

Type 1 Diabetes and School Camp Management Plan: Insulin Pump



SCHOOL CAMP MANAGEMENT PLAN AND CHECKLISTS FOR TYPE 1 DIABETES: INSULIN PUMP

Understandably, most students will want and should be given every opportunity to attend school camps or overnight excursions, as a part of the school's learning program. Camps and excursions will vary from school to school and camp situations will vary between year groups and schools. Most camps for younger students may be close to medical facilities, and some schools will encourage or allow parent participation and support. For older students, camps may involve greater independence, no parents, perhaps no nursing staff, more remote locations and often physically demanding situations over an extended time period. For this reason, preparation requirements for camps will vary. In all cases, schools should refer to their education sector's camp/excursion policy in conjunction with this Camp Management Plan and Checklists.

Students with Type 1 Diabetes can participate fully in a camp program. It is recommended that schools preparing for camp undertake appropriate education. This can be access at DiabetesInSchools.com.au

This education will include:

- Blood Glucose Monitoring
- Insulin Administration
- Continuous Glucose Monitoring
- Glucagon Administration
- Type 1 Diabetes and School Camp

PLANNING FOR SCHOOL CAMPS

KEY MESSAGES

- Pre-planning is essential for the student with type 1 diabetes to safely attend camp.
- A camp meeting with parents/carers and school staff should be held well in advance.
- A camp checklist will assist in planning.
- There are extra specific responsibilities for school staff at camp.
- Camp activities, different foods and changes in routine can have a significant impact on student's glucose levels.
- The student's individualised camp diabetes management plan is specific to that student and that camp. It is developed by their diabetes treating team in collaboration with the parents/carers and student, in consultation with the school.
- Good communication between all parties is vital both before and during camp.
- School Camp Management Plan.

SCHOOL CAMP MANAGEMENT PLAN FOR TYPE 1 DIABETES: INSULIN PUMP

This document is to be read in conjunction with the *School Camp Checklists for Type 1 Diabetes and your education sector's camp/excursion policy*.

It is recommended the schools arrange a meeting between relevant school staff and the family to discuss the contents of this document well in advance of the camp.

This form is to be completed in consultation with the family. If needed, families should speak to their clinical treating team for assistance.

The use of this camp management plan is to assist in risk management when supervising a student with Type 1 Diabetes while on excursion from the regular school environment.

Diabetes WA and PCH do not accept any liability for any injury, loss or damage incurred by use or misuse of this plan.

GLUCOSE MONITORING AND MANAGEMENT

LOW GLUCOSE LEVELS (Hypoglycaemia / Hypo)

ACTION is needed if the glucose level is less than 4mmol/L.
 Confirm glucose level with a **blood glucose (BG)** finger prick check.

LOW (HYPO) // Glucose less than 4.0 mmol/L // DO NOT DELAY TREATMENT.

Symptoms: Feeling sick Pale Headache Shaky Sweaty Drowsy Unusual behaviour

Student Conscious (Able to eat hypo food)	BG 2.0-3.9.	STEP 1 Give fast acting carbs: _____ _____	STEP 2: Recheck finger prick in _____ If Blood Glucose: • Less than 4.0, repeat step 1. • 4.0 or more, proceed.	Original BG 2.0-3.9: No further action.
	BG less than 2.0, suspend pump. See page 9.			Original BG less than 2.0: Give sustaining carbs, resume pump.
Student Drowsy / Unconscious (Unable to swallow), suspend pump.	FIRST AID DRS ABCD Stay with student.	CALL AN AMBULANCE DIAL 000	ADMINISTER GLUCAGON YES <input type="checkbox"/> NO <input type="checkbox"/>	CONTACT PARENT WHEN SAFE TO DO SO. When student conscious/alert, follow above steps.

HYPO KIT – Hypo kit should be kept with student at all times

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 the instructions above, 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.

SEVERE LOW/HYPO MANAGEMENT

Severe hypoglycaemia is not common.

