TYPE ONE DIABETES MANAGEMENT PLAN: 2026
Insulin Pump

EARLY CHILDHOOD CENTRE

Use in conjunction with Diabetes Action Plan.
This has been developed by specialist diabetes clinicians.

As kaitiaki (carers/guardians) of diabetes related services, it is a collective responsibility to establish an environment that facilitates a pathway for people with diabetes to navigate te ao mate huka - the world of diabetes[1].

Child's name:	Age:	Date:

RESPONSIBLE STAFF

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

Responsible staff will need to receive training on how to check glucose levels and how to put information into the pump and how to administer insulin via the insulin pump or injection if required.

The Centre manager /director is responsible to ensure the appropriate documentation is completed for staff who are required to administer / supervise insulin given via the pump or injection.

List below and tick those that apply.

Staff's name/s:	Glucose checking	Insulin administration
	☐	☐
	☐	☐
	☐	☐

INSULIN PUMP

The child wears an insulin pump that continually delivers insulin.

Insulin Pump model:

The responsible trained centre staff will need to be able to: (tick all those that apply)

- Count carbohydrate foods (Parent /caregiver will label all food) ☐
- Enter glucose levels into pump ☐
- Enter grams of carbohydrate food into pump ☐
- Do a 'correction dose' as per Diabetes Action Plan ☐
- Disconnect & reconnect pump if needed ☐
- Turn on "Exercise mode"/ "Temp target"/ "Ease-off"/ "Temp basal" / "profile" ☐

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

NOTES

- Parent / caregiver will determine carbohydrate count values to be enetered into the pump pre-meals.
- Parent / caregiver will need to be contacted to troubleshoot any pump alarms or malfunctions
- If the cannula comes out, a new pump cannula will need to be inserted by the parent / caregiver.
- If the cannula comes out and the parent / caregiver cannot be contacted, contact the child's Diabetes Medical Team.

NZCYCN
New Zealand Child & Youth Clinical Network

1. *Te Kaiwhakahaere Māori te Roopu mate huka Debbie Rawiri - Te Whatu Ora Waitaha Canterbury*

Child's name: _____

GLUCOSE LEVEL (GL) CHECKING

Target range for blood glucose levels (GLs): 4 – 8 mmol/L

- **GL results outside of this target range are common**
- GL check should be done where the child is, whenever needed
- The child should always wash and dry their hands when doing a BGL check via finger prick.

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

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

Times to check GL's (tick all those that apply)

- ☐ Anytime, anywhere
- ☐ Before activity
- ☐ Before snack
- ☐ Before lunch
- ☐ When feeling unwell
- ☐ Anytime hypo suspected
- ☐ Other routine times - please specify:

A finger prick (blood glucose check) is required if GL is **greater than 15.0 mmol/L for more than 2 hours, or if symptoms don't match the CGM value**. Refer to diabetes action plan.

AND/OR

If the meter reads **LO** this means the BGL is too low to be measured by the meter

Follow the **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

SENSOR GLUCOSE (SG) MONITORING

Most children will be wearing a small sensor that sits under the skin and measures glucose levels in the fluid surrounding the cells (interstitial fluid).

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, there may be times SG readings should be confirmed by a finger prick blood glucose check. Discuss with parent/caregiver.

☐ The child is wearing Continuous Glucose Monitor (CGM)

- With CGM, a transmitter sends data to either a receiver, phone app or insulin pump.
- CGM is NOT a compulsory management tool.

CGM ALARMS

- CGM alarms may be 'on' or 'off'.
- If 'on' the CGM will alarm if interstitial glucose is low or high.

ACTION: When pump/phone alarms, treat as per Diabetes Action Plan.

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

USE AT 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 are not expected or required to install CGM apps on their computer or smartphone, or to carry CGM receivers. Some centres may choose to do this to support individual children, and this can be discussed and agreed between the centre and family.
- Parents/carers are the primary contact for any questions regarding CGM use.
- Some CGM devices can be monitored remotely by family members. They should only contact the Centre 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. Monitoring should then be done via finger prick glucose checks and entered into the insulin pump/phone.
- The sensor can remain on the child during water activities.

AUTOMATED INSULIN DELIVERY PUMP SYSTEMS

Contemporary pumps with automation via a paired CGM can either increase or decrease insulin delivery in real-time. However **insulin bolus is still required for food via their phone or insulin pump.** Some children will **require** their phone within proximity of their pump for the system to work - discuss with parent/carer.

The pump may stop insulin delivery when the glucose level is low or predicted to go low.

ACTION: For any low or high alerts follow the Diabetes Action Plan

LOW BLOOD GLUCOSE LEVELS

(Hypoglycaemia / Hypo)

Follow the child's Diabetes Action Plan if BGL less than or equal to 3.9 mmol/L. Mild hypoglycaemia can be treated by using supplies from the child's HYPO BOX.

