

LIVING with DM

Physical exercise and diabetes

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Nowadays, physical exercise is considered one of the fundamental pillars of diabetes treatment, along with diet and medication.

The main beneficial effect of exercise is that it allows for better metabolic control of the body by increasing glucose utilisation and insulin sensitivity. It also helps to take care of your heart and reduce the risk of other diseases, such as hypertension, hyperlipidaemia and obesity.

It is therefore recommended that everyone with diabetes should be physically active on a regular basis.



A little bit of physical activity is better than none at all!

Even if you fall short of the general recommendations, daily physical activity such as housework, walking the dog or gardening increases your daily energy expenditure and helps you to lose weight.

Daily movement helps to improve blood glucose control and is recommended as a starting point for anyone who is sedentary and unwilling or unable to engage in more structured physical activity.

Before you start

According to the referring institutions, **you do not need medical clearance for exercise** if you are a sedentary, asymptomatic person who wishes to start a **low to moderate intensity activity, which does not exceed the demands** of a brisk walk or daily life.

However, **adults with diabetes** who plan to exercise at a higher intensity or who are at high risk of cardiovascular disease (e.g. high cholesterol, smokers, family history of cardiovascular disease, etc.) **should have a medical examination** before starting.

Exercise recommendations for people with diabetes

The following table provides general recommendations based on scientific evidence regarding physical activity and exercise in people with diabetes. These recommendations should be adapted to individual characteristics and state of health.

	Aerobic	Strength	Flexibility and balance
Type of exercise	Activities involving large muscle groups (walking, running, swimming, cycling). They can be performed continuously or in intervals.	Resistance exercises that can be done using bodybuilding machines, free weights, resistance bands and/or body weight.	Flexibility: stretching of large muscle groups, yoga, pilates, tai chi, etc. Balance (> 65 years): walking with heel-toe support, one-legged postures, multidirectional movements.
Intensity	Moderate to vigorous (4-8 on a subjective scale of 1-10).	From moderate (e.g. 15 repetitions, but no more than a further 15 repetitions allowed) To vigorous (e.g. 6-8 repetitions, but no more a further 6-8 repetitions allowed)	Flexibility: stretch to the point of tightness or the point of slight discomfort. Balance: light to moderate.
Duration	Moderate intensity: 150 min/week or more. Should be done at intervals of at least 10 minutes with a target of at least 30 minutes a day. Vigorous intensity: 75 min/week would be sufficient for a physically active person (able to run at 9.7 km/h for at least 25 min).	At least 8-10 exercises in 1 to 3 sets.	Flexibility: hold the dynamic or static stretch for 2-4 repetitions; 10-30 seconds of each exercise. Balance: any.
Frequency	3-7 days a week (without being inactive for 2 consecutive days).	2-3 days a week on non-consecutive days.	2-3 days a week.
Progression	Increase intensity, frequency and/or duration to the recommended 150 min/wk at moderate intensity. Greater emphasis should be placed on vigorous-intensity aerobic exercise, unless otherwise indicated.	Initially, the intensity should be moderate; performing 10-15 repetitions per set and increasing the load as the number of repetitions decreases (8-10). The increase in load may be followed by an increase in the number of sets and eventually the frequency of training may be increased.	Increase duration and/or frequency over time.

Remember...

- ★ It is very important to understand the effects of different types of exercise on glycaemic control. That is why it is essential to design an appropriate diabetes care plan.
- ★ This plan should include monitoring of blood glucose and, if appropriate, ketone bodies with the established monitoring frequency, as well as the figures that would be contraindications for exercise. For example, exercise is contraindicated in cases of hypoglycaemia (<70 mg/dL) and severe hyperglycaemia (over 300 mg/dL or over 250 mg/dL with positive ketonaemia), especially in patients with type 1 diabetes.
- ★ If you are being treated with insulin, be aware of the doses and adjustment and correction strategies for the type of activity planned. Be extremely alert and learn to recognise the warning signs of decompensation due to hypoglycaemia (dizziness, drowsiness, blurred vision, headache...), how to act in these cases and where to contact the health care team, if needed.