

Pen Devices for Insulin Administration

WHAT YOU SHOULD KNOW:

- An insulin pen is a device that looks like a pen and can be used to inject insulin. An insulin pen has a cartridge of insulin and a disposable needle inside of it. There are reusable and disposable insulin pen types. The reusable pen has a pre-filled insulin cartridge that can be replaced with another cartridge when the insulin has been used. Disposable pens are thrown away when the insulin cartridge is empty. You may need to use a different pen for each type of insulin you use. Talk to your caregiver about the different types of insulin that are available in a pen.
- The insulin pen may be more comfortable for some people because the needle is smaller and thinner than a syringe needle. The insulin pen may help ensure that you get the correct amount of insulin. It may also be easier for children and busy adults to use because a pen may be faster and simpler to use than a syringe and vial. The insulin in a pen may become less sterile over time. Air may also enter the insulin cartridge if the disposable needle is left on the pen. This extra air can cause you to inject the wrong amount of insulin.

AFTER YOU LEAVE:

How do I use the insulin pen to inject insulin?

- **Wash your hands.**
- **Check insulin label and appearance of the insulin.** Follow the pen manufacturer's instructions for inserting an insulin cartridge into a reusable pen.
 - Check the label on the insulin cartridge or pen to make sure you are injecting the right type of insulin. Check the expiration date to make sure the date has not passed. Use a new insulin cartridge or disposable pen if the date has expired.
 - Check the appearance of the insulin to make sure it is OK to use. Clear insulin should be clear, colorless, and free of particles. For all insulin types, there should be no particles attached to the side of the insulin cartridge. Use a new insulin cartridge or disposable pen if the insulin does not look right.
- **Mix cloudy insulin.** All insulin types except rapid, short-acting, and glargine (very long-acting) are cloudy and must be mixed before injecting. To mix cloudy insulin, follow these steps:
 - Roll the pen in the palms of your hands 10 times.



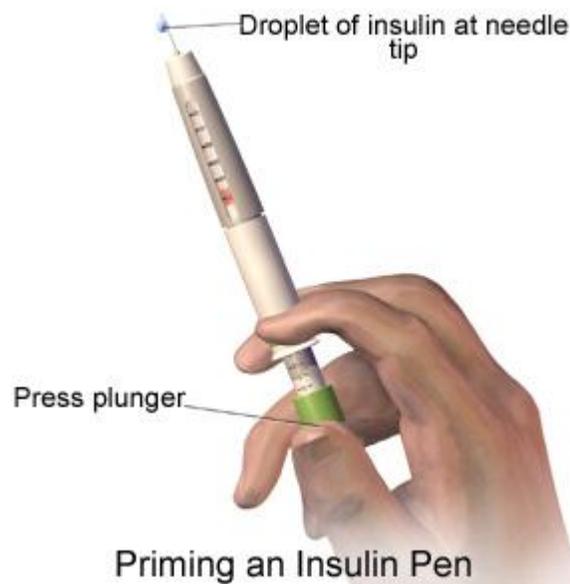
-
- There is a small bead in the cartridge that mixes the insulin. Tilt the pen back and forth at a 180 degree angle 10 times to make sure the insulin is mixed well with the bead. After rolling the pen and tilting it, the insulin should be evenly mixed. If the insulin does not

appear to be evenly mixed, roll the pen again 10 times and tilt the pen back and forth 10 times.

- Do not use the insulin if there are clumps in the insulin after mixing.

- **Attach the disposable needle to the pen.**
 - Remove the pen cap and clean the rubber seal on the insulin cartridge with a sterile alcohol swab.
 - Attach the disposable needle onto the pen. Remove the outer needle cap and save it to use later when you are done with your injection. Remove the inner needle cap and throw it away. Use a new needle every time you inject insulin.
 - With the needle pointing upward, tap the insulin cartridge to force any air bubbles to the top.

- **Prime the pen before each injection.** Priming the pen gets rid of air bubbles that may be in the pen. Air bubbles can affect the flow of insulin from a pen and cause you to inject the wrong amount of insulin.
 - Dial two units of insulin on the dose selector. Point the needle up and firmly press the plunger until a drop of insulin appears at the needle tip. Repeat this step if a droplet does not appear. You may need to use a different needle or pen if you have to repeat this step several times.



-
- To prevent air from entering the pen, do not leave the needle on the pen between injections.

- **Dial the correct dose.**
 - Make sure there is enough insulin in the pen for your full dose. Insert another cartridge into your reusable pen or use another disposable pen if there is not enough insulin.
 - Make sure the dose selector is set at 0 in the dose display area. Dial your insulin dose. For most insulin pens, you will hear a click for each unit of insulin that you have dialed. Check the insulin display area before injecting your insulin to make sure you have dialed the right dose.

- **Inject the insulin.**
 - Choose the injection site. Insulin is usually injected into the abdomen, thighs, and arms. Ask your caregiver about where to inject your insulin and how to rotate the sites of injection.
 - Clean the injection site with a sterile alcohol swab, or soap and water. If you use an alcohol swab, allow the alcohol to dry before injecting the insulin.
 - Lightly pinch a fold of skin at the injection site. Hold the insulin pen at a 90 degree angle and insert the needle all the way into the skin. Children and thin people may need to inject the needle at a 45 degree angle.



Pinch and Inject

-
- Let go of the pinched fold of skin and inject the insulin by pushing the button on the insulin pen all the way in. Keep the button pressed and count to 5 before removing the needle from the skin. For glargine insulin, leave the needle in your skin for 10 seconds before removing it. Gently apply pressure on the injection site but do not rub it.

- **Place the outer cap on the needle and remove the disposable needle from the pen.** Throw the needle away in a hard container.

How do I store an insulin pen?

- **Store the insulin cartridges or disposable pens that you are not using in the refrigerator.** Insulin cartridges or disposable pens that have been kept in the refrigerator are good until the expiration date. Do not store insulin cartridges or disposable pens in the freezer.

- **Keep the insulin pens that you are using at room temperature.** Keep the insulin pen away from direct heat and light. The amount of time that you can use an insulin pen that has been at room temperature varies. Ask your caregiver how long you may use your insulin after opening and keeping it at room temperature. Keep insulin pens out of the reach of children. Do not store pens with the disposable needle attached.

Risks: Follow your caregiver's instructions and the device directions to help ensure that you inject the correct amount of insulin. Injecting the wrong amount of insulin may cause your blood sugar levels to be too high or too low.

CALL **IF:**

- You think you did not give yourself enough insulin, or you have given yourself too much insulin.
- Your blood sugar levels are often too high or too low.
- You are having problems using your insulin pen.