

# Diabetes Management Plan (DMP) – Insulin Pump

School:



Click to add photo

First name: \_\_\_\_\_ Last name: \_\_\_\_\_ Date of birth (D/M/Y): \_\_\_\_\_ School Year: \_\_\_\_\_

Target range for glucose is 4.0 - 8.0 mmol/L

**NEVER LEAVE ALONE IF UNWELL. TREAT ON THE SPOT.**

Contact 1:

Contact 2:

PCH Clinic:

6456 1111

## GLUCOSE MONITORING

In addition to the daily schedule, monitoring of glucose levels and ketones should be performed if the student is unwell or if there is a concern.

**DAILY SCHEDULE // PLEASE GIVE INSULIN: \_\_\_\_\_ MINUTES BEFORE FOOD.**

Time	Meal	Glucose Check	Insulin	Action	Responsible Person

Type of insulin pump: \_\_\_\_\_ Type of sensor/monitor: \_\_\_\_\_

Low glucose levels to be confirmed by

**LOW (HYPO) // Glucose less than 4.0 mmol/L // DO NOT DELAY TREATMENT // TREAT ON THE SPOT**

Symptoms: Feeling sick, Pale, Headache, Shaky, Sweaty, Drowsy, Unusual behaviour

<b>Student Conscious</b> (Able to eat hypo food)	Glucose 2.0-3.9. Glucose less than 2.0, <b>suspend pump.</b> See page 3.	<b>STEP 1:</b> Give fast acting carbs:	<b>STEP 2:</b> Recheck glucose level in _____ mins <b>If Glucose:</b> • Less than 4.0, repeat step 1. • 4.0 or more, proceed.	Original glucose 2.0-3.9: No further action. Original glucose less than 2.0: Give sustaining carbs, resume pump.
<b>Student Drowsy / Unconscious</b> (Unable to swallow), <b>suspend pump.</b>	<b>FIRST AID</b> DRS ABCD Stay with student.	<b>CALL AN AMBULANCE</b> DIAL 000	<b>ADMINISTER GLUCAGON</b> YES NO Dose : <input type="text"/>	<b>CONTACT PARENT WHEN SAFE.</b> When student conscious/alert, follow above steps.

**HIGH (HYPER) // Glucose 15.0 mmol/L or above Check Pump-Site** \*SEE DETAILED MANAGEMENT PLAN

Symptoms: Feeling sick, Thirsty, Increased urine production, Headache, Irritable, Lethargic

<b>Student Well</b> Unexplained high glucose-. <span style="color: red;">Check Pump-Site</span>	<b>CHECK GLUCOSE</b> At next scheduled time.	Allow unrestricted water intake and access to toilets.	<b>AT NEXT GLUCOSE CHECK</b> If glucose remains 15.0 mmol/L or above, <span style="color: red;">CHECK KETONES. Check pump site</span>
<b>Student Unwell</b> Unexplained high glucose with cramps or vomiting. <span style="color: red;">Check Pump-Site</span>	<b>CHECK BLOOD KETONES</b> If less than 0.6 mmol/L, no diabetes action required.	If ketones 0.6mmol/L or above, <b>CONTACT PARENT.</b>	If unable to contact parent, <b>CALL AN AMBULANCE</b> DIAL 000

## PHYSICAL ACTIVITY

4.0 - 5.0 mmol/L

5.1 - 8.0 mmol/L

Once above 5.0 mmol/L exercise can start.

Exercise can be started.

8.1 - 14.9 mmol/L

15.0 mmol/L or above

No action required.  
Exercise can be started.

