

Welcome to The Charles H. Best Diabetes Centre
School Staff Presentation

Jennifer Gardner RPN
Jennifer@charleshbest.com



THE
CHARLES H. BEST
DIABETES CENTRE

What is Type 1 Diabetes?

- Type 1 diabetes (T1D) is a condition where the pancreas stops producing insulin. Insulin is a hormone that helps your body control the level of glucose—or sugar—in your blood.
- Type 1 diabetes is an autoimmune condition.
- Type 1 diabetes **is not caused** by eating too much sugar. It **cannot be prevented**.
- People living with T1D will have to be given insulin for the rest of their life either by injection or insulin pump
- Signs of undiagnosed type 1 diabetes are;
 1. Increased thirst
 2. Increased urination
 3. A lack of energy
 4. Weight loss

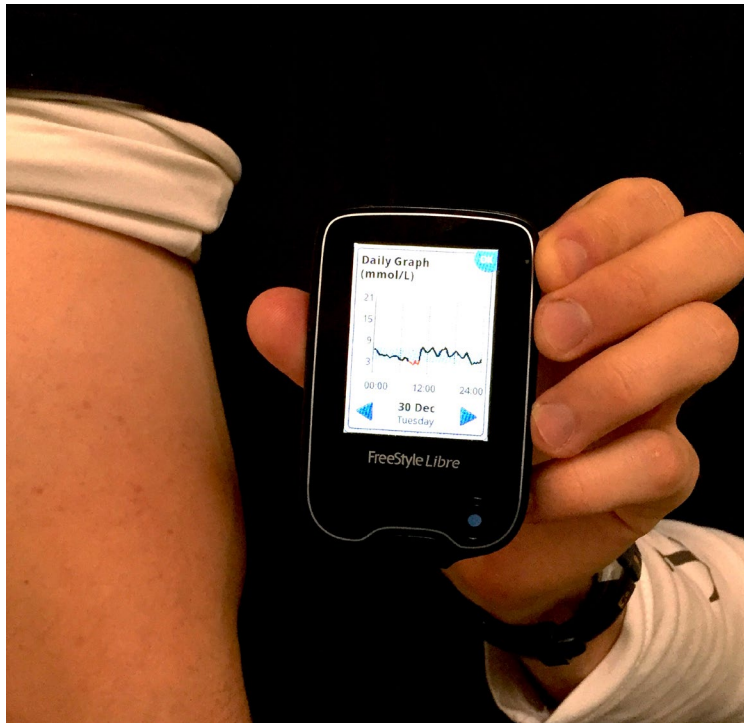




Testing blood sugar

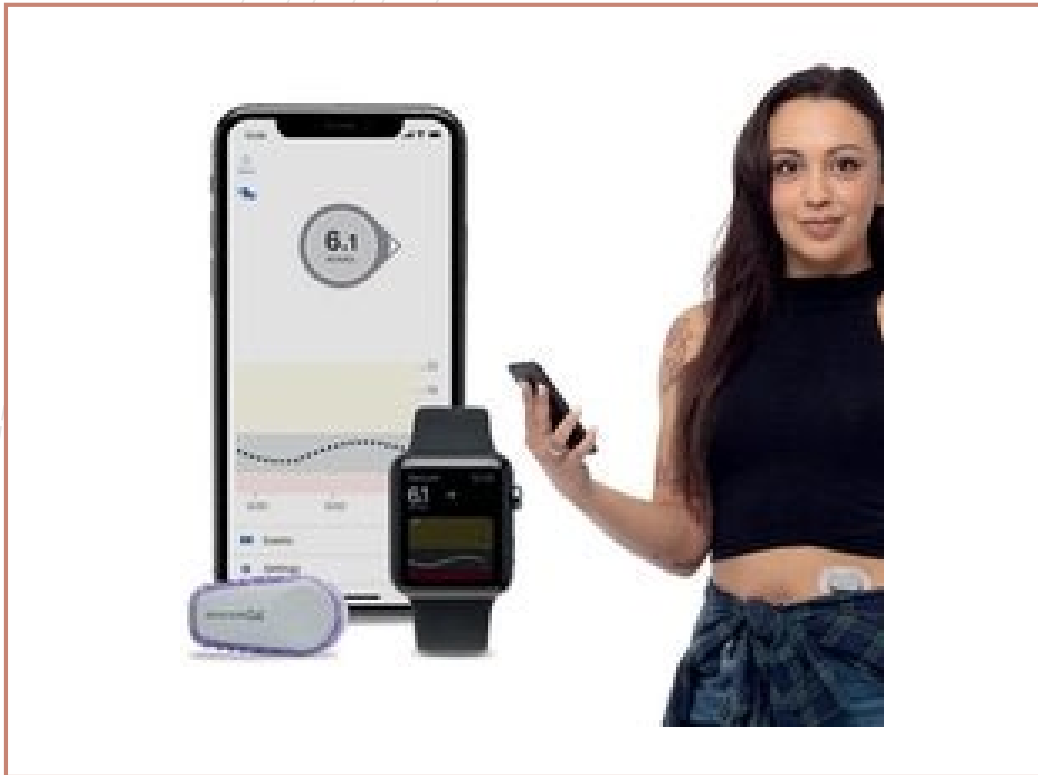
Blood sugar should be tested at various times throughout the day.

