

SCHOOL SETTING

Insulin pump therapy

Use in conjunction with Action Plan



The Royal Children's
Hospital Melbourne

Monash
Children's
Hospital

DIABETES MANAGEMENT PLAN 2018

Name of student _____ Date of birth _____
First name (please print) Family name (please print)

Name of school _____ Grade/Year _____

This plan should be reviewed and updated at least once per year.

EMERGENCY MANAGEMENT

Please see the Diabetes Action Plan as to the treatment of severe hypoglycaemia (hypo). The student 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 school is located more than 30 minutes from reliable ambulance service, then staff should discuss Glucagon injection training with the student's diabetes Treating Medical Team.

If the student has high blood glucose levels please refer to the Diabetes Action Plan.

INSULIN PUMP

Insulin pump model: _____

The student wears an insulin pump that continually delivers insulin into the body:

- Is supervision/assistance required for pump button pushing? ☐ Yes ☐ No
- If assistance is needed the nominated adult/s needs to: ☐ Remind ☐ Observe ☐ Button push

Name of nominated adult/s assisting with insulin pump: _____

STUDENT INSULIN PUMP SKILLS

Able to independently count carbohydrates	<input type="checkbox"/> Yes <input type="checkbox"/> No	(Parent/Carer will label all food)
Able to enter blood glucose levels (BGL) and carbohydrate grams into pump	<input type="checkbox"/> Yes <input type="checkbox"/> No	(Adult assistance required)
Able to do a 'Correction Bolus'	<input type="checkbox"/> Yes <input type="checkbox"/> No	(Adult assistance required)
Able to prepare and insert a new infusion set if needed	<input type="checkbox"/> Yes <input type="checkbox"/> No	(Parent/Carer to be contacted)
Able to disconnect & reconnect pump if needed	<input type="checkbox"/> Yes <input type="checkbox"/> No	(Adult assistance required)
Give an insulin injection if needed	<input type="checkbox"/> Yes <input type="checkbox"/> No	(Adult assistance required)
Able to troubleshoot pump alarms or malfunctions	<input type="checkbox"/> Yes <input type="checkbox"/> No	(Contact Parent/Carer)

BLOOD GLUCOSE CHECKING

Is the student able to do their blood glucose check independently? ☒ Yes ☒ No

If no, the nominated adult needs to

☐ Do the check ☐ Assist ☐ Observe ☐ Remind

Name of nominated and trained adult/s

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

- Insulin dose
- 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 < 4.0 mmol/L or ≥ 15.0 mmol/L. (Refer to Diabetes Action Plan)

If the meter reads '**LO**' this means the blood glucose level is too low to be recorded – follow hypoglycaemia (Hypo) treatment on Action Plan

If the meter reads '**HI**' this means the blood glucose level is too high to be recorded – follow hyperglycaemia treatment on Action Plan

Times to check BGLs

(tick all those that apply)

- ☐ Anytime, anywhere
- ☐ Before recess/snack
- ☐ Before lunch
- ☐ Anytime hypo suspected
- ☐ Before Activity:

- ☐ Before exams/tests
- ☐ When feeling unwell
- ☐ Beginning of after school care session (OHSC)
- ☐ Other routine times – please specify:

PLEASE NOTE

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

Checking should be available where the student is, whenever needed.

INTERSTITIAL GLUCOSE MONITORING

Some students may be using a sensor to measure interstitial glucose.

This is **not** a substitute for finger prick **blood glucose** checking when confirming a suspected low or high BGL.

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

- ☐ Refer to Continuous Glucose Monitoring (CGM) appendix
- ☐ Refer to Flash Glucose Monitoring appendix

HYPOGLYCAEMIA (HYPO) TREATMENTS TO BE USED

- All hypo treatments 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	Amount	Sustaining carbohydrate	Amount

- The student **will not** give an insulin bolus for the carbohydrate food being eaten to treat a hypo.
- If needing to repeat the treatment more than twice, phone the Parent/Carer or the student's Treating Medical Team for further advice. These phone numbers will be found on the student's Diabetes Action Plan

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 blood glucose level.
- 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 the school
- Allow access to drinking water and toilet at all times (high blood glucose levels can cause increased thirst and urination)

Does the student have coeliac disease?:

☐ No

☐ Yes (Seek Parent/Carer advice regarding appropriate foods and hypo treatments)