**CHECK BLOOD KETONE LEVELS**

**Ketones less than 0.6 mmol/L**  
Exercise can start.

**Ketones 0.6 mmol/L or above**  
CONTACT PARENT

### AUTHORITY TO ACT // SCHOOL STAFF WHO HAVE COMPLETED DIABETES IN SCHOOLS LEVEL 3 TRAINING

Name	Role	Contact Number	Level 3 Training Date

Perth Children's Hospital Trainer:

Date:

Digital Signature:

\_\_\_\_\_

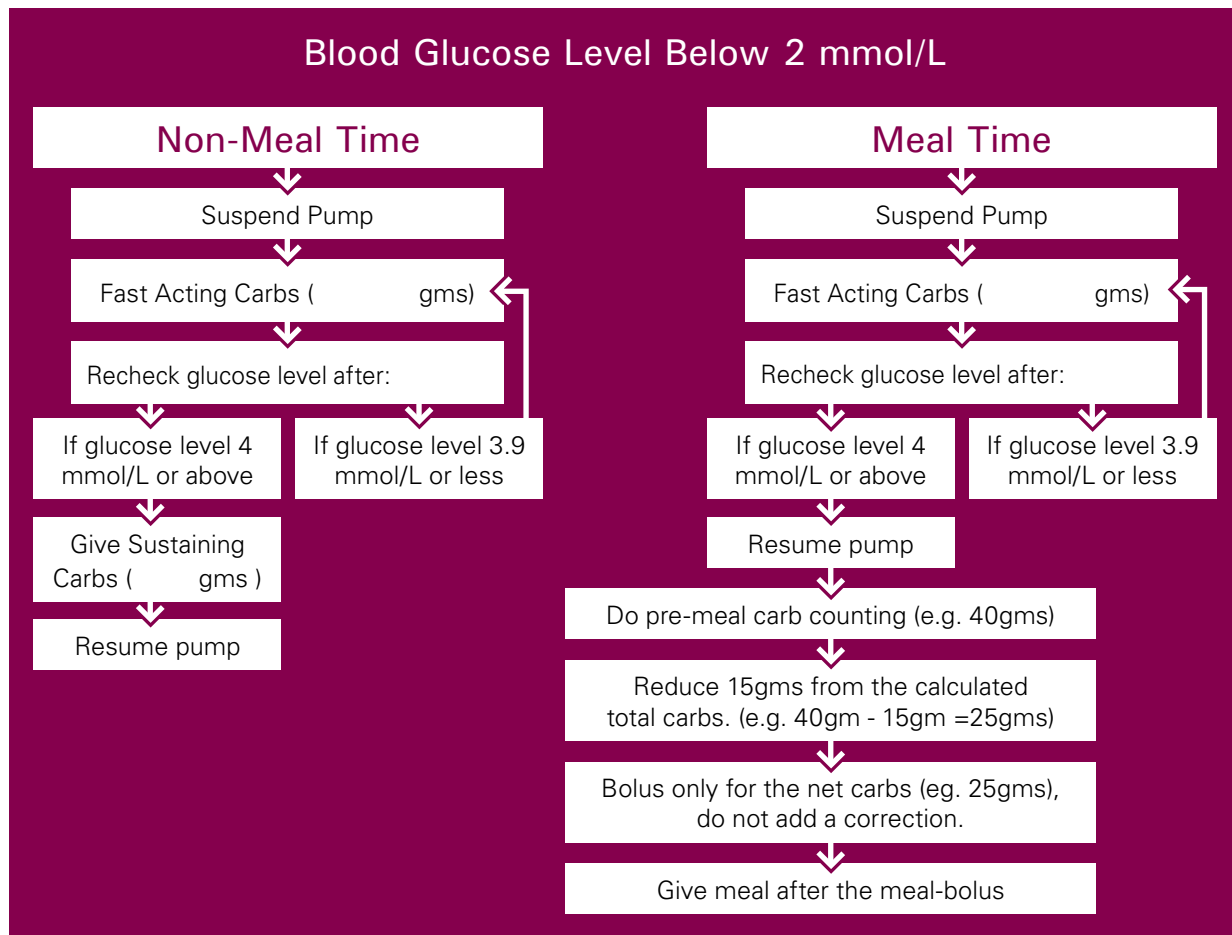
**REVIEW DATE:** \_\_\_\_\_

This diabetes management and safety plan authorises school staff to follow this advice and that of the medical team. School staff are not expected to manage a student's diabetes as comprehensively as at home. This plan is sanctioned as being safe and reasonable. It is valid for one year or until the school is advised of a change to the student's health care requirements.



