Starship Insulin Pump Program

Helping you transition to insulin pump therapy

Insulin Pump Therapy – a Realistic Option

The decision by Pharmac to fund Insulin Pumps has removed a significant financial barrier, making pump therapy a more accessible and realistic option for children and teenagers with type 1 diabetes.

The Starship Diabetes Service currently cares for just under 500 children and adolescents with type 1 diabetes. Of these patients, about 20% have been enrolled on the Starship Insulin Pump Programme and have their diabetes successfully controlled in this manner.

Now that Pharmac Funding is available, it is hoped that children and adolescents who would benefit from insulin pump therapy will be able to access this treatment option without their families having to worry about raising the money for the initial cost of the pump and the ongoing cost of consumables. Funding does depend on meeting the clinical criteria as specified. Insulin pumps are small battery powered (external) devices that deliver insulin through an infusion line into the skin by a removable cannula. Funding does depend on meeting the clinical criteria as specified below.

What are insulin pumps and how do they work?

- Insulin pumps are small battery powered external devices that deliver insulin through an infusion line into the skin by a removable cannula
  - Insulin pumps deliver rapid-acting insulin such as Novorapid®, Humalog® or Apidra®
- The pump is programmed to deliver a continuous low rate of insulin during the day and night (basal)
- Additional insulin is delivered (as a bolus dose) at mealtimes or to correct a high blood sugar level
  - At snacks and mealtimes (whenever food is eaten), the user enters the amount of carbohydrate into their pump as well as their blood sugar level and the pump calculates how much insulin is needed for the food and to achieve the target blood sugar level

Advantages of the Insulin Pump

- Most people find that insulin pumps offer more convenience and flexibility
- The quick acting insulin that the pump uses has several benefits over longer acting insulins
  - Insulin levels are less variable than those seen with long-acting or intermediate-acting insulin
    - › More predictable blood sugar levels
    - › Fewer swings in blood sugar levels
  - Allows more flexibility in lifestyle
    - › No need to snack or have set meal times to maintain blood sugar levels – a major disadvantage of longer acting insulins
  - Fewer injections
    - › The insertion site is changed about once every 3 days

Disadvantages of the Insulin Pump

- If insulin delivery is disrupted, this can lead to an increased risk of diabetic ketoacidosis (DKA), as there is no long acting insulin
- Cost (if your child or teen doesn't meet the criteria
- Site infections
  - These are not common and mostly avoidable with good cleaning and hygiene
- People on insulin pumps need to be connected to their pump all day
  - However, the pump can be easily disconnected for baths, showers, and sports as required

Would your child benefit from Insulin Pump therapy?

If your child or adolescent continually struggles to maintain their blood sugar levels within the target range using daily insulin injections of short- and long-acting insulins, they may benefit from insulin pump therapy.

The continuous infusion of short acting insulin (with bolus insulin doses when eating) that the insulin pump delivers may help patients who have either significant hypoglycaemia or severe recurrent hypoglycaemia on daily insulin injections.

If you would like your child to be considered for insulin pump therapy, you should discuss this at clinic with your diabetes consultant. They will assess the likely benefit that could be achieved with pump therapy and the feasibility of meeting the criteria for a Pharmac funded pump.

Pharmac Criteria for a Funded Pump

In order to qualify for a Pharmac-funded pump, your child must meet one of the following criteria:

EITHER
- Unpredictable and significant variability in blood glucose including significant hypoglycaemia affecting the ability to reduce HbA1c.
  - Your diabetes consultants at clinic believe that the HbA1c could be reduced by at least 10 mmol/mol or 1% using insulin pump treatment

