

## Living Well with Diabetes

# Types of insulin and length of activity

There are several types of insulin available to help keep your blood sugar levels as close to normal as possible. Your need for insulin is different from other people with diabetes. The type of insulin you take and when you take it depends on your individual needs.

Your doctor will work with you to find the type of insulin, the dose, and the timing of your doses that are best for you.

Here are the types of insulin and how each works:

### **Fast-acting insulin**

These types of insulin are designed to take care of the sugar a person eats. For most people, fast-acting insulins follow these ranges:

- Aspart — Starts to act in 5 to 15 minutes, peaks in 90 minutes, lasts 3 to 4 hours
- Lispro — Starts to act in 5 to 15 minutes, peaks in 90 minutes, lasts 3 to 4 hours
- Regular — Starts to act in 30 to 60 minutes, peaks in 2 hours, lasts 4 to 6 hours

### **Intermediate and long-acting insulin**

These types of insulin, also called basal or background insulin, work continuously, similar to the way a normal pancreas produces insulin. They are absorbed slowly and last from 10 to 24 hours, depending on which kind of insulin you use. For most people basal insulin types follow these ranges:

- NPH — Starts to act about 2 hours after taking, peaks at 6 to 8 hours, lasts 10 to 16 hours
- Glargine — Starts to act about 2 hours after taking, and can last 20 to 24 hours
- Detemir — Starts to act about 2 hours after taking, and lasts between 14 and 24 hours

### **Combination insulin**

Combination insulin mixtures deliver fixed doses of insulin and have a later action with an earlier and stronger peak. Combination insulin includes human and analog mixtures:

Human mixtures combine NPH and regular insulin.

- 70/30 = 70 % NPH insulin and 30 % regular insulin

Analog mixtures combine fast-acting analog insulin with protamine for extended action.

- 70/30 = 70 % aspart protamine and 30 % aspart
- 75/25 = 75 % lispro protamine and 20 % lispro

The types of insulin are listed below. The first word is the generic name and the second word is a brand name of the insulin.

