

Insulin Delivery Methods

Syringes, insulin pens, and insulin pumps all serve the same purpose: to deliver insulin to a person with type 1 diabetes, who does not produce insulin on her own.



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Insulin Injections

To stay alive, people with type 1 diabetes must inject insulin many times a day. The exact number of injections varies from person to person. Insulin injections typically occur at regularly scheduled times during the day. Syringes or insulin pens are both used for injections, but both essentially do the same thing. Some people find the pen to be more convenient when they only need a single kind of insulin. Some children also find the pen needles more comfortable than the syringe needles. The age at which children are able to administer their own injections varies. After working through the initial trauma of being diagnosed with type 1 diabetes, however, most children eventually inject their own insulin.

Insulin Pumps

An alternative to insulin injections is the insulin pump. The pump is a computerized device, about the size of a beeper or pager, often worn on a belt or in a pocket. The pump delivers a continuous low (basal) dose of insulin through a cannula (a flexible plastic tube), which attaches to the body through a small needle inserted into the skin. The cannula is taped in place and the needle is removed. Common insertion sites on the body include the thighs, buttocks, upper arms, and other areas with fatty tissue.

When a person wearing a pump eats, she pushes a button on the pump to deliver an extra amount of insulin called a bolus.

The advantages of the pump include:

- Greater flexibility with meals, exercise, and daily schedule
- Improved physical and psychological well-being
- Smoother control of blood glucose levels

The disadvantages of the pump include:

- Risk of infection
- More frequent hypoglycemia (low blood sugars)
- Ketosis and ketoacidosis (risk of very high blood sugars)
- Constant physical reminder of diabetes

A person with type 1 diabetes who uses an insulin pump may need to test her blood sugar more frequently.

Personal Choice

Choosing an insulin delivery method is a personal decision for a person with type 1 diabetes, made by the individual, family (if a child), and medical provider. The same method may not be the right choice for everyone.