

## Diabetes Mellitus Type 1, Follow-Up, Child

### Why do follow-up exams?

Our main goal in treating your child's diabetes is to allow your child to grow and develop normally. We want your child to feel well. We want your child to have plenty of energy to play, participate in sports, and go to school. To accomplish these goals, we need to keep your child's blood sugar levels within a safe range as much as possible. We do regular exams to make sure this is happening.

Diabetes mellitus is a condition that causes the blood to contain too much glucose (sugar). This is because your child's body does not make enough insulin. Insulin helps glucose move out of the blood into the cells. There it is used for energy. Over time, too much glucose in the blood can damage blood vessels and organs. Careful treatment can keep the blood sugar within safe ranges and prevent or delay health problems in the future.

Learning to deal with diabetes will be a lifelong job. Your child may have trouble with diet or weight. You may have problems with your child's insulin dosing. There may be questions about exercise and what to do when the child is sick.

Your child may have trouble accepting the diagnosis of diabetes. Children with this problem may not want to cooperate with treatment or monitoring. There may be problems at school. Our job is to answer or help find answers to your child's questions and yours. We want you and your child to become experts in diabetes management!

### What may be done during this exam?

One of the most important reasons for these visits is education. This is your chance to ask questions about your child's health and how to cope with the diabetes.

Another important reason for these visits is monitoring your child's blood glucose measurements. We want you and your child to keep a record of daily blood glucose levels and insulin dosages. Write down the date, time, and numbers in a record book and bring it with you to these visits. Bring in your child's blood glucose monitor so we can download the readings and verify it is working well. This will help us adjust your child's insulin, diet, and exercise instructions if needed. We may have you test your child's urine at home as well.

Sometimes we will do tests to see how well your child's diabetes is controlled. We measure weight and height to be sure your child is growing normally. We may inquire about how school is going. We want to know how well you and your child cope with diabetes. We will also examine your child and may do test to make sure no serious problems are developing. From time to time we may refer your child to other specialists to help us care for your child.

### What to watch for.

There is a danger that your child's blood sugar may get too high or too low. Both of these conditions can be life threatening. Low blood sugar is immediately dangerous and must be treated right away. Very high blood sugars that occur due to not taking insulin or a stressful situation can be associated with a condition known as ketoacidosis. Individuals with this condition feel unwell and complain of abdominal pain, nausea, and vomiting. Learn how to recognize the signs of a

low blood sugar and how to test the urine for ketones. Watch for trends in your child's blood sugar levels – either consistently high or low. Call us when your child starts a new exercise program or sport. We may have to adjust your child's diet or insulin doses.

Call us if your child is ill and having difficulty with blood sugar control. We can help you make changes in the insulin doses or diet, if necessary, curing the illness.

Let us know if your child has sleep problems or bad dreams. This may mean that your child has blood sugar problems during sleep.

### What advice may we have?

Never run out of insulin. Your child needs this every day. Avoid skipping insulin doses. Have your child bring insulin on trips and when spending the night away from home.

Make sure your child never skips meals and snacks. Talk to your child's teachers about diabetes treatments and danger signs.

Keep a record of your child's blood sugar measurements and insulin doses. This is an important way to monitor your child's diabetes and treatment.

We may recommend an annual influenza shot for your child.

### Instructions:

#### Have glucagon available to use if there is a hypoglycemic reaction.

Know how to use it properly. If possible, have a family member or coworker learn how to give a glucagon injection. If you have an insulin reaction you may not be able to give it to yourself.

#### Have glucagon available to use if your child has a hypoglycemic (low blood sugar) episode.

Learn how to use it properly. Family members, teachers, and other adults supervising your child must learn how to give a glucagon injection. A person having a hypoglycemic episode may not be able to give themselves an injection. Always bring it with you on trips and outings.

#### If your child's blood sugar reading is less than 70 or has symptoms of low blood sugar, your child needs to eat or drink a source of sugar.

This condition must be treated quickly because hypoglycemia can lead to unconsciousness.

Signs of low blood sugar include:

- crankiness
- sweating
- trembling hands
- difficulty concentrating
- pale or cold skin
- rapid pulse

Be sure to carry something with you when you travel. Teach your child to always carry a sugar source. Be sure to have something available at school.

Treatment is to get sugary food into your child as fast as possible. Candy, fruit juice or non-diet soda pop is good. Once the symptoms improve, give your child more non-sugar food to prevent the blood sugar from dropping again. Milk, crackers, peanut butter or bread are good for this.

**On days that your child is ill, check your child's blood glucose every 4 hours.**

Check all urine for ketones, even if the blood sugars are normal. We may ask you to give extra Regular insulin if there are ketones in the urine. Even on days when your child is vomiting or not eating, insulin is still needed. Use your usual sliding scale for insulin dosing. Give plenty of fluids. If your child is unable to eat, these fluids will need to have sugar in them. If your child's blood sugar is high, use fluids with no sugar in them.

**Regularly change the location of insulin injections.**

This avoids lipoatrophy (wasting of the fat tissues just below the skin surface) and hypertrophy (fat tissue build up). Atrophy may occur at the site of insulin injections, leaving an unsightly depression in the skin. Hypertrophy (fat tissue build-up) shows as lumps at the injection site.

**Some general comments about diet for your child with diabetes.**

Other than concentrated sweets, children with diabetes can eat the same food the rest of the family eats. The only real difference is that we want your child to eat as consistently as possible – both in terms of when and how much your child eats.

It is important for all children to eat a well balanced diet. This is especially true of diabetic children. Encourage your child to eat a variety of good foods including fruits, vegetables, grains, and lean meat. Avoid high fat meals. Avoid fried foods, fatty meats, cream, butter and ice cream except as an occasional treat. A diabetic diet is low in fat and simple sugars but contains enough calories for normal growth and energy. We want to avoid obesity but we also want to avoid hunger and poor weight gain. It is important that eating be spread evenly throughout the day. It is better to have 5 to 6 small meals than 2 to 3 large ones.

Salt intake should be limited. Avoid highly salted foods like bacon, ham, potato chips and other snack foods. Become a label reader. Watch for salt, MSG, and soy sauce in foods. Choose fresh foods over prepared. Teach your child not to add excess salt to food either at the table or when cooking. Your child will accept the treatment of diabetes better if the diet is not overly strict. An occasional sugary treat should be allowed so your child does not feel different than other children. There are plenty of artificial sweeteners available. Your child's meals may need to be changed depending on exercise or illness. Exercise is important because it burns sugar and helps insulin work better. Before strenuous activity, your child should have an extra snack to avoid too sudden a drop in blood sugar. Days without usual exercise or sick days may require a cutting back on a snack or meal. We will work with you on making diet changes.

**Your child needs to eat a well-balanced diet.**

### **Precautions:**

**Call 911 if:**

**There are symptoms of ketoacidosis.**

Your child begins to have a seizure. Your child fainted or passed out.

**Call your Physician If:**

The ketones in the urine persist despite treatment.  
You don't understand something about your child's diet, exercise, or insulin dosage. Your child develops hives.  
Your child has an illness that may interfere with diabetes management.  
Your child is going to start a new exercise routine or sport.  
Your child is refusing to cooperate with our treatment.  
Your child is wetting the bed.  
Your child's blood sugar measurements show a new trend, either consistently high or low for 4 days.

**Seek Immediate Medical Attention if:**

Ketones are present in the urine.  
Your baby is showing signs of dehydration.  
Your child's blood glucose (sugar) is over 400.