

DIABETES ACTION PLAN 2019 EARLY CHILDHOOD SETTINGS

Use in conjunction with Diabetes Management Plan. This plan should be reviewed every year.

Insulin pump

LOW Hypoglycaemia (Hypo)

Blood Glucose Level (BGL) less than **4.0 mmol/L**

SIGNS AND SYMPTOMS Pale, headache, shaky, sweaty, dizzy, drowsy, changes in behaviour

Note: Symptoms may not always be obvious

**DO NOT LEAVE CHILD ALONE
DO NOT DELAY TREATMENT**

Child conscious
(Able to eat hypo food)

Step 1: Give fast acting carbohydrate
e.g. _____

Step 2: Recheck BGL in 15 mins
If BGL **less than 4.0** repeat **Step 1**
If BGL **greater than or equal to 4.0**, go to **Step 3**

Step 3:
If starting BGL between **2.0-4.0**
No follow up sustaining carbohydrate required

Step 3:
If starting BGL **less than 2.0**
Give sustaining carbohydrate
e.g. _____

Child unconscious / drowsy
(Risk of choking / unable to swallow)

First Aid DRABCD
Stay with unconscious child

**CALL AN AMBULANCE
DIAL 000**

Contact parent/carer
when safe to do so

HIGH Hyperglycaemia (Hyper)

Blood Glucose Level (BGL) greater than or equal to **15.0 mmol/L**

SIGNS AND SYMPTOMS Increased thirst, extra toilet visits, poor concentration, irritability, tiredness

Note: Symptoms may not always be obvious

HIGH BGLs ARE COMMON

Check blood ketones
Blood ketones greater than or equal to **0.6 mmol/L** requires immediate treatment

Blood ketones less than 0.6

- Enter BGL into pump
- Accept Correction bolus
- 1-2 glasses water per hour; extra toilet visits may be required
- Recheck BGL in 2 hours

BGL less than 15.0
No further action

BGL greater than or equal to 15.0

Blood ketones greater than or equal to 0.6

- Potential line failure.
- Contact parent/carer for further advice
- May need injected insulin and line change
- This is the parent/carer responsibility

**IF UNABLE TO CONTACT PARENT/CARER
CALL AN AMBULANCE
DIAL 000**

IF UNWELL (E.G. VOMITING), CONTACT PARENT/CARER TO COLLECT CHILD

CHILD'S NAME _____

DATE OF BIRTH _____ AGE _____

CENTRE _____

INSULIN The insulin pump continually delivers insulin. The pump will deliver insulin based on carbohydrate food and BGL entries. All BGLs must be entered into pump.*

Button pushing: Full assistance required

* For further information see Management Plan

THIS CHILD IS WEARING

- Continuous Glucose Monitoring (CGM)
- Flash Glucose Monitoring (FGM)

ROUTINE BGL CHECKING TIMES

These are still required if child on CGM/FGM

- Anytime, anywhere in the centre
- Before main meal
- Anytime hypo is suspected
- Before planned activity

PHYSICAL ACTIVITY

- 1 serve sustaining carbohydrate food before every 30 minutes of planned activity.
DO NOT BOLUS for this carbohydrate serve.
- Vigorous activity should **not** be undertaken if BGL is greater than or equal to 15.0 **and** blood ketones are greater than or equal to 0.6.
- Usually playtime doesn't require additional action, but check with parent/carer.

PARENT / CARER NAME _____

CONTACT NO. _____

OTHER CONTACT NAME & NO. _____

TREATING MEDICAL TEAM _____

CONTACT NO. _____

DATE _____

DIABETES MANAGEMENT PLAN 2019 EARLY CHILDHOOD SETTINGS

Use this plan in conjunction with Diabetes Action Plan. This plan should be reviewed and updated at least once per year.
Please tick appropriate boxes.

INSULIN PUMP

Insulin pump model: _____

The child wears an insulin pump that continually delivers insulin.

Responsible trained staff will be required to put information into the pump.

Name/s of responsible trained staff assisting with insulin pump:

The responsible trained staff will need to be able to:

- Enter blood glucose levels (BGL) into pump
- Enter grams of carbohydrate food into pump
- Understand how to do a 'Correction Bolus' as stated on the Diabetes Action Plan
- Disconnect and reconnect the pump if needed, for example swimming

Information on how to do this will be provided by the parent/carer.

