections.

SC injections are injected into the innermost layer of the skin called the subcutis or hypodermis, which is made up of a network of fat and collagen cells. SC injections are also known as 'subcut' or 'SQ' injections. These injections work more slowly than an IV or IM injection because the area does not have such a rich blood supply.

Where can subcutaneous injections be administered?

If you're prescribed an injection that you have to administer yourself at home then it's likely it'll be an SC injection. This type of injection is used to administer medications like insulin for diabetes, hormone injections for fertility treatment, and blood-thinning agents to prevent blood clots.

SC injections need to be injected into an area on the body with subcutaneous fat. It is recommended that you inject an SC injection into:

- The lower abdomen (belly or stomach area), except for the 2 inches (5cm) area around the navel (belly button)
- The front or outer sides of the thighs
- The upper area of the buttock
- The upper outer area of the arms (if being administered by someone else)

When selecting an injection site take care to avoid areas where the skin is sunken or lumpy or areas where you might inject into a muscle rather than subcutaneous tissue. Also, avoid sites where the skin is injured or damaged.

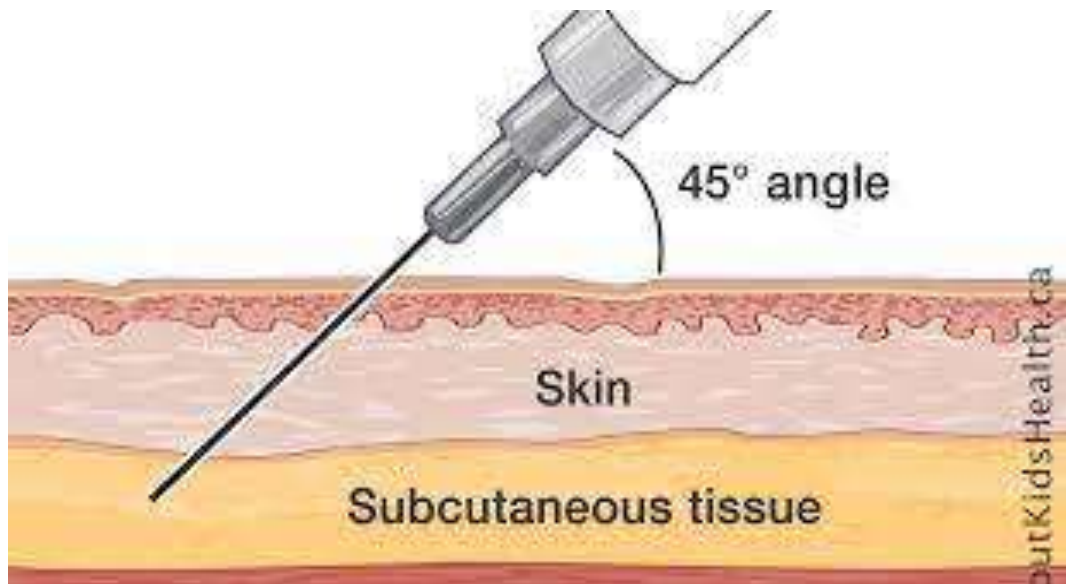
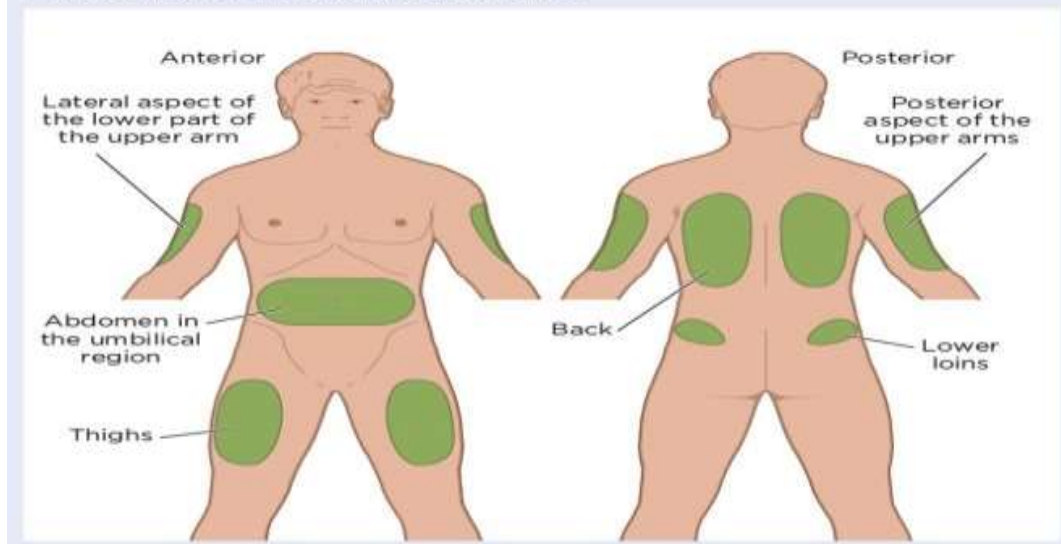