Hypo box location/s: _____

HYPO BOX

FAST ACTING CARBOHYDRATE FOOD	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 / caregiver. Continue hypo treatment if needed while awaiting further advice.
- Once GL is above 4.0mmol/L - follow-up long-acting carbohydrate is not a requirement. However if child is hungry, they can eat, but require an insulin bolus for this long-acting carbohydrate via the insulin pump.
- All hypo treatment foods should be provided by the parent/caregiver.
- Ideally, packaging should be in serve size bags or containers.

Mild hypoglycaemia is common. However, if the child is having patterns of low GLs at 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 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 or with family. **A video resource is available here**.

HIGH BLOOD GLUCOSE LEVELS

(Hyperglycaemia / Hyper)

- Although not ideal, **GLs above target range are common.**
- If GL is 15.0 mmol/L or more, **follow the child's Diabetes Action Plan.**
- If the child is experiencing patterns of high BGLs at Centre, make sure the parent/carer is aware.

KETONES

- Ketones occur most commonly when there is not enough insulin in the body.
- Ketones can be dangerous in high levels.
- Ketones are made more quickly when using insulin pump therapy.

You will be required to check the child's blood ketone level if:

- Child is unwell or
- GL is above 15.0 mmol/L twice in 2 hours

If blood ketones are more than 1.0 mmol/L, follow action for positive ketones on the child's Diabetes Action Plan.

EATING AND DRINKING

- All carbohydrate amounts need to be entered into the pump/app before routine meals or snacks.
- The child should not routinely go for prolonged periods without having access to a meal or snack containing carbohydrate (if hungry)
- Younger children require supervision to ensure appropriate amounts of food are eaten at meal and snack times
- Children with diabetes are encouraged to eat a nutritionally balanced diet and adequate food to support daily activities and being physically active. It is important NOT to restrict routine meals or snacks to manage glucose levels.
- Seek parent/carer advice regarding appropriate types of food, portion sizes, and insulin dose requirements for food at parties/celebrations at school
- Always allow access to drinking water and toilet facilities while the student is at the centre (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.

- Does the Child have a confirmed food allergy or intolerance?

  ☐ No ☐ Yes*

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

PHYSICAL ACTIVITY, ACTIVE OUTDOOR PLAY AND SWIMMING

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

- Check glucose level before physical activity, physical activity may lower glucose levels.
- There are settings that can be used to manage the effect of physical activity on glucose levels, such as "Exercise Mode", "Ease-off" , "Temporary Target" , "Temp basal" , "Profile". Some children may require this turned on for entire day at the centre.
- Physical activity should not be undertaken if BGL less than or equal to 4.0 mmol/L.
- Refer to the Diabetes Action Plan for hypo treatment.
- Vigorous activity should NOT be undertaken if the student is unwell AND/OR blood ketones are greater than or equal to 1.0mmol/L
- Suspend AND disconnect pump for intense and water-based activity.
- Pump should not be disconnected or suspended for longer than 90 minutes.
- If pump has been removed for physical activity, it is important it is reconnected as soon as possible.

INDIVIDUALISED GUIDANCE (free text)

EXCURSIONS /TRIPS

It is important to plan for extracurricular activities.

Consider the following:

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

EMERGENCIES OR EVACUATIONS

- In case of emergencies or evacuation, spare diabetes supplies stored at the centre should accompany the child including their personal hypokit. Up to three days of supplies are recommended for a civil defence emergency.

EXTRA SUPPLIES

Provided for diabetes care at the Centre by parent/carer for back up or in case of Civil Defence emergency

- [ ] Insulin and syringes / pens / pen needles
- [ ] Spare Infusion sets and tubing
- [ ] Charging cords and power pack if required
- [ ] Finger prick device
- [ ] Blood glucose meter
- [ ] Blood glucose strips
- [ ] Blood ketone strips
- [ ] Sharps container
- [ ] Hypo food
- [ ] Activity food
- [ ] Consider Batteries and / or charger for meter or glucose monitoring device and pump

GLOSSARY OF TERMS

Common insulin pump terminology

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

Food 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.

"Exercise Mode", "Ease-off" , "Temp Target", "Temp basal" & "Profile"
Modes that can be switched on via certain pumps/phones to deliver less insulin & prevent hypos Eg., for phsycial activity

" Boost "
A mode which can be switched on via certain pumps to deliver more insulin & prevent higher GLs

AGREEMENTS

PARENT/CARER

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

☐ I give consent to the Early Childhood Centre to communicate with the Diabetes Treating Team about my child's diabetes management at Centre.

First name _____ Family name _____

Signature _____ Date _____

CENTRE REPRESENTATIVE

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

First name _____ Family name _____

Role ☐ Manager ☐ Supervisor ☐ Other (please specify) _____

Signature _____ Date _____

This document has been developed by Specialist Diabetes Clinicians.
If you have concerns please contact the child's diabetes treating team.