THE ABLE DIABETIC
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INNER CIRCLE RESOURCE

Insulin Pumps: What They Are, How They Work and Whether One Is Right for You

A plain English guide from someone actively researching the switch

Why this guide exists

I have managed Type 1 diabetes for over 30 years on a basal-bolus regime - injections twice daily for background insulin, plus fast-acting insulin at every meal. It has served me well. My control is strong and I have no compelling reason to change.

And yet I find myself seriously researching a move to a pump.

The technology has advanced to a point where that conversation is worth having even for someone like me - well-established, well-controlled, resistant to unnecessary change. This guide is what I have learned in that process. Not clinical advice, not a sales pitch for any particular device, but a plain English account of what pumps are, how they work, and my view on what the decision actually involves.

1. What a pump actually is

An insulin pump is a small wearable device that delivers insulin continuously through a thin cannula inserted under the skin. It replaces the need for a separate long-acting background injection - instead, the pump delivers a slow, continuous trickle of fast-acting insulin throughout the day and night, which can be adjusted hour by hour.

You still have a 'bolus' for meals - that part does not disappear. But the background insulin delivery becomes far more precise and flexible than a single (or twice) daily injection can achieve.

Some pumps are connected by a thin tube to the device, which you clip to clothing or carry in a pocket. Others, like the Omnipod, are tubeless - a self-contained pod worn directly on the skin, controlled wirelessly via a handset or smartphone. The tubeless design is particularly valued by people who are active or simply prefer not to manage tubing.

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2. Open loop vs hybrid closed loop

This is where the picture has changed most significantly in recent years, and it is worth understanding the distinction clearly.

An open loop pump delivers a programmed basal rate and user-requested boluses, but does not communicate with your CGM. You still read your CGM data yourself and make all dosing decisions manually. It offers more precision than injections but still requires active management.

A hybrid closed loop system goes further. Here, the pump, the CGM and an algorithm all communicate with each other. The algorithm reads your glucose data continuously and adjusts your basal insulin delivery automatically - raising it when you are trending high, reducing it when you are trending low - without you having to intervene. You still announce meals manually, which is why it is called “hybrid” rather than fully closed loop. But the system handles the background management in a way that is, frankly, closer to what a healthy pancreas does than anything previously available.

Various systems are currently available in the UK. The results in terms of time in range for many users have been significant. Someone newly diagnosed will in all likelihood be put straight on one of these.

3. What changes - and what doesn't

A pump does not make t1d easy. It changes the nature of the management rather than removing it.

What typically improves is overnight control, the ability to handle variable days more gracefully, and the easing of the mental load of constantly calculating and adjusting background insulin. For people with unpredictable lifestyles, irregular schedules, or persistent overnight issues, the difference can be substantial.

However, a layer of continuous attention still remains. There is still the need to think about food, to bolus for meals, to respond to the data your CGM provides. The pump handles background insulin and the general pattern. Overall control remains yours to manage.

There are also practical realities. You are wearing a device on your body at all times. There is a cannula to change every two to three days. Technology can fail - and when it does, you need a plan. These are not reasons to avoid a pump, but they are part of the honest picture.

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4. Is it right for you?

The honest answer is that it depends on your life more than your numbers.

The question I have found most useful in my own research is not “would a pump improve my HbA1c?” but “where in my day does my current regime let me down?”. For some people that is overnight. For others it is exercise, or unpredictable working days, or the sheer cumulative fatigue of constant manual calculation. If you can identify where the friction is, you can assess whether a pump addresses it.
If your control is already strong and your regime fits your life, the case for changing is less urgent - though the technology is now good enough that the question is worth asking regardless.

Talk to your diabetes team. Ask specifically about hybrid closed loop options, not just pumps in general. The gap between an open loop pump and a hybrid closed loop system is significant, and it is worth understanding what is actually available to you on the NHS in your area.

5. Where I have landed

I am still deciding. What I can say is that the research has genuinely surprised me. The hybrid closed loop technology available now is not the pump conversation of ten years ago. The algorithm does something that manual management simply cannot replicate - it responds in real time, continuously.

Personally, I’ll soon be impacted by the ending of Levemir insulin availability as it is being discontinued, and so I have to change my regime in some way. That might drive a move for me that otherwise wouldn’t have happened yet.

For anyone newly diagnosed, or reconsidering their regime after years on injections, this technology is worth understanding properly. Not because it is right for everyone, but because the decision deserves to be made with accurate information.

Based on Sarah’s research into pump technology as a long-term t1d considering a future switch, not medical advice. Always discuss regime changes with your diabetes specialist team.

Want to understand more?

For frequent insight on living with type 1 diabetes, visit theablediabetic.com and instagram @theablediabetic

Contact Sarah at sarah@theablediabetic.com

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