

Managing Your Diabetes

Working with your health care team at
The Children's Hospital at Montefiore



General Information

During office hours

- If you are calling for an emergency, state that it is an emergency. If your doctor is unavailable, another clinician will be able to assist promptly. In an emergency, please have available:
 - **Your latest blood glucose level and time of check (have your meter available)**
 - **Amount and time of last insulin dose**
 - **Result of ketone check**
- If you are calling to discuss a non-urgent matter, expect someone to be in touch within two business days.
- **Do not email any doctor or educator if you are having an emergency. Call our department directly.**

After office hours

- In an emergency, the doctor on call can be reached at 718-920-5321. Ask for the pediatric endocrinology Fellow on call.
- You can call 718-920-4664 for non-urgent issues and leave a message.

Prescriptions and forms

- Please call our main line at 718-920-4664 and follow directions to the prescription and forms voicemail box. Two business days should be expected for processing the request.
- **Do not wait until you are out of medication to request a refill or a prescription.** You should order refills when you open your last box (bottle), or call a month before you need the prescription or form.

Appointments

- Please call 718-741-2450 to make an appointment.
- If you are unable to attend your scheduled appointment, please call to cancel and reschedule.
- Please arrive 15 minutes prior to your appointment.
- Always bring your records and your blood glucose meter and insulin pump with you, if you wear one.

The Children's Hospital at Montefiore

Pediatric Endocrinology and Diabetes

718-920-4664

Office hours:

Monday–Friday

8:30am–5pm

After-hours emergency number

718-920-5321

This number will connect you to the operator. You should state that you need the pediatric endocrinology fellow on call.

We are here for you 24 hours a day.

However, please be sensitive to what is considered an emergency and requires you to call us after hours. Please be aware of what information we need to be able to help you the best we can.

My endocrinologist:

My nurse practitioner (NP):

My certified diabetes educator (CDE):

My registered dietitian (RD):

My social worker:

My dentist:

My ophthalmologist:

General Information *(continued)*

What is an emergency?

- If your blood glucose is high and you have ketones.
- If you are in need of insulin before the office reopens.
- If your blood glucose is persistently under 60 mg/dL and/or you are severely symptomatic.
- If you are vomiting, are unable to tolerate food or drink fluids, or have altered mental status, confusion, high fever, or another serious medical problem.

When you call, please have available:

- Your latest blood glucose level and time of check
- Your meter
- Amount and time of last insulin dose
- Result of ketone check

What is not an emergency?

- Refills
- Appointments
- Blood glucose review
- General questions or concerns
- Forms
- If your pump is not working, please call the pump company before calling the doctor. The phone number for pump concerns can be found on the pump. When you call, have the pump available so you can report the serial number and any other information they request.



Education Checklist

Pathophysiology

- Type 1 diabetes versus type 2 diabetes
- Insulin deficiency, autoimmunity, islet cell destruction, insulin resistance etc.
- Treatment with insulin and blood glucose monitoring
- “Honeymoon” period
- Interaction of carbohydrates, insulin and exercise
- Overview and rationale for treatment and insulin

Insulin Action

- Long-acting insulin—Lantus/Levemir
- Rapid-acting insulin—Novolog/Humalog/Apidra

Skills

- Fingerstick and blood glucose monitor use
(Meter type: _____)
- Drawing up insulin: by syringe by insulin pen
- Giving injections
- Insulin dosing—steps and calculations
- Carbohydrate counting and nutrition basics

Blood Glucose

- Hyperglycemia: high blood glucose signs and symptoms, causes, treatment and complications
- Hypoglycemia: low blood glucose signs and symptoms, causes, treatment and emergencies
- Glucagon: emergency use, dose and administration
- Coping with illness, diabetic ketoacidosis (DKA) and ketones
- Exercise
- HbA1c: explanation and goals



Practical

- Prescriptions: Given Filled Reviewed
- School letter for absence
- 504 plan
- Future appointments
- Social worker
- Contact with us and emergency numbers
- Nutritionist

Other

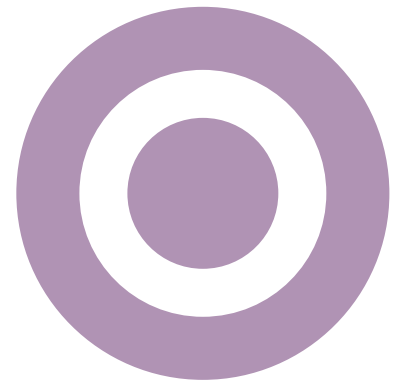
- Call your child's school regarding absence and diagnosis. Speak with school nurse and teachers.
- Call your insurance company regarding diagnosis and assignment of case manager.
- Discuss research opportunities.
- Purchase a medical alert bracelet.
- Discuss follow-up appointments, support groups, upcoming events.
- Make an appointment with an eye doctor.
- Explore insulin pump options.
- Learn about Juvenile Diabetes Research Foundation (JDRF) and American Diabetes Association (ADA) events.

