

Family Notebook for Children with Diabetes

Children's Medical Center

Endocrinology Center

2350 Stemmons Freeway, Ambulatory Pavilion, Suite 4400, Dallas, Texas 75207

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CHILDREN'S ENDOCRINOLOGY CENTER
2350 Stemmons Freeway, Ambulatory Pavilion, Suite 4400, Dallas, Texas 75207

Phone Numbers and Resources

Main Number for appointments, diabetes educator	214-456-5959
Emergencies (24 hours a day).....	214-456-5959

Childrens.com : Endocrine website to obtain logs , information, school nurse website

Diabetes Educators Fax Line.....**214-456-5963**

E-Mail.....**diabetes_educators@childrens.com**

Diabetes Dietitian Voice Mail.....**214-456-5242**

E-mail.....**diabetes_dietitian@childrens.com**

Social Worker Voice Mail.....**214-456-2300**

Other Helpful Numbers/Addresses

Camp Sweeney (www.campsweeney.org)..... 940-665-2011
Box 918, Gainesville, TX 76241..... 940-665-9967 (fax)

Camp New Horizons Sherry Hill (972) 392-1181 x6097
A day camp sponsored by the American Diabetes Association

Texas Lions Camp (www.lionscamp.com)..... 830-896-8500
P.O. Box 290247, Kerrville, TX 78029..... 830-896-3666 (fax)

American Diabetes Association (www.diabetes.org)..... 972-255-6900
44100 Alpha Road Suite #100 Dallas, Texas 75244..... 972-255-7900 (fax)

Juvenile Diabetes Foundation (www.jdrfdallas.org).....214-373-9808
9400 North Central Expressway, #1201 Dallas, TX 75231

B-Scientific Diabetes Supply Center..... 817-265-0452 **or** 1-800-544-5969

Fifty50 Pharmacy (www.fifty50.com).....972-243-2727 **or** 1-800-746-7505

Welcome to Children's Endocrinology Center Diabetes Education Program

Learning that your child has diabetes is sad, but we think you are in good hands to learn to take the best care of your child:

- Our diabetes education program is recognized by the American Diabetes Association as **meeting National Education Standards**
- We have earned **Disease Specific Certification** by the Joint Commission for Hospital Accreditation
- 90% of our educators are **Certified Diabetes Educators**. A certified Diabetes Educator has passed a national certifying exam and has met requirements for practice hours of diabetes education.
- Children's Medical Center is recognized as a **Magnet Hospital**

The following Diabetes Family Notebook is provided to the newly diagnosed diabetic child and family who receive diabetes care at Children's Medical Center Dallas. This information is specific to the diabetes care provided by the Children's Endocrinology Center of Children's Medical Center Dallas, and is not meant to direct the care of children who are not patients of Children's Medical Center Dallas /Children's Endocrinology Center.

This information is not meant to serve as a general reference for diabetes care as it is a document specific to the education provided at Children's Medical Center.

• **Diabetes Management Instructions**

Types of Insulin: A=Apidra H= Humalog, NV= Novolog, N= NPH, G= Lantus, dT =Levemir

Time of Day

_____ Test blood glucose
 _____ Take insulin injection: Rapid acting (____) ____ units Long acting (____) ____ units
 Eat breakfast.....grams carbohydrates_____

_____ Eat mid morning snack.....grams carbohydrates_____

_____ Test blood glucose
 _____ Take insulin injection: Rapid acting (____) ____ units
 Eat lunch.....grams carbohydrates_____

_____ Mid afternoon snack.....grams carbohydrates_____

_____ Test blood glucose
 _____ Take insulin injection: Rapid acting (____) ____ units Long acting(____) ____ units
 Eat supper.....grams carbohydrates_____

_____ Test blood glucose
 _____ Take insulin injection: Long acting (____) ____ units
 Bed time snack.....grams carbohydrates_____ + protein

_____ Overnight blood glucose testing (If needed)

Correction Insulin Guidelines

Use **rapid acting insulin** only. Use only at mealtimes or before bedtime snack

For blood glucose below _____ add no extra insulin
 For blood glucose from _____ to _____ add _____ units _____ insulin
 For blood glucose from _____ to _____ add _____ units _____ insulin
 For blood glucose from _____ to _____ add _____ units _____ insulin
 For blood glucose from _____ to _____ add _____ units _____ insulin
 For blood glucose from _____ to _____ add _____ units _____ insulin
 For blood glucose over _____ add _____ units _____ insulin

DO NOT VARY SCHEDULE TIMES BY MORE THAN ONE HOUR; KEEP 2 HOURS BETWEEN MEALS AND SNACKS.

Patient/Family Goals for home management of Diabetes

Please circle which goal(s) you are willing to try and incorporate into your daily routine.

1. My family/I will test my blood glucose values daily as instructed.
2. My family/I will count carbohydrates (CHOs) consistently to help manage my blood sugar.
3. My family/I will take my (oral/insulin) medication daily as instructed.
4. Additional goal: _____

EMERGENCIES: 214-456-5959 (24-hour access)

Call for: moderate or large ketones, vomiting, glucose below 40

Diabetes Quick Reference

Hypoglycemia (Low Blood Glucose)

A. If glucose is BELOW 70:

1. Give child 15 grams carbohydrate. Examples are
 - 6 lifesavers
 - 4 ounces of juice
 - 6 ounces regular soda
 - 3-4 glucose tabs
2. Have the child rest for 10 to 15 minutes, retest blood glucose.
3. If symptoms persist or blood glucose remains below 70, repeat step 1 for carbohydrate intake. If it is a meal or snack time, allow the child to eat the meal or snack in addition to the treatment carbohydrate.

B. If blood glucose is BELOW 70 and the child is unconscious or seizing:

1. Call 911 emergency medical services.
2. Rub a small amount of glucose gel (or cake gel) on child's gums.
3. Inject Glucagon _____mg. subcutaneous.
4. Notify Endocrine Center.

Hyperglycemia (High Blood Glucose)

C. If blood glucose is OVER 250:

Test for urinary ketones.

1. If urinary ketones are **NEGATIVE**
 - a. Follow usual meal plan
 - b. Encourage calorie-free fluids
 - c. Give rapid insulin based on supplemental/correction scale and
 - d. Review child's schedule to identify changes in food amounts or activity level.
 - e. Notify Endocrine Center for patterns of hypoglycemia and hyperglycemia.
2. If urinary ketones are **POSITIVE**,
 - a. Follow usual meal plan
 - b. Push calorie-free liquids
 - c. Give rapid insulin per supplemental/correction scale.
 - d. Re-test blood glucose and urinary ketones every 2-3 hours, or until ketones are negative
 - d. Notify Endocrine Center for moderate to large ketones, nausea with vomiting, deep rapid respirations and fruity odor to the breath. These signs can indicate **Diabetic Ketoacidosis (DKA)**, requiring medical attention.

NOTE: Also test for urinary ketones when ill regardless of blood glucose value.