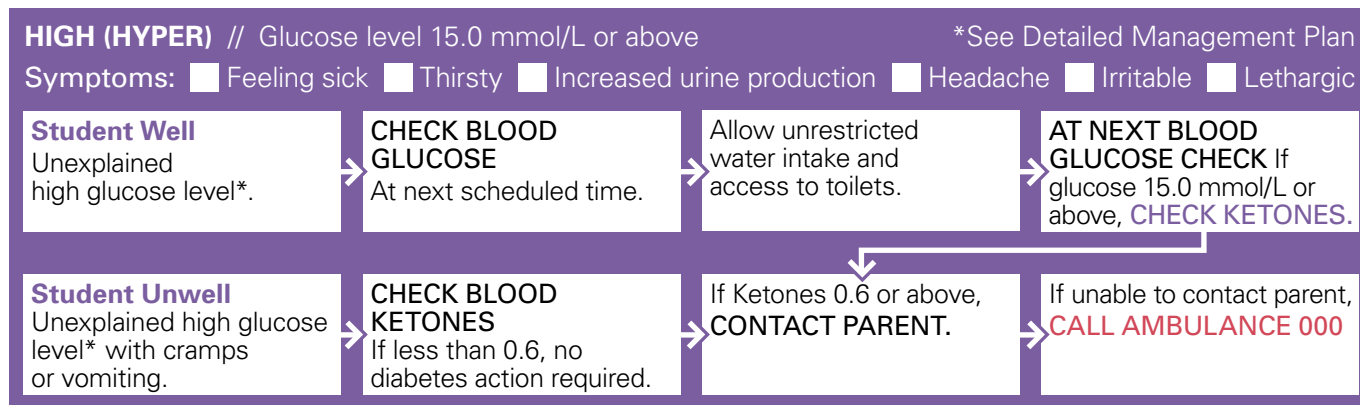
Follow the instructions as above page for any episodes of severe hypoglycaemia.

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 camp 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.

HIGH GLUCOSE LEVELS (Hyperglycaemia / Hyper)

ACTION is needed if the glucose level is 15mmol/L or above.



- Although not ideal, glucose levels above target range are not unusual.
- Glucose levels may be above target if food has been consumed within the last two hours.
- If insulin has been given, allow two hours for glucose levels to return to target.
- Remember, if the student is frequently above 15mmol/L to contact the 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:

- Student is unwell **or**
- Glucose levels remain at 15.0 mmol/L or above for two or more consecutive blood glucose finger prick checks.

ACTION: If ketones are **0.6 mmol/L or above**, follow action for ketones as above.

NOTE: Pumps / Pump sites occasionally fail, resulting in lack of insulin delivery.
Seek advice from parent / carer.

BLOOD GLUCOSE MONITORING: FINGER PRICKS

Target range for glucose levels: 4 – 8 mmol/L

- **The student should always wash and dry their hands before doing a finger prick check.**
- Glucose levels outside of this target range are common.
- Finger prick checks should be done when listed in the daily schedule, to confirm a low or high sensor reading, when the student is unwell, and when sensor reading unavailable. If hypo – treat on the spot.

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

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

- 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 page 3.
- If the meter reads '**HI**' this means the glucose level is too high to be measured by the meter – follow high (Hyper) treatment on page 4.

SENSOR GLUCOSE CHECKING

The student is wearing Yes No (if "no", turn to page 4)

Continuous Glucose Monitor (CGM)

- Dexcom G5®
- Dexcom G6®
- Guardian™ Connect
- Guardian™ Sensor 3

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 (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 FGM, the device will only give 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.
- Therefore, **LOW** or **HIGH** readings **must** be confirmed by a finger prick blood glucose check.

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

CALIBRATION

Some CGM's will require regular calibration. Does the student's CGM require calibration?

Yes No

Times to calibrate: _____

The student should always wash and dry their hands before calibrating.

It is not recommended to calibrate when glucose level are rising or falling rapidly.

Will the sensor need changing during camp?

Yes No

It is recommended that families change the sensor prior to camp.

INSULIN ADJUSTMENTS/CORRECTIONS WHILST ON CAMP:

The student's insulin needs will change on camp due to the change in exercise, eating and sleep patterns. If you wish, please note any changes in dose that your child may implement.

Long acting insulin (Insulin Glargine) dose needs to be given at the same time each day however the dose may need to be reduced whilst on camp.

PHYSICAL ACTIVITY

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

- Check glucose level before physical activity.
- 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 **may alter** glucose levels.
- Physical activity should not be undertaken **if glucose levels are less than 5.0 mmol/L**. Refer to diagram below.
- Vigorous activity **should not** be undertaken **if the student is unwell or ketones are 1.0 mmol/L or above**.

PHYSICAL ACTIVITY // PLEASE CHECK GLUCOSE LEVEL BEFORE PHYSICAL ACTIVITY

8.0 mmol/L or less	8.1 - 14.9 mmol/L	15.0 mmol/L or above
4.0-5.0 mmol/L: _____ Once above 5 exercise can start. 5.1-8.0 mmol/L: _____ Exercise can be started.	No action required. Exercise can be started.	Check blood Ketone levels Ketones less than 1.0 mmol/L, exercise can start. Ketones 1.0 mmol/L or above, CONTACT PARENT.

