

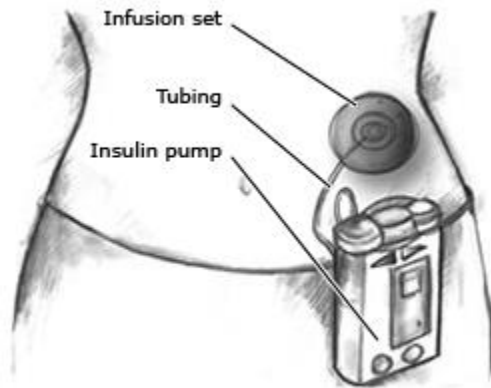
What is an insulin pump?

An insulin pump is a device that delivers insulin to the body. Some people with diabetes use an insulin pump instead of shots as a way to get their insulin treatment.

An insulin pump is smaller than most cell phones. If you get a pump, you will need to wear or carry it on your body all the time.

How does an insulin pump work?

An insulin pump attaches to the body and delivers insulin under the skin. There are many different kinds of insulin pumps. For example:



- Some pumps are connected to a tube that you insert under your skin, usually in the belly area. This involves using a small needle (or a device that has a small needle). The pump containing insulin can be attached to your clothing or carried in your pocket. The needle and tubing are changed every 2 to 3 days. The pump also needs to be refilled with insulin every few days.

- Another type of pump sticks directly to the skin. You use a syringe to fill it with insulin. Then, when you press a button, the device inserts a small tube into your skin to deliver the insulin. The pump is covered with a patch and left in place for 2 to 3 days. After this, the pump needs to be replaced with a new one in a different area of the body.

Only short-acting (regular) or rapid-acting insulins are used with a pump. Most people use rapid-acting insulin with a pump. If you use a pump, your doctor or nurse will help you figure out the amount of insulin that you should get continuously – all day and night. This is called a "basal" rate. Then, before meals, you will program your pump to give a higher dose of insulin (called a "bolus"). This amount will depend on what you plan to eat and what your blood sugar level is.

Will I still need to check my blood sugar every day?

Yes. Just like people who use insulin shots, people with an insulin pump need to check their blood sugar level a few times each day.

For most people who use an insulin pump, checking blood sugar involves wearing a device that measures the blood sugar all the time. This is called "continuous monitoring." You wear a special sensor

that attaches to your skin with a sticky patch. It measures blood sugar and sends the information to a small box that can attach to clothing or go in a bag. Most people who have continuous monitoring still need to check their blood sugar by pricking their skin. This is to make sure the monitoring device is working correctly. Your doctor or nurse will tell you how and when to check your blood sugar using a finger prick. This will depend on which device you use for continuous monitoring.

Some insulin pumps are combined with the continuous monitoring device. Using this kind of combined system can make it easier to figure out what dose of insulin you need. Some newer systems will even adjust the dose automatically based on your blood sugar level. This is called an "artificial pancreas." That's because the system does the job the pancreas (an organ in the belly) normally does, producing the amount of insulin the body needs. Depending on which system you have, you might still need to choose your bolus dose before meals.

Who might use an insulin pump?

People of all ages can use an insulin pump. Most often, insulin pumps are used in people with type 1 diabetes.

What are the benefits of an insulin pump?

Compared to insulin shots, an insulin pump has the following benefits:

- It does not involve getting insulin shots every day.
- Insulin can be delivered in smaller amounts with a pump. This is helpful for people who are very sensitive to insulin.
- People with an insulin pump have more choices about when and what they eat. They don't always have to plan their meals in advance. They can just give themselves a bolus dose to cover the food they plan to eat and the activities they plan to do. This is possible to do with insulin shots, too, but some people feel they have more flexibility with a pump.
- Using an insulin pump might help people keep their blood sugar levels under better control, with fewer episodes of low blood sugar.

What are the downsides of an insulin pump?

The downsides of an insulin pump include the following:

- It takes time to learn how to program and use an insulin pump.
- If the tube slips out of the skin or gets a kink in it, people won't get any insulin. Then their blood sugar level can get too high, which can lead to serious problems.
- Insulin pumps usually cost more than insulin shots.
- Wearing or carrying an insulin pump all the time can be bothersome.
- The area where the tube goes into the skin can get infected.

How do people wear or carry their pump?

People wear or carry their pump in different ways. They can put it in their waistband, shorts, underwear, or bra. They can also keep it in their pocket or clip it to a belt.

At night, people can put their pump in their pajamas or clip it to a blanket, sheet, or pillow.

Most people can disconnect their pump and take it off for short periods of time, about 1 to 2 hours. That way, people don't need to wear it when they shower, bathe, swim, or have sex.

How do I decide if I should switch to an insulin pump?

You, your doctor, and your family will need to discuss whether an insulin pump is right for you. To help you decide, discuss the benefits and downsides of using a pump, and your individual situation.