THE ABLE DIABETIC
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INNER CIRCLE RESOURCE

T1D and Exercise: What Actually Happens and How to Work With It *An honest account from someone who has navigated this for over 30 years - imperfectly, and with hard-won perspective*

Why this guide exists

Exercise and t1d should be straightforward. Exercise is good for everyone. T1ds are no different. Moving your body frequently is important.

Except it is not straightforward at all. The interaction between exercise and blood glucose is one of the most complex and unpredictable aspects of living with t1d, and one of the most frustrating. This guide does not offer a clean solution, because there isn't one. What it offers is an honest account of what actually happens, why, and what thirty years of navigating it has taught me.

1. The basic picture - and why it is more complicated than it looks

Exercise uses glucose. Muscles need energy to work, and they draw it from the bloodstream. For a t1d, this means that physical activity, particularly sustained aerobic activity, pulls blood glucose down. Without a functioning pancreas to adjust automatically, the t1d is managing this manually, in real time, often without quite enough information.

The complication is that exercise does not always lower blood glucose. Different types of exercise produce different and sometimes opposite effects.

Aerobic exercise, sustained, moderate-intensity activity that uses oxygen, such as walking, running, swimming or cycling, draws glucose from the bloodstream and reliably lowers blood glucose. The harder and longer the effort, the more significant the drop.

Anaerobic exercise, short, high-intensity bursts such as weight training or sprinting, works differently. This type of exercise draws on stored glucose in the muscles rather than the bloodstream, and also triggers the release of hormones that cause the liver to release stored glucose. The result can be that blood glucose goes up rather than down.

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In practice, most exercise is a combination of both, which is part of why the picture is so unpredictable. A long walk with a steep hill involves sustained aerobic effort punctuated by bursts of harder exertion. The net effect on blood glucose depends on the balance, and often cannot be predicted accurately in advance.

2. The unpredictability - and what it costs

My honest answer to the question of what exercise does to my blood glucose is: I never quite know. After more than 30 years, I have patterns and instincts, but not certainty.

Walks - particularly longer ones - typically produce hypos. Swimming the same. Short resistance work and weights move my levels only modestly. But even these patterns are not reliable. The timing of my last insulin dose, what I have eaten, my stress levels, the temperature, how well I slept - all of these affect the outcome.

The unpredictability has a real cost beyond the inconvenience of a hypo. The fear of going low during exercise - particularly high-intensity exercise where the drop can be rapid - is a genuine deterrent. Over my lifetime it has pushed me away from harder, higher-intensity exercise and towards lower-impact alternatives. That is not a decision I made consciously. It is a drift that happened gradually, shaped by accumulated experience of things going wrong.

I also want to be honest that t1d has not been my only impediment. I have another medical condition that is triggered by high levels of exertion, which has been an additional and significant constraint on harder exercise - particularly in my thirties and the period when I had young children, when the risk calculation became more complex. Managing both conditions simultaneously, with small children who depended on me, made solo exercise feel genuinely risky at times.

3. The hypo-then-eat problem

One of the most frustrating realities of exercise and t1d is what happens after a hypo during or after exercise: you have to eat to bring your blood glucose back up.

If you have just walked for an hour partly in the hope of managing your weight, and then have to eat a sugary snack to recover from the resulting hypo, the calorie arithmetic becomes deeply demoralising. You have done the exercise - and then been forced to undo part of it. This is not a minor frustration. Over time, it can quietly shift your motivation.

The proximity of insulin to exercise matters enormously and is worth understanding clearly. If there is active insulin in your system when you start exercising, it amplifies the blood glucose drop significantly - the exercise pulls levels down and the insulin pushes them down simultaneously. I go out of my way to avoid having mealtime insulin in my system for at least two hours before a walk, and ideally four. The greater the gap, the more manageable the impact. This is one of the most practical adjustments I have made, and it is not widely talked about.

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Timing of exercise within the day makes a further difference. Exercising later in the day when insulin levels are generally lower reduces the likelihood and severity of hypos. Eating minimal carbs before exercising means less active insulin in the system. Neither approach eliminates the problem, but both help.

4. The exercise snack - and why it matters more than it sounds

One thing that has genuinely worked for me, and that I think is underappreciated, is what I think of as exercise snacking - very short bursts of activity woven into the day rather than formal dedicated exercise sessions.

Thirty squats while the kettle boils. Standing on one leg while brushing teeth. A set of upper body resistance band exercises. Angle press-ups. These things take two or three minutes. They barely register on blood glucose - perhaps a small downward nudge but nothing that causes a problem. And cumulatively, over a day and a week, they add up to something real.

This is not a replacement for sustained cardiovascular exercise. But for periods of life when sustained exercise is difficult, impractical, or simply not happening consistently, it is genuinely better than nothing - and it maintains a habit of movement that is easier to build on than starting from scratch.

5. What I wish I had known earlier

I gave up rugby immediately after my t1d diagnosis. I withdrew from team sport entirely. Looking back, that was a significant loss - not just physically but socially. Team sport offers a particular kind of camaraderie and a certain quality of person that I have genuinely missed. The right approach would have been to stay with it and adapt, not to walk away.

At the time, nobody suggested that. The conversation was about blood glucose management, not about whole-life health. There was no framework for thinking about how to keep doing the things that mattered - with adjustments - rather than giving them up.

Strength training was also not prioritised or well understood in the early 1990s in the way it is now. It turns out that building muscle is one of the most useful things a t1d can do for long-term metabolic health - it improves insulin sensitivity, supports blood glucose stability, and has a relatively manageable impact on levels compared to sustained aerobic exercise. I wish I had been told that earlier.

And the social dimension of exercise deserves more attention than it gets. Walking with friends is both exercise and connection. Exercise classes, team sports, group activities - these add a layer of motivation and pleasure that solo exercise rarely matches. Finding ways to exercise socially is worth prioritising deliberately, not treating as a nice-to-have.

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6. The reframe that matters most

For much of my life, exercise was framed - in my own thinking and in conversations with medical teams - primarily in terms of blood glucose management. Does it push levels up or down? How do you manage around it? What do you need to adjust?
That framing is not wrong, but it is incomplete. It keeps the focus narrow at the expense of the bigger picture.

The better question is this: t1d now comes with a life expectancy that extends well into your eighties and beyond with good management. If you are going to live a long life, you need a body that can carry you through it. That means cardiovascular health, muscle mass, strength, mobility, mental wellbeing. Blood glucose management is part of that picture, but it is not the whole of it.

Exercise for your whole health, not just your blood glucose. The two are connected, but the second is in service of the first - not the other way around.

Based on Sarah's lived experience of over 30 years navigating exercise with t1d. Not medical advice. For guidance on exercise specific to your regime and health history, talk to your diabetes team.

Want to understand more?

Sarah's memoir Invisible Impacts covers her first decade living with Type 1 diabetes, including the early years of learning what exercise does and does not do to blood glucose.

Visit www.theablediabetic.com or contact Sarah at sarah@theablediabetic.com

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