GUIDE FOUR
OF FIVE

04

THINK ICE BEFORE EXERCISE

EXTOD

EXTOD Exercise Confidence Guides

Many people with Type 1 diabetes worry that exercise will cause their blood glucose levels to drop too low. That concern is completely understandable.

The good news is that with a little planning you can greatly reduce this risk. For most of us, as we gain experience, all those early anxieties start to fade away and we begin to enjoy moving, and exercising freely, just like those who don't live with diabetes.

One of the simplest ways to remember how to prepare for exercise is ICE:

I Insulin
C Carbohydrate
E Exercise

These three things work together. Learning how they interact will help you exercise more safely and with greater confidence.

I – Insulin

Insulin lowers your blood glucose levels. If you have **too much active insulin** in your body when you begin exercising, your blood glucose levels are much more likely to fall during or after activity.

Depending on the type, timing and intensity of your exercise, you may need to:

- reduce your mealtime insulin before exercise
- reduce your background (basal) insulin in some situations or go into exercise or ease-off mode if on a closed-loop system
- avoid exercising immediately after a large insulin dose

Exactly what works for you will depend on your insulin regimen and the type of exercise you are doing. Your diabetes team can help you develop a plan that suits you.

Remember: exercise itself can make insulin work more effectively, so the amount of insulin already in your body is one of the biggest factors influencing your blood glucose response.

C – Carbohydrate

Carbohydrate is your body's main source of energy during exercise.

Sometimes your body simply needs additional carbohydrate before, during or after activity to keep your blood glucose levels within a target range (7-10 mmol/L for exercise).

You may need extra carbohydrate if:

- your blood glucose levels are falling before exercise
- you are exercising for a prolonged period
- your exercise is more intense than usual
- you still have a significant amount of active insulin in your body.

Not every activity requires extra carbs, but it is always sensible to carry a fast-acting source of glucose, such as glucose tablets or glucose gel, just in case.

Learning when you need carbohydrate, and when you don't, is one of the key skills that develops with experience.

E – Exercise

Different types of exercise affect blood glucose levels in different ways.

Steady aerobic exercise

Examples include walking, cycling, jogging, swimming, housework and gardening.

These activities often cause blood glucose levels to fall, particularly if active insulin levels are high.

High-intensity (explosive) exercise

Examples include sprinting, weight training, competitive sports; matches or events.

These activities often cause blood glucose levels to rise temporarily because your body releases stress hormones such as adrenaline.

Interval and mixed-intensity exercise

Examples include HIIT, HYROX, circuit training and team sports.

Blood glucose responses vary between individuals and depend on the intensity of the session, the type of activity and how much insulin is circulating.

Whatever type of exercise you do, continue to monitor your blood glucose levels after exercise. Even if your glucose rises during exercise, it may fall later. Learn from your own experience and how your body responds to the exercise you do.

Remember...

ICE is simply a way of helping you think about the three things you can influence – Insulin, Carbs and Exercise – so you can enjoy being active safely and confidently, and start doing things you never thought you could.

The ICE approach

Before you exercise, ask yourself three simple questions:

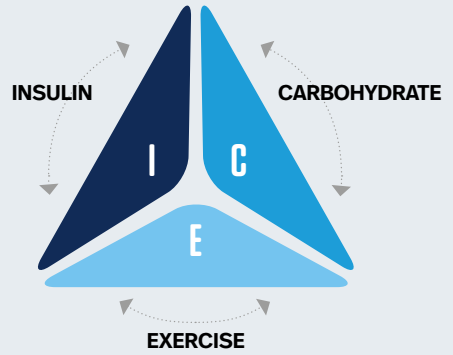
Insulin: how much active insulin do I currently have? When did I last give a bolus?

Carbohydrate: do I need any carbohydrate before or during this activity?

Exercise: what type of exercise am I about to do, and how long will it last?

Thinking about these three factors before you start will often help you avoid problems before they happen.

THINK ICE



Technology can help

Continuous glucose monitors (CGMs) and insulin pumps have made exercising with Type 1 diabetes easier than ever before.

Watching the direction of your glucose trend – not just the number itself – can help you make better decisions before, during and after exercise.

Remember: sensor readings can sometimes lag behind blood glucose levels, particularly during rapidly changing exercise. If your reading doesn't match how you feel, check with a finger-prick blood glucose test if possible.

Your EXTOD Guides challenge 4

Think ICE before every exercise session you do this week. Before you begin your activity, just pause for 30 seconds and ask yourself:

I – Insulin: how much active insulin do I have inside me?

C – Carbohydrate: do I need any carbs before or during this activity?

E – Exercise: what type of exercise am I about to do and for how long?

The aim is simply to build the habit of Thinking ICE before every exercise session. **Remember:** the more often you do it, the more confident and instinctive it becomes.

Your EXTOD Guides

- ☐ **01** Why should I exercise?
- ☐ **02** How exercise affects my blood glucose
- ☐ **03** How do I start exercising?
- ☐ **04** What is the ICE approach?
- ☐ **05** Make exercise work for you

Scan here to continue your journey

Visit the EXTOD website to explore more resources and continue learning.

extod.org

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Top tips from T1s

"If I exercise within 2 hours of a meal I've found I have to reduce my meal insulin by 50%."

"Avoid starting exercise with large amounts of active insulin whenever possible."

"Always carry fast-acting glucose with you that you know works for you."

"Monitor your blood glucose levels before, during and after exercise."

"Everyone responds differently so learn from your own experience."

"Every T1D gets it wrong sometimes. But don't let that stop you."

"If my glucose is 7 mmol/L and the arrow is down on my CGM, I take 15 grams of fast-acting carbohydrate before starting a run."

"Don't worry about hypos. Plan for it and ask why if you get one."

Your next step: Guide 5 – Make exercise work for you.

In the final ECG 5, you'll learn how to turn everything you've discovered into lifelong confidence. You'll explore how to recognise patterns, make small adjustments, learn from every exercise session and develop habits that will help make exercise a part of your everyday life.