Diabetes Supplies List

Item	Source	Estimated Retail Cost	Rx Needed	Amount needed/month
Insulin vials: NPH, Novolog, Lantus, Humalog, Levemir, 70/30 Mix	local pharmacy or mail order	\$90-120	yes	1-2 vials of each type/month Each vial contains 1000 units
Insulin Pens: Humalog, Novolog, Lantus, Levemir, NPH, 70/30	local pharmacy or mail order	\$150-160/ box of 5	yes	1 or 2 boxes of 5pens /month 5 pens or cartridges with 300 units each/box
Insulin syringes: 3/10 cc, ½ cc or 1 cc	local pharmacy or mail order	\$20	yes/no	1-2 box/month 100 syringes /box
Pen needles	local pharmacy or mail order		yes/no	1 box/month 100 needles/box
Blood glucose meter:	local pharmacy, discount store, or mail order	\$25-75	yes/no	1 meter (a second meter at school is useful)
Blood test strips	local pharmacy or mail order	0.75/strip	no	150-200 strips/month
Lancets	local pharmacy or mail order		no	150-200/month
Lancet device	local pharmacy or mail order		no	1
Ketostix (Bayer)	local pharmacy or mail order	\$12	no	1 bottle contains 25, 50 or 100 strips or 1 box of 20 foil wrapped strips
Glucagon Kit	local pharmacy or mail order	\$100	yes	1 kit for emergency use (second kit is useful for school)
Glucose gel	local pharmacy		no	1 tube at school and 1 at home (can use honey or cake gel)
Glucose tabs	local pharmacy		no	variable (can use lifesavers type candy)
Alcohol sponges	local pharmacy		no	1-2 boxes /month
Sharps Container	local pharmacy		no	1/200 syringes (can use coffee can, bleach, or detergent bottle)
Diabetes bag	Diabetes supply store or variety store		no	A sturdy bag, such as a insulated lunch bag is useful for carrying your supplies
Medical ID bracelet	local pharmacy or 'Medic Alert Foundation'		no	1 emblem

Note: prescriptions may be useful in obtaining reimbursement from your insurance company. **Check with your insurance company to identify which drug store or mail order service you should use.** Sales tax will not be charged if you have prescriptions for your supplies.

Additional Resources: (Specific information is available from a social worker or financial interviewer)

Medicaid

CHIPs – Children’s Health Insurance Program of Texas

CSHCN -Children with Special Healthcare Needs

What is Diabetes?

Diabetes Mellitus is caused from a lack of a hormone (chemical) called insulin. This hormone is normally made by a group of cells in the pancreas. There are 2 types of diabetes:

Type 1: usually diagnosed in childhood and **must** be treated with insulin. Diet and exercise play a role in treating diabetes. People with type 1 diabetes cannot make their own insulin. While the exact cause of diabetes is unknown, some scientists think that two factors play a role: genetics and an environmental cause. Diabetes is not caused by eating too much sugar, staying up too late or poor parenting!

Type 2: usually affects older individuals, but many adolescents and children are diagnosed with Type 2. The first treatment is a healthy diet and daily exercise. Medications such as pills and/or insulin may be needed. People with type 2 diabetes make insulin but their body does not respond well to their insulin. The cause of type 2 diabetes is related to genetics and lifestyle.

What are the common symptoms of Diabetes?

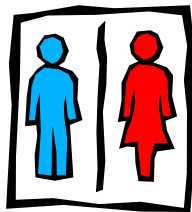
Thirst



Being Tired



Frequent urination (peeing)



Increased or decreased appetite



Weight loss



Blood Glucose Testing

What is blood glucose testing?

Blood glucose testing is a skill you can learn to monitor diabetes throughout the day. Normal glucose level is 70 to 110mg/dl before a meal and below 140mg/dl following a meal. Your child will have a glucose target that is based on both age and ability to recognize low glucose signs and symptoms. Typical glucose targets are:

- Infant: 100-200 mg/dl before meals
- Pre-school child: 80-180 mg/dl before meals
- School age child: 80-150 mg/dl before meals
- Bedtime blood glucose goal: >100mg/dL for all age groups**

When should I test?

Test your child's glucose a four to six times per day. Check **before each meal, before bedtime snack, and when your child has symptoms of high or low blood glucose.**

What do test results tell us?

1. A glucose test helps to identify a need to treat a low glucose.
2. A glucose test can identify the need for more insulin
3. A glucose log with several days of glucose tests help to identify trends, or patterns in blood glucose. Insulin changes can be made when glucose trends are identified. The following chart identifies the insulin active at specific times of day.

Testing time	NPH + Rapid therapy: Active Insulin is...	Lantus/Levemir + Rapid therapy: Active insulin is...
Breakfast	Bedtime NPH	Bedtime Lantus/Levemir
Lunch	Morning Rapid	Morning Rapid
Dinner	Morning NPH	Lunch Rapid
Bedtime	Dinner Rapid	Dinner Rapid

Your Diabetes Educator will tell you how often to fax your glucose log.

NOTE: If your child has two to three days of low blood glucose results, please fax right away. We will contact you promptly. For routine faxes, we will contact you within two to three business days. (If you have not heard from us, we have not received your log.) **Blood Glucose Logs** are available

in this packet, through our office, and can be printed off the Childrens.com website. If you wish to devise your own log, please check with us for guidelines.

3-6 months after diagnosis, please sign up for the [Take Charge Class](#). You will learn more about diabetes management skills including how to adjust your child's insulin dosages.

Which glucose monitor should I use to test the glucose?

There are many meters available. Check with your insurance company to identify which meter offers the lowest cost for you.

Meters are most accurate when you follow the directions. Please read the instruction manual that comes with your meter. There are also manufacturers' phone numbers to help you with any problem you might have. This phone number is on the back of your meter.

How do I perform a finger stick?

There are many types of finger lancet devices (we call them finger pokers). To get your finger ready, wash your hands in soap and warm water. Load the finger poker with a lancet. Aim the finger poker on the pad of the finger, slightly to the side, to avoid the nerves located at the middle and tip of the finger. After poking your finger, squeeze the finger from the knuckle to the tip to get a drop of blood. Apply the blood to the test strip as stated by your meter directions. Wait for your blood test result to show in the meter window. Do not forget to write your blood test result on your **Blood Glucose Log**.

Hints:

- ◆ Make sure your fingers are warm: wash in warm water
- ◆ Hold your hand and finger lower than the heart
- ◆ Adjust your poker setting for a stronger poke
- ◆ Try a different type of finger poker
- ◆ Talk to your diabetes educators as needed



Can other places on the body be stuck for glucose testing?

Sites other than the fingertips can be used with some meters. These include the upper/lower arms, and the palm of your hand. See your meter instruction manual to learn if your meter allows alternate site testing. You should not use alternate site testing if low blood glucose are present. Talk with your diabetes doctor if you would like to try alternate site testing.

How to Think Like a Pancreas

Insulin is important for health. To treat diabetes, you must learn to take over for the pancreas! The diabetes education program will teach you and your family to ‘think like a pancreas’.

You must learn 3 skills to think like a pancreas. They include:

- Insulin Therapy
- Blood Glucose testing
- Constant Carbohydrate diet

Once you know these skills, you will learn to balance diabetes.



Insulin Therapy

Why do we need insulin?

Insulin can be thought of as the ‘key’ that unlocks the doors on the cells of the body. Insulin allows food (glucose) to enter the cells of the body. Glucose (nicknamed sugar) is formed when foods are digested (broken down into smaller pieces). The cells of the body use glucose for energy.

Following a meal, the stomach begins breaking down food into glucose. The blood stream absorbs the glucose and carries it throughout the body for energy. The pancreas senses the blood glucose level increasing, and releases insulin to ‘unlock the cell doors’ and move the glucose into the cell where it will be used for energy.

Without insulin, cells will starve. Glucose cannot move from the blood stream and into the cells because there is no ‘key’ to unlock the cell door. As the blood glucose level increases, the kidney attempts to flush out extra glucose through urination (peeing). Increased urination from high glucose levels results in excessive thirst, and can lead to dehydration.