If glucose levels are consistently below 4.0mmol/L or above 15.0mmol/L parents should be contacted to discuss a change to insulin doses.

PUMP

It is recommended that the family upload the pump prior to camp to ensure most recent settings are recorded.

Pump (Type or model) _____

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

Hypo Management Appendix (see following page).

Is supervision/assistance required for pump button pushing? Yes No

If yes, the responsible staff need to:

Remind Observe Assist Perform injection

Staff member/s allocated to supervise bolus doses:

STUDENT INSULIN PUMP SKILLS

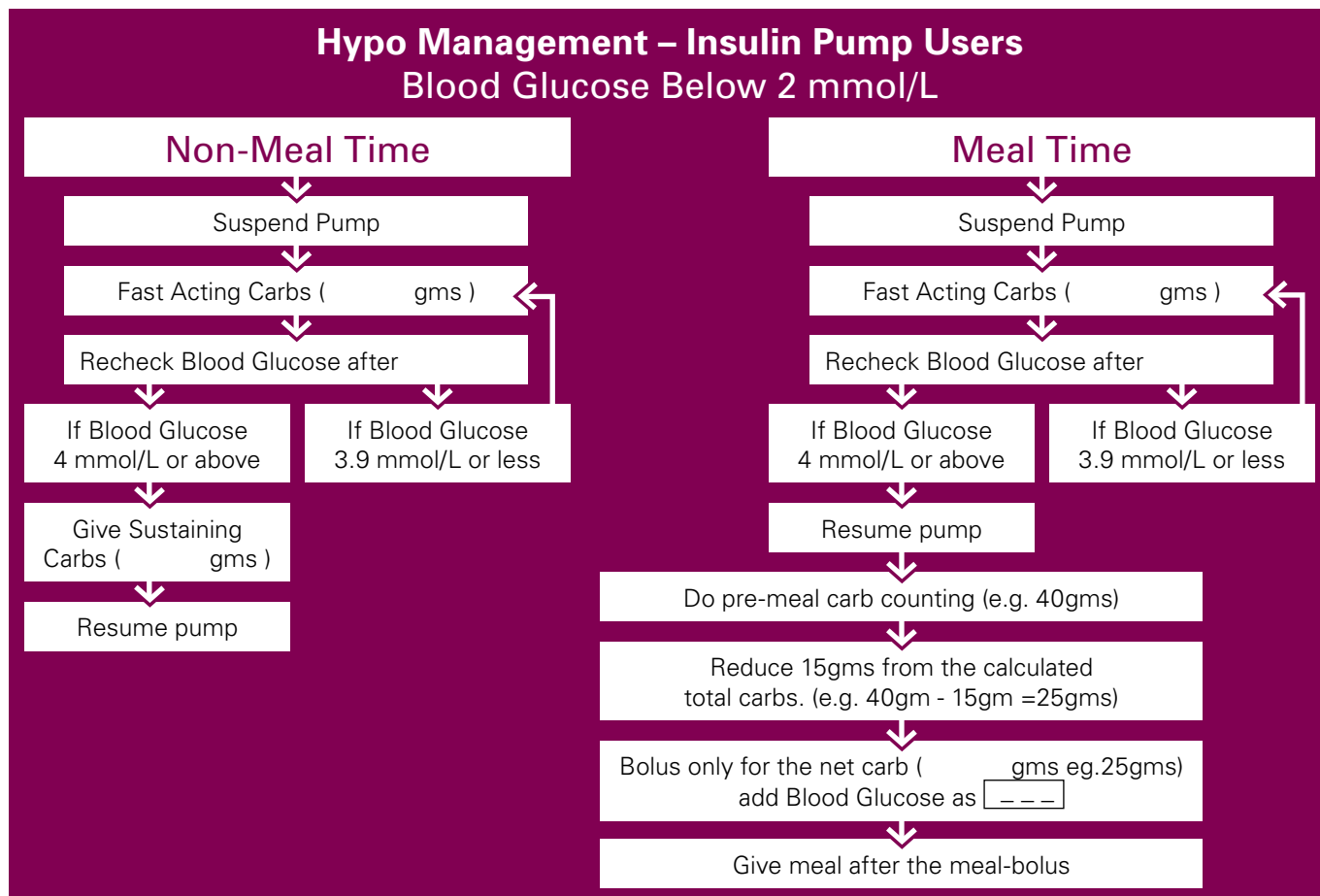
- | | | |
|---|------------------------------|--|
| Able to independently count carbohydrate foods | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Able to enter glucose levels and carbohydrate grams into pump | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Able to do a 'Correction Bolus' | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Able to disconnect & reconnect pump if needed | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Restart pump manually | <input type="checkbox"/> NA | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Able to prepare and insert a new infusion set if needed | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Give an insulin injection if needed | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Able to troubleshoot pump alarms and malfunctions | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Able to utilise temporary basal rates? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Does the infusion site require changing during camp? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

If yes, what date/s does this need changing?