Self-Care with Diabetes

American Diabetes Association (ADA) Recommendations

Age	Blood Glucose (BG) Before Meals	BG at Bedtime
0–6 yrs	100 mg/dl–180 mg/dl	110 mg/dl–200 mg/dl
6–12 yrs	90 mg/dl–180 mg/dl	100 mg/dl–180 mg/dl
13–19 yrs	90 mg/dl–130 mg/dl	90 mg/dl–150 mg/dl

Age	Hemoglobin A1c
0–6 yrs	less than 8.5% (205 mg/dl)
6–12 yrs	less than 8.0% (190 mg/dl)
13–19 yrs	less than 7.5% (175mg/dl)



What is a hemoglobin A1c?

- A hemoglobin A1c tells us how well your diabetes has been controlled over the past two-three months. It is a very important level to measure.
- We want your A1c to be close to or less than 7percent, as long as your blood glucose (BG) levels are not consistently low. You should have your A1c measured every three to six months.

What other tests should I have done?

- Every three to six months you should also have your blood pressure checked, visit the dentist and see your endocrinologist.
- Each year you should have:
 - o blood lipid (fat) test
 - o foot exam
 - o dilated pupil exam (eye doctor)
 - o urine test for kidney function
 - o flu shot/other vaccinations as needed.
- People with type 1 diabetes are sometimes more prone to being diagnosed with other autoimmune disorders, so we may do some other blood tests, such as:
 - o adrenal tests
 - o celiac tests
 - o thyroid tests

Hyperglycemia (High Blood Glucose)

Symptoms

Symptoms vary from person to person, but these are some of the common ones:

- Frequent urination
- Thirst
- Blurry vision
- Sleepiness or feeling of lethargy
- Difficulty or lack of concentration

Hyperglycemia is when your blood glucose level is high. When blood glucose is high, or above normal range, (>180 mg/dl), it can be a serious problem if it is prolonged. That is why it is important to treat hyperglycemia as soon as you detect it.

If you fail to treat hyperglycemia, a condition called ketoacidosis can occur.

- Ketoacidosis develops when your body doesn't have enough insulin. Blood glucose is usually at least 250 mg/dl.
- Without insulin, your body can't use glucose for energy, so your body breaks down fats to use for energy.

When your body breaks down fats, waste products called ketones are produced.

- Your body cannot tolerate large amounts of ketones.
- Your body will try to get rid of the ketones through the urine, which makes you go to the bathroom more often.
- Your body will try to get rid of the ketones through the lungs, which may give your breath a fruity odor.
- The body cannot release all the ketones, and they build up in your blood. This is called ketoacidosis.

Ketoacidosis is life-threatening and requires immediate treatment. It is rare in children who have blood glucose levels in good control, but it is important to be aware of the symptoms.

Symptoms include:

- Shortness of breath
- Breath that smells fruity
- Nausea and vomiting
- Very dry mouth

Hyperglycemia (High Blood Glucose) *(continued)*

If a child has any of the above symptoms or blood glucose is persistently 250 mg/dl or higher, it is important to check for ketones in the urine or in blood.

- Trace or small ketones can be cleared with additional hydration (using sugar-free fluids), insulin and blood glucose monitoring.
- Moderate or large ketones will need additional insulin, and hospitalization may be required to provide intravenous (IV) hydration.
- Exercise can make the ketones worse. When a child has ketones, it is important for him or her to have plenty of rest and sugar-free fluids like water.

If a child is experiencing hyperglycemia, it is important to:

- Monitor blood glucose levels frequently.
- Check for ketones.
- Provide plenty of sugar-free liquids: water, diet soda, or sugar-free drinks.
- Continue administering insulin as ordered; you may need more insulin than usual. You should call the doctor to determine the best insulin doses.

If a hyperglycemia is persistent:

- We may need to make adjustments in the insulin plan, food choices, or exercise. Please call us; we can help you make those changes.



Hypoglycemia (Low Blood Glucose)

Hypoglycemia is when your blood glucose is low or less than 70mg/dl. Everyone with diabetes will occasionally have hypoglycemia, but with frequent glucose checks and proper management it can usually be prevented. Hypoglycemia should be treated as soon as it is detected.

Symptoms

Symptoms vary from person to person, but these are some of the common ones:

- Irritability or anxiety
- Headache
- Shakiness or dizziness
- Weakness
- Sweating
- Hunger

Be aware of the signs and symptoms of hypoglycemia, and tell others who are with you about hypoglycemia.

- A child sometimes does not recognize the symptoms of low blood glucose.
- An observant parent, teacher, or supervisor may need to help.
- When blood glucose is low, a person may need assistance because the brain does not have enough energy to function properly.

