

# DIABETES ACTION PLAN 2021 EARLY CHILDHOOD SETTING

## Insulin pump

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

CHILD'S NAME \_\_\_\_\_

DATE OF BIRTH \_\_\_\_\_ AGE \_\_\_\_\_

NAME OF 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. For further information see Management Plan **Button pushing:** ■ Full assistance required

### THIS CHILD IS WEARING

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

### BLOOD GLUCOSE LEVEL (BGL) CHECKING TIMES

**BGL check should occur where the child is at the time it is required**

- Before main meal
- Anytime hypo is suspected
- Confirm low or high sensor glucose reading
- Before planned activity

### PHYSICAL ACTIVITY

- Some children MAY require a BGL check before planned physical activity.
- Some children MAY require slow acting carbohydrate food before planned activity.
- Vigorous activity **should not** be undertaken if BGL is greater than or equal to 15.0 **and/or** the child is unwell.

PARENT / CARER NAME \_\_\_\_\_

CONTACT NO. \_\_\_\_\_

DIABETES TREATING TEAM \_\_\_\_\_

CONTACT NO. \_\_\_\_\_

DATE PLAN CREATED \_\_\_\_\_

## 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: Check BGL if hypo suspected**

**Symptoms may not always be obvious**

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

### MILD

**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 slow acting carbohydrate required

**Step 3:**  
If starting BGL **less than 2.0**  
**Give slow acting carbohydrate**  
e.g. \_\_\_\_\_

### SEVERE

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

**First Aid DRSABCD**  
Stay with 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** is well above target and requires additional action

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

**Note: Symptoms may not always be obvious**

### 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 and ketones less than 0.6**

No further action

**BGL still greater than or equal to 15.0 and ketones less than 0.6**  
Potential line failure

**Blood ketones greater than or equal to 0.6**

**POTENTIAL LINE FAILURE**

- Will 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**

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

\_\_\_\_\_

CHILD'S NAME

AGE

## RESPONSIBLE STAFF

Centre staff who have voluntarily agreed to undertake training and provide support with diabetes care to the child.

STAFF MEMBER	GLUCOSE CHECKING	INSULIN PUMP

Responsible staff will need to receive training on how to check glucose levels and administer insulin via the insulin pump.

## INSULIN PUMP

The child wears an insulin pump that continually delivers insulin.

Insulin pump model: \_\_\_\_\_

## RESPONSIBLE STAFF INSULIN PUMP SKILLS

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

Information on how to do this will be provided by the parent/carer or Diabetes Treating Team.

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.

**Centre director/manager will need to ensure that the parent/carer has completed the relevant documentation, authorising responsible staff to administer insulin via the pump to the child.**

# BLOOD GLUCOSE LEVEL (BGL) CHECKING

## Target range for blood glucose levels (BGLs): 4 – 7 mmol/L

- BGL results outside of this target range are common.
- **BGL check should occur where the child is at the time it is required.**
- **The child should always wash and dry their hands before doing the BGL check.**

Blood glucose levels will vary day-to-day and be dependent on several factors such as:

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

## TIMES TO CHECK BGLS (tick all those that apply)

- Anytime hypo suspected
- Before breakfast
- Before snack
- Before lunch
- Before evening meal
- Before activity
- When feeling unwell
- Other times – please specify \_\_\_\_\_

- 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 monitor reads '**LO**' this means the BGL is too low to be measured by the monitor — follow the hypoglycaemia (Hypo) treatment on Diabetes Action Plan.
- If the monitor reads '**HI**' this means the BGL is too high to be measured by the monitor — follow hyperglycaemia (Hyper) treatment on Diabetes Action Plan.

# SENSOR GLUCOSE (SG) MONITORING

The child is wearing

**Continuous Glucose Monitor (CGM)**

Model: \_\_\_\_\_

**Flash Glucose Monitor (FGM)**

Freestyle Libre

- CGM and FGM consist of a small sensor that sits under the skin and measures glucose levels in the fluid surrounding the cells.
- With CGM, a transmitter sends data to either a receiver, phone app or insulin pump.
- With FGM, the device will only give a glucose reading when the sensor disc is scanned with a reader or phone app.
- These devices are not compulsory.
- A sensor glucose (SG) reading 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, a SG reading less than \_\_\_\_\_ or above \_\_\_\_\_ **must** be confirmed by a finger prick blood glucose check.

