

# Type 1 Diabetes and Your Child: Using Insulin



Your child's pancreas no longer makes insulin. The missing insulin must be replaced. Insulin can't be taken by mouth. This is because stomach acids destroy it before it can get into the bloodstream. Instead, insulin is given by shot (injection) into the fat just under the skin. It's not hard to learn to give insulin shots.

## Types of insulin

There are 3 basic types of insulin:

- **Fast-acting insulin.** This is given before meals to act on mealtime blood sugar.
- **Intermediate-acting insulin.** This takes longer to work than fast-acting insulin. But it stays in the bloodstream longer.
- **Long-acting insulin.** This provides a small amount in the bloodstream at all times.

Your child will likely use more than 1 type of insulin.

## Using and storing bottles of insulin

To use and store insulin safely:

- **You can keep insulin you're using now at room temperature.** You can keep the bottle of insulin you are using now on the kitchen counter. But throw it away 28 days after opening it. Do this even if it isn't used up yet.
- **Keep insulin cool.** Make sure it doesn't get above 86°F (30°C).
- **Have a backup supply of insulin stored in the refrigerator.** Check the expiration dates on the bottles. If an expiration date has passed, throw the bottle away.
- **Don't freeze or shake insulin.** Insulin won't work well after it's been frozen. And shaking it can create air bubbles in the vial.
- **Don't use insulin if it looks different for any reason.** Some insulin is supposed to be cloudy. Other types are clear. But they should not change. Call the healthcare provider or pharmacist if you're not sure how the insulin is supposed to look.

## Ways of giving insulin

Ways to give insulin to your child include:

- **Needle and syringe.** This is the most common and least expensive way. It is covered by most insurance plans. This method lets you mix 2 kinds of insulin in the same syringe.
- **Insulin pen.** This device includes a needle and a cartridge of insulin. Pens make it easy to measure the insulin and prepare the shot. In public places, a pen may attract less attention. It may be more convenient than a needle and syringe. Smart pens, now called "connected insulin pens (CIPs)" are also available. These pens can be programmed to calculate insulin doses and transfer data to the patients smart phone.
- **Insulin infusion pump.** This can send insulin continuously in very tiny amounts. A pump is about the size of a pager. It is attached to your child's body by a long, thin tube. It is worn all the time. Pumps are expensive. But some insurance companies cover them. Talk with your child's healthcare team about the benefits and risks of an insulin pump for your child.

- **Inhaled insulin.** This is being studied for possible use by children. It's now only available for adults.

## Tips to help

These tips can make giving shots easier:

- Ask your child's healthcare team about a device that hides the needle when you give a shot. This can help lower your child's stress.
- You can practice on yourself. You can give yourself a shot of sterile distilled water or saline given to you by your healthcare team, using an insulin syringe. That way, you'll have a better idea of how an insulin shot feels.
- To keep your child's skin healthy, use a new site for each shot. Sites used most often are the upper arms, front of thighs, and fatty skin of the belly.
- Teach your child about diabetes and insulin shots. Use words that are right for your child's age. Adjust what you say as your child gets older. Your child's healthcare team can help you.

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