Treating low blood glucose

- If you feel any of the above symptoms, check your blood glucose.
- If it is below 70 mg/dl, you should treat it.
- Eat something that is mostly sugar/carbohydrates.
Foods that have a lot of fat, such as chocolate or cookies, do not work quickly enough.
- Treat with 15 grams of fast-acting carbohydrates:
 - **4 oz. (1/2 cup) of juice or regular soda**
 - **2 tablespoons of raisins**
 - **4 teaspoons of sugar**
 - **1 tablespoon of honey**
 - **4 glucose tablets**
- Carry fast-acting carbohydrates with you at all times, in case of low blood glucose.



Hypoglycemia (Low Blood Glucose) *(continued)*

Once you've checked your blood glucose and treated:

- Wait 15 to 20 minutes, then check your blood glucose again.
- If your blood glucose is still below 70 mg/dl, repeat the treatment and recheck 15 to 20 minutes later.
- Be aware that symptoms of hypoglycemia may persist when blood glucose returns to normal.

Do not treat again if blood glucose is normal.

It is important to treat hypoglycemia quickly because hypoglycemia can get worse and you can pass out.

- If you pass out, you will need immediate treatment.
- Someone must give an injection of glucagon, or you must get emergency treatment in a hospital.
- You should always carry glucagon with you. We will teach you how to use glucagon, and it is important that people around you also know how to use it.

Glucagon injection

- Used when the person cannot take anything by mouth or has passed out.
- 911 should also be called in this type of emergency.

Using the Glucagon Emergency Kit (simple directions are also on the kit):

- Open red glucagon case.
- Remove flip-cap from bottle.
- Remove needle protector from syringe with solution.
- Inject entire contents of syringe into bottle of glucagon powder.
- Shake bottle gently until powder dissolves.
- **Withdraw all of the solution from the bottle (1 mg mark on syringe), and for children weighing less than 44 pounds, withdraw half of the solution (.5 mg mark on syringe).**
- Glucagon is injected the same way as insulin.
- Turn patient to his or her side in case of vomiting when he or she awakens.
- When the patient awakens, give food with carbohydrate and protein.

If hypoglycemia is common or persistent:

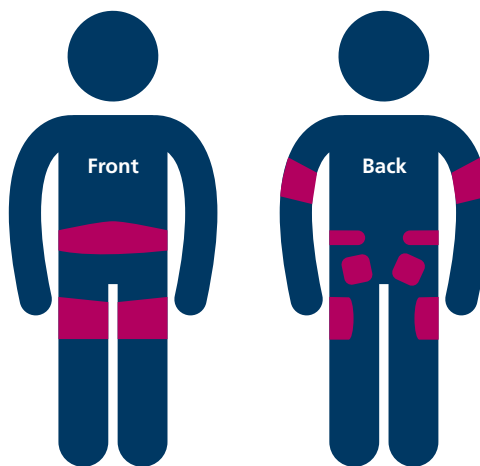
- We may need to make adjustments in the insulin plan, food choices, or exercise. Please call us; we can help you make those changes.

Insulin Information

Insulin administration sites

The picture shows areas where we recommend insulin administration/injections.

- These areas have a layer of fat below the skin. These areas have few nerves and make it more comfortable for injections. Insulin is easily absorbed in these areas.
- Sites for insulin injection are:
 - **Belly**
 - **Legs**
 - **Arms**
 - **Buttocks**
- Rotate sites to prevent scar tissue buildup.
- Different areas work better for different people. The stomach provides even insulin absorption. If you give insulin in your leg, it may work more quickly with exercise.
- These sites can also be used for insulin pumps.



Insulin types

There are different types of insulin:

- **Rapid-acting insulin:** Usually taken before meals and as needed (examples: Novolog, Humalog, Apidra).
 - It starts working in 15–30 minutes and lasts for about 2–5 hours
- **Long-acting insulin:** Usually taken one time each day (examples: Lantus, Levemir).
 - It starts working in 2–4 hours, and lasts for about 22–24 hours.

How to use your insulin pens

- There are different types of insulin pens, but most are very similar.
 - **Disposable pens**
 - **Non-disposable pens**
- The rubber top should be cleaned with alcohol before each use.

Preparing pen

- Use a new pen needle before each injection.
- Pull off paper tab and screw needle top onto insulin pen.
- Remove needle outer cap and small inner needle cover to expose the needle.

Priming the pen:

- The pen must be primed before each use.
- At one end of the pen is a dose selector knob. Dial to 2 units by turning the dial until the window or arrow is at 2. The dial can be moved forward and backward.
- Hold the pen so you can see the needle tip, and push the dial completely down into the pen until you see drops of insulin and the knob is back to its starting position, at zero.
- If you do not see insulin, repeat this step until you do, or try removing the needle and screwing it back on. Sometimes when starting a new pen you have to repeat this step before you see a drop of insulin, indicating it is primed.