Without insulin, the body feed itself by using other food sources, such as stored body fat. Fat is changed to ketones (acids) to provide food for cells. If insulin is present, ketones can enter the cell and are ‘burned’ for energy. Without insulin, ketones build to dangerous levels in the blood. This

can lead to diabetic ketoacidosis (DKA), an emergency. Weight loss results with ketone formation, because fat stores are being used up.

Insulin is essential: if the pancreas stops making insulin, it must be supplied from somewhere else. Insulin must be given by injection. If taken by mouth, the digestive juices of the stomach would digest the insulin, and destroy it. Insulin is injected into the fat tissue under the skin. Once injected, it spreads to the blood stream, which carries the insulin throughout the body. Millions of cells make up the body tissues, and almost all need insulin to help receive glucose for energy.

Where does insulin come from?

The insulin in your vial is made in a laboratory, not taken from a person. It is very pure. In years past, animal insulins were used to treat diabetes, but are not recommended for children. This insulin is similar to the insulin our pancreas makes.

What types of insulin are available?

There are several types of insulin and each is active for a different length of time. Below is a chart of common types of insulin and length of action.

Type of Insulin	Onset	Peak (hours)	Duration (hours)
Rapid Acting			
Humalog (H)	5-15 minutes	1.5	3-5
Novolog (NV)	5-15 minutes	1.5	3-5
Apidra (A)	5-15 minutes	1.5	3-4
Regular (R)	20-40 minutes	3-4	4-6
Long Acting			
NPH (N)	1-2 hours	4-8	12-16
Lantus (G)	1 hour	-----	24 +
Levemir (dT)	1 hour	-----	20-24 +

How do I store insulin?

Insulin Storage		
Refrigerator	Comfortable Room Temperature (86 ° or cooler)	Warm/Hot
<ul style="list-style-type: none"> • All unopened pens waiting to be used • Vials 	<ul style="list-style-type: none"> • Pens in use 	<ul style="list-style-type: none"> • NONE: heat will damage insulin

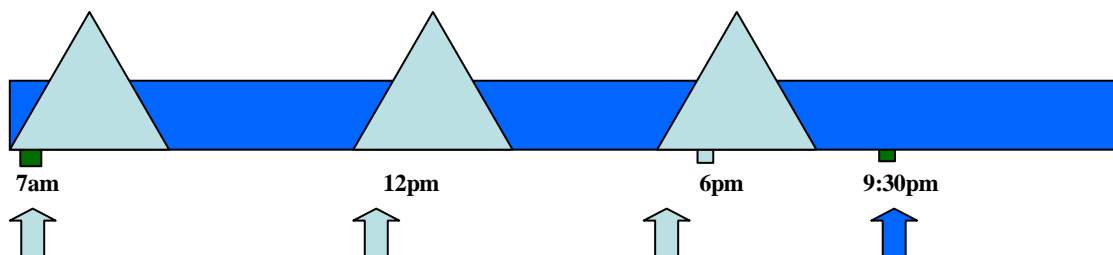
Pointers

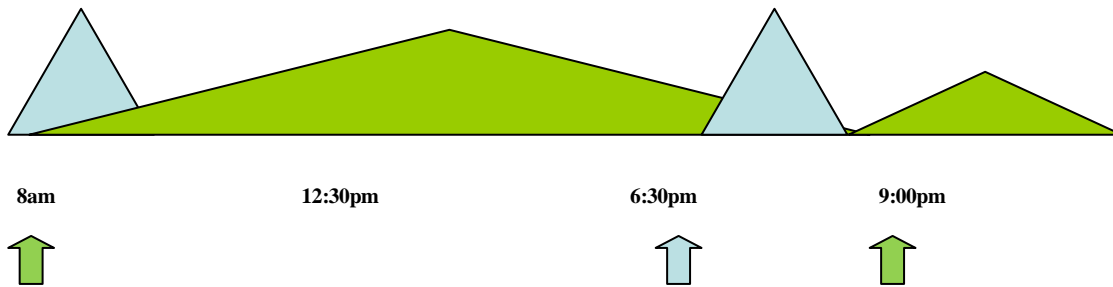
- ◆ Always use a sterile (new) insulin syringe or pen needle to measure and give the insulin
- ◆ Regular, Humalog, Novolog, Apidra, Levemir and Lantus insulin should be clear. If the insulin is cloudy or discolored, do not use it.
- ◆ NPH will have white sediment in the bottom of the vial. Before using, gently turn the vial upside down or roll the vial or pen until the sediment is evenly mixed. Do not shake as this may cause bubbles and/or clumping. If clumps form, the insulin should be thrown away.
- ◆ The manufacturer's prints the expiration date on each vial/pen. If stored correctly and unopened, the insulin is good until that date.
- ◆ Discard and replace your *used* insulin vials and pens every month.
- ◆ NPH pens need to be replaced 14 days after opening.
- ◆ Never remove the rubber stopper on the insulin vial. Remove only the plastic cap. Write the date you opened the vial on the label, so you will know when to replace the vial.
- ◆ Insulin is measured in units
- ◆ Each vial has 1,000 units, each pen has 300 units.
- ◆ Insulin in the US comes in U-100 concentration. This means there are 100 units of insulin per one milliliter of fluid. (Discuss travel plans with us if traveling out of the US- there are other strengths of insulin in other countries)

How often will my child need an insulin injection?

The goal of insulin therapy is to mimic the action of the pancreas and provide insulin as the body needs it. This may require 3 to 5 injections per day. You will use 2 types of insulin. Your child's insulin therapy will be tailored to meet your child's needs. One plan for diabetes management cannot meet everyone's needs. Here are 2 typical insulin plans:

A. Lantus/Levemir therapy: Requires four or more injections per day, but offers more flexibility in daily schedule. Rapid insulin is injected before each meal, and Lantus/Levemir is injected one time per day (most often at bedtime).





B. NPH therapy: three injections are scheduled per day: before breakfast , before supper, and before bedtime. The breakfast injection is a combination of NPH and Rapid insulin, the supper injection is Rapid insulin, and the bedtime injection is NPH insulin.
See the diagram above for an example of a day on this regimen:

Insulin Injections

How do I prepare the syringe for a single type of insulin injection?

See instructional video: <http://www.bd.com/us/diabetes/page.aspx?cat=7001&id=7257>

Wash your hands and assemble equipment:

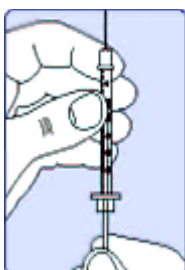
Insulin vial

Alcohol swabs

Insulin Syringes with 5/16” needle for thin children , 5/16” or 1/2 “ needle for non-lean children



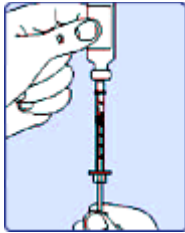
1. Check the insulin dosages ordered.
2. Clean the top of each vial with alcohol and allow to dry. (if cloudy insulin, don't forget to roll the vial)



3. Pull the plunger of the syringe to the number of units of insulin you need.



4. Insert the needle through the rubber stopper of the insulin vial and inject the air into the vial. Do not remove the needle from the vial.



5. Turn the vial upside down and with the needle in the insulin solution, pull and push the plunger three times.

6. Slowly pull the plunger to the actual unit mark needed. Be as accurate as possible when measuring the dosage.

7. If large bubbles appear, repeat steps 5 & 6.

How do I prepare the syringe for a mixed insulin injection?

