

DIABETES

WHAT IS IT?

Staying safe continued

If you get any of the following problems, get medical advice from your GP or by contacting NHS Direct (see below):

- Discomfort in your chest or upper body brought on by physical activity
- Uncomfortable or severe breathlessness during your activity
- Dizziness or nausea on exertion
- Fainting during or just after doing physical activity
- Palpitations (a very fast or irregular heart beat) during activity.

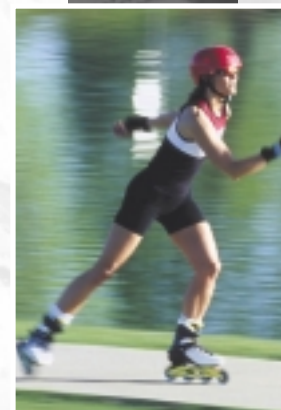
Remember: The more active you are, the more benefits you will get.

Be active - be safe - have fun!

For more information

- Diabetes UK 020 7323 1531 and www.diabetes.org.uk
- BBC Online Health www.bbc.co.uk/health/diabetes/
- NHS Direct 0845 4647 or www.nhsdirect.co.uk
- SportEX Health - information on physical activity www.sportex.net

Local information



Diabetes is a condition in which the amount of glucose (sugar) in the blood is too high because the body cannot use it properly. Glucose comes from the digestion of various foods such as rice, bread and potatoes but also from sugar in sweet foods. It is also manufactured by the liver. Insulin, a hormone made by the pancreas, is responsible for transporting the glucose from the blood to the muscles of the body where the glucose is then used as fuel.

There are two types of diabetes, type 1 also known as insulin dependent diabetes and type 2 which may be known as non-insulin dependent diabetes. Type 1 diabetes develops if the body is unable to produce any insulin. Type 2 develops when the body is able to make some insulin but not enough, or when the insulin produced doesn't work properly (insulin resistance). In these cases glucose levels in the blood are difficult to control and the glucose can not be transported to the cells. Exercise along with a good diet and in some cases insulin injections or tablets are the main ways of keeping blood glucose levels as near to normal as possible.

If there is not enough insulin to carry the glucose in the blood to the muscles, chemical messengers in the muscle continue to relay requests for glucose to fuel their work. With no vehicle (insulin) to transport this glucose from the blood into the muscles, the glucose levels in the blood just continues to rise. It is important to remember that the messages from the muscles requesting glucose continue to be sent, irrespective of how much or little insulin is available.

High levels of glucose in the blood is known as hyperglycaemia. The opposite scenario is too little glucose in the blood which is called hypoglycaemia. This can be caused by an injection of too much insulin or alternatively an insufficient intake of carbohydrates meaning there is no glucose available to be supplied to the muscles.

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PHYSICAL ACTIVITY AND DIABETES

How does physical activity help if you have diabetes?

- Physical activity, as well as a healthy diet and prescribed medications, is an important part of diabetes control. It helps maintain good blood glucose control and blood pressure levels and helps with weight management.
- Good diabetes control will reduce the chance of developing diabetes complications such as heart disease, or kidney problems.
- The short-term benefits of regular physical activity include maintaining good blood glucose levels (4-7mmol/l before meals, rising to no higher than 10mmol/l two hours after meals). It also helps improve overall blood glucose control in conjunction with appropriate monitoring of diabetes medication and carbohydrate intakes.
- Physical activity also helps reduce many other forms of ill health such as high blood pressure, high blood cholesterol and being overweight.
- In addition physical activity, along with a healthy diet, helps reduce stress, improves your overall feeling of well-being and quality of life and helps you to sleep well.
- It also reduces the risk of bowel cancer, osteoporosis and the risk of falling.

What type of activity is best?

While stamina-based activity is particularly important when you have diabetes, you also need to include some strength and flexibility-based activity to get the best health gains.

Stamina-type activities: Walking, swimming, cycling, dancing, tennis and housework (washing floors or windows)

Strength-type activities: Walking uphill, carrying shopping, climbing stairs, gardening (digging or mowing) and housework

Flexibility-type activities: Dancing, yoga, Pilates, T'ai Chi and gardening

Tips on increasing your activity level

- Walking is an ideal activity as it's free and easy to do anywhere. Perhaps take a dog for a walk to make it more interesting.
- Look for opportunities to be active during your whole day. For example park at the far end of the car park, or walk one stop further to catch the bus, and take 10 minutes out of your lunch break to go for a walk.
- Try using the stairs instead of the escalator. If you do use the escalator start by walking part of the way up and gradually progress to walking up the whole way.
- Choose activities that you enjoy doing. Involve your friends and family to make your activities fun, sociable and enjoyable.

How much and how often?

Frequency Your main aim is to build up to 30 minutes of moderate intensity activity on 5 or more days of the week. If this seems too much to start with, try starting with 3 x 10 minute walks spread throughout the day and work towards 2 x 15 minute walks and then 30 continuous minutes. One goal is to try and increase your activity by 2 minutes each day.

Intensity Moderate intensity means breathing harder and getting warmer than normal. It does not need to be hard. You should be able to talk and be active at the same time.

Advice Whatever your chosen activity, it should be performed at a gentle intensity which gradually increases until after about 10 minutes you have reached the level you can maintain for your chosen period of activity. This gets the blood flowing to your muscles and allows your heart rate to increase gradually. When you are nearing the end of your activity you should also slowly decrease the level of activity over 5-10 minutes to allow your heart rate to slow down gradually.

Remember Set yourself realistic goals and don't worry if you miss one day. Just make sure that the next day you pick up where you left off.

Staying safe

- It is important to have your blood pressure checked before starting any activity and regularly after this.
- If you change or increase your activity patterns from normal and you use insulin, discuss with your doctor or diabetes nurse whether you need to change your insulin intake or monitoring.
- It's a good idea to take your blood glucose monitor with you when you exercise as many symptoms of exertion are similar to those of low glucose levels ('hypos'), eg. sweating, headache, high pulse rate.
- If you take insulin or other medication for your diabetes you may need extra glucose during or after activity. Have a sugary carbohydrate snack with you when you exercise in case you get any of the symptoms of 'hypos'.
- People with diabetes are more likely to get foot ulcers. Keep your feet clean and dry and regularly check them for any sore areas.
- If you have any eye problems or high blood pressure avoid strenuous activity or lifting heavy weights.