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

## ALARMS

- Alarms will be  **ON**  **OFF**
- If "on" the device will alarm if sensor glucose is low or high.
- Currently FGM does not have alarm settings.

**ACTION: Check finger prick blood glucose level (BGL) and follow Diabetes Action Plan for treatment.**

## LOW GLUCOSE SUSPEND

Some insulin pumps may be programmed to **STOP** insulin delivery at a **low** sensor glucose.

The child has low glucose suspend activated:  Yes  No

**ACTION: For any low alert a finger prick blood glucose check is required. If BGL less than 4.0 mmol/L, treat hypo as per Diabetes Action Plan.**

*continued...*

## USE AT THE CENTRE

- Staff are not expected to do more than the current routine diabetes care as per the child's Diabetes Action and Management plans.
- Staff do not need to put CGM or FGM apps on their computer, smart phone or carry receivers .
- Parents/carers are the primary contact for any questions regarding CGM/FGM use.
- Some CGM/FGM devices can be monitored remotely by family members. They should only contact the the centre if they foresee an emergency.
- **If the sensor/transmitter falls out, staff to do finger prick blood glucose checks.**
- The sensor can remain on the child during water activities.

# LOW BLOOD GLUCOSE LEVELS (Hypoglycaemia / Hypo)

Follow the child's Diabetes Action Plan **if BGL less than 4.0 mmol/L.**

**Mild hypoglycaemia is common.**

Mild hypoglycaemia can be treated by using the child's hypo supplies.

HYPO SUPPLIES LOCATED: \_\_\_\_\_

### HYPO TREATMENT

FAST ACTING CARBOHYDRATE FOOD	AMOUNT TO BE GIVEN

SLOW ACTING CARBOHYDRATE FOOD only required if starting BGL less than 2.0 mmol/L	AMOUNT TO BE GIVEN

- If the child requires more than 2 consecutive fast acting carbohydrate treatments, as per their Diabetes Action Plan, call the child's parent/carer. Continue hypo treatment if needed while awaiting further advice.
- **DO NOT give an insulin bolus for this treatment.**
- All hypo treatment foods should be provided by the parent/carer.
- Ideally, packaging should be in serve size bags or containers and labelled as **fast acting carbohydrate** food and **slow acting carbohydrate** food.

If the child is having more than 3 episodes of low BGLs at the centre in a week, make sure that the parent/carer is aware.

## SEVERE HYPOGLYCAEMIA (HYPO) MANAGEMENT

**Severe hypoglycaemia is not common.**

Follow the child's Diabetes Action Plan for any episode of severe hypoglycaemia.

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

If the 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 Team.

# HIGH BLOOD GLUCOSE LEVELS (Hyperglycaemia / Hyper)

- Although not ideal, BGLs above target range are common.
- **If BGL is 15.0 mmol/L or more**, follow the child's Diabetes Action Plan.
- If the child is experiencing frequent episodes of high BGLs at the centre, notify their parent/carer.

## KETONES

- Ketones occur most commonly when there is not enough insulin in the body.
- Ketones are produced when the body breaks down fat for energy.
- Ketones can be dangerous in high levels.

### Check blood ketone level if:

- Child is unwell **or**
- BGL is above 15.0 mmol/L

If ketones are **more than 0.6 mmol/L**, follow action for ketones on the child's Diabetes Action Plan.

## EATING AND DRINKING

The child will need to have an insulin bolus from the insulin pump **before** carbohydrate foods are eaten.

