



## Insulin

This is a brief guide to the types of insulin and how long each type of insulin lasts over a 24-hour period.

The following will give you information on the different types of insulin you may be prescribed for your diabetes. The graphs all show the action of the insulin against the number of hours that have passed since it was injected.

### Quick-acting insulin

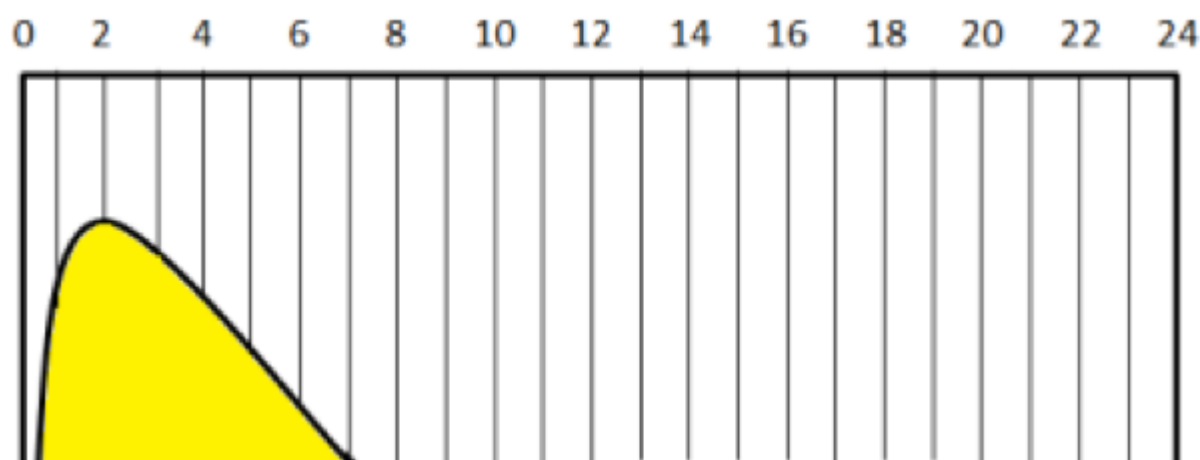
Quick-acting insulin is usually taken before meals. There are two different types of quick-acting insulin, both of which are clear in appearance:

- Soluble – this type of insulin comes from human or animal insulin-producing cells
- Analogue – this is a newer type of insulin that is synthetic and is produced in a lab

#### *Quick-acting soluble insulin*

The following are the different types of soluble insulin you may be prescribed.

- Actrapid
- Humulin S
- Hypurin Porcine Neutral
- Insuman Rapid



After the insulin has been injected it is absorbed into your bloodstream and starts to work within 30 minutes, peaking between two and four hours after

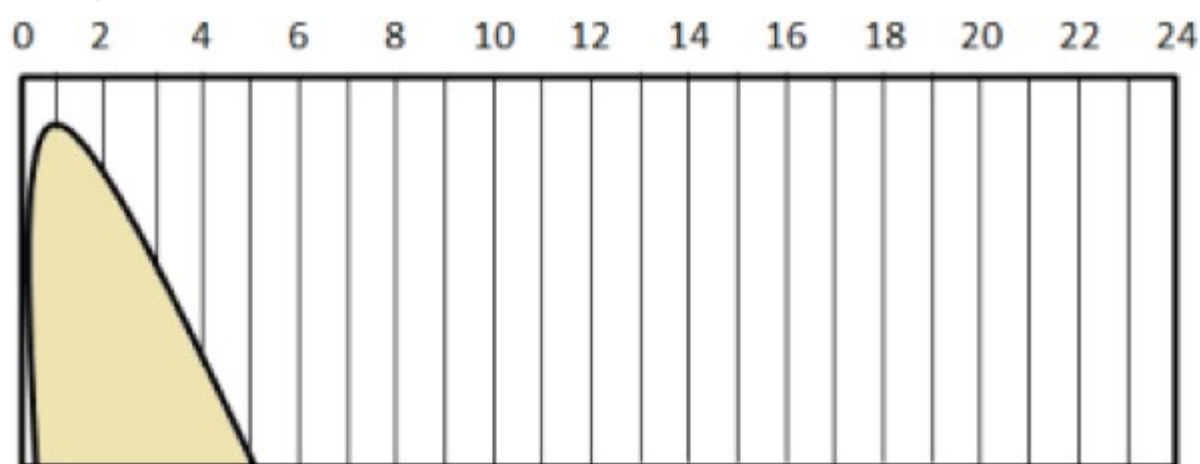


injection and lasting for up to eight hours. You normally inject these types of insulin 20–30 minutes before you have your meal.

### *Quick-acting analogue insulin*

The following are the different types of quick-acting analogue insulin you may be prescribed.

- Humalog
- Novorapid
- Apidra



This may be prescribed instead of soluble insulin as it acts more quickly and disappears from your system more quickly, reducing the risk of you having a hypoglycaemic episode (a 'hypo') after your meal when you have already digested your food.

It should ideally be injected 10–15 minutes before meals. It begins to work within 15 minutes, peaking between 50 and 90 minutes after injection. It can continue to have an effect on blood glucose for two to five hours, depending on the dose injected.