It is recommended that families insert a new pump site before attending camp.

If NO to any of the above, please enable your child to learn or practice these skills.

HYPO MANAGEMENT APPENDIX



INSULIN ADJUSTMENTS/CORRECTIONS WHILST ON CAMP:

Temporary basal rates can be used to assist in management.

Temporary basal rates to be used during camp? Yes No

If yes:

If the BGL's are consistently above _____ mmols:

_____ % for _____ Hours

If BGL's are consistently below 4mmols:

_____ % for _____ Hours

Temporary basal rates can be ceased once the glucose level returns to within the target range of:

_____ mmols/L – _____ mmols/L

CHECKLIST FOR FAMILIES

CAMP MEALS AND SNACKS

Discuss food and meal needs with schools so that they can make necessary arrangements with camp catering staff. Arrange for extra fast and slow acting carbohydrate food to be available to treat hypos and prepare for exercise. Overnight access to carbohydrate containing foods will also be necessary. For example: If access to food is limited during an extended activity the student will need to carry or have access to additional carbohydrates at all times.

SUPPLIES

Arrange for the supplies your child will need whilst on camp. In most cases, they will need:

- Long acting insulin pens x 2
- Fast acting insulin pens x 2
- Glucagon
- Hypo foods and snacks
- A blood glucose meter / ketone meter
- Glucose test strips
- Ketone test strips
- Lancets / finger pricker
- Extra batteries / charging cable
- A means to keep the insulin cool in hot weather if a refrigerator is not available.

Make arrangements so your child or staff can contact you. The family will be the contact point to discuss glucose levels and insulin doses while at camp. The family can contact PCH as needed for advice.

REMOTE LOCATIONS

In cases where camps are in remote locations, you will need to discuss with the Principal whether there is a need for additional staff training. In cases where no medical staff are attending camp and/or the camp is not near medical facilities, extra training will be necessary. Usually in cases of severe hypoglycaemia, the Ambulance Service would be called and ambulance officers would give glucagon or a glucose infusion. However, on a remote camp where medical help may be delayed, staff will need to be trained in how to administer a glucagon injection in cases of severe hypoglycaemia.

CHECKLIST FOR SCHOOLS

SKILLS REFRESHER

Revise and refresh diabetes management skills for staff. Check that all staff responsible for the student's care on camp know when to call for help, the emergency medical evacuation procedures, and are familiar with correct injection technique so they can appropriately supervise the student.

Are staff:

- | | | |
|--|------------------------------|-----------------------------|
| Familiar with blood glucose monitoring | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Familiar with injection technique | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Confident to treat a hypo | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Familiar with blood ketone testing | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Familiar with medical emergency procedures | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

REMOTE LOCATIONS

In cases where camps are in remote locations you will need to discuss with the Principal the process of calling for help in an emergency.

Consider the use of a satellite phone.

- | | | |
|--|------------------------------|-----------------------------|
| Is there limited access to emergency medical care? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| If yes, has a staff member(s) completed Glucagon training? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

CAMP MEALS AND SNACKS

Does the student have coeliac disease? Yes No

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

Provide the family with a detailed meal program (including estimated timing of meals and access to food outside of these times). Carbohydrate foods should be served at every meal and snack time. For example; if meal times fluctuate each day of the camp, some additional planning may be required. Additional carbohydrate foods are needed for exercise and must be readily available where the exercise is taking place.

CAMP PROGRAM

Provide the family with a detailed activity program. The extra exercise at camps increases the risks of hypos. Insulin dosages are usually reduced by a quarter to a third.

HYPO KIT

A hypo kit is a pack containing fast acting and sustaining carbohydrates. Arrange for a hypo kit/s to be available at the camp. In cases of severe hypo, follow the Diabetes Camp Management Plan "Low Glucose Levels" on page 3.

The student should have a hypo kit on their person at all times. On a remote camp where medical help may be delayed, a trained staff member must be available to give a glucagon injection in cases of emergency. As per page 3.

CONTACT DETAILS

Make arrangements so staff can contact the child's parents to discuss glucose levels and insulin doses while at camp if required.

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 camp.
- 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