Fig 2. Subcutaneous injection sites



Intradermal (ID) injections.

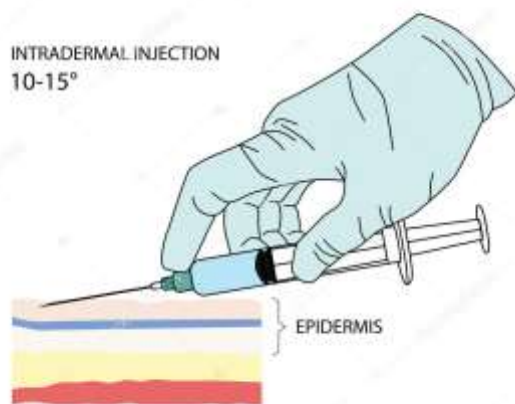
ID injections are given directly into the middle layer of the skin called the dermis. This type of injection is absorbed more slowly again than IV, IM or SC injections.

Where can intradermal injections be administered?

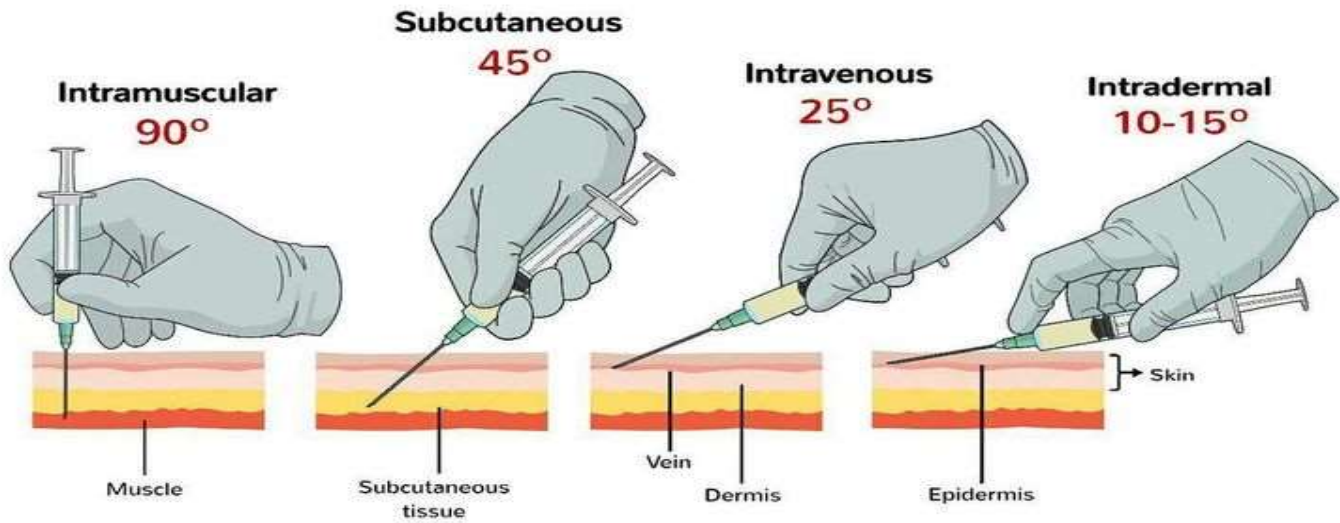
ID injections are commonly used for allergy and TB testing. The most common sites for an ID injection are:

- The inside or ventral aspect of the forearm
- Upper back, under the shoulder blade

When administering an ID injection for allergy testing it is best to avoid areas of the body with moles, scars, rashes or a lot of hair as they can make it difficult to interpret the results of testing. Skin lesions should also be avoided except when an ID injection is being administered to help treat them, such as in the case of steroid injections for psoriasis plaques.