Before lunch and before exercise (gym) are examples of times blood sugar would be tested.



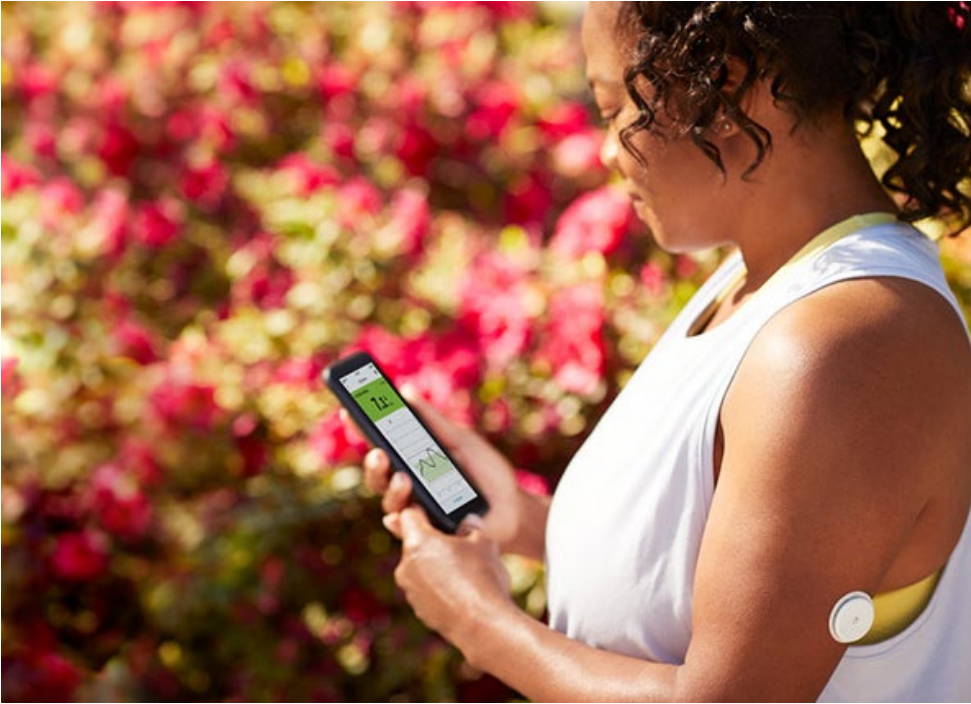
Some students monitor/test their blood sugar using a glucometer and finger poke and/or a “sensor” like Dexcom CGM or Libre

Dexcom G6



- Dexcom G6 is a continuous glucose monitor that takes a reading of the blood sugar every 5 minutes (280+ blood sugar readings in 24 hours)
- Dexcom sensors are changed every 10 days so you will see the sensors worn in a different area of the body every 10 days. Often worn on the upper arm, abdomen, buttocks, or lower back
- Dexcom shows blood sugar value and blood sugar direction arrows. Arrows predict what the blood sugar will be in the next 30 minutes.
- Dexcom has pre-set alarms. **If alarm sounds, child should do a finger poke to confirm number.**
- Receiver (phone) must be 6 meters from the child at all times
- Up to 5 people can follow blood sugar readings on their phone. Sometimes a school staff member will be one of the followers

Libre



- Libre is a “flash” (not continuous) monitor
- Sensors last 14 days
- Patient must scan or “flash” the sensor to get the blood sugar reading
- A phone or reader device is used to scan the sensor
- Libre sensors are worn on arm
- Libre 2 has alarms that sound at pre-set blood sugar levels. Alarm is signal to scan for possible low or high blood sugar level.

Hypoglycemia (low blood sugar) refers to a blood sugar below 4mmol/L.

