

New pumps and CGMs

We are celebrating 100 years of insulin this year. Developments in tools, technologies and medications to manage diabetes have transformed the experience of living with diabetes in many ways since 1921. Credentialed Diabetes Educator and Registered Nurse Karen Jameson looks at the latest insulin pumps and Continuous Glucose Monitoring (CGM) systems on the market.

MEDTRONIC MINIMED 770G PUMP

Launched in Australia in 2020

The Medtronic Minimed 770G Pump is a hybrid closed loop system when used with the Guardian Sensor-3 CGM. It includes SmartGuard™ Auto adjust technology that increases or decreases basal insulin delivery every five minutes. The Suspend before low function stops basal insulin delivery at a set limit and will automatically restart when the sensor glucose level has recovered. This helps to avoid lows and rebound high glucose levels. It has Bluetooth integrated into the pump. You will no longer have to choose between the phone or the pump, you can now use it on both.

MEDTRONIC MINIMED 780G PUMP

Launch early 2022

The 780G system will provide automatic correction bolus deliveries. It also aims to achieve 80% time in range.



MYLIFE LOOP PROGRAM MYLIFE ASSIST

Ypsomed pump systems have become more convenient with the launch of a three-step, app-based feature. The first step is the myLife Assist app that integrates Dexcom G6 CGM technology. Features include:

- The direct use of CGM values for suggested bolus calculation
- Alerts the user when glucose values are (trending) high or low
- Option of data sharing

The myLife Assist will be available for download this year on Android smart phones, and as soon as available from the Apple App Store.

The myLife Dose 2 is the second step of the app. It enables bolus delivery direct from a smartphone.

The final step of the myLife Loop program incorporates full control of the pump from the myLife App. It has an automated insulin dosing algorithm which is currently in development and pending regulatory approval by the TGA.



TANDEM T:SLIM X2 BASAL IQ

Launched August 2020

The new Basal-IQ technology update is compatible with the Dexcom G6 continuous glucose monitoring system, which is indicated for making treatment decisions with zero finger pricks and no calibrations. The Basal-IQ feature helps reduce the frequency and duration of low-glucose events by predicting glucose levels 30 minutes ahead and suspending insulin if they are expected to drop below 4.4mmol/L, or if a CGM reading falls below 3.9mmol/L.

The touchscreen technology makes the t:slim X2 insulin pump simple to learn and simple to use. The t:slim X2 insulin pump's rechargeable battery can be charged from a wall outlet, the car, a power pack or a computer without interrupting insulin delivery. A complete charge lasts up to seven days.

You can experience the simple touch screen interface of the t:slim X2 insulin pump with Basal-IQ technology on the free t:simulator™ App.

CONTROL IQ

Launch TBA

Control IQ is an advanced hybrid closed loop system that uses an algorithm to automatically adjust insulin in response to predicted glucose levels to help increase time in target range. It can also be linked to the t:connect phone app via Bluetooth without getting the pump out of your pocket.



INSULET OMNIPOD DASH TUBELESS PATCH PUMP

Launched August 2021

The Omnipod DASH® system is suitable for people of all ages living with diabetes requiring insulin.

Key features – it is tubeless, offers auto insertion and is waterproof. It has two simple parts: The Personal Diabetes Management (PDM) and the Pod.

- The PDM controls the Pod, including the insertion device. It is a small touch screen device to bolus and makes any required changes to delivery
- The POD is a wireless, tubeless, discrete, waterproof insulin management system that provides three days of continuous delivery
- The pod is changed every three days. The reservoir and infusion site are all combined into one disposable unit
- It can be worn anywhere you would give yourself an injection
- There are no visible needles
- The internal reservoir is filled with a syringe prior to insertion
- The 6.5mm angled Teflon cannula is auto inserted when you activate the pod

Insulin delivery

Each Pod is filled with 85-200 units of insulin which will last three days.

- Up to 24 basal blocks
- 0.05U/hr increments.

Does the Omnipod DASH System interact with Dexcom or Libre?

Any CGM system is complementary to the Omnipod DASH System to help inform insulin delivery. Currently, the Omnipod DASH System isn't enabled with CGM; however, readings from a CGM or BG system can be used for a bolus calculation, which provides choice and flexibility.



What's the right blood glucose meter for you?