PHYSICAL ACTIVITY

- Physical activity **may lower** blood glucose levels. The drop in blood glucose may be immediate or delayed.
- The student will require an extra serve of carbohydrate before every 30 minutes of planned physical activity or swimming. They **do not** bolus for this carbohydrate food

Carbohydrate to be used	Amount to be given

- **Check blood ketones if BGL \geq 15.0 mmol/L and vigorous activity planned**
- Vigorous activity should **not** be undertaken if BGL \geq 15.0 mmol/L **and** blood ketones \geq 0.6 mmol/L
- A blood glucose meter and hypo treatment should always be available. If a hypo does occur (BGL $<$ 4.0 mmol/L) treat as per Action Plan.
- Activity should not be undertaken if BGL is $<$ 4.0 mmol/L (refer to Action Plan for hypo treatment)
- Disconnect the pump for vigorous activity/swimming. The student can be disconnected from the pump for up to 90 minutes.
- **Do not enter BGL into pump within 1 hour of completing physical activity;** if lunch occurs immediately after, only enter carbohydrates to be eaten

EXCURSIONS

It is important to plan ahead for extracurricular activities and consider the following:

- Diabetes care is carried out as usual during excursions
- Staff/parents/carers to discuss well in advance
- Ensure blood glucose meter, blood glucose strips, blood ketone strips, hypo treatment, activity food are readily accessible during the excursion day
- Permission will be required to eat on the bus – inform bus company in advance
- Additional supervision will be required for swimming and other sporting activities (especially for younger students) either by a 'buddy' teacher or Parent/Carer.

CAMPS

It is important to plan ahead 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 Diabetes Camp Management Plan is required
- The student's Treating Medical Team will prepare the Camp Management Plan and require at least 4 weeks notice to do so.
- Parents/carers will need to be provided with a copy of the camp menu and activity schedule for preparation of this plan.
- At least 2 nominated adults 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.
- School staff will need to discuss any training needs at least 4 weeks before the camp with the student's parents/carers or Treating Medical Team.
- If the camp location is more than 30 minutes from a reliable ambulance service, school staff attending the camp should discuss the need for Glucagon injection training at least 4 weeks before the camp with the student's Treating Medical Team.
- If the student requires school staff on camp to
 - either assist or supervise pump button pushing
 - or assist or supervise the administration of back-up insulin via pen device or syringethen school staff should discuss the need for training at least 4 weeks before the camp with the student's Treating Medical Team.

EXAMS

- BGL should be checked before an exam
- BGL should be > 4.0 mmol/L
- Blood glucose meter, monitoring strips and hypo treatments should be available in the exam setting
- Continuous Glucose Monitoring (CGM) or Flash Glucose Monitoring devices should be available in the exam setting if being used
- Considerations for extra time, if a hypo occurs or for toilet privileges, should be discussed in advance
- Applications for special consideration for VCE exams should be submitted at the beginning of year 11 and 12 – check VCAA requirements

EXTRA SUPPLIES PROVIDED FOR DIABETES CARE AT THE SCHOOL

- ☐ Finger prick device
- ☐ Blood glucose meter
- ☐ Blood glucose strips
- ☐ Blood ketone strips
- ☐ Hypo food
- ☐ Sport/activity food
- ☐ Infusion sets and lines
- ☐ Reservoirs
- ☐ Inserter
- ☐ Batteries (for insulin pump)
- ☐ Pen device, insulin and pen needles

AGREEMENTS

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

Parent/Carer

Name

Signature

Date

.....
First name (please print)

.....
Family name (please print)

Treating Medical Team

Name

Signature

Date

.....
First name (please print)

.....
Family name (please print)

School Representative

Name

.....
First name (please print)

.....
Family name (please print)

Role

☐ Principal ☐ Vice Principal

☐ Other (please specify)

Signature

.....
Date

COMMON INSULIN PUMP TERMINOLOGY - GLOSSARY OF TERMS

Basal – background insulin delivered in small amounts 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 out-of-target BGL and/or to clear ketones

Insulin pump (also known as continuous subcutaneous insulin infusion (CSII)) – small battery operated, computerized device for delivering insulin

Line or Tubing – the plastic tubing connecting the pump reservoir to the cannula

Line failure – disruption of insulin delivery due usually to line kinking or blockage

Reservoir – Container which holds the insulin within the pump