Parent/carer will determine insulin doses and any pump setting adjustments that need to be made.

The parent/carer will need to be contacted to troubleshoot any pump alarms or malfunctions as needed.

If the cannula comes out, a new pump cannula will need to be inserted by the parent/carer.

If the cannula comes out and the parent/carer cannot be contacted, contact the child's Diabetes Treating Medical team.

CHILD'S NAME

DATE OF BIRTH

AGE

CENTRE

EMERGENCY MANAGEMENT

Please see the Diabetes Action Plan for the the treatment of **severe hypoglycaemia** (hypo).

The child should not be left alone and requires adult supervision until hypoglycaemia has resolved.

DO NOT attempt to give anything by mouth or rub anything onto the gums as this may lead to choking.

If the centre is located more than 30 minutes from a reliable ambulance service, then staff should discuss Glucagon injection training with the child's Diabetes Treating Medical Team.

BLOOD GLUCOSE CHECKING

Name/s of responsible trained staff to check Blood Glucose Levels (BGLs):

Blood glucose levels will vary day to day and be dependent on a number of factors such as:

- Insulin dose
- Excitement / stress
- Age
- Growth spurts
- Type/quantity of food
- Level of activity
- Illness/ infection

Target range for blood glucose levels (BGLs): **4-8 mmol/L**

BGL results outside of this target range are common.

Further action is required if BGL is less than 4.0 mmol/L or greater than or equal to 15.0 mmol/L. Refer to Diabetes Action Plan.

If the meter reads '**LO**' this means the BGL is too low to be measured by the meter – follow hypoglycaemia (Hypo) treatment on Diabetes Action Plan.

If the meter reads '**HI**' this means the BGL is too high to be measured by the meter – follow hyperglycaemia (Hyper) treatment on Diabetes Action Plan.

Prior to BGL checking, wash and dry child's hands.

TIMES TO CHECK BGLS (tick all those that apply)

- | | |
|---|--|
| <input checked="" type="checkbox"/> Anytime, anywhere | <input type="checkbox"/> Anytime hypo suspected |
| <input type="checkbox"/> Before snack | <input type="checkbox"/> When feeling unwell |
| <input type="checkbox"/> Before lunch | <input type="checkbox"/> Other routine times – please specify: |
| <input type="checkbox"/> Before activity: | |

PLEASE NOTE

Blood glucose checking should be done where the child is, whenever needed.

Blood glucose checking should not be restricted to the sick bay.

KETONE CHECKING

- Blood ketone check Urine ketone check

Check if the child is

- unwell regardless of BGL
 unwell and has a BGL greater than or equal to 15.0 mmol/L

[Follow hyperglycaemia treatment on Diabetes Action plan](#)

INTERSTITIAL SENSOR GLUCOSE MONITORING

Some children will be using a sensor to measure interstitial glucose levels.

A glucose reading from Continuous Glucose Monitoring (CGM) or Flash Glucose Monitoring (FGM) can differ from a finger prick blood glucose reading during times of rapidly changing glucose levels e.g. eating, after insulin administration, during exercise.

Therefore suspected **LOW** or **HIGH** sensor glucose readings must be confirmed by a finger prick blood glucose check.

Hypo treatment is based on a blood glucose finger prick result.

- Refer to Continuous Glucose Monitoring (CGM) section
 Refer to Flash Glucose Monitoring (FGM) section

■ Continuous glucose monitoring (CGM)

Some children will attend the centre wearing a continuous glucose monitoring (CGM) device.

Parents /carers are the primary contact for any questions regarding CGM use.

While these devices provide additional information on glucose trends, they are not compulsory management tools.

Staff are not expected to do more than the current routine diabetes care as per the child's Diabetes Action and Management plans.

It is not necessary for staff to put CGM apps on their computer, smart phone, or carry receivers.

CGM consists of a small sensor that sits under the skin and measures glucose levels in the fluid surrounding the cells (interstitial fluid).

A transmitter sends data to either a receiver, phone app or insulin pump.

Some CGM devices can be monitored remotely by family members.

CGM devices can be programmed to alarm if glucose levels go below or above set targets.

If the sensor/transmitter falls out, staff are required to keep it in a safe place to give to parents/carers.

The sensor can remain on the child during water activities.

CGM ALARMS

CGM alarms may be 'on' or 'off'.

If 'on' the CGM will alarm if interstitial glucose is less than 4.0mmol/L.