Insulin Information *(continued)*

Giving an injection

- Dial your insulin dose into the window or so that the dosing arrow is pointing to it.
- Choose an injection site. Clean injection site and allow it to dry.
- Gently pinch up skin and insert the needle at a 90-degree angle.
- Press down on the dose knob (usually using the thumb) until it stops and is at zero. Leave in place and count for five to 10 seconds to allow all insulin to be injected and absorbed.
- Pull the needle straight out at a 90-degree angle.

Insulin vials

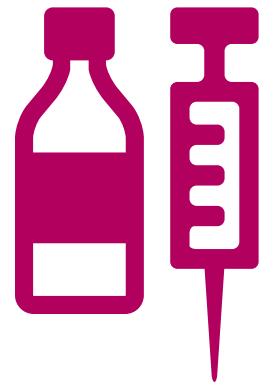
- Clean the rubber top with alcohol before each use.

Preparing injection

- Draw air (approximately the same amount as the insulin you will be drawing out) into the syringe by pulling plunger down until it is at the correct line.
- Place vial on flat surface and stick needle into vial at a 90-degree angle. Push air into vial by pushing plunger down.
- Flip syringe and vial over so that you can draw insulin out of the bottle. Draw out insulin to the amount desired and remove needle at a 90-degree angle.
- Check syringe for air bubbles. If air bubbles are visible, lightly tap syringe so that the bubbles rise to the top. Then, push the bubbles back into the vial and redraw the insulin out of the vial without air bubbles.

Giving an injection

- Choose an injection site. Clean the injection site and allow it to dry.
- Gently pinch up skin and insert the needle at a 90 degree angle.
- Push plunger completely down until all insulin has been administered.
- Pull the needle straight out at a 90 degree angle.



Sharps disposal

- Needles and sharps should be disposed of in a sharps container or puncture-proof container.
- You can buy a sharps container or use a detergent bottle or coffee can, for example.
- Dispose of sharps according to your county rules.

Storage of your insulin

- The insulin pen (or vial) being used can be kept outside of the refrigerator for one month.
 - Write the date you started using it on the pen (or vial) with a permanent marker.
 - Never store your insulin in direct sunlight, on a heater, in a car, or next to a window.
- The insulin pens (or vials) not in use should be stored in the refrigerator. Be sure that they do not freeze and that they are not expired before using.

Sick Day Rules

Understanding what happens when you are sick

- Minor illnesses often change the body's insulin requirements. As a result, the blood glucose may rise higher than usual.
- Illness can also lead to ketoacidosis more easily through a buildup of ketones.
 - Ketones are waste products that have acid from the breakdown of fat. This happens when there is not enough insulin in the body to utilize the glucose as energy.

1. Unless advised by your doctor, **DO NOT SKIP INSULIN DOSES!**

- You need to keep taking insulin/diabetes medication when you are sick even if you are not eating or eating less than normal. If you are feeling too sick to eat, your body will get some energy by releasing sugar from the liver. You may need to adjust insulin doses.
- You will always need some basal or background insulin.
- Your insulin requirements may change when you are sick, when you are taking medications that may increase your blood glucose levels, or when you are having the following signs and symptoms:

- **Vomiting**
- **Fever**
- **Loss of appetite**
- **Diarrhea**
- **Ketones**



2. Check for ketones every four hours, and call your doctor if they are positive (trace, small, moderate, or large).

- You must check for ketones especially if your blood glucose is over 250 mg/dl and you are feeling sick.
- How to check for urine ketones:
 - Check expiration date on ketone strips.
 - Get a sample of urine in a clean cup and dip ketone strip into urine.
 - Gently shake off excess urine from ketone strip and wait for the small square pad at the end of the strip to change color. Check directions on bottle or box of strips.
 - Compare the color of the ketone strip to the color on the ketone strip container and record the results.

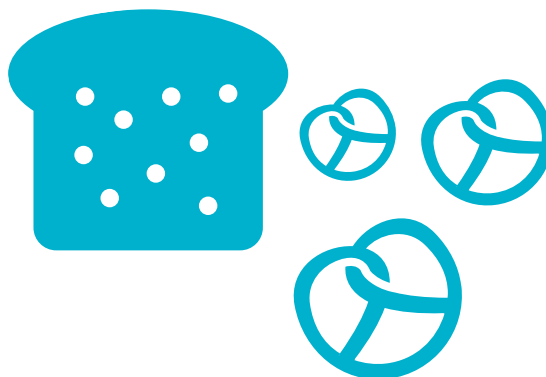
3. Check your blood glucose every two to four hours. Call your doctor if you are having trouble. Insulin doses may need to be adjusted.