## HYPO MANAGEMENT - INSULIN PUMP

The below plan is to be used if the student's glucose level is below 2mmol/L. In this instance the insulin pump needs to be suspended.



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## INSULIN PUMP

The student wears an insulin pump that continually delivers insulin.

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

Hybrid Closed Loop Pump – Refer to Appendix for further details.

Basal IQ

Control IQ

Is staff involvement required for pump button pushing?      Yes                      No

If yes, the responsible staff need to:

Remind                      Observe                      Assist                      Perform

## STUDENT INSULIN PUMP SKILLS

Able to independently count carbohydrate foods	Yes	No (Parent/carer will label all food)
Able to enter glucose levels and carbohydrate grams into pump	Yes	No (Adult assistance required)
Able to do a 'Correction Bolus'	Yes	No (Adult assistance required)
Able to disconnect & reconnect pump if needed	Yes	No (Adult assistance required)
Restart pump manually	NA	No (Adult assistance required)
Able to prepare and insert a new infusion set if needed	Yes	No (Contact parent/carer)
Give an insulin injection if needed	Yes	No (Adult assistance required)
Able to troubleshoot pump alarms and malfunctions	Yes	No (Contact parent/carer)

## GLUCOSE LEVEL CHECKING

Target range for glucose levels: 4.0 – 8.0 mmol/L

- Glucose levels outside of this target range are not unusual.

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

## SENSOR GLUCOSE

The student is wearing:      Yes      No (if "no", turn to page 5)

### Continuous Glucose Monitor (CGM)

Dexcom G5®

Dexcom G6®

Guardian™ Connect

Guardian™ Sensor 3

### Flash Glucose Monitor (FGM)

Freestyle Libre 1

Freestyle Libre 2

- CGM and FGM consist of a small sensor that sits under the skin and measures glucose levels in the fluid surrounding the cells (interstitial fluid).
- These devices are not compulsory management tools.
- With CGM a transmitter sends data to either a receiver, phone app or insulin pump.
- With Freestyle Libre the device will only show a glucose reading when the sensor disc is scanned by a reader or phone app.
- A sensor glucose 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.

### Hypo treatment is based on:

Sensor glucose reading.

Blood glucose finger prick result.

## ALARMS

- Alarms may be 'on' or 'off' (No alarms on Freestyle Libre 1).
- Urgent low alarms cannot be turned off.
- It is suggested that high alarms are turned off during school.

**ACTION FOR ALARMS: Check glucose level and follow front page for treatment.**

## LOW GLUCOSE SUSPEND

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

The student has low glucose suspend activated:      Yes      No

## USE AT SCHOOL

- Staff are not expected to do more than the current routine diabetes care as per the student's Diabetes Management plan.
- Staff do not need to put CGM apps on their computer, smart phone or carry receivers .
- Parents/carers are the primary contact for any questions regarding CGM/FGM use.
- Some CGM devices can be monitored remotely by family members. They should only contact the school if they foresee a prompt response is required.
- If the sensor/transmitter falls out, staff are required to keep it in a safe place to give to parents/carers. In this scenario, use finger prick blood glucose levels.
- The sensor can remain on the student during water activities.

## FINGER PRICK GLUCOSE

**The student should always wash and dry their hands before doing a finger prick check.**

Is the student able to do their own glucose check independently?

Yes  No

If NO, the responsible staff member needs to:

Remind  Observe  Assist  Perform

Tick appropriate box below:

### Dexcom G6

A finger prick is needed when:

- TAG (trend arrow glucose) unavailable
- Symptoms don't match the sensor reading
- Sensor has fallen off

### All other CGM/FGM sensors

A finger prick is needed when:

- TAG (trend arrow glucose) unavailable
- Symptoms don't match the sensor reading
- Sensor has fallen off

