

## **PUMPER IN THE SCHOOL!**

### **MEDTRONIC MINIMED PARADIGM**

An insulin pump is a device about the size of a pager that provides small amount of fast-acting insulin (**basal**) every few minutes through a small catheter under the skin. The student then takes an additional amount of insulin (**bolus**) through the pump for meals and snacks. These bolus amounts are dependent on carbohydrates, blood sugar and any exercise the student may be about to engage in. Insulin pumps help the child with diabetes to maintain a more normal lifestyle and also to gain better blood sugar control. This sheet is intended to give you the information you need to assist a child with a Medtronic Minimed Paradigm insulin pump.

#### **LOW BLOOD SUGAR**

Students with a pump may go low or high just as children using insulin in the form of shots do. For details on how to handle a low for a particular student, check the diabetes care plan.

If a severe low occurs in a child using a pump, it is important for school personnel to know how to disconnect the pump from the insertion site at the skin. Have the child show you how he or she disconnects the pump (it's easy and painless) so that you will know how if an emergency arises. See care plan for how to treat a low BG.

#### **HIGH BLOOD SUGAR**

If the student has a high blood sugar (over 300), it is **VERY** important to check the urine for ketones. If a child shows positive ketones, it is a sign that the pump may not be delivering insulin and the child will need an injection of fast-acting insulin (Humalog or Novolog) using a needle and syringe. See the care plan for specifics on dosing. The pump insertion site will also need to be changed. If the child is unable to change the site his or herself, a parent will need to be called. Any time insulin is given for a blood sugar over 300 (whether by pump or syringe), blood sugar should be checked again in 1 hour.

#### **EXERCISE**

During times of vigorous exercise or contact sports, the student may choose to disconnect the pump for a short time. For this, the student needs to place the pump in a safe place. The pump should not be disconnected for longer than 1 hour. Some students choose to wear their pump during exercise. See the care plan for details about this student.

#### **SUPPLIES FOR SCHOOL**

- Blood glucose meter, lancet and strips (BD Link meter comes with pump and will 'beam' BG result directly to the pump by radio waves)
- Glucagon (in case child passes out from a low)
- Ketostix (to check urine for ketones if BG > 300)
- Snacks (to treat low BG)
- AAA battery (the pump will alarm if the battery runs low. You will need a penny to loosen the battery cap to change out the battery.)
- Insertion set (in case insertion site comes out)
- Back-up insulin (see above section on high blood sugar)

#### **SUSPENDING THE PUMP**

The student's pump should not be suspended for any reason. If the pump needs to be disconnected, simply disconnect at the site and leave the pump running.

## **MEAL BOLUS**

At lunch, the student will need to give a bolus dose of insulin through the pump. The bolus dose is given before the meal unless there is concern the child will not eat all of the meal. In that case, the bolus is given right after the meal. *The typical student needs help remembering to give their bolus!* Missing bolus doses is the main reason for poor diabetes control in people who use pumps.

### **How to give a meal-time bolus using the Medtronic Paradigm pump**

1. **ALL** pumpers need a blood sugar check before lunch. Most kids benefit from checking their blood sugar and bolusing in the classroom. Check blood sugar using the BD Link meter or whatever meter the child is using.
2. If using the BD Link meter, the BG will automatically display on the pump.
3. Press ACT to accept BG number, select 'Bolus' from menu, press ACT, select 'Use Bolus Wizard', press ACT
4. If you are using another meter, select 'Bolus' from menu, press ACT, select 'Use bolus wizard', press ACT, scroll up to enter BG, press ACT
5. The next screen to appear is 'Enter Food' – scroll up to enter grams of carb, press ACT
6. The next screen to appear will be the 'Estimate Details' screen, it will give you the calculations that the pump has made for the bolus, press ACT
7. The next screen is 'Set Bolus Estimate' and the suggested bolus will be flashing. Press ACT to accept the bolus. Bolus will infuse over next 3 minutes.

**Note:** The pump will lower the amount that it recommends to give if another bolus has been given within the past 3 hours. This is a safety feature and is meant to keep the child from over bolusing. If this is happening, you will see the amount of insulin subtracted in the 'Estimate Details' screen at the 'Active insulin' line.