- When you call, please have available:
 - Your latest glucose level and time of check
 - Amount and time of last insulin dose
 - Result of a ketone check (see above)

Sick Day Rules *(continued)*

4. Drink plenty of fluids to prevent dehydration, and try to consume some carbohydrates.

- If your blood glucose is in **normal** range, or higher than normal, drink:
 - **Water**
 - **Diet drinks**
 - **Broths and tea**
- If your blood glucose is running **low** (less than 70 mg/dl), drink fluids that contain carbohydrates until your glucose is in normal range. Sip:
 - **Juices**
 - **Regular soda**
- The following foods are easily tolerated when ill. Each is 15-20 grams of carbs:
 - **½ cup Jell-O**
 - **¼ cup sherbet**
 - **1 popsicle**
 - **5 saltines or 6 pretzel rings**
 - **1 slice bread**
 - **½ cup cooked cereal or rice**
 - **Electrolyte replacement drink (such as Pedialyte or Equalyte)**



5. Call your doctor if you:

- Vomit more than once
- Are unable to tolerate any fluids
- Have confused thinking or are feeling very sleepy
- Feel short of breath
- Have a high fever
- Have ketones
- Have any other serious medical problems

Exercise and Diabetes

Regular exercise is an important component of maintaining good health for everyone, including people with diabetes. Exercise is linked to:

- Better physical fitness and overall health
- Improved blood glucose control
- Lower insulin requirements
- Decreased long-term complications
- Weight loss/weight maintenance



With a little preparation, a child with diabetes can participate in all physical activities.

- Check blood glucose before exercise, and eat a snack if necessary.
 - **If blood glucose levels are less than 100–120 mg/dl prior to exercise, a snack should be eaten. A snack with protein and carbohydrate is best.**
- If the blood glucose is within a normal range, the individual can eat a snack consisting of 15 grams of carbohydrate for every hour of exercise; however, this varies from person to person and with type of exercise.
- You may prefer to eat carbohydrates or drink small amounts of regular juice or sports drinks for rehydration and carbohydrates. Four ounces of juice is approximately 15 grams of carbohydrates, so 4 to 8 ounces for every 30–60 minutes of exercise can maintain blood glucose levels during strenuous exercise (basketball, hockey, etc.).
- Ideally, blood glucose levels should be lower than 250 mg/dl prior to exercise.
 - **If higher, urine should be checked for ketones. If ketones are present, the child should avoid exercise.**
 - **If your child has small or no ketones, but blood glucose at 250 mg/dl or higher, adequate fluid intake is necessary.**
 - **Drink at least 8 ounces prior to exercise and 8 ounces for every 30 minutes of exercise.**
- There should always be a source of fast-acting glucose (gel/tablets/juice) carried by the person with diabetes or by a supervising gym teacher or coach. Glucagon should be available for emergencies.
- Tell someone you have diabetes, and wear a medical alert bracelet.
 - **There are special medical alert bracelets that are made for athletes.**

Exercise and Diabetes *(continued)*

- It is very important to check blood glucose levels during exercise, as activity may mask hypoglycemia.
- Exercise lowers blood glucose by:
 - **Helping use carbohydrates so more energy is burned when we exercise.**
 - **Helping our muscles use insulin better so we may need a little less.**
- Exercise can lower blood glucose immediately, as well as several hours or a day after exercise.
- Different types of exercise effect blood glucose levels differently and at different times.
- Children who are more active on certain days may need less insulin on those days, even hours after the exercise.
 - **A good plan is to decrease the child's insulin dose as recommended by your health care provider on the days of activity, and if the blood glucose continue to decrease, reduce more.**
 - **Check blood glucose after exercise and overnight in addition to during exercise.**

Strenuous exercise, especially when outdoors, can lead to dehydration.

- Children should drink enough fluids to prevent dehydration.
 - **About 4 to 8 ounces for every 30 to 60 minutes of exercise.**
- For hydration, water is ideal, though diet drinks are fine as well.



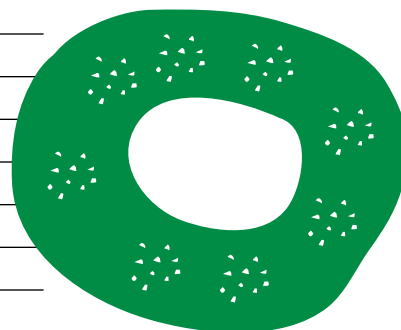
Nutrition Information

Carbohydrate Content

Breads / crackers / grains / starchy vegetables

* Carbohydrate content may vary from brand to brand. Always read the food label.