Meals and snacks are provided:

- **By the centre** Centre to provide a copy of the menu to the parent/carer to determine carbohydrate amounts at meals/snacks.
  - **By the parent/carer** All carbohydrate food should be clearly labelled by the parent/carer with carbohydrate amount in grams.
- The insulin dose will be determined by the pump based on the grams of carbohydrate food they will be eating and the current glucose level.
  - The child will require supervision to ensure all food is eaten.
  - No food sharing.
  - Seek parent/carer advice regarding foods for parties/celebrations.
  - Always allow access to drinking water and toilet (high glucose levels can cause increased thirst and extra toilet visits).

**Does the child have coeliac disease?**     No     Yes\*

\*Seek parent/carer advice regarding appropriate food and hypo treatments.

## EXTRA PHYSICAL ACTIVITY AND SWIMMING

A blood glucose monitor and hypo treatment should always be available.

- Some children may require a blood glucose level check before physical activity.
- Physical activity **may cause glucose levels to go high or low.**
- Some children MAY require slow acting carbohydrate food before every 30 minutes of planned physical activity or swimming.

■ ACTIVITY FOOD REQUIRED. LOCATED: \_\_\_\_\_

### ACTIVITY FOOD

CARBOHYDRATE FOOD TO BE USED	AMOUNT TO BE GIVEN

- Physical activity should not be undertaken **if BGL less than 4.0 mmol/L.**  
Refer to the Diabetes Action Plan for hypo treatment.
- Vigorous activity should **not** be undertaken if **BGL is greater than or equal to 15.0 mmol/L and blood ketones are greater than or equal to 0.6 mmol/L.**  
[Refer to Diabetes Action plan.](#)
- **Do not enter the BGL into the pump within 1 hour of completing activity.**
- If lunch occurs immediately after physical activity, only enter the amount of carbohydrate food to be eaten into the pump.

## EXCURSIONS / INCURSIONS

It is important to plan for extracurricular activities.

Consider the following:

- Ensure blood glucose monitor, blood glucose strips, blood ketone strips, hypo and activity food are readily accessible.
- Plan for meal and snack breaks.
- Always have hypo treatment available.



# DAILY EQUIPMENT CHECKLIST

## Supplied by the parent/carer

- Finger prick device
- Blood glucose monitor
- Blood glucose strips
- Blood ketone strips
- Sharps container
- Hypo food
- Activity food
- Infusion sets and lines (Parent/carer use)
- Reservoirs (Parent/carer use)
- Cartridges (Parent/carer use)
- Inserter (if applicable) (Parent/carer use)
- Insulin pen and pen needles (Parent/carer use)
- Batteries (for insulin pump / blood glucose monitor)
- Charging cable (for insulin pump)

## GLOSSARY OF TERMS

### COMMON INSULIN PUMP TERMINOLOGY

**Basal** Background insulin delivered continuously.

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

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

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

**Insulin pump also known as continuous subcutaneous insulin infusion (CSII)**

Small battery operated, computerised device for delivering insulin.

**Line or Tubing** The plastic tubing connecting the pump reservoir/cartridge to the cannula.

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

**Low Glucose Suspend** Pump stops delivery of insulin if glucose sensor detects a low glucose level or low glucose is about to occur.

**Reservoir/Cartridge** Container which holds the insulin within the pump.

# AGREEMENTS

## PARENT/CARER

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

NAME

\_\_\_\_\_

FIRST NAME (PLEASE PRINT)

FAMILY NAME (PLEASE PRINT)

\_\_\_\_\_

SIGNATURE

\_\_\_\_\_

DATE

## CENTRE REPRESENTATIVE

- I have read, understood and agree with this plan.

NAME

\_\_\_\_\_

FIRST NAME (PLEASE PRINT)

FAMILY NAME (PLEASE PRINT)

ROLE

Manager

Supervisor

Other (please specify) \_\_\_\_\_

\_\_\_\_\_

SIGNATURE

\_\_\_\_\_

DATE

## DIABETES TREATING MEDICAL TEAM

NAME

\_\_\_\_\_

FIRST NAME (PLEASE PRINT)

FAMILY NAME (PLEASE PRINT)

\_\_\_\_\_

SIGNATURE

\_\_\_\_\_

DATE

\_\_\_\_\_

HOSPITAL NAME