

Physical activity & type 2 diabetes

Physical activity is any activity that gets your body moving, makes your breathing become quicker, and your heart beat faster. There are different types of physical activity but all offer benefits to your diabetes and your overall health.

What are the benefits?

For people with type 2 diabetes, physical activity helps to:

- > improve the body's response to insulin which can lower blood glucose levels
- > assisting with weight loss and maintaining a healthy weight
- > increase strength, power and balance
- > improve mood, reduced stress and tension
- > improve sleep
- > lower blood pressure and cholesterol levels, reducing the risk of heart attack and stroke
- > increase circulation in lower limbs
- > slow age-related loss of muscle mass, preventing osteoporosis and reduce risk of falls.



What is physical activity?

Physical activity includes planned exercise and day to day activity. There are two main types of physical activity: aerobic and resistance.

Aerobic activity is any activity that involves large muscle groups working at a pace that can be sustained for more than a few minutes. It gets your body moving, makes your breathing quicker and your heart beat faster.

Moderate or intense aerobic activity includes running, walking, dancing, exercise classes, cycling and swimming.

Light aerobic activity includes gardening, housework, golf, yoga, lawn bowls and choosing to walk up the stairs rather than take the lift.

Resistance activity involves working your muscles against a load or resistance. This can be your own body weight (such as moving from sitting to standing or doing squats or wall push-ups) or using equipment (such as machine weights, dumbbells, cans of food or resistance bands).

Physical activity does not have to be organised or competitive to be helpful. Whether on your own, or with family and friends, it can be fun.

How much is enough?

Doing any physical activity is better than doing none. If you are inactive, start by doing something, and slowly build up to match (or better) the national recommendations.

The Australian Physical Activity Guidelines for Adults aged 18 - 64 years suggest that you:

- > be active on all or most days every week

- > do up to 150 to 300 minutes (2½ to 5 hours) of moderate intensity physical activity or 75 to 150 minutes (1¼ to 2 ½ hours) of vigorous intensity physical activity, or combination of both moderate and vigorous activities, each week
- > use muscle strengthening activities on at least 2 days each week
- > minimise the amount of time spent in prolonged sitting
- > break up long periods of sitting as often as possible.

Keeping a log of your physical activity can help you assess what you do, what you don't do and what you may be able to do more of. You can use this information to make healthier choices, monitor your progress and celebrate your successes.

Are there any risks?

Overall, the benefits of physical activity outweigh the risks. Diabetes can put you at risk of certain conditions that could be affected by physical activity.

If you are new to physical activity, have other health problems, or are concerned about the safety of being (more) active, speak with your doctor or health professional about the best activities for you.

Before starting any new activity, your doctor will consider your blood glucose levels, any diabetes complications and the condition of your heart and blood vessels.

As most physical activity involves using your feet, seeing a podiatrist, doctor or credentialled diabetes educator before you start your program for a foot risk assessment and advice on suitable footwear is needed.

How can I manage my diabetes during physical activity?

Each person's response to physical activity is different. It is important to work out your way of balancing your physical activity with your diet and diabetes medication (e.g. tablets and/or insulin). Your doctor, credentialled diabetes educator or dietitian will be able to assist you.

Dietary advice

The intensity and duration of your activity will affect the amount of energy you need. Being active after a main meal containing carbohydrates (CHO) is a good start. Extra CHO may be needed if physical activity is of a high intensity or lasts a long time.

It is also important to stay well hydrated. Drink enough water to avoid thirst and remember you will need a bit more than usual while being active. Your dietitian or credentialled diabetes educator will be able to assist you with any questions and concerns.

Diabetes medication

The intensity and duration of your activity will affect your diabetes tablets and/or insulin. If you are increasing your activity level to reduce your weight, your medication may need to be adjusted over time. Your doctor or credentialled diabetes educator can discuss your medication and any changes needed.