Wash your hands and assemble equipment:

Rapid insulin vial (Humalog, Novolog, Apidra or Regular)

Long-acting insulin vial (NPH) **NOTE: Do not mix Lantus and Levemir with any other insulin per manufacturers' guidelines**

Alcohol swabs

Insulin Syringes with 5/16" needle for thin children , 5/16" or 1/2 " needle for non-lean children

1. Check the insulin dosages ordered.
2. Roll the Long-acting insulin vial in your hands until the white sediment is evenly mixed. Do not shake the vial. The Rapid insulin will be clear, and does not need to be rolled.
3. Clean the top of each vial with alcohol, and let it dry.
4. Pull the plunger of the syringe to the mark showing the number of units of Long-acting insulin you need.



5. Insert the needle through the rubber stopper of the Long-acting insulin vial and inject this air into the vial. Remove the needle from the vial.

6. Pull the plunger of the syringe to the number of units of Rapid insulin you need.

7. Insert the needle through the rubber stopper of the Rapid insulin vial and inject the air into the vial. Do not remove the needle from the Rapid vial.



8. Turn the vial upside down and with the needle in the insulin solution, pull and push three times.

9. Slowly pull the plunger to the actual unit mark needed. Be as accurate as possible when measuring the dosage.

10. If a large bubble appears repeat steps 8 & 9.

11. Remove the syringe from the rapid insulin vial. Hold the syringe by the barrel to avoid squirting out any insulin.



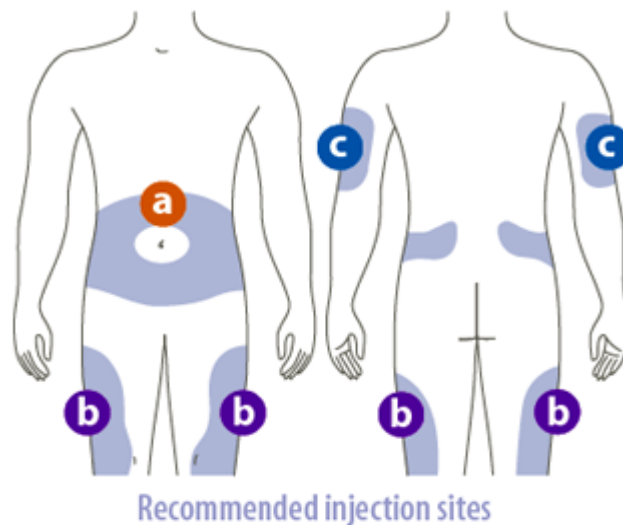
12. Insert the needle through the rubber stopper of the Long-acting insulin vial without moving the plunger. Turn the vial and syringe upside down and slowly pull the plunger to the total dosage unit mark (Long + Rapid) of insulin. Be careful to not go past the total dosage unit mark. Mixed insulin cannot be pushed back into the vial.

Be Careful:

1. **Draw up the rapid-acting insulin (Humalog, Novolog, Apidra, Regular) first** to avoid accidentally mixing the long-acting into the rapid-acting insulin vial. This is not harmful, but it will reduce the action of the rapid-acting insulin. If a small amount of rapid-acting gets into the long-acting vial it will not cause a change in either insulin action
2. Inject the mixed dosage within 5 minutes of preparing.

Where do I give insulin?

Injection sites include: the thighs, hips, arms or stomach. (see diagram below) Because insulin works faster/slower in some sites, **choose the same location for the same time each day.** For example: Morning injections given in the arm, evening injections given in the hips, and bedtime injections given in the thigh. Move shots around in each site to avoid lumps (lipohypertrophy). You can also switch sides of the body from day to day. For example: on odd days use the right side of the body and on even days use the left side of the body. Thin children may prefer to avoid the abdomen until more fat tissue is available.



How do I give an injection?

See instructional video: <http://www.bd.com/us/diabetes/page.aspx?cat=7001&id=7257>

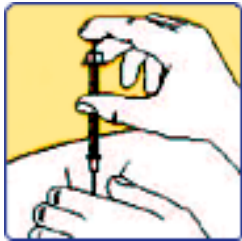
1. Wash your hands, and assemble equipment:
 - a. Syringe filled with the right amount of insulin.
 - b. Alcohol swab.
 - c. Your child

2. Clean the injection site with soap and water, or alcohol.



3. With your free hand, pinch up the fat tissue.

4. Hold the syringe like a pencil and quickly insert the entire length of the needle into the pinched skin. The needle should go in at a 90 degree angle, straight up and down. Release the pinch before you begin pushing the plunger.



5. Press the plunger down until all the insulin is injected. Count slowly to five and quickly withdraw the needle. Counting after injecting will help stop wet shots (insulin leaking back out).

6. Do not rub or massage the injection site.

7. If a raised area should appear after an injection or the skin appears slightly reddened for a short time, the needle was probably not inserted deep enough.

8. If you have a wet shot, do not try to give another injection to replace lost insulin. Make a note “wet shot” on your blood sugar log.

How do I know if the insulin is working?

The blood glucose test lets you know that insulin is working. Use the insulin action chart to determine which insulin should be active when you test. For example, the breakfast blood glucose evaluates the action of the bedtime NPH or Lantus insulin given the night before.

What is the insulin correction scale?

A correction scale is a guideline to give extra, rapid insulin when the blood glucose is high. The scale is used only before breakfast, before lunch, before supper, and before bedtime. For example, if you test your child’s glucose mid-afternoon and find the glucose is high, you would not use the sliding scale.

What should I do with used syringes?

Please dispose of used ‘sharps’ safely. Drop the used syringe and used lancet into an empty, opaque, sealable container such as a home sharps container, detergent bottle, bleach bottle, or coffee can.

Keep the container out of the reach of children. When full, tape the lid on and call your city sanitation department for directions on safe disposal.

Product Expirations

Diabetes products have an expiration date: after that date, the product may not work well. Always check the expiration date on the product. Do not use past that date. Mark when you open the product, use only for the times listed below.

Control Solution: expires 3 months after opening. When to use control solution:

- 1) when opening a new bottle of test strips;
- 2) test strips have been exposed to temperatures over 85 degrees
- 3) test strips have been exposed to freezing temperatures
- 4) symptoms don't match the test result

Glucose Test Strips: Once opened, good for 6 months



Ketone Test Strips: Once opened, good for 6 months

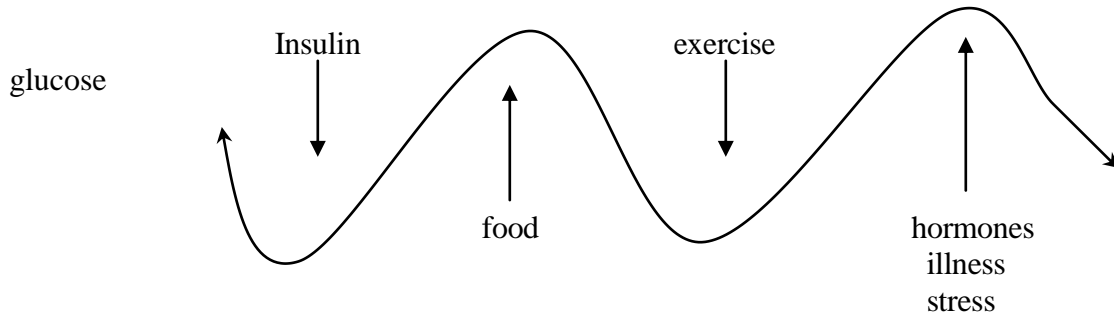


Insulin: Once opened, the vials of insulin are good for 28-30 days. Pens are good for 2 weeks (NPH) or 28 days (all others). Store unopened insulin in the refrigerator. Once opened vials should continue to be refrigerated but pens may remain at room temperature. **WHEN IN DOUBT, REFER TO THE PATIENT INSERT INCLUDED WITH YOUR MEDICATION!**



Balancing it All

The following diagram shows the actions of food, insulin and exercise on glucose values. Understanding the effects of food, insulin, and exercise on glucose values will help you to learn to think like a pancreas, and balance glucose levels.



