

Overview

Monitoring or checking blood glucose levels at home and at different times throughout the day, gives important information about the effects of food, medication, activity, stress and illness, and how it relates to diabetes control. Recording this information in a log or diary helps to keep track of this information in making decisions to care for diabetes each day. You can check blood glucose with strips that are read by a glucose monitor. These require a drop of blood. Glucose monitors read the blood glucose value from the strip. Monitors are available with many choices in features. The choice may be based on cost, size, ease of use, extra features (e.g., memory, computer use), and personal choice.

How often should you check your blood glucose?

Blood glucose levels change throughout the day and night. When and how you check your blood glucose depends on your treatment goals. You and your doctor may decide on one or more of the following options:

- 1-8 times per day
- Before each meal and at bedtime
- Fasting and 2 hours after meals
- Before and after meals
- Once a day, but at different times each day (e.g., Monday before breakfast, Tuesday before lunch)
- Fasting and once more at different times of the day (as above)
- Each day before breakfast

Additionally, you will check every 2-4 hours when you are ill. You may also check your blood at those times when you feel hypoglycemic (low blood glucose) but are not sure. You can help detect and prevent night-time low blood glucose by checking before bedtime. Checking before and after a certain activity or exercise can tell you the effect that activity has on your blood glucose.

How do you check your blood glucose?

Blood glucose checking may seem hard at first, but will become easier with practice. When purchasing a new glucose monitor, ask your diabetes educator or pharmacist for help in learning how to use it. Always follow the manufacturer's instructions that come with your monitor. Also, most monitors come with a toll free customer service number that can be called if you need more assistance. Before you check, gather all the equipment you will need. Make sure you have the correct strips for the monitor you are using. Check the expiration date. Do not check with materials that are outdated or have a color change on the test pad. Do not use monitoring equipment that belongs to someone else and do not share your equipment with others. Calibrate your monitor as instructed.

To obtain a drop of blood:

- To check your blood glucose, use the lancet device that comes with your monitor according to the directions that come with the equipment. Newer monitors allow for more variety in sites for blood glucose collection (such as the forearm). If you are not sure what sites your monitor will allow, ask your diabetes educator. If you have difficulty obtaining a drop of blood, ask your diabetes educator for help. Many blood glucose lancing devices now offer patients options for adjusting the lancet mechanism – if yours does not, your educator can assist with exploring other options for selecting another lancing device.

Important Things to Remember

Record the results of your blood glucose checking and bring them with you to your doctor appointment. As you look for patterns in your blood glucose levels, think about causes for changes from your usual or desired patterns. Call your doctor or nurse if any problems arise between visits or if there are major changes in your results. Be sure to report any episodes of low blood glucose that happen for reasons you don't understand. Make sure you check or calibrate your monitor as instructed by the manufacturer of your monitor to insure accurate results.

How Can Your Doctor Help You?

Your doctor or diabetes educator can help you select the monitor that will be good for you to use and assist you in deciding when and how often to perform self monitoring of your blood glucose (SMBG). An average number of monitoring times are 1-2 times a day if you are managing your diabetes with meal planning and exercise only. It may be necessary to check your levels more often if you are taking diabetes pills or insulin injections.

The results of your SMBG will help you and your doctor determine if changes are needed in the type, amount, or timing of your medication, or if your blood glucose levels are too high (hyperglycemia) or too low (hypoglycemia). Remember: these results are not "tests" to pass or fail – they are "tools" used to evaluate and monitor the day-to-day care of your diabetes.

Quiz

1. Self-monitoring blood glucose gives you information on the effects of what things on your blood glucose?
 - a) Medication
 - b) Food
 - c) Activity
 - d) Illness
 - e) All of the above
 - f) None of the above
2. When and how you check your blood glucose depends on your treatment _____.
3. True or False: It is okay to use monitoring materials that are outdated or have a color change on the test pad.

Answers: 1) e, 2) goals, 3) False