Blood glucose levels

The affect that physical activity has on blood glucose levels is hard to predict. There are some guidelines that assist in keeping you safe to enjoy what you do. Testing your blood glucose levels before, during and after activity will check how your blood glucose levels are affected and if further changes are needed. Your doctor or credentialled diabetes educator can discuss assist you.

Is there any precautions?

Hypoglycaemia – low blood glucose (with certain medications and insulin) can occur during, when you stop and in the hours after physical activity. The responses to low blood glucose levels such as sweating and palpitations may be confused with your response to the activity.

Always carry your blood glucose meter and 'hypo' treatment. Your doctor or credentialed diabetes educator can discuss risk, provide advice for prevention (e.g. CHO requirements, changes to diabetes medication (tablets and/or insulin), a *Hypo Action Plan and Hypo Kit*.

Hyperglycaemia – high blood glucose can result if you have not been able to match your diabetes medication (tablets, injectables and/or insulin) and CHO foods with very intensive or long duration activity.

If mildly high blood glucose, it is not necessary to stop. Vigorous activity should be avoided if the blood glucose level is greater than 15.0mmol/L. Your doctor or credentialed diabetes educator can discuss risk and provide advice (e.g. CHO needs, changes to diabetes medication (tablets and/or insulin) and a *High Blood Glucose/Sick Day Action Plan*.

Retinopathy – if you have retinopathy, you may need to avoid strenuous activity until your eye specialist says your condition is stable.

Neuropathy – if you have lost sensation in your feet, you should talk to your doctor, your podiatrist or credentialed diabetes educator about what activity is safest for you to do.

Is there any reason to stop being active?

Stop your activity if you get chest, abdominal, neck or arm pain, tightness, palpitations or irregular heart rate, breathlessness, feel lightheaded or have any other unusual symptoms. These symptoms require urgent assessment at the nearest hospital emergency department.

If you get any other pain, stop until the pain goes away then re-start your activity. Make sure your doctor or diabetes specialist knows about what has happened. Over time you should be able to extend your activities.

If you are getting symptoms of a 'hypo', check blood glucose levels and treat as per your *Hypo Action Plan*. Do not continue until your symptoms have gone and your blood glucose level has returned to your target range.

Any other considerations?

- > Wear your medical identification (e.g. Medic Alert).
- > Wear sunscreen, protect your head and layer your clothing so you can add or remove clothes as needed.
- > Check your feet after exercise or at least once a day looking for signs of redness, blisters, cracks and calluses. If your feet perspire, change into dry socks.
- > Each time you reach your goal, reward yourself then set a new goal to stay motivated.
- > Illness – do not be physically active if you are unwell.

Important points to remember

- > Think of physical activity as an opportunity, not an inconvenience.
- > Be active every day in as many ways as you can.
- > Put together at least 30 minutes of moderately intensive physical activity on most, if not all, days.
- > Wear suitable foot wear, consult your podiatrist, doctor or credentialed diabetes educator.
- > As you are at risk of low blood glucose (hypoglycaemia), be prepared and have a *Hypo Action Plan*.
- > If you have a blood glucose level above 15.0mmol/L (not directly after eating), delay your activity and refer to your *High Blood Glucose/Sick Day Action Plan*.
- > Discuss the need for adjusting your CHO foods and/or insulin with your doctor, dietitian or credentialed diabetes educator.

Personal Goals

Where can I go for more information?

Diabetes Australia

www.diabetesaustralia.com.au

National Diabetes Services Scheme

www.ndss.com.au

Dietitians Australia

www.dietitiansaustralia.org.au

Australian Podiatry Association

www.apodc.com.au

Physical Activity Australia

www.physicalactivityaustralia.org.au

For more information

Diabetes Service

Rural Support Service

PO Box 287, Rundle Mall

ADELAIDE SA 5000

Telephone: (08) 8226 7168

www.chsa-diabetes.org.au

www.sahealth.sa.gov.au/regionalhealth

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