



Insulin injection sites

Insulin is injected through the skin into the fatty tissue known as the subcutaneous layer. It doesn't go into muscle or directly into the blood. Absorption of insulin varies depending on where in the body it's injected. The abdomen absorbs insulin the fastest and is used by most people. The upper arms, buttocks and thighs are also commonly used. While it is essential to give each injection in a slightly different spot within the one site (such as the abdomen), you should not change sites without discussing it with your doctor or

diabetes educator.

Factors that speed insulin absorption

Variation in absorption can cause changes in blood glucose levels. Insulin absorption is increased by:

- Injecting into an exercised area such as the thigh
- High temperatures, for example, shower, bath, hot water bottle, spa or sauna
- Massaging the area around the injection site
- Injecting into muscle – the deeper the injection into muscle, the faster the insulin will be absorbed.

Are there any side effects to insulin?

The main side effect is hypoglycaemia (low blood glucose level). Mild hypoglycaemia can be treated very quickly by the person with diabetes without too much disruption to their day. Very low blood glucose levels can be dangerous and must not be ignored. Find out more about hypoglycaemia.

Some people may experience a slight reaction where the injection was given. This usually goes away within a few days. Very rarely, a person may experience a reaction to the insulin that requires them to stop it and start another type of insulin.

Weight gain can occur after starting insulin therapy. This can be curbed by increasing exercise and reducing energy intake. The benefits of better blood glucose control with insulin outweigh the risks of increased weight.

Lipohypertrophy

Fatty lumps can develop in places that are over-used for injecting insulin so it is important to inject in a different spot each day. Insulin does not work as effectively when injected into areas of lipohypertrophy.

If you do have lipohypertrophy, the lumps can go away if you avoid injecting in these areas for a while. However, discuss this with your health care team. Your insulin dose may need to be reduced as it may work better in a new site and cause hypoglycaemia.

Injection sites

Storage of insulin

Unopened insulin should be stored in the fridge, between 2-8 degrees Celsius. Once opened, insulin may be kept at room temperature (between 25 to 30 degrees Celsius) for one month and then discarded.

Insulin can be damaged by extreme temperatures. It must not be left where temperatures reach over 30 degrees, eg, in the car or in direct sunlight.

Insulin should not be allowed to freeze as it will lose its potency, and must be discarded.