



**Wolverhampton
Diabetes Care**

Hypoglycaemia and Exercise

Physical activity and exercise are good for everyone including people with diabetes. There are many health benefits but a low blood sugar is a risk that should and can be avoided.

What do we mean by exercise?

You should think of this as any extra activity you do above the normal day to day effort. It doesn't just mean jogging or going to the gym or anything dramatic. It includes simple things like doing extra housework, going shopping, and working in the garden. It may be activity at work especially if you have a heavy job.

Who can get it?

You will not be affected if you are on diet treatment alone but those people on diabetes tablets, especially sulphonylurea tablets, and those on insulin can get a low sugar (hypoglycaemia) when exercising unless the right actions are taken.

Why does it happen?

Activity and exercise burns energy and causes the blood sugar (glucose) levels to fall. This can happen during or just after the exercise but it is important to remember that it can fall up to 12-24 hours after finishing exercising as the body tries to replace the glucose and energy in the muscles. Remember that, if you are on tablets or insulin injections, these treatments will also be forcing the blood test down. If you haven't eaten enough then there will not be enough to replace the amount you have burnt off. All of these effects can lead to a hypo.

Exercise and when to do blood testing?

Gentle activity may well not affect your blood sugar levels but anything out of the ordinary will.

It's a good idea to get to know how exercise affects your blood sugar. When you first start doing any form of exercise or moderate physical activity (such as gardening or shopping) you should test before, during, and after, to work out what is happening. You will then learn what to expect.

After physical activity your muscles will take at least 1-2 hours or longer to refuel. During this time your blood sugar may still drop so it is important to check your blood sugar levels some hours after exercise to check for late hypos, which may occur in the night.

Balancing exercise, food and insulin?

Depending on the type of exercise you do, you may need to lower your insulin dose and / or increase the food you eat to avoid low blood sugars (hypos).

For short strenuous exercise, (e.g. squash), you may need more food beforehand and extra food afterwards at your next snack or main meal.

For prolonged exercise (e.g. a long cycle ride, foot ball or rugby match, gardening), you may need extra food during the exercise as well as before and after.

When and if to change your insulin dose is something you learn by trial and error. For prolonged activity, as well as eating more, you may well have to drop the dose before exercise by 10 or 20% but if you drop it too much the blood sugar will shoot up higher than expected. Those on tablets rarely have to change the dose and can usually manage by just eating a little extra.

What precautions should I take?

Before taking up an exercise programme, check it's suitability for your own benefit and safety with your doctor or nurse.

Don't forget the other medical conditions you may have that may be affected by exercise, especially any heart conditions.

Regular exercise is best rather than one-off bursts of activity – that way you can get used to what to expect. .

Check your own blood glucose levels frequently during exercise to work out what's going on.

Does not start exercise if your blood sugar levels are too low without putting that right.

Do not exercise if your blood sugar levels are too high, more than 15mmol/L especially if you are feeling unwell or ketones present in your urine.

Try to avoid exercise during the peak of insulin activity, within 1 -2 hours of your injection.

Exercise causes an increase in the blood flow to the limbs, so use your abdomen (tummy) for any injection taken before or up to 2 hours of after exercise,

Have a starchy (carbohydrate) snack before, during or after exercise, especially if prolonged.

Act straight away if you have any hypo symptoms. Carry something sugary such as Lucozade or dextrose tablets so that you can take them straight away if your blood glucose levels fall.

Don't forget to wear good shoes and socks when exercising as this will ensure that you do not damage your feet.

Always carry your diabetes ID card.

Seeking advice and what care to expect

You should have full advice about blood testing, what the correct foods to eat are and when and how to adjust your treatment, especially insulin. You must know how to take care of hypos. If you already do exercise or you have a heavy manual job, or if you are starting up something new, then how to deal with your diabetes at that time should be worked through with you. Your medical team should give you clear advice if there are any risks to you from doing exercise. If you have problems with your diabetes during exercise your medical team will advise you how to put them right so that you can carry on and enjoy the sort of exercise that you want to do.