Things that <u>Raise</u> blood glucose ⇒	Food, hormones, illness, stress	↑
Things that <u>Lower</u> blood glucose ⇒	Insulin, exercise	↓

Now that you have mastered the diabetes basics: **insulin therapy, blood glucose monitoring, and constant carbohydrate diet**, you are ready to use these skills to balance the blood glucose levels, just as the pancreas would.

Reminder : Insulin and exercise lower glucose
Stress, hormones and illness raise glucose





Hypoglycemia: Low Blood Sugar

What is hypoglycemia?

Hypoglycemia (or low blood sugar) occurs when the blood glucose falls below 70 mg/dl. Symptoms may also be noticed when there is a rapid decrease in the level of blood glucose, even if not low. Low blood glucose is usually caused by:

- ◆ missed or delayed meal or snack
- ◆ too much activity without an additional snack
- ◆ too much insulin
- ◆ excitement

What are the signs of hypoglycemia (low blood glucose)?

The early signs of hypoglycemia are caused by **adrenaline**, a stress hormone. Later signs are caused by ‘**brain hunger**’ as the brain cannot function well without a steady supply of glucose.

Signs of Hypoglycemia include:

Feeling Faint	‘Drunken’ behavior
Dizzy	Laughing
Nervous	Irritability or crying
Shaky	Confused
Weak	Inability to concentrate
Pale	Aggressive
Hungry	Blurred vision
Sweating	Stomachache
Drowsy	Headache
Fatigue	Nightmares
Dilated Pupils	Convulsions or seizures
Leg cramps	Unconsciousness

Hypoglycemia Unaware

Some children (especially those younger than 6 years old) may not make adrenaline when they have a low glucose. They may have no signs or symptoms of a low glucose. You might see behavior changes such as sleepiness or irritability with a low glucose. Test the glucose to determine if your child is low. Notify school staff and caregivers if your child does not have symptoms when low for your child's safety.

How do I treat hypoglycemia (low blood glucose)?

Use "the Rule of 15"

1. If your child has one or more of the hypoglycemia signs listed, or if your child is feeling "different", check his/her blood glucose level. If your child's blood glucose is below 70 mg/dl, give 15 grams of one of the fast-acting carbohydrate (CHO) foods/drinks listed:

- 4 ounces fruit juice
- 4-6 ounces carbonated beverage - <u>not diet or sugar free</u> soda pop
- 6 lifesavers
- 3-4 glucose tabs
-Do not use carbohydrate foods that have added fat and protein, such as chocolate, caramel, bread, or cookies.

2. Allow child to rest for 15 minutes
3. Repeat the blood glucose test. If still below 70, repeat 15 grams simple carbohydrate.
4. Try to find out what may have caused your child's low blood glucose:
 - Too much insulin
 - Less food than normal: either a delayed meal or a missed meal or snack
 - More activity, exercise, or work than usual
 - Excitement
5. Watch for a pattern. Please fax the glucose log to the diabetes team for a possible insulin change.
6. If there is no pattern of low blood glucose, your child may not need an insulin change.
7. For scheduled exercise or sports, insulin changes may be helpful in preventing low blood glucose results.
8. **If in doubt, always treat:** eat 15 grams of a fast acting carbohydrate food/drink.

Hints

- Always carry a source of a fast-acting CHO with you/your child. For example: three or four glucose tabs placed in a baggie are easy to carry in a purse or pocket. Glucose tabs are not as tempting to eat as candy or life savers, and there is no pressure to share with friends. Then if your child has a low blood glucose, you are prepared to treat it right away.
- Have your child wear some form of medical ID at all times in case of an emergency.
- Pay close attention to how many CHO your child is eating/drinking while treating a low blood glucose. Over treating will result in a high blood glucose later.
- Plan a meeting with school teachers and coaches to discuss your child's signs, symptoms, and treatment of hypoglycemia.

What is a severe low blood glucose reaction?

Signs of severe low glucose include: a hard to awaken, unconscious, or seizing (falling out). This is an **EMERGENCY**. We want to protect the brain from damage that can be caused by a blood glucose level that is too low. Blood glucose levels less than 40 mg/dL may lead to a severe low blood glucose reaction.

Glucagon Emergency Kit

Make sure your child is lying on his/her side to prevent choking. Rub small amounts of glucose gel or cake decorating gel on the inside of the cheeks and gum of your child. Do not use a large amount of gel at one time, as this could cause choking. Do not use gel if the child is seizing. This could cause choking.

If your child is still showing signs of a severe low blood glucose reaction, prepare and inject **glucagon**. Glucagon is a hormone that is made by the pancreas and raises blood glucose. Glucagon is not glucose, but helps the body to release stored glucose into the bloodstream.

When should I not use glucagon for my child?

If your child is able to eat or drink, use foods or drinks with CHO to treat hypoglycemia (low blood glucose) such as 4 ounces of juice or 4-6 ounces of regular soda.

How do I prepare and give my child glucagon?

Your Glucagon Emergency Kit contains a small bottle (vial) of white powder/ tablet (glucagon), and a pre-filled syringe of clear liquid (diluent) and printed directions on preparing and giving the medicine. The liquid diluent must dissolve all the glucagon powder before it can be injected. To prepare the glucagon:

1. Take the cap off the vial of glucagon.
2. Remove the needle cap from the pre-filled syringe, and inject all of the diluent into the vial of glucagon.

3. Remove syringe, shake vial gently until the solution is clear.
4. Using the same syringe, draw up the mixed solution from the vial.
5. Inject the glucagon in the same way you would give your child an insulin injection. The prepared syringe of glucagon may be given into fat or muscle.

Glucagon dosage

- If your child weighs **over 50 pounds**, give **all** of the mixed solution in the prepared syringe (1 mg)
- If your child weighs **under 50 pounds**, give **half** of the mixed solution in the prepared syringe



What should I expect after using the glucagon?

1. Your child may become more alert within 10 to 15 minutes after the glucagon injection. If your child is not more alert within 15 minutes, a second injection of glucagon may be needed with the help of a 911/emergency team.
2. Glucagon should only be used to treat a severe low blood glucose reaction. As soon as your child is able to swallow, encourage your child to take sips of regular soda, juice, etc. When your child's blood glucose level is above 70mg/dl and he/she is able to eat, provide an extra snack with slow-acting carbohydrates to replace the body's supply of glucose. This will help prevent another severe low blood glucose reaction.
3. Your child may have nausea and vomiting after you give glucagon. This could happen within a few minutes after your child wakes up.
4. Check your child's blood glucose level more often after a severe reaction, and call your child's diabetes team at **214-456-5959**.

More about Glucagon:

- ◆ Glucagon is a prescription drug. Ask your doctor for a prescription.
- ◆ If you have used your Glucagon, request a new kit from your pharmacy.