Starches	Amount	Carb Grams
Breads		
Bread, white or wheat	1 slice (1 oz.)	15 g
Light bread	1 slice (1 oz.)	7–8 g
Low-carb bread	1 slice (1 oz.)	9 g
Challah	1 oz	20 g
Pita bread	2 oz	30 g
Mini/Pocket	1 oz	15 g
Hamburger or hot dog bun	1 bun	20 g
Dinner rolls	1 small	15 g
Sandwich rolls	1 medium (2 oz.)	30 g
Bagel	1 (Deli style)	60–70 g
Mini bagel	1 (1 oz.)	15 g
Croissant, plain	1 small (1 oz.)	20 g
	1 large (2 ½ oz.)	35 g
Danish	1 regular	30 g
Doughnut	1 regular	25 g
Pancake or waffle,		
Frozen	1 small	15 g
Restaurant	1 regular	30 g
English muffin, plain	1	30 g
Muffin	1 medium (2 oz.)	30 g
Dunkin Donuts/Deli	1 large	75 g
Tortilla		
Corn (6")	1 small	10 g
Soft taco	1 small	15 g
Flour tortilla	1 large	30 g
Wraps, plain	1 regular	45 g



Nutrition Information *(continued)*

Starches	Amount	Carb Grams
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Crackers

Saltine	1 cracker	2 g
Cheese flavored	1 crackers	2 g
Graham	1 cracker	5 g
Wheat Thins	1 cracker	1 g
Soda cracker	1 cracker	10 g
Peanut Butter cracker	1 cracker	4 g

Cereals

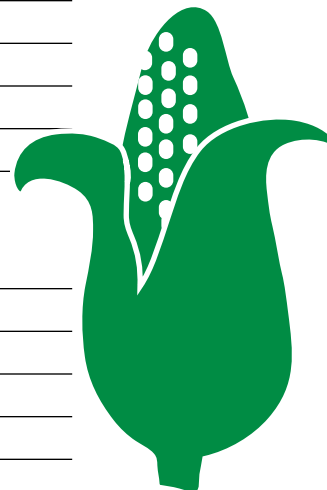
Check the label!	1 serving (1 cup)	15-45g
Oatmeal	1 cup (cooked)	30 g
Farina	1 cup (cooked)	25 g

Grains

Rice, white or brown	1 cup (cooked)	45 g
Spaghetti	1 cup (cooked)	40 g
Elbows/spirals	1 cup (cooked)	40 g
Small Shells	1 cup (cooked)	30 g
Mac & Cheese	1 cup (cooked)	30 g
Grits	1 cup (cooked)	30 g

Starchy vegetables

Corn	½ cup	15 g
Corn on the cob	1 medium	20 g
Popcorn	3 cups	15 g
Potatoes		
Plain, baked	small	15 g
	medium	30 g
	large	45 g
Mashed	½ cup	15 g
Plantain	1 medium	30 g
Yam	½ cup (mashed)	15 g
Yucca	½ cup (mashed)	15 g
Hash browns	½ cup	10 g



Nutrition Information *(continued)*

Starches	Amount	Carb Grams
French fries		
McDonald's/Fast food	small	30 g
	medium	50 g
	large	65 g
Restaurant style	15 fries	25 g

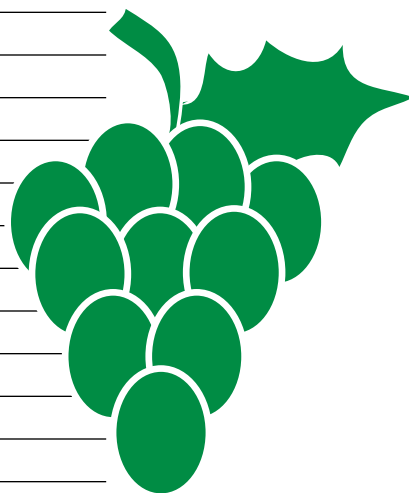
Beans

Beans	1 cup (cooked)	40 g
Baked beans	1 cup (cooked)	50 g
Chili with beans	1 cup (cooked)	30 g
Refried beans	1 cup (cooked)	40 g

Fruit

Fresh fruit

Apple		
	small	15 g
	medium	25 g
	large	35 g
Apricots	1 regular	6 g
Applesauce (unsweetened)	½ cup	15g
Banana		
	medium	25 g
	large	30 g
Berries	1 cup	20 g
Cantaloupe/Honeydew	1 cup (cubes)	15 g
Cherries	10 pieces	10 g
Clementine	1 medium	15 g
Grapefruit	½ fruit	15 g
Grapes	15 pieces	15 g
Kiwifruit	1 regular	10 g
Mandarin	1 regular	6 g
Oranges		
	small	15 g
	large	30 g
Papaya		
	½ cup (cubed)	8 g
	1 regular	30 g



Nutrition Information *(continued)*

Starches	Amount	Carb Grams
Peaches	1 regular	15 g
Plum	1 regular	10 g
Pear	1 regular	25 g
Pineapple	1 cup	20 g
Strawberries	1 cup (sliced)	10g
	3 large	3 g
Watermelon	1 cup cubes	12 g



