

Guidelines for School Nurse

INSULIN PUMP CONTINUOUS SUBCUTANEOUS INSULIN INFUSION (CSII)

The school nurse, family and student with an Insulin Pump will need to work together to insure optimum management of the Insulin Pump during school hours at each specific site.

HOW PUMPS WORK

The Insulin Pump is a tiny computer that contains a reservoir that is loaded with short acting insulin. The pump is programmed to deliver a **basal rate** continuously. The basal rate varies throughout the day depending on the student's usual activity level for each time period. There can be between two and six basal rates in a twenty-four-hour period. The basal rate can also be temporarily changed as needed for more active than usual activities or during illness. Before each meal or snack, a **bolus dose** of insulin is given. The bolus dose is based on the amount of carbohydrates to be consumed and is programmed at the time food is to be consumed. A bolus dose can be cancelled while it is being administered if needed.

MECHANICS OF INSULIN PUMPS

The pump consists of the pump compartment, which is run by batteries, a reservoir in the pump to hold the insulin, connecting tubing and cannula. The flexible cannula is inserted into the subcutaneous tissue usually in the abdomen with a needle, then the needle is removed and the cannula is taped into place. (Other sites such as upper buttocks may be used as decided by the student and his/her diabetes clinician.) The insertion site should be checked before each bolus for leaking or kinks in the tubing. The pump can be worn on a waistband, in a pocket or girls sometimes wear it in their bra.

BLOOD GLUCOSE TESTING

The pump is used to gain better control and to have more normality in their life. The student is able to be more flexible when and with what they eat but they must be willing to test their blood regularly. They should test at least four times a day - before meals, at snacks and especially before bed.

Correction doses of insulin can be given throughout the day for blood sugars higher than the target range. If the blood sugar is high the student should first:

- Check to be sure they did not run out of insulin
- Check that the pump is loaded correctly
- Check that there is no blood or air bubbles in the tubing
- Check the insertion site for signs of dislodgement or infection.

Low blood sugars should be treated with quick acting sugar. A student may need to check his/her blood glucose before activities associated with lower sugars (i.e., dances and exercise) and when there are dramatic changes in his/her schedule (i.e. final exams).

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GOING OFF THE PUMP

The pump can be disconnected for periods of time when the student is showering, swimming or participating in sports. The infusion set is disconnected and plugged, leaving visible a disk at the insertion site. The pump should be stored in a **secured location** if it is disconnected at school.

BACK-UP SUPPLIES

These supplies are to be provided by the parents and kept in the Health Office.

- Vial of Insulin (stored in locked refrigerator) with syringes or pen (in case there is a problem with the pump and the student needs to discontinue the pump)
- New cannula, reservoir and insertion set for student use if trained to reinsert
- Alcohol wipes
- Extra batteries
- Copy of manufacturer's instruction or quick reference guide.

Insulin in the pump should be at room temperature to prevent air bubbles from forming in the tubing. (Insulin stored in the refrigerator can be warmed by rolling the vial between palms of hands.

GUIDELINES:

- Insulin is only given by licensed healthcare providers.
- The following LAUSD forms need to be completed: (*District forms are not required in addition to consolidated orders from clinics.*)
 - Blood Glucose Testing Protocol (Rev. 11/06)
 - Hypoglycemic Reaction Protocol (Rev. 11/06)
 - Request for Medication Administration During School Hours (Form 33.199 Rev. 9/07)
 - Request for Self-Administration of Medication During School Hours (Form 33.205 Rev. 9/07)
 - Student Contract for Self-Administration of Medication During School Hours (Form 33.205A Rev. 9/07)
- See Bulletin No. 3878.1 dated September 24, 2007, "Assisting Students with Prescribed Medication at School."

REFERENCES:

Technical Support: call the pump company – phone number on back of the pump.

Clinical Support: Call student's healthcare provider.

See manufacturer's website for information specific to student's pump.

ADA website: www.diabetes.org