



Australian Paediatric Society

School e- learning modules – <https://www.t1d.org.au>

DIABETES MANAGEMENT PLAN 2018 INSULIN PUMP

Name of Student Date of Birth/...../.....

Insulin Pump Type and Model.....

Emergency ContactPh.....ORPh

Medical team.....Ph.....AND.....Ph.....

The Diabetes Management Plan (this plan) is a document produced by the parent and medical team that outlines the individual requirements, medical needs, directives and instructions for the management for the student with Type 1 in the school environment. The school and relevant Education provider must facilitate the execution of this Plan. The Plan is specific to this child.

The Diabetes Action Plan provides target blood glucose levels and steps for the appropriate management required for low (“Hypo”) high (“Hyper”) blood glucose levels.

The Diabetes Action and Management Plans constitute the parent’s formal instructions to the school regarding their child’s medical needs. These plans should be updated annually, or as required.

Insulin Pump Therapy (IPT)

An Insulin Pump is a computerised device that delivers background insulin (basal insulin) and delivers a calculated insulin dose (bolus) when the Blood Glucose level and /or carbohydrate content of food are entered into the pump. The pump is a tool that may optimize diabetes management if used properly. Severe low Blood Glucose (Hypo) risk may be reduced. Meal timing and food quantity can be more flexible when using IPT. Exercise and school performance are both enhanced when Blood Glucose levels are in the normal range.

An insulin pump may be disconnected from the student for up to 2 hours without causing significant problems but preferably it stays connected for everything except contact sports. The pump is an expensive item costing approximately \$10,000 hence must be left in the care of a responsible adult if disconnected. School staff are responsible to reconnect the pump or remind the student to reconnect their pump after disconnection. The pump companies do not cover accidental loss or damage.

Terminology

- **Cannula/infusion set** – small Teflon or metal tube that is inserted under the skin as the portal for insulin delivery. Must be replaced every 2-3 days. Teflon may kink causing failure to deliver insulin.
- **Reservoir / Cartridge** – plastic container within the pump containing sufficient insulin for 2-3 days
- **Line** – plastic tubing connecting the pump to the cannula - it cannot kink
- **Suspend** – cessation of insulin delivery from pump (under no circumstances should the pump need to be suspended at school)
- **Ketones** – chemicals produced by fat breakdown when glucose becomes unavailable as a fuel for cells to burn for energy (e.g. failure of insulin delivery). Small amounts of ketones are not usually a concern however when present in large amounts can induce nausea and vomiting, potentially leading to serious problems.

Exercise Strategy

Exercise strategy for scheduled activity

➤ Reduced insulin dose before exercise Yes / No

If yes, how is this done? _____

Exercise Strategy for Carbohydrates before and after exercise:

Give _____ (type and amount of Carb without insulin)

Before exercise if BG is _____ mmol/l








And _____ (without insulin) after exercise unless BG is above _____ mmol/l

Continuous Glucose Monitor (CGM) & Flash Glucose Sensor (FGS)

If the student is wearing a CGM or Freestyle Libre FGS, please discuss interpretation and interventions with parents. If either device reads low or the student has symptoms of low Blood Glucose, a finger prick Blood Glucose is required to confirm the result. This is because these devices have a lag time of approximately 5 minutes (and up to 15 minutes) behind Blood Glucose levels. This is important to assess the effect of low Blood Glucose intervention and treatment.

Please use Trend Arrows on CGM (Dexcom) and FGS (Libre) Yes / No

(A formal training program from treating Diabetes Team / parent strongly recommended).

CGM /FGS Arrow Use (Yes /No)	Significance	Prevent or act (consider the effect of exercise especially)
Double Down 	Glucose value falling by >2.5mmol/l in 15 minutes	6.5 mmol/l or lower – fast carbs per Action plan i.e.
Single down 	Glucose value falling by 1.7-2.5mmol/l in 15 mins	6.5 mmol/l or lower
Sideways down 	Glucose value falling by maximum 1.7mmol/l in 15 minutes	5.7 mmol/l or lower
Steady 	Stable blood glucose rising/falling by maximum 0.8mmol/l in 15 minutes	4.8mmol/l or lower
Sideways up 	Glucose value rising by as much as 1.7mmol/l in 15 minutes	Increase insulin dose by 10%
Single up 	Glucose value rising by as much as 2.5mmol/l in 15 minutes	Increase insulin dose by 20%
Double up 	Glucose value rising by more than 2.5mmol/l in 15 minutes	Increase insulin dose by 25-30%

(ref Peter Adolfsson CGM Step 1-2-3 Guide)

Insulin Pump Troubleshooting Skills

If there are problems with the pump or issues relating to insulin delivery it is strongly recommended the school staff seek guidance from the parents (in the first instance) and /or the treating diabetes medical team.

