

# Subcutaneous Injection

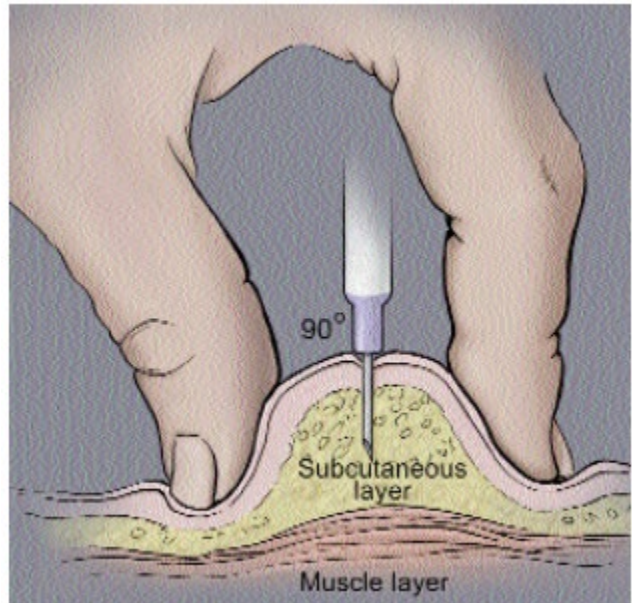
## What is a subcutaneous injection?

A **subcutaneous injection**, as illustrated in the figure to the right, is a shot given into the fatty layer of tissue just under the skin. Subcutaneous injections are given with a very small needle that causes little or no discomfort.

## Step 1: Prepare for your injection

Find a comfortable, well-lit place to do the injection. Plan to do your injection at the same time each day. Follow these steps to prepare for your shot:

1. Make sure it is the medication your doctor prescribed. Check the expiration date on the vial (bottle of medication). If the medication is expired, do not use it. If the medication has particles in it or is not its usual color, do not use it and check with your pharmacy.
2. Find an area with a flat surface to put your injection supplies on. Clean the area with soap and water. Dry off the work surface with a clean towel.
3. Gather your supplies:
  - Your medication
  - Disposable syringe and needle
  - Alcohol swabs
  - Sharps disposal container (details on page 5)



*"Subcutaneous injection" by [National Institutes of Health](#), public domain, via [Wikimedia Commons](#)*

## **Step 2: Wash your hands**

Although your hands may look and feel clean, it is always important to wash your hands and remove germs you can't see. Wash your hands before any injection. If you touch anything that might be considered dirty, wash your hands again (such as after blowing your nose, picking something off the floor, using the phone, touching your face or glasses, or removing a used bandage).

There are two ways to properly clean your hands: washing with soap and washing with hand sanitizer.

### **Washing your hands with soap**

You will need warm water, clean paper towels or a clean cloth towel, and antibacterial soap.

1. Wet your hands and wrists under warm running water.
2. Put soap on your hands and scrub for 15 seconds.
3. Rub soap between fingers, under nails, and over the palms and back of your hands.
4. Rinse your hands well. Make sure to keep your hands up so the dirty water runs toward your elbows.
5. Dry your hands with a clean paper or cloth towel.
6. Turn off the water using a clean towel (so your clean hand doesn't touch the sink).

### **Washing your hands with hand sanitizer**

Check the label on the sanitizer gel or lotion. It should contain 60-90% ethyl alcohol (ethanol), propyl alcohol, or isopropyl alcohol.

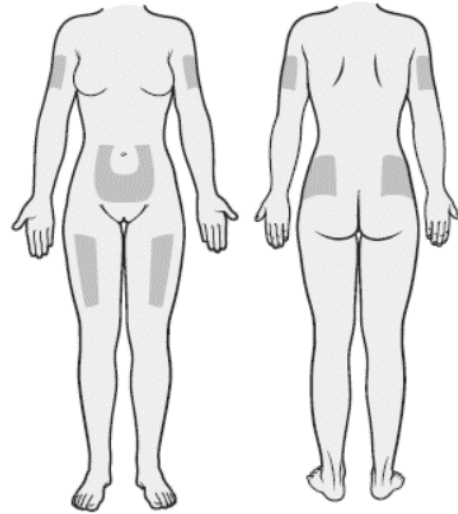
1. Place a dime-size amount of gel in one hand.
2. Gently rub the gel into your palms, the back side of your hands, and between your fingers.
3. Wait for your hands to dry.

### Step 3: Choose and prepare the injection site

The following are sites for injections on your body. Change your injection site each time you inject to avoid soreness at any one site.

- On the abdomen (belly)
- On the outer side of the arms
- On the back of the arms
- On the upper area of your buttocks
- On the thighs

If you are injecting in your arm or on the upper area of your buttocks, we suggest having another person give you the injection.



