

Intramuscular Injection

Introduction

Giving yourself an injection is simple. Most people are nervous about giving an injection, which is natural. But once you learn the procedure and practice it, the nervousness will disappear.

This reference summary explains how to give an intramuscular injection, which means an injection in the muscle tissue.



IM Injection

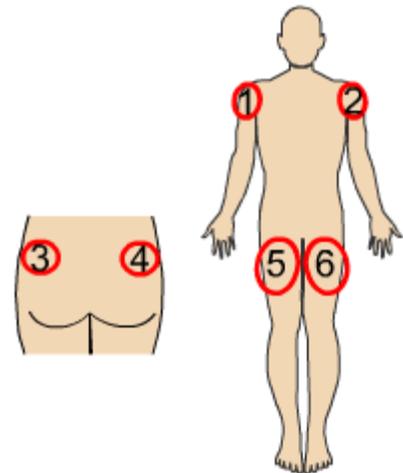
Injections are given when the medication cannot be taken by mouth. It is also given when faster drug absorption is desired.

An injection places the medication into the tissues below the injection site. From there, it will be absorbed into the bloodstream and carried by the blood to the rest of the body.

An intramuscular injection is an injection given into the muscle tissue just below the skin. The word ‘intra’ means in and ‘muscular’ means muscles. A short way of writing intramuscular is IM.

The following areas of the body have muscle tissues under the skin that can be easily reached with a needle:

- The front area of the thighs.
- The upper arm, about 2 to 3 fingers below the shoulder bone. This is the deltoid muscle.
- The gluteus muscle in the hip or buttock.



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Your doctor determines how often you should inject yourself and how much medicine you should take. A single dose is the amount of medication you get in one shot.

Be sure to change the injection site every time you give yourself an injection. This is called “rotating the sites.”

Preparations

You will need the following supplies for the injection:

- A syringe with a needle attached
- Medication vial
- Alcohol prep pads
- Container for disposal of syringe and needle
- Cotton balls
- Gloves, if a caregiver is giving the injection



A syringe consists of

- a tip designed to fit the hub of a needle
- a cylindrical barrel, and
- a close-fitting plunger.

To keep the syringe sterile, hold only the outside of the syringe barrel and the plunger’s handle. Do not touch the tip of or the inside of the barrel, the inside of the plunger, or the needle.

The medication vial is a glass or plastic container with a rubber seal at the top. A metal cap protects the seal until it is ready for use. Air must be injected into it to permit easy withdrawal of the solution.

A vial can have more than one dose in it. You need a doctor’s prescription to buy the vials. Check the medication name and expiration date. Do not use if expired! If the vial has cracks or leaks or if it is discolored or contains particles, do not use it!

Select an area that is clean, uncluttered, and large enough to work. Make sure there is good lighting. Wash the work area with soap and water. Use liquid soap whenever possible. Wash your hands. Bring all needed supplies to the work area.

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Hand washing is the most basic way to prevent and control the spread of germs. The following are tips for effective hand washing:

1. Wet your hands and wrists under warm running water.
2. Apply soap, liquid soap if possible, and lather well.
3. Scrub your hands and wrists for at least 15 seconds.
4. Pay special attention to the fingers, fingernails and the back of your hands.
5. Rinse hands well with your hands up. This keeps the dirty water running away from your hands.
6. Dry your hands using a clean paper towel, starting with the hands and working down towards the elbows.
7. Use the paper towel to turn off the faucet. Remember, you turned it on with dirty hands.



Procedure

The following are the basic steps to follow. They will be explained in more detail in the next sections.