ACTION: Check finger prick blood glucose level (BGL) and if less than 4.0mmol/l, treat as per Diabetes Action Plan.

Alerts for high glucose levels or in response to changing glucose trends are not recommended in this setting.

THE CHILD HAS A

- **Guardian Connect** This system uses a sensor, transmitter and smart phone app.
- **Dexcom G4** This system uses a sensor, transmitter and dedicated receiver.
- **Dexcom G5** This system uses a sensor, transmitter, insulin pump receiver or smart phone app.
- **Other:** _____

THE CHILD HAS A

- **MiniLink**
 - **Guardian 2 Link**
- These systems use a sensor, transmitter and insulin pump receiver.

THE CHILD HAS

- **Low Glucose Suspend (LGS)** on a
 - **Medtronic 554/754 pump**
 - **Medtronic 640G pump**

Certain pumps may be programmed to **stop** insulin delivery when the glucose level is low or predicted to go low.

ACTION for any **low alert** is a finger prick blood glucose check.

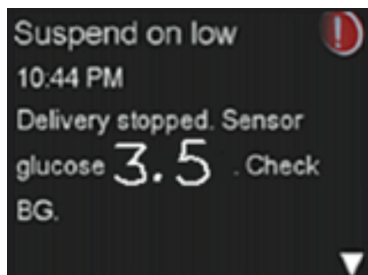
- If BGL **less than 4.0 mmol/L**. Treat hypo as per Diabetes Action plan (do not give an insulin bolus for this treatment)
- A trained staff member will need to restart the pump manually
- If BGL **greater than or equal to 4.0 mmol/L**. The pump will automatically restart when the sensor glucose level rises.

Should a mealtime insulin bolus be required (e.g. for snack or lunch) the trained staff member will need to restart pump manually for this mealtime bolus to occur.

continued over...

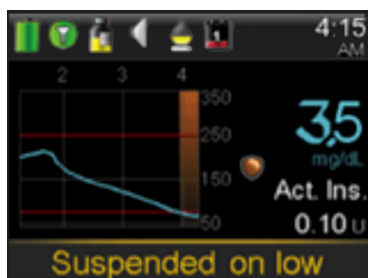
Continuous glucose monitoring, continued

RESUMING INSULIN MANUALLY AFTER LOW GLUCOSE SUSPEND (LGS)



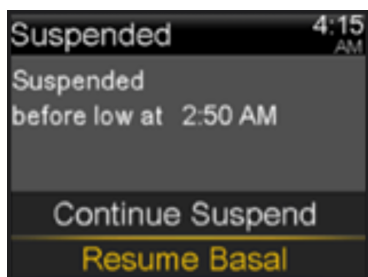
The insulin pump screen will show “Suspend on low”.

Press ‘down’ arrow on pump to clear alert message.



After the “Suspend on low” alert message is cleared, the screen will display: “Suspended on low” at the bottom of the screen in yellow print.

To resume insulin delivery, select “Suspended on low”.



Press ‘down’ arrow.
Highlight “Resume Basal”.
Press Right to “Yes” and press “Select”.

Insulin bolusing for a meal can now occur.

Flash glucose monitoring (FGM)

This system uses a sensor, and reader (which can also be used as a blood glucose / ketone meter).

Some children will attend the centre wearing a flash glucose monitoring (FGM) device.

Parents /carers are the primary contact for any questions regarding FGM use.

While these devices provide additional information on glucose trends, they are not compulsory management tools.

Staff are not expected to do more than the current routine diabetes care as per the child’s Diabetes Action and Management Plans.

FGM consists of a small sensor that sits on the upper outer arm and measures glucose levels in the fluid surrounding the cells (interstitial fluid). The device will only give the wearer a glucose reading when the sensor disk is scanned.

This device does not have alarm settings but has trend arrows for high or low glucose levels.

If the sensor/transmitter falls out, staff are required to keep it in a safe place to give to parents/carers.

The sensor is water resistant for 30 minutes to a depth 1 meter of water.

HYPOGLYCAEMIA (HYPO) TREATMENTS

- All hypo treatment foods should be provided by parent/carer.
- Ideally, packaging should be in serve size bags or containers and labelled as **fast acting carbohydrate** food and **sustaining carbohydrate** food.
- Please use one of the options listed below:

FAST ACTING CARBOHYDRATE FOOD	AMOUNT TO BE GIVEN

SUSTAINING CARBOHYDRATE FOOD	AMOUNT TO BE GIVEN

- **DO NOT** give an insulin bolus for the fast acting carbohydrate food being eaten to treat a hypo.
- If a child requires more than two (2) consecutive fast acting carbohydrate treatments, as per their Diabetes Action plan, call the child's parent/carer or the child's Diabetes Treating Medical team, for further advice.