Blood glucose meters come in all shapes and sizes; some are simple while others come with lots of bells and whistles. You can get meters that talk to you, meters that are small enough to put in your pocket, and meters that can give you ketone readings as well as blood glucose readings. What they all have in common is that they do the job. They all give you a blood glucose reading and they all meet stringent safety requirements. The difference between the meters is in the 'extras'. Credentialed Diabetes Educator Elaine McLennan takes us through some of the meters currently available on the market and how they differ from one another.



SCAN | FreeStyle Libre

The FreeStyle Libre measures the glucose in the interstitial fluid, which is the fluid around your cells, rather than a direct blood sample. A Libre sensor is inserted onto the back of your arm. To obtain a reading you swipe over the sensor with the reader or a compatible mobile phone using the Libre Link app.



- ✓ For people 4+ who are insulin requiring
- ✓ Each sensor lasts 14 days
- ✓ Capability to get a reading even through clothes
- ✓ Painless
- ✓ Can be used with a compatible smart phone or the Libre reader (which costs \$95)
- ✓ Can also be used as a blood and ketone meter
- ✓ Sensor is waterproof
- ✗ If BGLs are changing quickly, there may be a time lag between your true BGL and the Libre reading
- Flash meters are more expensive than most traditional monitors as each sensor costs \$92.50

FreeStyle Libre 2

- ✓ No more finger pricking unless symptoms do not match reading
- ✓ Customisable alarms to alert you if your glucose level is too high or low. To get the actual glucose number you need to scan your sensor
- ✓ Improved accuracy
- The Libre 2 sensor is now available in Australia for NDSS subsidy customers. The new sensors will not work with the old reader but will work with the Libre Link App.



SMALL BLOOD SAMPLE | FreeStyle Freedom Lite

If you have trouble getting blood from your fingers, or if you're taking blood from a young child, this meter requires only a tiny blood sample.

- ✓ Large numeric display
- ✓ Large buttons
- ✓ Easy to hold



SIMPLE | True Metrix Go

- ✓ Small meter that twists onto the test strip vial
- ✓ Custom GoPak 'koozie' holds meter, strips and lancing device in one place
- ✓ Easy to use
- ✓ Able to download information via micro USB port
- ✓ Memory stores 500 results
- ✓ Can see seven-, 14- and 30-day averages



TALKING | CareSens N Voice

- ✓ Reads out your blood glucose reading
- ✓ Large screen with large numbers
- ✓ Easy to hold
- ✓ Memory holds 500 readings
- ✓ Ability to transfer data to a computer using its Smartlog software
- ✓ Hypoglycaemia indicator that alerts to a possible low BGL
- ✓ Ability to see pre- and post-meal averages and set alarms



SMART | Insulinx

This meter is designed to assist people requiring insulin with their mealtime insulin calculations.

- ✓ Mealtime insulin calculator
- ✓ Used mainly for people with type 1 diabetes
- ✓ Very small blood sample required
- ✓ Touch screen
- ✓ Automated logbook
- ✓ Backlight, to assist in night time monitoring
- ✓ Built in software so you can print or email reports
- ✓ Your health professional will need to set up the calculator and provide appropriate education



COMPACT | Contour Next One

- ✓ Small and easy to use
- ✓ Coloured lights provide a quick guide when you take a reading as to whether your blood glucose level is too high (amber), too low (red), or in range (green)
- ✓ If you don't manage to get enough blood on the strip on your first attempt you can apply more blood to the same strip (less wasted strips)
- ✓ Alerts when readings are very high or very low
- ✓ Allows you to set reminders for when a blood glucose check is due
- ✓ Connects to Contour Diabetes app. BGL goes to diary and reports can be shared with health professionals.



LINKS TO AN APP | Accu-Chek Guide Me

- ✓ Large easy to read screen
- ✓ Memory can store 720 BGL results and provides averages
- ✓ Strip port light to help guide insertion
- ✓ Strip ejector button to help with removal of the strip
- ✓ Links to mySugr app
- ✓ Ability to sync BGL with mySugr app



There are many types of meter available to suit all sorts of requirements. If you need some help with choosing the right meter for you speak with your pharmacist, diabetes educator or you can call the NDSS helpline on **1800 637 700**.

A selection of meters are available at **diabetesshop.com** or can be purchased from pharmacies or directly from the manufacturer.

