

A Fact Sheet for Parents and Carers

Blood Glucose Monitoring

Monitoring blood glucose levels (BGLs) is really important to help your child manage diabetes. Keeping a record of BGLs helps you to look for patterns to determine insulin dosage and adjustments for various activities and stages of growth.

When to Test?

Your child's doctor and diabetes educator will tell you how often and when to test your child's BGL. Most children and teenagers test before meals, at bedtime, when they are playing sport, when they have a low blood glucose level (hypo) or when they are not feeling well.

Children may also wear a continuous glucose monitor, or CGM. The CGM monitors blood glucose levels throughout the day and night and records all information electronically, sending information to a smart phone, an insulin pump or information is sent to the CGM receiver. A CGM does not replace the finger prick test.

Blood Glucose Meter

There are a number of blood glucose meters on the market for you and your child to choose from. The meter should be maintained according to the manufacturer's advice and calibrated regularly. A drop of blood from a fingerprick is required for blood glucose and ketone testing.

Blood Glucose Test Strips

There are blood glucose test strips that match each blood glucose meter. Your child should join the National Diabetes Services Scheme (NDSS) in order to receive subsidised prices on strips. It is important to make sure that the strips are in date.

Fingerprickers/Lancets

Your child will need a fingerpricker with a lancet attached to obtain the drop of blood to test their BGL. Your educator will advise on the best device for your child, depending on their age.



TO PERFORM A BGL:

1. To prevent false readings, wash the child's hands before testing
2. Remove the meter from its case
3. Remove the strip from its container or remove the strip from its packet
4. Place the strip in the end of the meter
5. Prepare the fingerpricker
6. Apply the fingerpricker to the side of the top of a finger
7. Press the button so that the lancet enters the skin, which will produce a drop of blood
8. Apply the drop of blood to the strip
9. Wipe the blood off the finger with a tissue
10. Once there is enough blood the meter will start its countdown
11. Once the fingerprick and test is completed dispose of the used strip in the garbage
12. If the reading is below 4mmol/L treat as a hypo - refer to the hypoglycaemia fact sheet. Sometimes children can experience hypo symptoms at a level over or around 4mmol/L – they should still be treated for a hypo.

CGM

If a child is using a CGM, there are a few devices to choose from. Your diabetes team can guide you on the best CGM option for your child.

The CGM consists of the glucose sensor and a transmitter. The sensor usually sits on the child's stomach and detects glucose levels through interstitial fluid. The transmitter transfers glucose readings to the receiver, smart phone or insulin pump.

CGM NDSS Subsidy

The NDSS subsidises the full cost of the CGM sensor and transmitter for children under age 21 and meeting specific criteria. NDSS products may be ordered through any NDSS Access Point, usually your community pharmacy.

Ketones

High levels of glucose in the blood and a severe lack of insulin leads to the breakdown of fats for energy. As a result chemicals called ketones build up in the blood and urine which could lead to a dangerous condition called DKA or diabetic ketoacidosis. You should test for ketones if the BGL is above 15mmol/L and contact your diabetes team immediately if this situation arises.

Ketone Test Strips

There are two methods of testing for ketones

BLOOD KETONE TEST STRIPS

There are meters available to test blood for ketones that may be more convenient for children and teenagers. The same drop of blood to be tested for glucose can be used to test for ketones. Different strips are used for testing glucose and ketones. The blood ketone strips are currently not covered by the NDSS.



URINE KETONE TEST STRIPS

Ketone testing strips are still available to test for ketones in the urine. A sample of urine must be obtained and tested. Children usually hold the strip in their urine stream as they go to the toilet. These strips are subsidised through the NDSS.

Diabetes Record Book/Diary

It is important for you and your child/teenager to record BGLs in a diary. This will show you patterns of BGL's that will assist you and your diabetes team to adjust insulin doses and plan appropriate management. A CGM will record this information for you and send the glucose readings to either the CGM receiver or a smart phone. Your child's diabetes team will be able to download CGM data.

Some meters are able to transfer glucose readings to an app on a smart phone, eliminating the need for a paper copy of a blood glucose diary, although you still may wish to keep one for your own records.

SHARPS DISPOSAL

All used syringes, pen needles and lancets should be placed in an approved sharps container. Many pharmacies and councils have special provision for disposal of these containers when full. If your local council has no such provision, your hospital or clinic may be able to help.

HBA1C OR HAEMOGLOBIN A1C

This test measures overall blood glucose control over the previous two to three months and should be carried out every three months at your child's clinic visit. It gives your doctor important information about long term blood glucose control.



**For more information contact
Diabetes NSW & ACT on 1300 342 238 or visit as1diabetes.com.au**

Need an interpreter?

A free telephone interpreter service is available for people who may have difficulty in understanding or speaking English. The Telephone Interpreting Service (TIS) is provided by the government and has access to professional interpreters in almost 2000 languages and dialects and can respond immediately to most requests.

Accessing an interpreter:

1. Simply dial 131 450 for the Telephone Interpreting Service.
2. Explain the purpose for the call e.g. wanting to speak to the National Diabetes Services Scheme helpline
3. The operator will connect you to an interpreter in the required language to an NDSS helpline representative for a three-way conversation.

This free service has been set up by Diabetes Australia and will be promoted with assistance from the Australian Government Department of Health and Ageing.