EATING AND DRINKING

- The child will need to have an insulin bolus from the insulin pump before carbohydrate foods are eaten.
- The insulin dose will be determined by the pump based on the grams of carbohydrate food they will be eating and the current blood glucose level.
- Younger children will require supervision to ensure all food is eaten.
- The child should not exchange food/meals with another child.
- Seek parent/carer advice regarding appropriate foods for parties/celebrations that are occurring at the centre.
- Allow access to drinking water and toilet at all times (high glucose levels can cause increased thirst and urination).

Does the child have coeliac disease? No Yes*

*Seek parent/carer advice regarding appropriate foods and hypo treatments

PHYSICAL ACTIVITY, ACTIVE OUTDOOR PLAY AND SWIMMING

- Physical activity **may lower** glucose levels.
- The child may require an extra serve of carbohydrate food before every 30 minutes of physical activity, active outdoor play or swimming as provided in the activity box.
- Some types of 'play' may or may not need activity carbohydrate food – check with parent/carer if unsure.

Additional information about play:

ACTIVITY BOX	
CARBOHYDRATE FOOD TO BE USED	AMOUNT TO BE GIVEN

- Vigorous activity should **not** be undertaken if BGL greater than or equal to 15.0 mmol/L **and** blood ketones greater than or equal to 0.6 mmol/L.
- A blood glucose meter and hypo treatment should always be available.
- **Do not enter BGL into pump within 1 hour of completing activity;** if lunch occurs immediately after physical activity / active play, only enter the carbohydrate food to be eaten for a food bolus, **without** entering the BGL.

EXCURSIONS

It is important to plan ahead for extracurricular activities and staff/parents/carers to discuss well in advance of the excursion.

Consider the following:

- Ensure blood glucose meter, blood glucose strips, blood ketone strips, hypo and activity food are readily accessible during the excursion day.
- Diabetes care is carried out as usual during excursions.
- Always have hypo treatment available.
- Additional supervision will be required for swimming and other sporting activities (especially for younger children).

EXTRA SUPPLIES

PROVIDED FOR DIABETES CARE AT THE CENTRE

- Finger prick device
- Sharps container
- Blood glucose meter
- Blood glucose strips
- Blood ketone strips
- Hypo food
- Activity food
- Infusion sets and lines (for parent/carer use)
- Reservoirs (for parent/carer use)
- Inserter (for parent/carer use)
- Batteries (for insulin pump)
- Insulin pen and pen needles (for parent/carer use)

GLOSSARY OF TERMS

COMMON INSULIN PUMP TERMINOLOGY

Insulin pump

also known as continuous subcutaneous insulin infusion (CSII)

Small battery operated, computerized device for delivering insulin.

Cannula

A tiny plastic or steel tube inserted under the skin to deliver insulin. Held in place by an adhesive pad.

Line or Tubing

The plastic tubing connecting the pump reservoir to the cannula.

Reservoir

Container which holds the insulin within the pump.

Basal

Background insulin delivered continuously.

Bolus

Insulin for food delivered following entry of BGL and carbohydrate food amount to be eaten.

Correction bolus

Extra insulin dose given to correct an above target BGL and/or to clear ketones.

Line failure

Disruption of insulin delivery due usually to line kinking or blockage.

AGREEMENTS

I have read, understood and agree with this plan. I give consent to the centre to communicate with the Diabetes Treating Medical Team about my child's diabetes management at the centre.

PARENT/CARER

NAME

FIRST NAME (PLEASE PRINT)

FAMILY NAME (PLEASE PRINT)

SIGNATURE

DATE

DIABETES TREATING MEDICAL TEAM

NAME

FIRST NAME (PLEASE PRINT)

FAMILY NAME (PLEASE PRINT)

SIGNATURE

DATE

CENTRE REPRESENTATIVE

NAME

FIRST NAME (PLEASE PRINT)

FAMILY NAME (PLEASE PRINT)

ROLE

Manager

Supervisor

Other (please specify) _____

SIGNATURE

DATE