- Get the supplies
- Wash your hands
- Prepare medicine vial
- Identify correct dosage of medication
- Draw up medication
- Choose your site
- Prepare skin
- Insert needle
- Inject medication
- Withdraw needle
- Dispose of equipment
- Record

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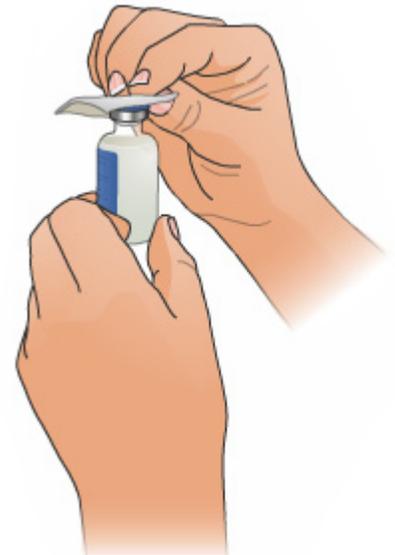
1. Get the Supplies:

- A syringe with a needle attached
- Medication vial
- Alcohol prep pads, or 70% rubbing alcohol
- Container for disposal of syringe and needle
- Cotton balls

2. Wash your Hands Well

3. Prepare Medicine Vial:

1. Remove the safety cap from the vial and discard. This exposes the rubber seal. Once the safety cap is off you can't replace it.
2. Cleanse the top of the medicine vial by swabbing with several firm strokes over the rubber seal with alcohol wipes or a cotton ball wet with alcohol. Move the swab or cotton ball forward, pick it up and move it forward again. Do not rub back and forth. Clean for 30 seconds and then let the alcohol dry.



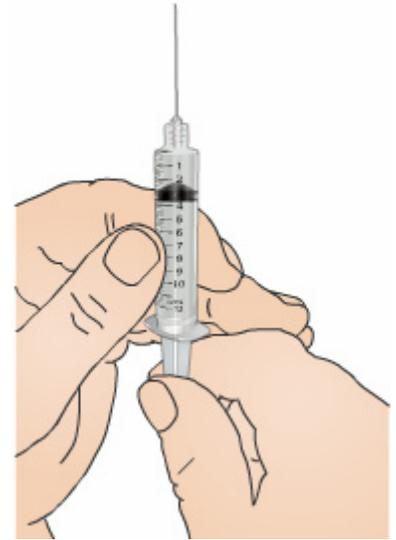
4. Identify the Correct Dosage of Medication:

1. Injectable medicines are usually measured in milliliters (ml). The syringe is marked in increments of a ml, such as 0.2 ml, 0.4 ml and so forth. To measure the dosage with the syringe, look directly at the top edge of the black plunger tip. Check your knowledge of syringe markings with your healthcare provider.
2. To measure the dosage with the syringe, look at the top edge of the plunger tip. See that it is even with the line for your dose.
3. Mark the dosage on the syringe.

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5. Draw up Injection

1. Open the syringe package. Remove the needle cap. Do not touch the needle to anything. Make sure the needle is tight.
2. Fill the syringe with air by pulling the plunger just to the amount of medication you use. In the next step, you will inject this air into the vial, and the air will allow the medication to be withdrawn into the syringe.
3. With one hand hold the vial steady on the table. With the other hand, put the needle through the top of the medication vial and push on the plunger, injecting all the air into the bottle.
4. Turn the bottle and syringe upside down so the bottle is on top. Leave the syringe in the bottle. Hold the vial between your thumb and index finger with the hand that you do not use for eating or writing. Grasp the end of the syringe barrel and plunger with the thumb and forefinger of the hand that you do use for eating or writing.
5. Make sure the tip of the needle is in the medication or you will be pulling in air.
6. Pull back on the plunger until you have slightly more than the correct dose of medication.
7. Check to see that there are no air bubbles in the syringe. If you see air bubbles, flick the syringe with your finger right at the bubble to help the bubble rise to the top. Push the plunger until you see the bubbles go into the bottle. Pull more medication slowly into the syringe to correct your dose.
8. When all the bubbles are out and you have the right dose in the syringe, take the syringe out of the bottle. Be careful not to touch the needle with your finger or bump it against anything since this will contaminate it, and you will need to start over. Put the needle protector back over the needle.