Injection technique



What should we do before giving an injection?

Before starting the injection session, and whenever there is contamination with blood or body fluids, clean the preparation surfaces with 70% alcohol (isopropyl alcohol or ethanol) and allow them to dry.

Caregiver Quote For this Lesson 😊





DIFFERENT KINDS OF MEDICINES

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Introduction

Most medicines come in a variety of types or formats. Be aware, though, that some medicines (particularly rare or unusual ones) only come in one type. Also, some may be more effective in one type than another.

Liquid

The active part of the medicine is combined with a [liquid](#) to make it easier to take or better absorbed. A liquid may also be called a 'mixture', 'solution', or 'syrup'. Many common liquids are now available without any added coloring or sugar.

Tablet

The active ingredient is combined with another substance and pressed into a round or oval solid shape. There are different types of [tablets](#). Soluble or dispersible tablets can safely be dissolved in water.

Capsules

The active part of the medicine is contained inside a plastic shell that dissolves slowly in the stomach. You can take some capsules apart and mix the contents with your child's favorite's food. Others need to be swallowed whole, so the medicine isn't absorbed until the stomach acid breaks down the capsule shell.

Other types of medicine:

Topical medicines

These are creams, lotions or ointments applied directly onto the skin. They come in tubs, bottles, or tubes depending on the type of medicine. The active part of the medicine is mixed with another substance, making it easy to apply to the skin.

Suppositories

The active part of the medicine is combined with another substance and pressed into a 'bullet shape' so it can be inserted into the bottom. [Suppositories](#) mustn't be swallowed.

Drops

These are often used where the active part of the medicine works best if it reaches the affected area directly. They tend to be used for the [eye](#), [ears](#), or [nose](#).

Inhalers

The active part of the medicine is released under pressure directly into the lungs. Young children may need to use a 'spacer' device to take the medicine properly. Inhalers can be difficult to use at first so your pharmacist will show you how to use them.

Injections

There are different types of injection, in how and where they're injected. [Subcutaneous](#) or SC injections are given just under the surface of the skin. Intramuscular or IM injections are given into a muscle. Intrathecal injections are given into the fluid around the spinal cord. [Intravenous](#) or IV injections are given into a vein. Some injections can be given at home but most are given at your doctor's surgery or in the hospital.

Implants or patches

These medicines are absorbed through the skin, such as nicotine patches for help in giving up smoking, or contraceptive implants.

Tablets you don't swallow (known as buccal or sublingual tablets or liquids)

These look like normal tablets or liquids, but you don't swallow them. Buccal medicines are held in the cheek so the mouth lining absorbs the active ingredient. Sublingual medicines work in the same way but are put underneath the tongue. Buccal and sublingual medicines tend only to be given in very specific circumstances.

Further tips

When we're prescribing medicine, remember to ask us about the different formats available. If you know from experience your child prefers tablets to liquids, please let us know. Wherever possible, we'll prescribe the medicine in a format that makes it easier for your child to take it. You can also discuss this with your pharmacist when you hand in the prescription.

Tablets



Capsules



Liquid



Topical medicines



Suppositories



Drops



Inhalers



Injections



Implants or patches



Tablets you don't swallow (known as buccal or sublingual tablets or liquids)



Proper way of giving medicine and timings

Dosage of medicine are always depends on what the doctor was prescribe to the patients.

Every 8 hours means calculate every 8hours

3x a day means calculate every 8 hours

2x a day means calculate every 12 hours

1x a day means calculate every 24 hours

**Before giving any medication to the patient
always remember**

The following this you should take note:

- **The right patient**
- **The right drug**
- **The right dose**
- **The right route**
- **And the right time.**

