

# Starting Insulin – a patient guide

## ABOUT INSULIN

Insulin is a hormone made by your pancreas, an organ that sits behind your stomach. Insulin is needed to move glucose, the sugar in blood, from the bloodstream into the body's cells. The cells use the sugar in blood as fuel to do their work. Insulin also helps the body store fat for future energy use.

How much insulin you need each day depends on your blood sugar levels. Your blood sugar changes during the day so the number of shots of insulin you need may vary.

When you start using insulin, you need to check and write down your blood sugar levels 2 or more times a day.

Your healthcare provider will use these results to decide the type and how much insulin you need.

### Insulin comes in different types, based on:

- How long it takes for insulin to start lowering blood sugar, called “onset”
- When its effect is strongest, called the “peak”
- How long its effect lasts, called “duration”

### The following table tells you about the different types of insulin.

| TYPE OF INSULIN                        | STARTS WORKING WITHIN         | PEAKS IN                             | LASTS              | EXAMPLE   |
|--|-------------------------------|--------------------------------------|--------------------|---|
| <b>Rapid-acting insulin</b>            | 15 minutes after injection    | 1 or 2 hours after injection         | 2 to 4 hours       | <i>Insulin aspart (Fiasp, NovoLog)</i><br><i>Insulin glulisine (Apidra)</i><br><i>Insulin lispro (Admelog, Humalog)</i> |
| <b>Regular or short-acting insulin</b> | 30 minutes after injection    | 2 to 3 hours after injection         | 3 to 6 hours       | <i>Human Regular (Humulin R, Novolin R, Velosulin R)</i>  |
| <b>Intermediate-acting insulin</b>     | 2 to 4 hours after injection  | 4 to 12 hours after injection        | 12 to 18 hours     | <i>NPH (Humulin N, Novolin N, ReliOn)</i>   |
| <b>Long-acting insulin</b>             | several hours after injection | lowers glucose levels up to 24 hours | Up to 24 hours     | <i>Degludec (Tresiba)</i><br><i>Detemir (Levemir)</i><br><i>Glargine (Basaglar, Lantus)</i>                             |
| <b>Ultra-long-acting</b>               | in 6 hours after injection    | does not peak                        | 36 hours or longer | <i>Glargine u-300 (Toujeo)</i>  |

<https://www.diabetes.org/diabetes/medication-management/insulin-other-injectables/insulin-basics>

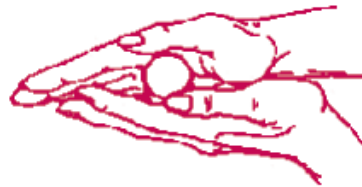
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- You may need only one type of insulin to control your blood sugar.
- If your blood sugar is hard to control, you may need to take two types of insulin.
- When you need two types of insulin, you will need to mix your own, or you may be able to use pre-mixed insulin.
- Not all types of insulin come pre-mixed in bottles.

### Mixing Insulin

- Draw the clear, short-acting insulin into the syringe before the cloudy, long-acting insulin.
- Roll the bottle of cloudy, long-acting insulin gently between your palms to mix the contents before drawing insulin into the syringe.
- Check the label to make sure you have the correct insulin before drawing up your dose.
- Avoid getting long-acting insulin mixed into the short-acting bottle



### Storing Insulin

- The bottle of insulin being used should be kept at room temperature.
- Any insulin that will not be used in 30 days should be stored in the refrigerator.
- If a bottle kept at room temperature is not used within 30 days, throw it away.
- Do not store insulin in the freezer or in hot places, such as the glove box of a car or on the windowsill.
- If your insulin is normally clear but has become cloudy, clumped, or crystallized, throw it away and open a new bottle.
- Always have an extra bottle of insulin on hand

Do **not** share your insulin with others.

Ask your healthcare provider if you have ANY questions about insulin.