

What is diabetes?

Diabetes mellitus is a metabolic disease characterised by an elevated fasting blood glucose level due to defects in insulin secretion or inability to use insulin.

Type 1 diabetes (T1DM)

In T1DM the cells in the pancreas that produce insulin are destroyed by the body's immune system. Without insulin the body's cells cannot take up glucose (sugar) and turn it into energy. Glucose builds up in the blood stream and this can damage organs in the body such as the kidneys, heart and eyes. People with T1DM require daily injections of insulin to control their glucose levels.

They also test their blood glucose levels several times daily. The onset of T1DM typically occurs in people under 30, but can occur at any age. About 10-15% of all cases of diabetes are T1DM.

Type 2 diabetes (T2DM)

T2DM is the more common form of diabetes, affecting 85-90% of all people with diabetes. While it usually affects older adults, more and more young people, even children, are developing T2DM. In T2DM the pancreas produces insulin but the body's cells do not respond effectively to the insulin and so do not take up the blood glucose and turn it into energy. This results in a build-up of glucose in the blood.

The management of T2DM includes healthy eating and regular physical activity. Some people with T2DM may also need medication and insulin injections.

How does exercise help with diabetes?

Everybody benefits from regular exercise but for people with diabetes mellitus (type 1 or type 2) exercise can play a vital role in the management of their condition.

Exercise cannot reverse the damage to the cells in the pancreas that leads to the decreased production of insulin. However, exercise can improve the way the muscles respond to insulin, which, in turn, helps regulate the blood glucose level for some hours after the exercise.

Exercise also increases glucose uptake by the muscles in other ways that do not depend on insulin. In addition, exercise can lower the dose of insulin required by improving the body's response to insulin. It is important to exercise right for diabetes however, as those with this condition may have an increased risk of complications.

Things to remember

- To avoid potential problems, blood glucose levels need to be checked before, during and after exercise.
- Avoid injecting insulin into exercising limbs.
- To prevent foot ulcers; supportive shoes and well-fitting socks need to be worn and regular foot checks undertaken.

What type of exercise is best for diabetes?

Exercise Right recommends both supervised and unsupervised phases of exercise programs with changes in duration, intensity, and frequency of exercise.

For the best health benefits, Exercise Right recommend at least 150 minutes a week of moderately intense physical activities like:

- walking
- lap swimming
- dancing
- strength training
- bicycling
- tai chi

Always seek professional advice from an Accredited Exercise Physiologist. Find one here: www.essa.org.au/find-aep