

Blood glucose levels (BGLs) and exercise

This resource is for people with diabetes and helps to explain how your blood glucose levels (BGLs) can change with exercise.

How does exercise change my blood glucose levels (BGLs)?

Exercise can cause your BGLs to increase or decrease. It is important to learn how exercise changes your BGLs, so that you can exercise safely.

BGLs may drop during or after activity

- Exercise like running, swimming or cycling can lower your BGLs during exercise.
- Your BGLs can also decrease for up to 24 hours after exercise.
- To prevent low BGLs (hypos) during and after exercise extra carbohydrate food, less insulin or changes to both might be needed.

BGLs may go up during or after the activity

- High intensity exercise or competitive sport can raise BGLs. This is due to the release of stress hormones.
- BGLs will usually fall again after the exercise.
- Extra carbohydrate or less insulin might be needed after exercise.

How do I manage my blood glucose levels when exercising?

For good BGL control, you may need to change your insulin dose, eat extra carbohydrate food or change both insulin and carbohydrate. Talk to your diabetes team to make a plan that is right for you.

Adjusting insulin dose

How to change your insulin for exercise depends on your fitness level, the duration and intensity of the exercise and your insulin pattern. For example, you may need to reduce your rapid acting insulin if exercising within 2 hours of taking this. Your diabetes team can help to guide you with these changes.

Eating extra carbohydrate food

Extra carbohydrate food may be needed for exercise lasting >30 minutes.

As a general guide consider:

- 1 x 15g (15g) carbohydrate serve for each hour of gentle exercise
- 2 x 15g (30g) carbohydrate serve for each hour of moderate exercise
- 3 x 15g (45g) carbohydrate serve for each hour of intense exercise

See table for examples of carbohydrate serves.

1 serve carbohydrate (15g)
<ul style="list-style-type: none">• 1 slice of bread• 1 piece of fruit (e.g. banana, apple)• 1 cup (250ml) plain milk• 1 tub (150-200g) yoghurt• 2 plain sweet biscuits (e.g. Nice, Arrowroot)• 250ml Gatorade/Powerade• 200ml fruit juice

Exercise tips

- Test BGLs **before, during and after** exercise.
- Talk with your diabetes team to make an exercise plan that works best for you.
- Always carry fast acting carbohydrate to treat a hypo if needed (see table below).

Fast-acting carbohydrate 1 serve (15g carbohydrate)
<ul style="list-style-type: none">• 100ml Lucozade• 7 jellybeans• 150ml soft drink (non-diet)• 200ml fruit juice• 3 teaspoons sugar or honey• Glucose gel or glucose tablets equal to 15g (talk with your diabetes team)

For further information, contact your Dietitian or Nutritionist