



Insulin Pumps with diabetes

streetwise

What is an insulin pump?

A pump is programmed to constantly give very small amounts of insulin. There are different types of insulin pumps and they vary in the way they are connected to the body.

PLEASE NOTE THAT YOU ARE NOT GETTING ANY INSULIN WHEN THE TUBING IS DISCONNECTED.

Insulin pumps with infusion sets

These are the most common type of pumps. They are a similar size to a small mobile phone and are worn on the outside of the body. The pump contains a syringe (or reservoir) of insulin that is attached with a tiny plastic tube to an infusion set under the skin. An infusion set is a constant connection between your body and an insulin pump. The infusion set goes into your abdomen, buttocks, or hip area and will need to be changed every couple of days. You or your parents can easily insert this. Once you know how to do this, it can take less than 5 minutes from start to finish!



pumps

You can push buttons on the pump to tell it how much insulin you want to give at meal/snack times. You can disconnect the tubing when you have a bath, go swimming, or when you play sports.



Insulin pump that uses an infusion set



How does a pump work?

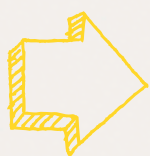
A pump only uses one type of insulin – normally rapid-acting insulin. The pump gives this single type of rapid-acting insulin in two ways:



Basal insulin - this is the insulin that is delivered constantly, in very small amounts over a 24-hour period. The amounts can vary every hour according to when you need more or less insulin.



Bolus insulin - this is a burst of insulin that is given with any food, drink (containing carbohydrate), or to correct a high blood glucose level. Pumps have clever calculators which once programmed, will work out how much insulin needs to be given according to how much carbohydrate you are eating and your blood glucose level.



Are insulin pumps safe?

Pumps are very durable and rarely get broken if accidentally knocked. Lots of pumps will have internal checking systems that will constantly check that it is working correctly. The tube of the pump can block and the pump will alarm but as you will be testing BGLs more frequently you may pick this up before the pump does.



Do you still need to test your blood glucose when using a pump?

It's very important to test your blood glucose when using a pump. Most young people find they need to do more regular testing than when they used insulin pens.

If I decided that I wanted a pump, what would I need to do?

You need to talk to your diabetes team – your nurse or doctor – about why you think you would like a pump. They will be able to discuss the pros and cons of this with you and your family. Not every diabetes service currently offers insulin pump therapy. If your team does not start children/young people on pumps, they should be able to refer you to another diabetes team that does.

Where do you put an insulin pump?

It can be clipped to your belt or waistband or carried in your pocket. Lots of young people get special pump pouches to keep their pumps in. It is up to you whether you want the pump hidden under clothing or whether you are happy for other people to be able to see it. If you decide to use an insulin pump, you will need to wear it day and night. Lots of people are a little worried about this at first, in case it gets pulled out accidentally overnight. However, most people who wear a pump forget they are wearing it at night. You can either wear it in a pocket in your nightclothes or just put it in your bed next to you.



pumps

If you decide that you would like to think about an insulin pump, there are some things that you will need to be able to do before you can go on a pump. These include:

1

Showing the diabetes team that you are able to check your blood glucose levels at least 4 times a day and change your insulin dose accordingly.

2

Learn how to 'carbohydrate count'. This is where you accurately calculate how many grams of carbohydrate there are in the food that you eat and use a carbohydrate ratio to calculate the dose of insulin that will match this each time you eat.

3

You may be offered a pump trial where the nurse will put an infusion set in and you can take a pump home with you for a couple of days. The pump will only contain water but can help you decide how you feel about being attached to a pump all of the time.

4

You and your parents will need to be taught how to use the pump. This will take several hours and might be spread out over a couple of days. When first starting on a pump you will be asked to test blood glucose levels very frequently, and this is likely to include testing overnight until the basal insulin rates are calculated correctly.

insulin pumps

good

not so good

Things that I think might be good/not so good about an insulin pump:

Contact Numbers

School Nurse:

Diabetes Specialist or Local Team:

Kidshealth

<http://www.kidshealth.org.nz>

Starship Transition

<https://www.starship.org.nz/patients-parents-and-visitors/youth-transition/diabetes-service>

Youth Law Aotearoa

<http://www.youthlaw.co.nz>

A series of leaflets is available that may be helpful for you:

- Annual Review
- Body Piercing & Tattooing
- Emotional Well-being
- Exercise
- Insulin Pumps
- Looking After Type 1 Diabetes
- Sensible Drinking
- Sex and Beyond
- Top Tips for School
- Travelling

Ask your diabetes team for the ones you want.

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