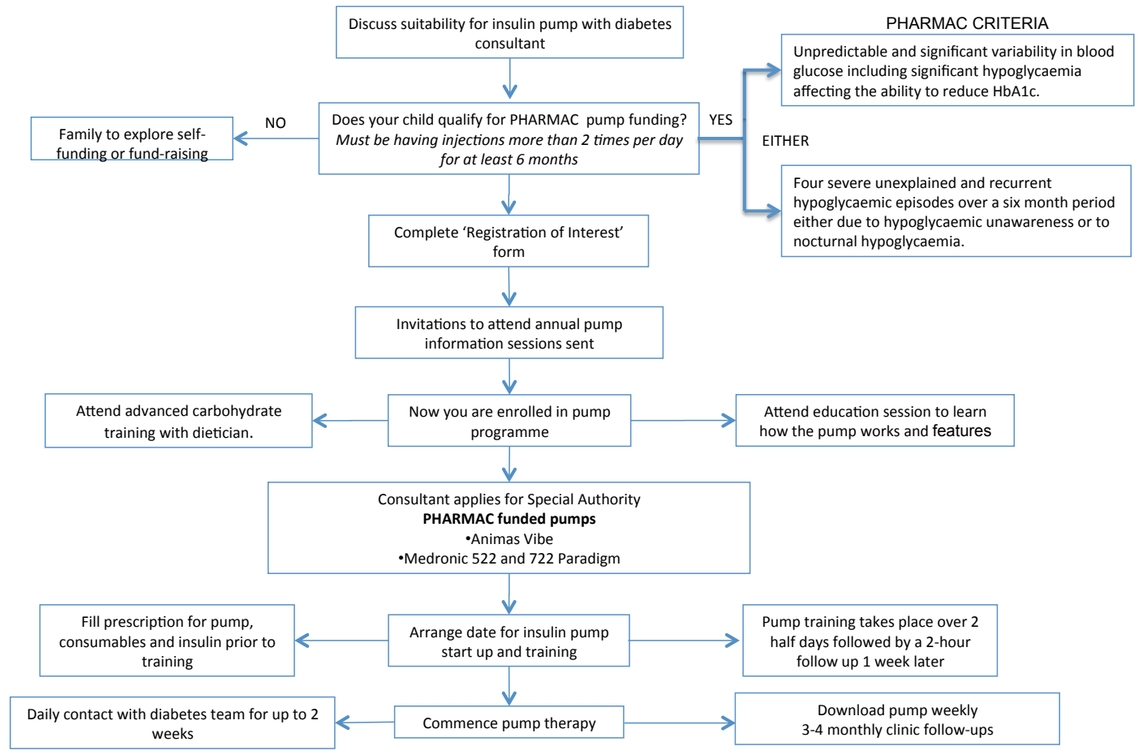
OR
- Four severe unexplained and recurrent hypoglycaemic episodes over a six month period either due to hypoglycaemic unawareness or to nocturnal hypoglycaemia

In addition, patients need to have been on an intensive multiple dose insulin regimen (3 to 4 injections per day) for 6 months or more and have the knowledge and skills to count carbohydrates.

If your diabetes consultant believes that your child will benefit from an insulin pump and that he/she is likely to qualify for a Pharmac-funded pump, they will submit an application via the Pharmac website.

Full details of the criteria for funding of pumps and pump consumables are available on the Pharmac website www.pharmac.govt.nz.

Starship Insulin Initiation Programme



To continue to have consumables funded your child must continue to meet the clinical criteria (see list of criteria)

Starship Pump Programme

Once you have made the decision to switch to Insulin Pump therapy (either funded through Pharmac if you meet the criteria, or privately funded), you can get more information by following the process outlined below.

1. Register your interest at your clinic appointment by completing the registration form
   - This adds your name to receive regular information on the Starship Pump Programme, but does not commit you
2. Once on the Starship Pump Information List, you will be invited to information evenings to discuss pump therapy
   - These sessions allow the opportunity to learn more about pumps, their consumables and the features of each
   - Pharmac now funds two makes of pump: Animas Vibe, and Medtronic 522/Medtronic 722 Paradigm
     - › You will do your own research on each pump type to determine which best suits the needs of your child and what features you like
3. The diabetes dietician will provide education on advanced carbohydrate counting
   - This is an essential component of pump therapy, and a requirement for a Pharmac-funded pump
     - › Accurate counting and weighing of carbohydrates to the gram is essential to getting the best results from your insulin pump
4. Once advanced carbohydrate training is completed, you will arrange a date with the nurse specialist to commence pump therapy
   - If you meet the criteria for Pharmac funding, the specialist will apply for a Special Authority application to Pharmac
   - A date will be arranged with the diabetes nurse specialist to commence pump therapy
     - › It is expected that Pharmac approval will be granted within weeks of the application being submitted
5. If the Special Authority is approved please contact us to request a prescription. You will need to fill your prescription for the insulin pump and consumables at your Pharmacy prior to the starting date (this may take a week or longer). You will also need to arrange technical training from the Company representative prior to the first training day.
6. Commencement of pump therapy entails 2 half-day training sessions, and a follow-up one week later of 2 hours
   - Both parents and/or caregivers must attend

- After the training sessions, daily contact with the diabetes team for up to 2 weeks is recommended to ensure that insulin levels are correct
- Ongoing, it is advisable that you download and analyse data from your pump on a weekly basis – this can be accessed by the Starship nurses and is an excellent resource for getting the best from your pump.

If your child or adolescent struggles daily to control their blood sugar levels, contact your diabetes consultant or nurse specialist to discuss their suitability for insulin pump therapy, it's well worth a try!