## **Long-acting insulin**

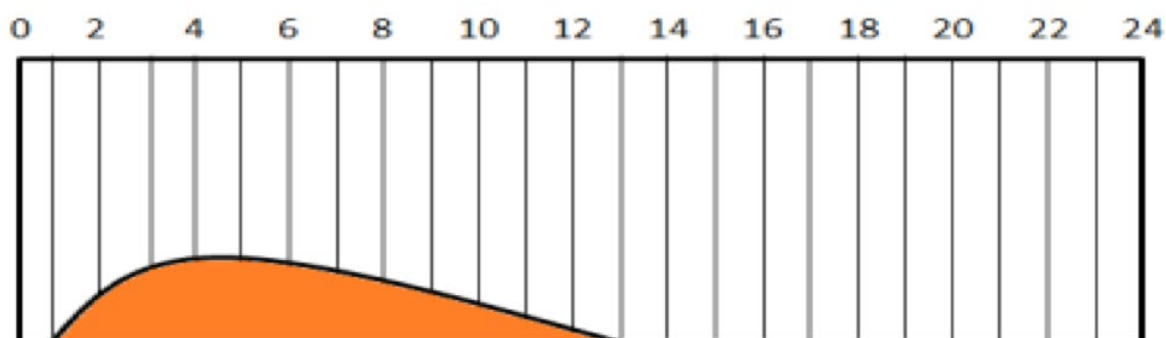
### *Isophane insulin*

The following are the different types of isophane insulin you may be prescribed.

- Insulatard
- Humulin I



- Hypurin Porcine Isophane
- Insuman Basal



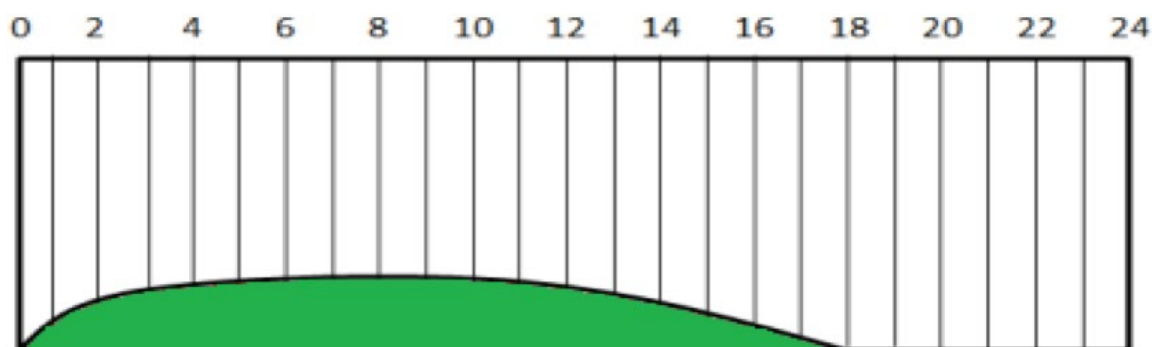
Isophane insulins are cloudy in appearance, and you need to mix them before you inject them. These insulins are often taken twice daily – in the morning and again at bedtime, although some people only need to take them once a day. They begin to work two hours after injection, peaking between four and six hours after injection. They continue to have an effect on blood glucose for eight to fourteen hours.

### *Long-acting analogue insulin*

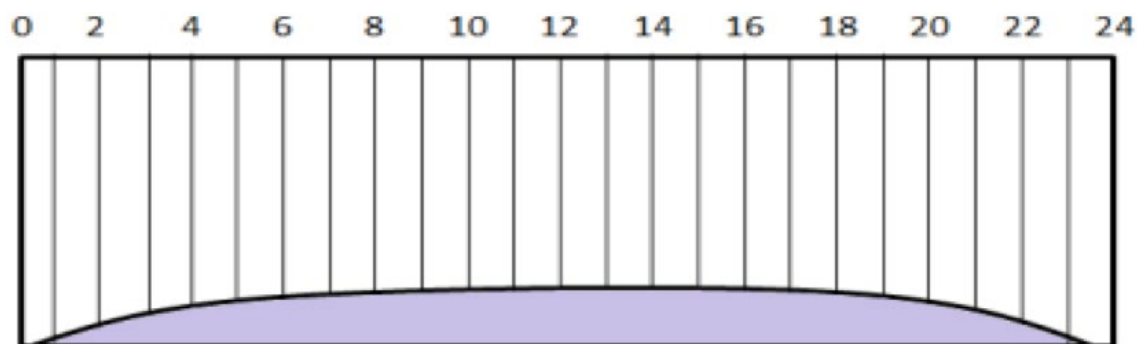
The following are the different types of long-acting analogue insulin you may be

prescribed.

- Levemir (can be taken once or twice daily)



- Lantus (Usually once daily, sometimes twice a day)



Long-acting analogue insulins are clear in colour, can be used instead of isophane insulins and last longer. They begin to work two hours after injection and last for 18–24 hours.

## Mixed insulins

These insulins are a mixture of quick-acting and longer-acting insulins and come in various proportions.

### *Mixed human insulin*

The following are the different types of mixed human insulin you may be prescribed.

- Humulin M3
- Insuman Comb 15
- Insuman Comb 25
- Insuman Comb 50

They are usually taken twice daily and injected approximately 30 minutes before breakfast and the evening meal.

### *Mixed analogue insulin*

The following are the different types of mixed analogue insulin you may be prescribed.

- Novomix 30
- Humalog mix 50
- Humalog mix 25

Mixed analogue insulin has a quicker action. This type of insulin is usually taken twice daily (although Humalog mix 50 may be taken three times daily if recommended by your diabetes care team) and injected five to fifteen minutes



before eating. Occasionally people may be advised to take this type of insulin with or after food.