- Immediate action must be taken to treat a low blood sugar

Symptoms of a low blood sugar may include

1. Tremors/shakiness
 2. Sweating
 3. Fatigue/tiredness
 4. Irritability or mood changes or confusion
 5. Blurred vision
 6. Change in complexion colour
- It's not uncommon for a child to have 2-3 low blood sugars in a week

Treatment of
low blood
sugar
(hypoglycemia)



Emergency Kit

- Emergency kits contain items to treat a low blood sugar
- Each kit should contain two bags marked treatment #1 (fast sugar) and treatment #2 (follow up snack)
- There should be at least two emergency kits at school. One should be kept in the office and one in the classroom
- It is recommended that parents also send in extra supplies so that items are replaced as they are used
- Ensure that one bag goes outside with student in the event of a fire drill or school evacuation



How to Treat Low Blood Sugar

The flowchart is a vertical sequence of five red chevron arrows pointing downwards, each containing a step label. To the left of the arrows is a large, thick, grey curved arrow that starts at the top and curves around to the bottom, indicating a continuous or repeating process. The steps are: 1. Check (Blood sugar under 4 mmol/L), 2. Treat (7-15 grams of fast-acting sugar), 3. Repeat (Recheck BG in 10-15 minutes), 4. If BG is above 4 mmol/L, give complex carbohydrate snack, 5. If lunch or snack is within an hour, wait until that time for complex carbohydrate.

Check

- Blood sugar (BG) under 4 mmol/L (or under 5 mmol/L with symptoms)

Treat

- Treat immediately with 7 – 15 grams* of fast-acting sugar (treatment #1 in emergency bag)
- *Speak to parents as to amount to be given. This is based on the child's weight

Repeat

- Recheck BG in 10-15 minutes

- If BG is above 4 mmol/L, give the complex carbohydrate snack now (Treatment #2 in emergency bag)
- If lunch or snack is within an hour child can wait until that time for complex carbohydrate.

Symptoms of high blood sugar

- Extreme thirst
- Frequent urination
- Headache
- Hunger
- Abdominal pain
- Blurry vision
- Irritability
- Warm flushed skin

Symptoms of very high blood sugar- call parents and consider calling 911

- **Rapid shallow breathing**
- **Vomiting**
- **Fruity breath**

High blood sugar
(Hyperglycemia)



As school staff you will simply offer water, bathroom breaks and exercise when blood sugar is high

The student will need insulin which they will get at lunch time. The amount of insulin given at lunch time is based on the amount of carbohydrates they are eating and the current blood sugar reading. Insulin brings blood sugars down.

INSULIN PUMPS

If the child is on an insulin pump, and has two consecutive high blood sugars over 15 mmol/L in an hour, please contact parents. They may need to change pump infusion site or insulin pod.

If the insulin pump site or insulin pod comes off the child's body, place an immediate **call to parents**.

Parents have two hours to start a new one.



Things that affect blood sugar

Food

Exercise

Weight gain
or loss

Illness

Adrenaline
(stress or
excitement)

Hormones

Weather

Change of
season



Exercise

- Before any type of exercise such as gym class, blood sugar should be at least 8 mmol/L.
- If blood sugar is not at least 8 mmol/L before exercise, student should have 15g complex carbohydrate (e.g. granola bar)
- Student can eat snack and then participate in the activity immediately. No need to wait for blood sugar to rise.
- It's best to plan ahead. Encourage the child to check their blood sugar 20 minutes to half hour before gym so they have time for snack if needed.

Lunch and snacks

It is very important that the student with T1D eats everything in their lunch and snacks to match the insulin doses given.

Failing to do so could result in a low blood sugar.





When would you call 911?

- As school staff you would only call 911 if the student were to go unconscious due to a low blood sugar.
- All other situations can be handled with the consultation of the student's parents

Baqsimi (nasal glucagon)

*given in the event someone with type 1 diabetes were to go unconscious and is therefore unable to take fast sugar by mouth.

*do not give if the child is conscious and can take fast sugar by mouth



Baqsimi nasal glucagon



1. Insert tip in nostril

2. Depress plunger all the way

Baqsimi has a single dose of glucagon nasal powder in each kit

Baqsimi is a hormone that activates glucagon receptors in the liver which raises blood sugar levels and starts working in 7-8 minutes

Things school staff should know

about

TYPE 1 DIABETES

Children will not outgrow type 1 diabetes

Insulin is not a cure

It takes a lot of work to manage type 1 diabetes

Technology is helpful but it doesn't work on its own

Blood sugar levels can change quickly

Low blood sugar needs immediate attention

High blood sugar means extra trips to the bathroom

Kids with diabetes can still eat treats/sweets

Even students who are independent may need help managing diabetes

Kids with diabetes want to be like everyone else

Please contact the student's parents/caregiver or The Best Centre should you have any further questions regarding students living with type 1 diabetes

The Charles H. Best Diabetes Centre

905-620-0360

bestdiabetes@charleshbest.com