- ◆ Check the expiration date. The pharmacy can replace the Glucagon before it expires. Check expiration dates of the kit when you obtain a new kit: ask for a new kit if it expires soon.
- ◆ Store at room temperature in a convenient location.
- ◆ Prepare Glucagon only if your child needs it. Throw away any unused mixed glucagon.

What can cause a severe low blood glucose reaction?

Following a severe low blood glucose reaction, think about your child's day. Identify any events that might have affected your child's blood glucose. For example:

- ◆ increased activity, such as a day at the swimming pool, or a school field trip
- ◆ missed snack or meal
- ◆ delayed meal or snack
- ◆ extra insulin, or incorrect insulin dose
- ◆ drastic schedule changes, such as time changes with travel

What is 'rebound hyperglycemia'?

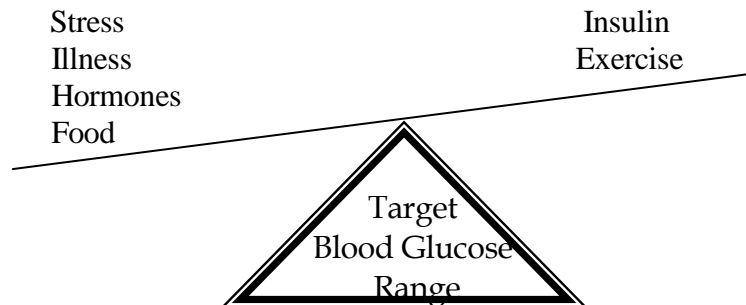
For several hours following treatment for any kind of low blood glucose, your child may have high blood glucose values. This is caused by both the food eaten, as well as stress hormones made when the glucose is low. Do not give extra insulin unless you have checked with the diabetes team.

What is the Honeymoon Phase?

Your child's pancreas may get a "second wind" shortly after diagnosis. The pancreas may still make some insulin. During this "honeymoon phase" your child may have low blood glucose levels more often as the body's insulin is working along with the injected insulin: the insulin dosages may need to be changed frequently. The "honeymoon phase" is **only temporary**, and could last from a few weeks to months .



Hyperglycemia: High blood sugar



What is hyperglycemia (high blood sugar)?

Hyperglycemia or high blood glucose can be caused by: too much food, not enough insulin, less activity than usual, stress, or illness. Children will also outgrow their insulin dosage, and have high glucose values. If glucose is over 250 (or when your child is sick) check your child's urine for ketones

How do I treat hyperglycemia (high blood sugar)?

Encourage your child to drink lots of water. Extra rapid acting insulin can be given according to your correction scale. **Use the correction scale only before meals, and before the bedtime snack.**

Helpful Hints:

- Do not give extra insulin such as mid-morning, mid-afternoon, or during the night unless told to do so by the diabetes team. This can cause 'stacking of insulin', resulting in low blood glucose
- Fax your child's blood glucose log when you notice a pattern of high blood glucose values.
- High blood glucose does not mean that you are doing something wrong. It is information that we can use to improve your child's diabetes control.

Ketones

What are ketones?

Without enough insulin, we can't use glucose for energy. Another source of energy comes from fat cells. Your liver will change fat to ketones. But ketones are acids (poisons) and can cause illness if too high in the blood.

When do I test for ketones?

- Blood glucose is 250mg/dl or higher
- When your child is sick

How do I test for ketones?

You will need:

- A sample of your child's urine
- Ketostix test strip
- Ketostix bottle with color chart

1. Remove the strip from the bottle. Replace the cap to keep the remaining strips dry. Do not touch the test pad of the strip.
2. Have your child urinate directly onto the test end of the strip, or into a cup. If your child urinates into a cup, dip the test pad end of the strip into the sample.
3. Time exactly as directed on the bottle, compare the test pad area to the ketone color chart. Ignore later color changes.
4. Record result and time of test on your child's Blood Glucose Log.
5. Store ketostix in a tightly sealed container. Moisture and light can ruin the test strips.

NOTE: Both Ketostix and Keto-diaistix are available at the pharmacy. The Keto-diaistix has two test pads: one for ketones and one for glucose. The glucose test pad is the old-fashioned method for monitoring diabetes. Blood glucose monitoring is more accurate. We are interested only in the results of the **keto** test pad (the tan test pad).

Sick Day Management

What do I do when my child is sick?

Controlling diabetes during an illness can be tricky. For non-diabetic illnesses, please call your primary care provider (pediatrician, family doctor, or clinic) to treat the illness. Call the diabetes team for help on controlling diabetes while sick. The following are guidelines to help you control diabetes when your child is sick.

Sick Day Rules

1. Give insulin as scheduled, unless told otherwise by our office. Your child still needs to take insulin even when ill. Your child may need more insulin when ill, even if not eating well.
2. Check urine for ketones every 2 to 3 hours while the child is ill. When your child is ill, he/she may have ketones with normal or high blood glucose levels. (See Ketone box in hyperglycemia section)
3. Check blood glucose often. Because of the body's increased need for insulin during illness, you should check your child's blood glucose level every 2 to 3 hours when they are ill.
4. Give your child lots of beverages during an illness. Beverages, such as water or diet soda will help to stop dehydration, and rinse out ketones. Avoid drinks with caffeine. Encourage your child to drink the following amounts:

Child's weight	Goal for fluid / 20 minutes
Below 40 lbs	4-6 ounces
40-80 lbs	6-8 ounces
Over 80 lbs	8-10 ounces

5. Avoid anti-nausea medications (example: Phenergan) which may cause your child to be drowsy. Try Emetrol, an over the counter anti-nausea medication that will not cause drowsiness.
6. Follow your child's usual meal plan. Use sick day liquids if your child is not able to eat the usual amount of CHO (See sick day liquid exchange list in the diet handout):

6 ounces Regular soda = 15 grams carbohydrate
1/2 cup Regular Jell-O = 15 grams carbohydrate
1 Regular popsicle = 15 grams carbohydrate

7. Call the diabetes center at 214-456-5959 for: vomiting, moderate or large ketones. Ask to speak to the sick call nurse.

When should I call the diabetes emergency line?

1. If your child is vomiting.
2. If your child has moderate to large ketones.
3. If your child **looks** sick, is very sleepy (and hard to wake up), is not urinating, is breathing deeply, or has a dry mouth and sunken eyes.
4. Anytime you have questions or concerns: sick day management is an emergency.



Contact the diabetes team with any questions, so we can help you make safe sick day insulin adjustments for your child. 214-456-5959

Hints:

- ◆ Have a sick day shelf in your pantry that has regular and diet food and drinks such as: Jell-O, soda, broth concentrate, crackers, popsicles and other easy to digest foods and drinks. Keep it well supplied so you are prepared for a sick day.
- ◆ Keep Ketostix on hand. Check the expiration date; bottles expire 6 months after opening.
- Use **over-the-counter medications** sparingly. Decongestants may mimic or hide the signs of low blood glucose. Try to find sugar-free and alcohol-free cough or cold products.
- ◆ Many liquid antibiotics are in sugar based syrup. If your pediatrician thinks the medication will help your child, then it is okay for your child to take during illness. The tiny amount of sugar in a teaspoon of antibiotic will not have a big effect on the blood glucose level.
- ◆ Avoid any medication that may cause drowsiness. If your child is drowsy or sleeping more, they may not be able to drink enough liquid to rinse out ketones, or to prevent your child from becoming dehydrated.
- Tylenol or ibuprofen (liquid or pill) may be used for aches, pains and elevated temperature. Follow directions on the box or label

Diarrhea

What do I do if my child has diarrhea?