**Other times to check include** (tick all those that apply):

- |   |  |                     |
|---|--|---------------------|
| <input checked="" type="checkbox"/> Anytime, anywhere | Before snack                           | Before lunch        |
| Before activity                                       | Before exams/tests                     | When feeling unwell |
| Anytime hypo suspected                                | Beginning of after-school care session |                     |
| Other routine times – please specify:                 |  |                     |

- Further action is required if glucose level is **less than 4.0 mmol/L or 15.0 mmo/L or above**. Refer to front page.
- If the meter reads **'LO'** this means the glucose level is too low to be measured by the meter – follow the low (Hypo) treatment on the front page.
- If the meter reads **'HI'** this means the glucose level is too high to be measured by the meter – follow high (Hyper) treatment on the front page.

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## LOW GLUCOSE LEVELS (Hypoglycaemia / Hypo)

Follow the front page **if glucose less than 4 mmol/L**.

A mild low/hypo can be treated by using supplies from the student's HYPO KIT.

**Hypo kit should be kept with student at all times**

### HYPO KIT

FAST ACTING CARBOHYDRATE FOOD	AMOUNT TO BE GIVEN

SUSTAINING CARBOHYDRATE FOOD	AMOUNT TO BE GIVEN

- If the student requires more than 2 consecutive fast acting carbohydrate treatments, as per their front page, call the student's parent/carer. Continue hypo treatment if needed while awaiting further advice.
- 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 sustaining carbohydrate food.

**Mild hypoglycaemia is common.**

If the student is having more than 3 episodes of low glucose levels at school in a week, make sure that the parent/carer is aware.

## SEVERE LOW/HYPO MANAGEMENT

**Severe hypoglycaemia is not common.**

Follow the front page for any episode of severe hypoglycaemia.

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

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

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## HIGH GLUCOSE LEVELS (Hyperglycaemia / Hyper)

- Although not ideal, glucose levels may be above the target range.
- Glucose levels may be above target if food has been consumed within the last two hours.
- **If glucose levels are 15.0 mmol/L or above**, follow the front page.
- If insulin has been given allow two hours for glucose levels to return to target.
- If the student is experiencing frequent episodes of high glucose levels at school, make sure the parent/carer is aware.  
**For unexplained high glucose, pump site should be checked for leakage, dislodged needle/cannula or redness/swelling. If any of these occur, the infusion set must be changed immediately and contact 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.

**You will be required to check the student's ketone level if:**

- Student is unwell **or**
- Glucose levels remains at 15.0 mmol/L or above

**ACTION:** If ketones **0.6 mmol/L or above** follow action steps on the front page.

## EATING AND DRINKING

- The student 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 glucose level.
- For younger students, all carbohydrate food should be clearly labelled by the parent/carer with carbohydrate amount in grams. It is not the responsibility of school staff to count carbohydrates, although they may need to assist the student to add up the food amounts that they wish to eat.
- Younger students will require supervision to ensure all food is eaten.
- The student should not exchange food/meals with another student.
- Seek parent/carer advice regarding appropriate foods for parties/celebrations that are occurring at school.
- Always allow access to drinking water and toilet (high glucose levels can cause increased thirst and extra toilet visits).

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

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

## PHYSICAL ACTIVITY

**A glucose meter and hypo treatment should always be available.**

- Check glucose level before physical activity.
- Physical activity **may alter** glucose levels depending on type, duration and intensity.
- The student may require an extra serve of carbohydrate food before every 30 minutes of planned physical activity or swimming as provided by the family.
- Physical activity should not be undertaken **if glucose levels are less than 5.0 mmol/L**. Refer to page 2.
- Vigorous activity should **not** be undertaken **if the student is unwell or the blood ketones are 0.6 mmol/L or above**.
- **Do not enter the glucose levels 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.
- Disconnect the pump for vigorous activity/swimming.\*  
The student can be disconnected from the pump for up to 90 minutes.  
\*Extra details for Hybrid Closed Loop Insulin Pump in Appendix.

