

Pumper in the House!

The Simple Guide for Friends and Family of Kids and Teens on Pumps

Why the Pump?

OK, by now it's probably been explained to you that the youngster in your house has diabetes and, as a result, will require insulin. I know hearing that word for the first time seems a little scary. But now that you know it's a very treatable condition, let's talk about how the Insulin Pump can help provide these youngsters with a productive and positive lifestyle.

What is an Insulin Pump?

The Insulin pump is really a "system" containing three parts:

The pump is a small programmable device, about the size of a pager that holds the reservoir of insulin. The pump is programmed to deliver insulin into the body through a thin plastic tube called an infusion set. The pump is worn outside the body, in a pouch or on a belt. The infusion set is inserted just below the skin, where it stays in place for two to three days. The part that remains in the body is usually a tiny, flexible tube, called a cannula. When it is time to change the set, a new one is inserted in a different location.

Too much Insulin

Low Blood Glucose

Hypoglycemia

Caused by:

- Too much insulin
- Extra exercise, activity, or excitement that uses up more glucose than usual
- Not enough food or not being able to keep food down

Symptoms:

Any of these symptoms could precede seizure, convulsion, or loss of consciousness.

- Behavior changes: crying, crankiness
- Pale complexion
- Hunger
- Shaking (more often a "cold" sweat)
- Excessive weakness (lack of energy)
- Headache
- Confused, dazed, or spaced out
- Drowsiness
- Non-responsiveness to questions

Treatment

General rule: GIVE FOOD CONTAINING SUGAR BY MOUTH AS SOON AS POSSIBLE. You may give milk or juice or soda (non-diet), or glucose tablets. It may take 10 to 15 minutes for the blood glucose to rise. Ask mom or dad for the best snacks to treat low blood glucose.

Glucagon

Glucagon is used when the child is unable to take anything by mouth. It has the OPPOSITE effect of insulin, in that it raises the blood glucose level. Should a seizure or loss of consciousness occur, know how to administer glucagon by injection and know where the kit is kept.

If you need to treat hypoglycemia, do so first, then call the parents or the medical contact.

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What the Insulin Pump Can and Cannot Do

It's very important to understand what the insulin pump can and cannot do. First of all, you must realize that the pump is not a true artificial pancreas, and like any mechanical device, you will need to tell it what to do. Also, it will not automatically measure your child's blood glucose and give insulin. It delivers only regular insulin to mimic what the pancreas would do if it were delivering insulin. Because of this, the insulin is delivered in a much more natural and consistent manner. This is different from intermediate and long-acting insulins, such as NPH, Lantus, or Ultralente, which can vary in absorption on a day-to-day basis.

How is the Insulin Delivered?

The pump delivers insulin in two different ways:

- **Basal Rate:** a small amount of insulin, delivered continuously 24 hours a day in order to keep the blood glucose stable between meals and during the night. The pump can be programmed to deliver different basal rates depending on the time of day. For example, some kids require less insulin at night than during the day.
- **Bolus:** a larger amount of insulin delivered over a short period of time used to cover food from meals or snacks. Since a bolus can be given at any time and in varied amounts, there is great flexibility with regard to timing and size of meals. If necessary, an extra bolus of insulin (correction or supplemental bolus) can be given to compensate for high blood glucose.

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Want to know a little more?

I cannot stress enough how working with the pump in the presence of the youngster's parents will build confidence and provide valuable hands-on experience. I find that I'm more at ease handling situations when I am alone with Oren since I have encountered them in the presence of his mother. Hopefully, in your case, the parents will encourage this training, but if not, try to insist that he or she does. In the long run, it will bring about a more calm, comforting experience when helping the youngster in your house with his or her diabetes management.

Remember, too, it's very important to post the telephone number for the local medical personnel who is to be contacted in case questions arise and you cannot reach the parents. This may be the physician, the nurse educator, dietician, etc. These numbers should also be listed on the attached Pumper Information Form. Also, remember to use the Medical Clinical Services helpline in case of any pump problems. That number is located on the back of the pump.

A tip on the sometimes forgotten parts of the pump: I find that it is helpful to make sure that my grandson's tubing is really tucked away in a manner that does not really allow for it to become caught on legs, umbrellas, etc. This also helps the older pumper who may be involved in sports activities and other busy pastimes. I used to worry so much about programming the pump, and have found that the pump itself has never presented a problem - it's the other "normal kid" surprises that have! My advice is to frequently check the infusion site in order to make sure that the cannula is still inside the site and that the skin is not red. Call the parents if the site is red.

Finally, if you ever find yourself in an unfamiliar pump screen, and you wish to return to the main screen, **do not touch any buttons on the MiniMed pump**, since it will automatically return to the "Time of Day" screen after approximately 10 seconds. I simply set down the pump for a moment, relax, and tap again when the "Time of Day" screen appears.

So there you have it... a grandmother's simple method of caring for the "looked" kid in the house, by providing him with the coolest insulin pump available.

Other Tips from Carolyn

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MiniMed
Professional Education
12744 San Fernando Road
Sylmar, CA 91782
916-562-0154 • 800-400-3322
Fax: 818-479-0302
www.minimed.com