6. Choose your Site

Select one of the following sites:

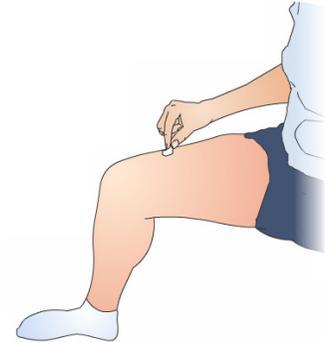
- The upper leg
- The hip or buttock muscle
- The upper arm

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Do not inject in the same place repeatedly. Keep changing your injection sites in a regular pattern. For instance, use the left thigh, then the right thigh, then the left arm, and so on.

7. Prepare Skin

Using an alcohol wipe or a cotton ball wetted with alcohol, scrub an area about two inches around the injection site. Start at the center and scrub outward using a circular motion. While the area is drying, pick up the syringe and remove the needle protector.



To keep the needle sterile once you have removed the cap, do not set it down or touch the needle to anything.

8. Insert Needle

1. With one hand, gently stretch the skin of the cleansed area you selected.
2. With the other hand, hold the syringe between index finger and the thumb then steadying it with the second finger as you would a pencil.
3. Holding the needle at an angle 90° to the stretched skin, insert the needle with a quick short movement into the skin. Insert the needle as far as it will go.

9. Inject Medication

After the needle is in, grasp the lower end of the syringe barrel with your other hand to stabilize the syringe. Use your dominant hand (the one you use for writing) and move it up to the end of the plunger. Do not move the syringe.

Pull back on the plunger. If no blood appears, slowly push down on the plunger with your finger until all the medication is given. It should take about 10 seconds to inject the medication. If blood appears in the syringe, remove the needle and dispose of the medication and syringe, then start the procedure over.

10. Withdraw Needle

Pull the syringe out quickly by pulling it straight out using a smooth and steady motion. Place an alcohol pad or dry cotton ball gently over the injection site. Apply gentle pressure. Do not massage. There may be a tiny drop of blood or a small black and blue mark at the injection site. This is normal.

11. Dispose of the Syringe and Needle

Dispose of needles in a container used only for that purpose such as a coffee can. Do not dispose of needles or syringes into a wastebasket.

Do not recap used needles. This reduces the chance of sticking yourself with a contaminated needle. The blood of a person infected with HIV, hepatitis, and other diseases may contaminate a needle. If a person accidentally gets stuck with a used contaminated needle, seek immediate medical care for evaluation and possible treatment.



12. Record Keeping

After each injection you should write down

- The date and time of the injection,
- The amount of medicine given, and
- The injection site.

Risks & Safety

Intramuscular injections are very safe. However, complications can occur if an injection is given incorrectly. It is important to know what precautions to take to avoid complications and what actions to take if they do occur. Complications include infection, needle breakage in the skin, and hitting a nerve.



Infections may occur if a dirty needle is used or if the skin is cleansed improperly. Therefore, take time to cleanse the skin thoroughly and never use a needle and/or syringe more than once.

If the injection site becomes red, swollen, and warm to the touch, place a warm cloth on it. This may help decrease the pain and redness. If the pain and redness persist, call your physician. Call your physician if you see any drainage from the injection site.

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Needle breakage in skin will be avoided if you always give yourself an injection in a quiet, private place where there is no danger of being bumped accidentally.

Hitting a nerve may occur if the wrong injection site is chosen. Therefore, take time to choose your site carefully. If you have numbness or severe pain following an injection notify your doctor.



Conclusion

An intramuscular injection is an injection given into muscle tissues just below the skin. These injections are given when the medication cannot be taken by mouth.

Giving yourself an injection is simple and safe. This reference summary explained the procedure and its safety measures. After practice, any nervousness you may have should disappear.

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