Canned fruit

In water/diet	½ cup (4 oz.)	10 g
In light juice/syrup	½ cup (4 oz.)	15 g
In heavy syrup	½ cup (4 oz.)	25 g

Dried fruit

Apricots	8 halves (1 oz.)	15 g
Prunes	1 medium	5 g
Raisins	2 tablespoons	20 g

Milk / Yogurt

Milk

Whole, low-fat or skim	8 oz. (1 cup)	12 g
Chocolate milk	8 oz. (1 cup)	26 g
Soy milk (plain)	8 oz. (1 cup)	10 g

Yogurt

Yogurt (plain)	8 oz. (1 cup)	15 g
Yogurt (light)	8 oz. (1 cup)	20 g
Yogurt with fruit	8 oz. (1 cup)	35 g

Condiments /Sweeteners

Sugars

Table sugar	1 Tbsp.	15 g
Honey	1 tsp.	6 g
Jam or preserve	1 Tbsp.	15 g
Syrup, regular	1 Tbsp.	15 g
Syrup, light	1 Tbsp.	7 g

Nutrition Information *(continued)*

Starches	Amount	Carb Grams
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Condiments

BBQ sauce	1 Tbsp.	6 g
Ketchup	1 Tbsp./ 1 pkt	5 g
Spaghetti sauce	½ cup	10 g
Cranberry sauce	¼ cup	25 g

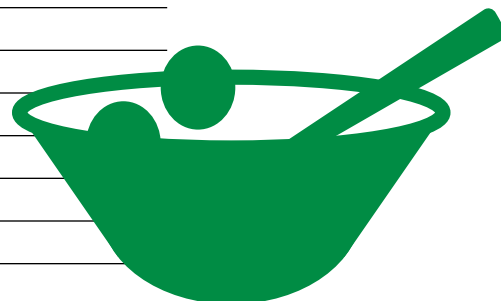
Other

* Ask for nutritional information where you buy/eat fast food.

New York–style pizza	1 slice	45 g
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Kosher foods

Grape juice	1 cup	40 g
Challah	1 piece	20 g
Matzah	1 piece	25 g
Gefilte fish	1 slice	6 g
Noodles	½ cup	15 g
Matzah balls	1 regular	12 g
	1 large	25 g
Farfel/Egg barley	½ cup	30 g
Cholent/Sabbath stew	1 cup	35 g
Potato kugel	1 piece (3.5 oz.)	15 g
Luckshin kugel	1 piece (5 oz.)	20 g
Compote dessert	½ cup sweetened	25 g
	½ cup unsweetened	15 g
Sponge cake	1 piece	25 g
Knish	1 Potato knish	20 g
	1 Cheese knish	35 g
Blintzes	1 regular	25 g
Borscht	1 cup	15 g
Rainbow cake	1 small	12 g
Kasha	½ cup	20 g
Latka	1 regular	22 g
Pierogi	1 regular	10 g



Steps to Calculating Your Insulin Dose

Target:

Your target is what your blood glucose should be.

Target _____ mg/dl

Correction factor:

If you give yourself 1 unit of rapid-acting insulin (Novolog/Humalog/Apidra), your blood glucose will go down _____ mg/dl.

Carbohydrate ratio:

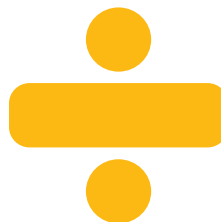
For every _____ grams of carbohydrates you eat, give yourself 1 unit of Novolog/Humalog.

Steps:

Step 1

Blood glucose minus your target.

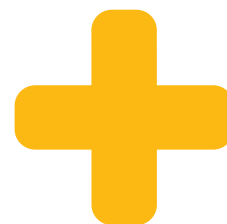
$$\begin{array}{r} \underline{\hspace{2cm}} \quad - \quad \underline{\hspace{2cm}} \quad = \quad \underline{\hspace{2cm}} \\ \text{(Blood glucose)} \quad \text{(Target)} \quad \quad \quad \text{(Points above your target)} \end{array}$$



Step 2

Divide your answer of Step 1 by your correction factor.

$$\begin{array}{r} \underline{\hspace{2cm}} \quad \div \quad \underline{\hspace{2cm}} \quad = \quad \underline{\hspace{2cm}} \\ \text{(Points above your target)} \quad \text{(Correction factor)} \quad \quad \quad \text{(Answer to Step 2)} \end{array}$$



Step 3

Divide the grams of carbohydrates that you are eating by your carbohydrate ratio.

$$\begin{array}{r} \underline{\hspace{2cm}} \quad \div \quad \underline{\hspace{2cm}} \quad = \quad \underline{\hspace{2cm}} \\ \text{(Carbs you are eating)} \quad \text{(Carbohydrate ratio)} \quad \quad \quad \text{(Answer to Step 3)} \end{array}$$

