



Hypoglycemia & Hyperglycemia

Hypoglycemia (low blood sugar)

What is hypoglycemia?

- Hypoglycemia or low blood sugar occurs whenever someone's blood sugar approaches or is below 70 mg/dL.
- Your body needs sugar (or Carbohydrates) in order to run, so it's very important to listen to the body's cues for high or low blood sugar.
- This can feel very different for each individual. Below you will see a chart of recommended blood sugars ranges. If you check your blood sugars, these are the desired blood sugar ranges to aim for. Also included in this handout is a list of signs and symptoms for you and any close family or friends to watch for.
- Glucose Goals:



Time at which blood sugar is checked	American Diabetes Association Goals for people with Diabetes	My Individual goals set with my Care Team
Before meals or fasting	70 to 130 mg/dL	
1-2 hours after the start of a meal	Less than 180 mg/dL	

Symptoms of low blood sugar:

- Shaky
- Sweaty
- Dizzy
- Pounding heart, Racing Heart
- Sudden change in mood or behaviors
- Hungry
- Weak, tired
- Headache
- Nervous or Upset, Angry

Common causes of hypoglycemia

- Taking too much medication, or too many medications in general, depending on the type you take. Ask your care team if you are at risk for Hypoglycemia.
- Not eating enough, or going too long between meals
- Drinking Alcohol
- Eating or drinking later or earlier than your usual times
- Skipping meals

How do you treat hypoglycemia?

Important! Make sure anyone living with you knows how to treat low blood sugar. Sometimes people are not aware that they are acting differently or showing signs of low blood sugar. Wear a medical Alert Bracelet or necklace and make sure close friends and family know how to treat hypoglycemia.

When you have low blood sugar:

- Step 1:
 - Take 3-4 glucose tablets (available at the pharmacy)
 - Have a tube of glucose gel or a small tube of cake frosting
 - Chew and swallow 4-6 pieces of hard candy
 - Have 4oz (1/2 cup) of fruit juice or regular soda (not sugar free)
 - A tablespoon of Honey
- Step 2:
 - Recheck your blood sugars to see if you are still below 70 mg/dL. If so, eat another serving of the items listed above
 - Repeat this step
- Step 3
 - As soon as you can, but definitely within an hour eat a substantial meal or snack that also contains protein and fat such as a sandwich, crackers and cheese, cottage cheese and fruit, etc.
- **When to call your doctor or seek emergency treatment**
 - First of all, do not drive when you have low blood sugar!
 - Seek Medical attention if your blood sugar has not responded to the process listed above after 3 attempts.
 - If you pass out and have a glucagon injection available, your family should know how to give it to you. If you are not waking up, someone should call 911. Remember, never try to feed someone who is unconscious.

Hyperglycemia (high blood sugar)

What is hyperglycemia?

- After eating a meal, the body signals the release of insulin. Insulin is like a key that unlocks the cells in order to store glucose for later use. This process reduces the amount of glucose in your blood stream. In people with Diabetes, this process does not work as well because either there isn't enough insulin being produced, or because the body is resistant to the effects of the insulin. As a result, levels of glucose in the blood stream can reach high levels, causing hyperglycemia or high blood sugar.

Scale of normal blood sugar range

- Hyperglycemia occurs when the blood sugar is above 130 mg/dL while fasting, or greater than 180 mg/dL after eating a meal.

Time at which blood sugar is checked	American Diabetes Association Goals for people with Diabetes	My Individual goals set with my Care Team
Before meals or fasting	70 to 130 mg/dL	
1-2 hours after the start of a meal	Less than 180 mg/dL	

Scale of Hb A1C

- If blood glucose is regularly higher than the "normal" ranges, then this will reflect in the Hemoglobin A1C test that your doctor will run. The Hemoglobin A1C gives your care team an idea of what your blood sugar typically is at.

Symptoms of hyperglycemia

- High blood sugar
- Frequent urination
- Increased Thirst
- Increased Hunger
- Blurred Vision
- Fatigue
- Weight loss
- Poor Wound Healing
- Dry Mouth
- Poor Wound Healing
- Drowsiness

Common Causes of hyperglycemia

- Too much Food
- Illness, colds, infections, injuries, surgeries
- Emotional stress
- Not enough Diabetes Medication, or skipped doses of medication
- Too little exercise

How to treat hyperglycemia

- Check your blood sugar, if it's at the level where your doctor would suggest you call or get treatment, then do so. You may also want to check for ketones if your doctor suggests this
- Exercise. However do not exercise if you are feeling ill or dizzy or if your blood sugar is very high
- **When to call your doctor or seek emergency treatment:**
 - If you notice a pattern in your blood sugar readings being high, for example 3 or more days with blood sugars higher than 150, notify your doctor.
 - **Seek medical attention right away if you suspect high blood sugars and you are:**
 - Drinking or urinating a lot more than usual
 - Having nausea or vomiting
 - Deep rapid breathing
 - Ketones in your urine or blood

REMEMBER: DO NOT DRIVE yourself if you think you may have very high blood Sugars or Diabetic Ketoacidosis