Student with Type 1 Diabetes is consented by parents to action the following:

- Able to fill insulin reservoir and prepare tubing and cannula change Yes / No
- Able to insert new cannula / infusion line Yes / No
- Able to disconnect and reconnect tubing if required Yes / No
- Able to self-administer insulin injection if required without supervision Yes / No

Coeliac Disease

- This student also has coeliac disease so must avoid gluten (wheat) Yes / No

Communication

The school must contact the parent in first instance. The circumstances when the parent should be contacted immediately for certain circumstances are listed by the parent in Annexure 3.

The parent may provide consent for school staff to communicate with the treating medical team if the Parent is unavailable.

I authorise school staff to contact the treating medical team about my child in the event of in an emergency

Parent/Legal Guardian

Signed _____(parent)

Date ____/____/201__

Name _____

INFORMED CONSENT

This Plan requires the Informed Consent of the Parent/legal guardian.

Medical Staff/ Treating Medical Team

Medical staff are responsible for their prescribed medical treatment of the child. This cannot be delegated to a third party that is not authorized or suitably qualified.

Our medical team is committed to supporting the student with Type 1 Diabetes. Treatment decisions are made by the parent in conjunction with the medical team to allow optimal medical care and in the best interest of the child's short and long-term health outcomes. The medical team are obliged to undertake and advise on their prescribed treatment in line with their obligations as Registered Health Practitioners.

Parent/Legal Guardians

The parent is responsible for the medical decisions concerning their child.

I understand that it is my right to be fully informed of any instruction, advice or training that is provided regarding the needs of my child with Type 1 Diabetes. I understand that it is my right and responsibility to instruct the School on the specific care required for my child. I understand that I am responsible for supply of all Type 1 Diabetes information and material, equipment, insulin, carbohydrate food, hypoglycaemia supplies and Glucagon Hypokit. I understand it is my right and responsibility to notify of any changes to the medical needs of my child with type 1 diabetes

Parent/Legal Guardian

Signed _____(parent)

Date ____/____/201__

Name _____

Treating Medical Team

Signed _____ (doctor)

Date ____/____/201__

Name _____

Annexure 1: General Issues with Type 1 Diabetes

Young children are not capable of managing diabetes cares and will require extra support at school. The child with diabetes may be encouraged to be involved in care and perform some tasks by themselves under supervision. The student may be capable, but should not be responsible for Type 1 management during school hours as the effects of low or high blood glucose may seriously impair judgement.

There is no consensus as to what age the student may be expected to have responsibility for self-care during the school day. In most cases the child is mature enough by 12 years but a neurocognitive dysfunction, learning disability or psychosocial vulnerability can cause prolonged need for support. The parent is the best and most appropriate person to judge this in conjunction with the child's medical team and should document the amount of assistance and supervision required in the child's individual Diabetes Management Plan. The child will not "learn responsibility" by being left to their own devices in school.

Type 1 is a relentless condition with over 30 points of care required daily. Because of this, there is increasing recognition that adolescents are generally not capable of total diabetes care until they leave school and their forebrain fully develops. Adolescents have other interests, do not want to be different from their peers and having a condition such as diabetes may carry a stigma, so diabetes management is generally not a high priority. Diabetes teams aim to encourage children with Type 1 to enjoy active "normal" lives not inhibited by Type 1. Discrimination, exclusion, inappropriate comments and lack of facilitation of Type 1 requirements during school time for many children can destroy such ethos.

The student with Type 1 has individualised needs and has a right to undertake their diabetes management where they feel most comfortable. A child should be permitted, if required, to leave the classroom for toilet privileges or for Type 1 management requirements with supervision provided as required.

Annexure 2: EMERGENCY PACK

Always have available and updated supplies of the following at school:

(Responsibilities – parent to supply, school to notify if supplies low)

- Blood Glucose meter, test strips, finger lancet device
- Blood ketone strips
- Blood ketone test device: FreeStyle Optimum Xceed, FreeStyle Optimum Neo or Freestyle Libre reader
- Glucagon (in-date)
- Spare lines and reservoirs
- Spare rapid acting insulin (in-date)
- Syringes / Pens/pen needles
- Batteries
- Cannula inserter (if required)
- Hypo food /glucose tablets
- Team contact details
- Pump company emergency details Medtronic Hotline/ Animas Hotline

Annexure 3 Other Individual Requirements

The following are also required as reasonable adjustments for the complex care of my child with Type 1 Diabetes to maintain blood glucose levels as much as possible in the normal range:

Signed..... (parent)

Date/...../ 201.....