Step 4

Add the answer to Step 2 + the answer to Step 3 together to get the total amount of insulin you should take.

$$\begin{array}{r} \underline{\hspace{2cm}} \quad + \quad \underline{\hspace{2cm}} \quad = \quad \underline{\hspace{2cm}} \\ \text{(Answer to Step 2)} \quad \text{(Answer to Step 3)} \quad \quad \quad \text{(Insulin you will take)} \end{array}$$

*At a meal, if the blood glucose is within target, a correction dose is not required. Skip Step 1 and 2 and only provide insulin for the food (Step 3). Do not calculate correction factor for snacks (the correction factor should not be given within three hours of the last dose of insulin. This is known as the three-hour rule or active insulin time). ALWAYS COVER CARBOHYDRATES!

*Correction factor is sometimes called insulin sensitivity factor.

General Instructions

Blood glucose (BG) readings

- When you wake up in the morning
- Before all meals
- Before bedtime
- Overnight as determined by your doctor
- Other: _____

Always do a BG check if you suspect a low or high BG!



Insulin regimen

- Long-acting insulin
 - Lantus (glargine) or • Levemir (detemir) _____ units at _____
- Rapid-acting insulin
 - Novolog (aspart) or • Humalog (lispro) or • Apidra
 - Correction: 1 unit to lower BG _____ mg/dL to the target of: _____ mg/dL.
Do not give any correction between meals (unless it has been three or more hours since last correction dose)
 - Carbohydrate ratio: 1 unit for every _____ grams of carbohydrate.
 - Take insulin for food 15 minutes before eating.
 - Special instructions for bedtime and overnight corrections (if necessary):
If the BG is above _____, take 1 unit to lower BG _____ mg/dL to a target of _____ mg/dL

If a correction is needed, be sure to recheck your BG in two hours to make sure it is going down. This information is useful for future correction doses and for safety. Do not make additional corrections at that time, unless instructed by your provider. If you are concerned about a high or low BG level overnight, contact the fellow on call.

Insulin plan adjustments

Keep records and check blood glucose as we have discussed. We will need to be in contact with you often to review your records and make changes as necessary. During the “honeymoon” period, changes may occur frequently in order to make sure you are getting the required doses.

General Instructions *(continued)*

Appointments

Be sure to make an appointment with the endocrinologist every three months as determined by your doctor. You can come more often, if needed.

Speak with a social worker.

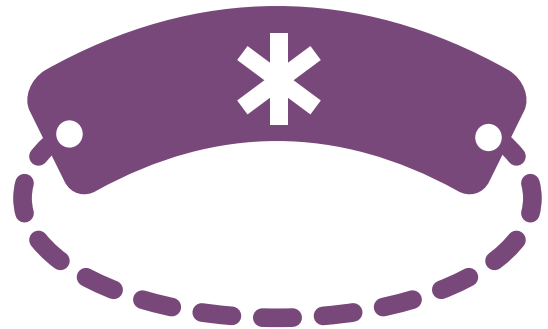
Make an appointment with the nurse practitioner and/or Diabetes Educator and/or Nutritionist.

Reminder

Diabetes is a condition that requires lifelong management. With proper care you will continue all the activities you enjoyed prior to this diagnosis. It is necessary, however, that you recognize the importance of continuing education and appointments with our team. This is an ongoing process that takes time, but be assured the team here at Montefiore will be with you each step of the way!

Until your next appointment

- Check blood glucose levels as instructed and record insulin, food and activities.
Call us as instructed, or if you notice the numbers are not in the recommended range.
- Speak to the school nurse and teachers.
- Call your insurance company and ask to have a case manager assigned to work with you.
- Choose a medical alert ID.
- Get some rest!
- Call the school and school nurse.



How to contact us

- To make appointments, call 718-741-2450.
- The Department number is 718-920-4664.

Date of appointment(s): _____

Blood Glucose Records



Date: _____ Name: _____

Long-acting insulin
(Lantus/Levemir):

Dose _____
Time _____

Best Contact #: _____ Email: _____



	12a	1a	2a	3a	4a	5a	6a	7a	8a	9a	10a	11a	12p	1p	2p	3p	4p	5p	6p	7p	8p	9p	10p	11p	
Blood Glucose																									
Carbs																									
Rapid-Acting Insulin (Novolog/Humalog/Apidra)																									
Comments: (Exercise, emotions, activity)																									

Breakfast			Lunch				Dinner				
Time	Food	Amount (grams)	Time	Food	Amount (grams)	Time	Food	Amount (grams)	Time	Food	Amount (grams)

What changes do you think need to be made in your management plan? What suggestions do you have?

Notes