## EXCURSIONS / INCURSIONS

**It is important to plan for extracurricular activities and discuss these in advance with parents/carers.**

Consider the following:

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

## CAMPS

It is important to plan for school camps and consider the following:

- Parents/carers need to be informed of any school camps at the **beginning of the year**.
- A separate and specific **WA Diabetes School Camp Checklist and Management Plan** is required, and should be completed by the family in partnership with the school ([click here for Diabetes Management and Action Plans](#)).
- Parents/carers will need a copy of the camp menu and activity schedule.
- At least 2 responsible staff attending the camp should have a general understanding of type 1 diabetes and the support that the student requires to manage their condition for the duration of the camp.
- If the camp location is more than **30 minutes** from a reliable ambulance service, **Glucagon administration training will be required**.
- An application for skills based training is available online at [DiabetesInSchools.com.au](http://DiabetesInSchools.com.au).
- School staff will need to discuss any training needs **at least 4 weeks** before the camp with the student's parents/carers or Diabetes Treating Team.

## ASSESSMENT / EXAMS

- Glucose levels should be checked before commencing.
- Glucose levels should be 4.0 mmol/L or above before commencing.
- Blood glucose meter, monitoring strips, hypo treatments and water should be available.
- Continuous Glucose Monitoring (CGM) or Flash Glucose Monitoring (FGM) devices and receivers (smart phones) should be available if applicable.
- Extra time will be required if a hypo occurs or for toilet privileges.

## APPLICATIONS FOR SPECIAL CONSIDERATION

- The School Curriculum and Standards Authority's Guidelines for Disability Adjustments for Timed Assessments includes type 1 diabetes and is available at [www.scsa.wa.edu.au](http://www.scsa.wa.edu.au)
- Where required, schools should apply in advance for special provisions for all externally set assessments (e.g NAPLAN, OLNA, WACE)
- It is advisable to check and record glucose levels prior to (and during, if unwell) WACE assessments as medical evidence, in the event that an Application for Sickness/Misadventure is necessary.

## EXTRA SUPPLIES

### Provided for diabetes care at the school by parent/carer

Finger prick device	Blood glucose strips	Blood ketone strips
Blood glucose meter	Sharps container	Hypo food
Batteries / charger (for insulin pump)		
Infusion sets and lines	Student use	Parent/carer use
Reservoirs	Student use	Parent/carer use
Cartridges	Student use	Parent/carer use
Inserters (if applicable)	Student use	Parent/carer use
Insulin pen and pen needles	Student use	Parent/carer use

## GLOSSARY OF TERMS

### COMMON APPLICATIONS FOR SPECIAL CONSIDERATION

An insulin pump is also known as continuous subcutaneous insulin infusion (CSII). It is a small battery operated, computerised 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/cartridge to the cannula.

#### **Reservoir/Cartridge**

Container which holds the insulin within the pump.

#### **Basal**

Background insulin delivered continuously.

#### **Bolus**

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

#### **Correction bolus**

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

#### **Line failure**

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

## ADDITIONAL AGREED ACTIONS

Parent/Carer Signature:

\_\_\_\_\_

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NAME \_\_\_\_\_

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

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# AGREEMENTS

## PARENT/CARER

I have read, understood and agree with this plan.

I give consent to the school to communicate with the Diabetes Treating Team about my child's diabetes management at school.

I acknowledge that school staff who administer insulin and / or glucagon do so:

- 1) after receiving training from their clinical treating team.
- 2) to the best of their ability.

NAME

\_\_\_\_\_  
FIRST NAME (PLEASE NOTE)

\_\_\_\_\_  
FAMILY NAME (PLEASE NOTE)

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

## SCHOOL REPRESENTATIVE

I have read, understood and agree with this plan.

NAME

\_\_\_\_\_  
FIRST NAME (PLEASE NOTE)

\_\_\_\_\_  
FAMILY NAME (PLEASE NOTE)

ROLE

Principal

Associate principal

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

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

## DIABETES TREATING MEDICAL TEAM

NAME

\_\_\_\_\_  
FIRST NAME (PLEASE NOTE)

\_\_\_\_\_  
FAMILY NAME (PLEASE NOTE)

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

REVIEW DATE: SEE PAGE 2

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