

# I can tell you about my child's insulin

## What is insulin?

The body makes **hormones** that send signals through the body. Insulin is a hormone made in the pancreas. It lowers the amount of sugar in the blood. It moves sugar out of the blood into the body's cells, where it is used for energy.

A healthy pancreas releases insulin in 2 ways. It can release small drips of insulin throughout the day, like a drippy faucet. It can also release large amounts of insulin very quickly when it needs to, like turning a faucet on all the way.

In type 1 diabetes, insulin is missing and we need to replace it. The different types of insulin act like the insulin that a healthy pancreas makes. Most people with type 1 diabetes take two types of insulin, long acting insulin and fast acting insulin. Insulin comes in a small bottle, called a **vial**.



**A healthy pancreas drips insulin all day long.**



**A healthy pancreas can also release large amounts of insulin when needed.**

## What is long acting insulin?

The body always needs energy. Even when we are sleeping or not moving much, our brain, heart, and lungs are still working. So the body needs a little bit of insulin all the time. Long acting insulin lasts the whole day.

Since long acting insulin lasts for a whole day, you take long acting insulin one time each day, around the same time (for example, at 7 pm every evening).

There are 2 brands of long acting insulin. They are:

- Lantus
- Levemir

They both work the same way. To save you money, we try to choose the brand your insurance company prefers.

**My child's long acting insulin is:** \_\_\_\_\_  
**It is given once a day and lasts all day and night.**

## **What is fast acting insulin?**

Sometimes the amount of sugar in the blood goes up very fast, like when we eat food with carbohydrates. To clear this extra sugar out of the blood quickly, there is a type of insulin that works quickly. It is called **fast acting insulin**.

Fast acting insulin lowers blood sugar for about 3 to 5 hours. People with type 1 diabetes take fast acting insulin with nearly every food they eat, to help bring down a spike in blood sugar levels that is caused by carbohydrates in food. We call this **covering carbohydrates** or **covering carbs**.

People with type 1 diabetes can also use fast acting insulin to bring high blood sugar levels back down quickly. We call this **correcting a high blood sugar** or **giving a correction**.

So, fast acting insulin can do 2 different jobs:

- Covering carbohydrates that are eaten
- Correcting high blood sugars

There are 3 brands of fast acting insulin. They are:

- Novolog
- Humalog
- Apidra

They all work the same way. To save you money, we try to choose the brand your insurance company prefers.

**My child's fast acting insulin is:** \_\_\_\_\_  
**It is given for meals and to correct high blood sugar.**

## **What else should I know about insulin?**

- Insulin is measured in units.
- Insulin is a type of protein, like the protein found in meat, fish, or eggs. If we took insulin in a pill, it would be digested like other proteins and would not work. This is why insulin has to be given under the skin.

- Insulin will go bad in hot and cold temperatures. Insulin is stable only between 36° F and 86° F. If you are comfortable, the insulin is usually comfortable, too.
- Long acting insulin (Lantus or Levemir) should not be mixed with any other insulin.
- Fast acting insulin (Novolog, Humalog, or Apidra) should be given before eating the meal and snack. Fast acting insulin takes about 15 minutes to start working after you give the injection. If you have a good idea how much your child is going to eat, give your child insulin before eating. Insulin works best when given before a meal. Children under 5 years old may need to give insulin right after eating until you know how much they will eat.

Most people with type 1 diabetes have 4 to 6 insulin injections each day:

- Fast acting insulin at breakfast
- Fast acting insulin at lunch
- Fast acting insulin at snack time, if needed
- Fast acting insulin at dinner
- Fast acting insulin at bedtime, if needed
- Long acting insulin once a day

While that may sound scary, almost all people with type 1 diabetes get used to injections.

### **Now that you've read this:**

- Tell your nurse or doctor the name of your child's long acting insulin.  
(Check when done.)
- Tell your nurse or doctor the name of your child's fast acting insulin.  
(Check when done.)
- Tell your nurse or doctor when long acting insulin is given.  
(Check when done.)
- Tell your nurse or doctor when fast acting insulin is given.  
(Check when done.)
- Tell your nurse or doctor why insulin can't be given as a pill.  
(Check when done.)

#### Disclaimer

The information provided at this site is intended to be general information, and is provided for educational purposes only. It is not intended to take the place of examination, treatment, or consultation with a physician. Phoenix Children's Hospital urges you to contact your physician with any questions you may have about a medical condition.