

# Exercise and Type 2 Diabetes



## What is type 2 diabetes?

Type 2 diabetes mellitus (T2DM) is the most common type of diabetes. It occurs when your blood glucose or blood sugar level is too high. Blood glucose is your body's main form of energy and comes from the food you eat. Insulin is a hormone made by the pancreas that helps convert blood glucose into energy.

With T2DM, your body doesn't make enough insulin or it doesn't use it well. This increases the amount of glucose left in the blood.

The risk factors that increase your chances of developing T2DM include being overweight, not enough physical activity, a poor diet, and a family history of diabetes.



# What are hypoglycaemia and hyperglycaemia?

Hypoglycaemia means lower than normal blood sugar levels.  
Hyperglycaemia means higher than normal blood sugar levels.

- Normal blood sugar levels range between 4 and 7 mmol/L.
- Low blood sugar levels are below 4 mmol/L and can cause shaking, sweating, paleness, light-headedness, hunger, and pins and needles around the mouth.
- High blood sugar levels are above 10 mmol/L and can cause thirst, frequent urination, blurred vision, fatigue, and headaches.

If you use a blood glucose meter, it's important to know what a normal blood sugar level is. Your doctor can help you decide what the best target range is for you.

## What can I do?

T2DM is usually managed with lifestyle changes, but medication may be needed as well.

### **Lifestyle changes that help include:**

- Following a healthy diet
- Regular exercise
- Regular check-ups with your health care team
- Understanding your condition
- Learning how to self-manage your condition
- Getting support (e.g. a diabetes management plan)
- Maintaining a healthy weight
- Managing stress and improving your mental health.

# The benefits of exercise

Doing the recommended amount of physical activity reduces the risk of developing T2DM by almost 60%. That is why exercise is a vital component of T2DM management and prevention.

## Some of the benefits of exercise include:

- Improves your muscle's response to insulin and lowers blood sugar levels
- Boosts your body's sensitivity to insulin
- Helps prevent or delay T2DM
- Improves blood sugar control
- Helps you maintain a healthy bodyweight
- Helps you manage cholesterol and blood pressure
- Improves mood and reduces stress.



# What exercise is best?

Please note that these suggestions are only a guide. See your health care team for a personalised plan. Your exercise plan should remain the same whether you are managing or preventing T2DM.

The right amount and intensity of exercise depends on you. Some people may consider a slow walk on a flat surface to be moderate intensity. Others might consider a brisk walk up a hill to be moderate intensity.

The most important part is that you start moving your body regularly. Commit to a routine you think is achievable, which you can comfortably continue long term.

## How much exercise is enough?

The recommended amount of exercise for older people is at least 150 minutes of moderate activity every week.

Doing a mixture of aerobic activity and resistance exercises that you enjoy will give you the best results. Try aiming for resistance exercise on at least two days per week.

Practicing balance and working on your flexibility will help if your feet have been affected by nerve damage.

### Suggested exercises include:

- Cycling or exercise bike
- Dancing
- Gardening
- Golf
- Bowls
- Ping pong
- Swimming
- Tai chi
- Walking
- Water aerobics
- Weight training

# Further considerations

- Seek advice from your health care team before starting a new exercise program.
- Consider seeing an exercise physiologist for an individualised exercise program.
- If you take insulin check your blood sugar levels before and after exercise.
- Avoid a foot injury and prevent foot ulcers by wearing appropriate footwear.
- Get regular foot checks with a podiatrist.
- Low impact exercise is recommended if you have nerve damage in your feet.
- Avoid high intensity activity if you are feeling unwell.
- Start slow and progress gradually.
- Exercise with a partner or under supervision to reduce the risks associated with hypoglycemia.
- Drink plenty of fluids before, during, and after exercise. Fluids could be water or a sweetened drink if you need extra carbohydrates.
- Carbohydrate and medication adjustments may be necessary depending on your needs. Discuss this with your doctor.

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