



York Teaching Hospital
NHS Foundation Trust

Managing your Diabetes: Physical Activity

Information for patients, relatives and carers

① For more information, please contact:

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Caring with pride

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Introduction

This leaflet gives you information on how to manage your blood glucose levels during physical activity. This guidance aims to prevent your blood glucose from becoming too high or too low.

How does increased activity affect my diabetes?

Regular physical activity is an important element of a healthy lifestyle and can improve your diabetes control. Activity increases your body's demand for fuel. As a consequence, glucose in the body can be burned very quickly during increased activity potentially resulting in hypoglycaemia (blood glucose less than 4mmol/L). Depending on the type of activity you do or the intensity, it can also increase your blood glucose level.

This can be prevented with increased monitoring, and successful management should not prevent you being active.

What precautions should I take?

- Test your blood glucose level prior to your activity, ideally at least two times in the hour before you exercise so you know the direction your blood glucose level is moving.
- If your glucose is between 4 - 7 mmol/L, prior to activity have a low fat snack for example either a banana: a cereal bar: a slice of toast or a yoghurt.
- If you manage your diabetes with insulin, you may need to adjust doses prior to and after exercise (see table 1 for guidance). Try not to exercise within 90 minutes of an injection as this may increase your risks of hypoglycaemia.
- Avoid increased activity if your blood glucose level is above 14 mmols/L.
If you have Type 1 diabetes you should check for ketones.
- If you manage your diabetes with insulin, avoid injecting into large working muscles such as your arms or legs. Consider using your abdomen to inject prior to activity if possible.

- Ensure that you are up to date with the current advice on hypoglycaemia treatment; ask a member of staff for a copy of the Trust hypoglycaemia management leaflet if needed.
- Increased activity can affect your blood glucose readings for up to 8 - 12 hours after exercise, so monitor closely after exercise and seek advice from your diabetes team if needed.
- The table below will guide you in any insulin adjustments needed prior to, during and after activity.
- Following increased activity you may need to 're fuel'. This is usually within two hours to prevent hypoglycaemia after your activity. Consider having longer acting carbohydrate snack including some protein, for example milkshake: a sandwich with low fat filling: or mixed fruits and nuts.
- Keep hydrated.

Insulin adjustments before and after activity:

	Light Activity	Medium Activity	Heavy Activity
Examples	Walking, short bike rides	Swimming, football, cricket, rugby	Weekend hiking, sports tournaments
Meal time (bolus) insulin	No reduction Or up to 25% reduction	25% - 50% reduction both before and after	Up to 75% reduction both before and after
Background (basal insulin)	No reduction	No reduction or up to 25% reduction	30%-50% reduction

What do I need to keep with me during activity?

- Your blood glucose monitoring equipment.
- Your usual hypoglycaemia treatment i.e. Jelly Babies, glucotabs or dextrose tablets.
- A snack i.e. cereal bar, portion of fruit. You may need additional carbohydrate snacks during your activity depending on the intensity and duration.
- Bottle of water to drink before during and after exercise to keep hydrated.

How will I know if my blood glucose level is too low?

Symptoms of hypoglycaemia can occur rapidly during increased activity and can be confused with the effects of exercise.

You need to pay particular attention to how you are feeling during and after activity. Hypoglycaemia may cause a lack of concentration, headache, dizziness, nausea, anxiety, increased heart rate, shakiness and blurred vision.

These symptoms are not exhaustive; if you feel unwell in any way during or after your activity stop and check your blood glucose and manage your hypoglycaemia.

How will I know if my blood glucose levels are too high and what should I do?

You may feel more tired, have increased thirst or pass more urine. Hyperglycaemia can be associated with illness. If your blood glucose is above 14mmol/L before activity, you should treat the high glucose levels with a corrective dose of insulin or do not do the activity until your glucose level is lower.

In type 1 diabetes you should also check for ketones and if present DO NOT do the activity and correct your blood glucose level (see illness management leaflet for advice on corrective insulin doses).

Remember

Being active is good for our health both physical and emotional.

There may be some restrictions imposed by sports governing bodies for you pursuing some sports due to the increased risk of hypoglycaemia. Discuss with your diabetes team if you have any concerns re this.

Tell us what you think of this leaflet

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact:

Diabetes Centre, The York Hospital, Wigginton Road, York, YO31 8HE, telephone 01904 726510 or email diabetesadmingroup@york.nhs.uk.

Teaching, Training and Research

Our Trust is committed to teaching, training and research to support the development of health and healthcare in our community. Healthcare students may observe consultations for this purpose. You can opt out if you do not want students to observe. We may also ask you if you would like to be involved in our research.

Patient Advice and Liaison Service (PALS)

PALS offers impartial advice and assistance to patients, their relatives, friends and carers. We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services.

PALS can be contacted on 01904 726262, or email pals@york.nhs.uk.

An answer phone is available out of hours.

Providing care together in York, Scarborough, Bridlington,
Malton, Selby and Easingwold communities

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Owner	Tara Kadis, Diabetes Specialist Nurse
Date first issued	November 2017
Review Date	November 2019
Version	1 (issued December 2017)
Approved by	Centre for Diabetes and Endocrinology
Document Reference	PIL 1172 v1

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