Diarrhea may cause the blood glucose to be either high or low. Diarrhea can cause loss of body fluids and result in dehydration. To avoid dehydration, your child needs to drink lots of fluids. Please refer to page __ (Sick Day Rules) for suggestions on types of fluids. If your child has large liquid stools 4-6 times per day, contact your pediatrician or family doctor.

Caution:

1. Do not give your child Pepto-Bismol containing aspirin. It may cause an illness called Reyes Syndrome
2. Sugar alcohol sweeteners (sorbitol, mannitol, xylitol) can cause diarrhea if eaten in large amounts.

Vomiting: an emergency

What do I do if my child is vomiting?

1. **Call the diabetes emergency line at 214-456-5959. Vomiting is an emergency**, because your child can become hypoglycemic or dehydrated.
2. Always test for urinary ketones when your child is vomiting or ill.

Should I try to give liquids if my child is vomiting?

1. First try Emetrol according to directions on bottle. Emetrol is over-the-counter at your local pharmacy.
2. Give your child nothing to eat or drink for 30 minutes to an hour after vomiting.
3. After 30 minutes to an hour and no further vomiting, give sips of carbonated beverages, ice chips or popsicles.
4. If no vomiting after 2 hours, try larger amounts of liquids according to the following guidelines:
 - a. If the blood glucose is above 150, use calorie-free liquids..
 - b. If the blood glucose is below 150, use liquids with carbohydrates.
 - c. Try to keep the blood glucose around 150.
5. If vomiting continues, call the diabetes emergency line at 214-456-5959.

Insulin Guidelines with Vomiting

1. **For insulin guidelines if your child is vomiting call: the diabetes emergency line at 214-456-5959.**
2. Your child **must** have some active insulin to prevent the formation of ketones. If your child is not eating, a smaller dose of insulin may be ordered to avoid low blood glucose (hypoglycemia) yet stop ketones from forming
3. Stress hormones are released during an illness. These may result in high blood glucose levels even if your child is not eating.
4. Test your child's blood glucose and ketones every 2 to 3 hours while sick.

Let's Review those Diabetes Emergencies

This chart compares low and high diabetes emergencies:

	Hypoglycemia: LOW glucose below 70	Hyperglycemia: High glucose above 250
Onset	Rapid	Slow
Early Signs	Shaky, sweaty, pale, anxious	Thirsty, peeing a lot
Later signs	Unconscious, seizures	Tummy ache, throwing up, deep breathing
Treatment	15 grams CHO: treat <i>right</i> away For seizures: give glucagon	Give lots of Water and check for ketones: begin treatment <u>soon</u> , but it is OK to think about it and call us for advice
Resolves	Glucose comes up quickly with CHO	It may take hours to lower the glucose and rinse out the ketones
Prevention	Balance food / exercise / insulin	Don't miss shots Test glucose and ketones often if sick

School Issues

How will the diabetes be handled during the school day?

In 2005, the Texas legislature passed HB 984. This bill addresses your child's rights to diabetes care during the school day.

We will provide you with the *Diabetes Management and Treatment Plan* ("School form") prior to the start of each school year. This plan will include guidelines for your child's insulin dosages, glucose testing schedule, and treatment for both high and low glucose. This form includes all the care your child will need at school, and is all you need to take to the school nurse. Please get your School form at a routine clinic visit. We CANNOT fax a form to the school: you must pick it up and sign it.

You and your school nurse will develop an *Individualized Health Plan* for your child. You may also want to develop a 504 plan with the school.

Make an appointment with the school nurse to discuss your child's *Diabetes Management and Treatment Plan* prior to the start of the school year. You can discuss your child's skills and needs for diabetes care. Ask your school nurse to talk to explain diabetes to your child's teachers and coaches. Your school will also have Diabetes Care Assistants who can help your child with diabetes care.

Your child may be scheduled for snack(s) during the school day. The teacher should be aware that snacks are essential, and cannot be omitted, unless noted as optional on the *Diabetes Management and Treatment Plan*. Providing the snack is the responsibility of the parent.

Help your child to talk with friends about low blood glucose signs and symptoms. Give your child a medical identification to wear at all times. Your child might enjoy basing a science project on some part of diabetes, or planning a presentation on diabetes for the class.

What about PE and athletics?

Your child should be active! Extra carbohydrates may be needed before, during, or after a PE class and/or sports practice. Consider the following:

- how hard will my child practice
- how long will my child practice
- how close is the practice to a meal or snack

Discuss your child's schedule with the Diabetes Educator to develop a plan for exercise. Your child should **not** exercise if ketones are positive or if having a low glucose.

Can my child eat the school lunch?

Yes, with planning, your child can eat the school lunch. The school lunch varies in CHO amount from day to day. Ask for the school menu and nutrition information. Review food choices with your child to plan for the right choices. Contact cafeteria staff or school nurse to discuss CHO content and/or the food substitution policy.

What about school parties?

Parties are a part of school activities. Meet with teachers to discuss how to include your child in parties. Try to have parties scheduled at a snack or mealtime. Sweets can be worked into your child's meal plan. Offer ideas on appropriate foods that both your child and the class could enjoy. You can also have a supply of sugar-free gum, stickers, or diet soda for the teacher to substitute for high sugar treats that other children might be eating. Call the diabetes dietitians if you need help with planning for school events.



School Supplies:

Tip: Create a **diabetes box** which includes the following supplies.

Physician orders	√	Diabetes Management and Treatment Plan	Obtain at your diabetes clinic appointment
Testing supplies		Blood test supplies	
		<ul style="list-style-type: none"> • Glucose meter 	
		<ul style="list-style-type: none"> • Glucose test strips 	Good for 4 months after opening
		<ul style="list-style-type: none"> • Lancet device 	
		<ul style="list-style-type: none"> • disposable lancets 	
		<ul style="list-style-type: none"> • Control solution 	Good for 3 months after opening
		<ul style="list-style-type: none"> • Glucose Log Sheet 	
			Urine Ketostix
Hypoglycemia treatment supplies		15 gram carbohydrates products for treatment for hypoglycemia: <ul style="list-style-type: none"> • Juice box • glucose tabs • Regular soda 	Restock as needed
		Glucagon Emergency Kit	Check expiration date
Hyperglycemia treatment supplies		Insulin	Good for 1 month after opening
		Syringes or pen needles	
Diabetes Box		Plastic bag or box	to organize supplies
Emergency contact numbers		Parents' <u>current</u> work, cell and home phone numbers	

Complications of Diabetes

What are the long term problems with diabetes, and how can we avoid them?

Poorly controlled diabetes can result in many health problems later in life. Problems are result from high blood glucose values over a time. Prevent health problems through daily diabetes control. Research shows that keeping the blood glucose values close to normal (as measured by the hemoglobin A1c) can prevent or reduce the onset and/or severity of diabetes related complications. The major health problems associated with diabetes include:

Retinopathy: damage to the retina of the eye. Untreated retinopathy can lead to blindness.

Neuropathy: damage to the nerves of the body, especially the nerves of the feet and hands. Neuropathy can also affect the digestive system and heart.

Vascular disease: damage to large arteries and veins, leading to increased risk for heart attacks and strokes.

Nephropathy: damage to the kidneys. If untreated, nephropathy can lead to kidney failure, dialysis, and possibly transplantation.