### Step 4: Preparing the dose

1. Take the cap off the vial. Clean the rubber stopper with one alcohol swab.
2. Check the package containing the syringe.
  - If the package has been opened or damaged, do not use that syringe. Dispose of the syringe in the puncture-proof sharps container.
  - If the syringe package is undamaged, open the package and remove the syringe.
3. Pull the needle cover straight off the syringe.
4. Pull back the plunger to draw air into the syringe. You should draw the same amount of air into the syringe as the dose (mL or cc) that your doctor prescribed.
5. Keep the vial on your flat surface and insert the needle straight down through the rubber stopper. **Do not put the needle through the rubber stopper more than once.**

6. Push the plunger of the syringe down and inject the air from the syringe into the vial.
7. Keeping the needle in the vial, turn the vial upside down. Make sure the liquid is covering the tip of the needle.
8. Keeping the vial upside down, slowly pull back on the plunger to fill the syringe with the medication to the number (mL or cc) that matches the dose your doctor prescribed.
9. Keeping the needle in the vial, look for air bubbles in the syringe.
  - If there are air bubbles, gently tap the syringe with your fingers until the air bubbles rise to the top of the syringe. Then slowly push the plunger up to force the air bubbles out of the syringe.
  - Keeping the tip of the needle in the liquid, pull the plunger back again to the number on the syringe that matches your dose. Check again for air bubbles. If there are still air bubbles, repeat the steps above to remove them.
  - The air in the syringe will not hurt you, but air bubbles that are too large can reduce your dose of medicine.
10. Check again to make sure that you have the correct dose in the syringe. It is important that you use the exact dose prescribed by your doctor.
11. If you have the correct dose, flip the vial and syringe right side up. Then remove the syringe from the vial, but do not lay it down or let the needle touch anything.

### **Step 5: Inject the dose**

1. Clean the injection site by rubbing the skin with an alcohol swab for 15 seconds. Let the skin air dry completely (do not blow on it or fan it) before doing the injection.
2. Hold the syringe in the hand you will use to inject the medication. Use the other hand to pinch a fold of skin at the cleaned injection site.

3. Holding the syringe like a pencil, use a quick "dart-like" motion to insert the needle either straight and down (90 degree angle) or at a slight angle (45 degrees) into the fold of skin.
4. After the needle is inserted, let go of the skin. **Pull the plunger back slightly.**
  - **If no blood appears, slowly push down on the plunger all the way, until all the medication is injected.**
  - **If blood comes into the syringe, do not inject medication, because the needle has entered a blood vessel.** Remove the syringe and clean a new injection site. Remember to check again for blood before injecting medication.
5. When the syringe is empty, count to 5 then pull the needle out of the skin. Place a cotton ball or gauze over the injection site and press for several seconds.

#### **Tips for minimizing injection pain:**

- Inject medicine that is at room temperature
- Remove all air bubbles from the syringe before injection
- Wait until the alcohol on your skin has dried before injection
- Keep your muscles in the injection area relaxed
- Poke through the skin quickly
- Don't change the direction of the needle as it goes in or comes out
- Do not reuse disposable needles

#### **Instructions for disposing of "sharps"**

The Environmental Protection Agency (EPA) monitors the disposal of syringes and other sharp objects, or "sharps." It is important to dispose of them properly for your safety and the safety of others. The EPA recommends that you get rid of sharps in strong, non-recyclable containers. Your state or community environmental programs may have other requirements or

suggestions for disposing of your sharps. You should contact your local EPA office for any information you may need.

### **What container should I use?**

Place needles, syringes, lancets, and other sharp objects in a hard plastic or metal container with a screw-on or tightly-secured lid. There are many household containers that will work (for example, old laundry detergent bottles), or you can buy containers specifically designed for sharps disposal.

If you use a recyclable container to dispose of sharps, make sure that you don't mix the container with other materials to be recycled. **You should label the container "not for recycling" and put it in the trash.** In addition, make sure your sharps container is made of non-breakable material and has a lid that can be securely closed (screwed on or tightly secured). Before throwing out the container, be sure to cover the lid with heavy-duty tape.

Do not put sharp objects in any container you plan to recycle or return to a store, and do not use glass or clear plastic containers. Make sure that you keep all containers with sharp objects out of the reach of children and pets.

Your home care provider may deliver a sharps container with your medical supplies. If so, place all needles, syringes, and lancets in this container and contact the company when the container is about 75% full. Your home care provider will arrange for pickup of the container. **For your safety, do NOT bring your container to the hospital or Cancer Center for disposal.**

### **More information on sharps disposal**

More information can be found at the United States Environmental Protection Agency's website: [www.epa.gov/rcra/medical-waste#sharps](http://www.epa.gov/rcra/medical-waste#sharps). You may also

contact the Coalition for Safe Community Needle Disposal at 1-800-643-1643 for information about safe disposal programs in your area.

Disclaimer: This document contains information and/or instructional materials developed by University of Michigan (U-M) Health for the typical patient with your condition. It may include links to online content that was not created by U-M Health and for which U-M Health does not assume responsibility. It does not replace medical advice from your health care provider because your experience may differ from that of the typical patient. Talk to your health care provider if you have any questions about this document, your condition or your treatment plan.

Reviewers: Alexis Punches, Patricia Evans, Nancy Tena

Edited by: Brittany Batell, MPH MSW

Injection site illustration used with permission, [Memorial Sloan Kettering Cancer Center](#)  
Doc #0183

Patient Education by [U-M Health](#) is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International Public License](#). Last Revised 04/2023