

# Food Fact - Diabetes and Exercise

Regular exercise has many benefits including helping to reduce blood glucose levels and total cholesterol levels. It can help with weight loss and have a positive impact on self-image.

## Activity recommendations

We are all recommended to do 30 minutes of activity 5 times a week to improve our general heart health and overall fitness. This does not have to mean going to the gym, activity means anything over and above your usual; daily routine, e.g. gardening, dusting, hovering, shopping.

Also, it is recommended that you do strength exercises on 2 or more days a week that work all the major muscles (legs, hips, back, abdomen, chest, shoulders and arms). Muscle-strengthening exercises are counted in repetitions and sets. A repetition is 1 complete movement of an activity, like a biceps curl or a sit-up. To get health benefits from strength exercises, you should do them to the point where you struggle to complete another repetition. Examples of muscle-strengthening activities for most people include lifting weights, heavy gardening, body weight exercises and resistance band exercises.

The way in which exercise will affect your blood glucose levels will depend on the **type**, **duration** and **timing** of exercise you do.

## Types of exercise - what effect will they have on blood glucose levels?

- **Anaerobic exercise:** Any type of short, sharp exercise e.g. sprinting, weights. This type of exercise might **RAISE** your blood glucose levels due to the hormonal response it provokes.
- **Aerobic exercise:** Exercise which can be maintained for a while e.g. walking, swimming, cycling, running. This uses up extra glucose during and for a while after exercise and therefore is likely to **LOWER** your blood glucose levels. If you are on insulin or certain oral hypoglycaemic agents (e.g. gliclazide) you might be at risk of hypoglycaemia after certain types of exercise. If you are not on diabetes medication you will not be at risk of hypoglycaemia.
- **Intermittent exercise:** This is 'stop start' exercise e.g. football, netball, rugby. This tends to be a combination of the two different types of exercise and may have less of an effect on blood glucose levels than you think.

## Duration of exercise

The longer you continue the activity the greater the immediate impact on your blood glucose levels. With aerobic activity this can also lead to lower blood glucose levels several hours later.

## Timing of exercise

When you exercise will have an effect on your blood glucose levels. Think about when you had your last meal? When you had your gliclazide or rapid acting insulin? If exercising less than 2 hours after rapid insulin you will be more prone to hypoglycaemia.

## Monitoring

This is important if you think you are at risk of low blood glucose levels as a result of exercise. Ideally monitor before starting the exercise and then again when you finish. If you have been exercising for over an hour test after 2 hours as blood glucose levels might continue to fall.

## Fuelling exercise

Carbohydrate is the fuel we use for exercise / activity. It is important not to overcompensate for extra activity by eating too much carbohydrate, particularly if one of your aims is to lose weight. If you are not at risk of hypoglycaemia you do not need any extra carbohydrate unless you are exercising for over an hour.

If you are taking medication that might cause hypoglycaemia think about reducing the amount of insulin you take or eating extra carbohydrate before you start. Base this decision on the amount of exercise you plan to do a, when you are doing it and your blood glucose levels before you start.

## Refuelling after exercise

If you have been exercising for over an hour it is important to replenish the body stores you have used. Eat your usual meal or snack afterwards and ensure that this contains carbohydrate. Otherwise try to eat a carbohydrate snack soon after you have finished e.g. a glass of milk and a plain biscuit, a banana, a yoghurt and fruit.

## More information

For more individual advice on amounts of carbohydrate needed for certain sports and on insulin adjustment for exercise please ask to be referred to your dietitian and diabetes specialist nurse.

## Other sources of information

[www.runsweet.com](http://www.runsweet.com)  
[www.diabetes-exercise.org](http://www.diabetes-exercise.org)  
[www.mountain-mad.org](http://www.mountain-mad.org)

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