Daily diabetes control is the best prevention for diabetes related complications. Know your hemoglobin A1c test, This test tells you how you are doing with diabetes control. The ADA (American Diabetes Association) goal for children is a hemoglobin A1c test of 8% or lower. Ask for your child's result at each checkup.

Family Life with Diabetes

How can we live a normal life AND take care of diabetes?

Learning that your child has diabetes can be overwhelming. There is a lot to learn and requires a lot of effort on your part. Sadness, grieving, and anger are common emotions that you and your child may experience. Here are some ideas to help you/your child live successfully with diabetes:

- Talk with our Social Worker or your church pastor or counselor to help you understand your feelings.
- Be an example for your child, and your child will model your words and reactions.
- Let your child hear positive words like: “we can handle this” or “This diabetes sounds like a lot of work, but I think we can do it” etc.
- Separate the diabetes from the child. It’s OK to let your child know that you are angry or sad about the diabetes, but that your feelings for the child are unchanged.
- Solve problems as a family. *No child can handle the responsibility of diabetes alone.* Diabetes is a family issue.
- Talk. Have family meetings to discuss living with diabetes.
- Pay attention to all children in the family. Siblings may feel resentment or guilt toward the child with diabetes: Resentment that the diabetic child gets so much attention, guilt that they are the ‘healthy’ child. Have ‘special times’ with each child.
- Take time for yourself and your marriage/partnership.
- Have realistic expectations. No one is perfect. If you make a mistake, learn from it and move on.
- Practice these phrases: ‘You’ve done a good job’, ‘You did that well’, ‘I can see that you’re working hard on this’, ‘Well done’. Use liberally with your child AND yourself.
- Your child is a child first, and a person with diabetes second.

The Benefits and Responsibilities of Diabetes Care

Working as a team

1. Health care is both a right and a responsibility: you and your child have the **right** to receive appropriate, up to date diabetes care and advice. You have the **responsibility** to use the advice you receive.
2. Diabetes care is a partnership: the diabetes team, your local doctor, and your family will work together to keep your child healthy. You are an important team member.
3. Let’s keep your child healthy today and in the future. Research shows that good diabetes care will help prevent long term complications.
4. Keep learning! There is always more to learn about diabetes. Sign up for advanced Diabetes classes at our center. Join the American Diabetes Association and Juvenile Diabetes Research Foundation. Check out the local library and diabetes Internet sites. Send your child to diabetes camp.

More Diabetes Classes

Enroll in our advanced diabetes classes when you are ready to learn more diabetes self management skills

Take Charge Diabetes Self management Class: a **required** class to learn about insulin to CHO ratios and how to adjust your own insulin dosage based on your glucose log

Pump It Up: learn about the insulin pump and see the actual pump products. Take Charge Class is required prior to taking this class.

Graduation Debriefing Seminar: a class for seniors to discuss diabetes care as they graduate from high school and from our diabetes program

Keep learning!

Diabetes camps, websites and parent support groups help you keep learning!

Check ups: your clinic visit

You will have a diabetes check-up every 3 months. These visits are important to help keep your child healthy.

The diabetes team includes: the endocrinologist (MD), the endocrinology fellows (pediatricians who have finished their residencies and are specializing in pediatric endocrinology- they work together with your endocrinologist), advanced practice providers (nurse practitioners and clinical nurse specialist), dieticians, social workers, diabetes educators, medical assistants, and endocrinology psychologists. We all work together as your diabetes team.

What to expect from us during visits in the endocrinology clinic:

- You will schedule a clinic checkup every 3 months. Some visits will be with the MD, some with the Advanced Practice Provider.
- What to expect:
 - Review of health history, any medications used and your insulin management plan
 - Review of blood glucose logs
 - Routine screenings per the American Diabetes Association Recommendations:
 - Hemoglobin A1C test (the 3 month average of blood glucose values)
 - Blood glucose level
 - Blood pressure, height and weight
 - Every year: thyroid levels:

- Every year if diagnosed for at least 5 years, urine micro-albumin level to check for early kidney damage
- Every 5 years: if diagnosed for at least 5 years and/or over the age of 10 years, cholesterol levels
- One time screening: Celiac disease
- Registered Dietician visit yearly
- Endocrine social workers will meet with you if needed
- Request ALL paper work you need for school, work, camp and pharmacy.
- Get Prescription refills yearly
- A School / work excuse is available if needed
-

What we expect from you during your clinic visit:

- Arrive **15 minutes before** your appointment
- If you know you cannot keep your appointment, **Call and Cancel:** we set aside this appointment slot just for you and your child.
- Bring **completed** blood glucose logs for review so we can make safe insulin changes: download your logs at home if you have the software
- Know which lab your health insurance prefers. (Labcorp, Quest, or Children’s Medical Center outpatient lab) You will pay more for lab tests if you go to the wrong lab.
- Schedule your 3 and 6 month follow up visits as you check out of clinic. The clinic schedule fills up quickly: don’t forget
- Request **prescriptions** during your clinic visit- each prescription is **good for refills for one year.**
- Request the “Diabetes Management and Treatment Plan” (“school forms”) for your school nurse. You may request it in the spring or summer for the fall year. This form is required by most school, and is good for one year. If you fail to obtain at your visit and need it right away, you will have to come to the clinic to pick the form up.

Paying for Diabetes Care

If you have a health insurance company, please contact that company and request a case manager for your child. The case manager can help direct you to the ‘preferred’ pharmacies and labs where you get the best price. Read your health insurance benefit booklet so you know what your insurance covers. We **DO NOT KNOW** the specifics of your health insurance company: it varies greatly



Diabetes Vocabulary Words

Autoimmune disease: a disease that is caused by your own immune system as it attacks your organs

Carbohydrates (CHO): foods that raise blood glucose levels. These include starches such as bread and pasta, fruits, milk and starchy vegetables. CHO are measured in grams

Certified Diabetes Educator: a licensed professional who specializes in teaching patients about how to live with diabetes, and has passed a specialty exam

Dehydration: losing body liquid. Signs include a dry mouth, weight loss and lack of tears

Diabetic Ketoacidosis: an emergency medical condition including high glucose levels and high ketones.

Endocrinologist: a doctor who specializes in diabetes and other hormone related illnesses

Endocrinology: the study of disease related to hormones, such as diabetes

Glucose: food for our cells. CHO foods are digested (broken down) into glucose and carried by the blood stream to all parts of the body for energy. Glucose is nicknamed “sugar”.

Hemoglobin A1c: a blood test that reports your average blood glucose level

Hormones: chemical messengers in the blood that help the body to work well

Hyperglycemia: blood glucose values above target

Hypoglycemia: low blood glucose values, below 70 mg/dl

Insulin: a hormone that helps moves glucose (food) into the cell so it can be used for energy

Insulin pump: a device that delivers insulin into the body 24/7 via a tiny computer and a tiny catheter inserted into your fat tissue. You may want to attend a class to learn more about it.

Ketones: acid molecules that develop with when the body is starving. These can be dangerous with type 1 diabetes, and can lead to Diabetic Ketoacidosis, a diabetes emergency

Microalbumin: protein that is used to detect kidney damage. Your child will have a routine microalbumin test per guidelines of the American Diabetes Association.

Nephropathy: diabetes related kidney disease

Retinopathy: diabetes related eye disease

Type 1 diabetes: a disease in which you lose the ability to make insulin.

Type 2 diabetes : a disease where you continue to make some insulin, but it may be weak insulin. It can be treated with pills or insulin