Back to the Basics: Monitoring Blood Glucose

People with diabetes usually need to check their blood glucose (also called blood sugar) often during the day. Checking your blood glucose will help you decide how to handle your diabetes.

All blood glucose meters are different, so make sure you read and follow the directions for your meter. Don’t forget to wash your hands before checking your blood glucose.

The American Diabetes Association suggests the following goals for most adults with diabetes. These goals may not be right for everyone. Talk to your doctor about what your target goals should be.

- Before a meal: 70-130 mg/dl
- After a meal: less than 180 mg/dl

When you check your blood glucose, write it down. Keep a log of the day, time, and your blood glucose value. It’s also a good idea to keep track of what you ate, how much exercise you did, and how you are feeling. This record will help you learn how your body’s reacts to different situations. It will also help your healthcare providers, so take it with you when you have a check-up.

Low blood glucose is also called hypoglycemia. A blood glucose level less than 70 is too low. Watch out for symptoms like shakiness, dizziness, sweating, hunger, headache, sudden moodiness or behavior changes, clumsy or jerky movements, or confusion. If you have any of these symptoms, check your blood glucose. If it is below 70, treat your low blood glucose by eating some kind of quick-acting carbohydrate.

Some people carry glucose tablets in case they have low blood glucose and do not have food nearby. You can buy glucose tablets at the pharmacy. Food sources of simple carbohydrates can also be used. The most important thing is to consume 15-20 grams of carbohydrate. Some good choices are:

- 4 oz (1/2 cup) of 100% juice or soft drink made with sugar
- 2 tablespoons of raisins
- 4-5 saltine crackers
- 1 tablespoon of honey
- 4 teaspoons of sugar

After you’ve treated your low blood glucose, wait 15-20 minutes. Then check your blood glucose again. If it is still low, repeat the treatment. If your low blood glucose stays low after several treatments, call your doctor.
Diabetes Life Lines

High blood glucose is called hyperglycemia. A blood glucose level greater than 180 is too high for most people. Symptoms of high blood glucose include frequent urination, increased thirst, blurred vision, feeling very tired, headache, nausea, vomiting, dry mouth, weakness, confusion, or stomach pain. If you have any of these symptoms, check your blood sugar.

If it is above 180, try exercising. Exercise often lowers blood glucose. However, if your blood glucose is above 240, check your urine for ketones. Ketones in your urine show that you do not have enough insulin in your body to use blood glucose for energy. If ketones are present, do not exercise until your blood glucose is down. If you often have high blood glucose, you may need to change the amount or type of food you eat, get more regular physical activity or adjust your diabetes medicine with the help of a health professional.

Lipid Control in Diabetes

Cardiovascular disease (CVD) is the most frequent cause of death in people with diabetes. Major risk factors for CVD include smoking, high blood pressure, low HDL-Cholesterol (HDL-C or good cholesterol), family history of early heart disease and age. While you cannot change your age and family history, you can stop smoking, control high blood pressure, and increase low HDL-C levels.

It is common for someone with diabetes to have high triglycerides, low HDL-C and elevated LDL-Cholesterol (LDL-C or bad cholesterol). Health experts call these “lipids.” By keeping them in the desired range, you can reduce your risk for a heart attack or stroke.

Your health care provider will probably check your lipids each year. Desirable targets are:

- triglycerides less than 150
- HDL-C more than 40 for men and more than 50 for women
- LDL-C less than 100 (If you had a previous heart attack or stroke, the LDL-C goal is less than 70)

First, you need to lower the LDL-C or bad cholesterol. You can do this through diet changes, increased physical activity, weight control and not smoking. Control of blood glucose can also improve blood lipid levels.

If lifestyle changes are not enough to control LDL-C, then medicine may be used. Typically, statins are tried first. Examples of statins include atorvastatin (Lipitor®), simvastatin (Zocor®), fluvastatin (Lescol®), lovastatin (Mevacor®), pitavastatin (Livalo®), and rosuvastatin (Crestor®).
Diabetes Life Lines

Glaucoma and Diabetes

Glaucoma is more common if you have diabetes. What exactly is glaucoma? It is actually a group of eye diseases that can cause damage to the optic nerve due to too much pressure in the eye. It affects over 60 million people worldwide and is likely to grow to nearly 80 million by 2020. Just because you have diabetes, you are twice as likely to develop this disease as someone without diabetes. That is why you need yearly eye exams by your eye doctor.

The most common type of glaucoma is called open angle glaucoma. This type of glaucoma usually increases the pressure in your eye by blocking your eyes’ drainage canals. Typically there are no early signs that this is happening. A person may have no vision changes for years because glaucoma tends to get worse slowly. Often when someone finally does notice a change, such as a loss of peripheral or side vision, the glaucoma is very serious.

Statins can cause a significant decrease in LDL-C. They can also lower triglycerides and raise HDL-C. Common side effects with statins include stomach upset and muscle aches. Your doctor will also check your liver function periodically.

Once you reach your LDL-C goal, if your triglycerides are still too high, you may need niacin or a fibrate. Fibrates include fenofibrate (Tricor®) and gemfibrozil (Lopid®). Niacin can also increase HDL-C. However, it can cause side effects like flushing, itching, stomach upset, and a racing heart.

Other medicines used to manage lipids include bile acid sequestrants such as cholestyramine (Questran®), colestipol (Colestid®), and colesevelam (Welchol®). This class of medicines can lower LDL-C, but may bind to other medicines and prevent their absorption. Ezetimibe (Zetia®) helps to prevent cholesterol absorption, but does not lower LDL-C as well as the statins. In some cases, omega-3 fatty acids (like Omacor®) may also be used to lower triglyceride levels.

While these medicines can all help manage lipids, each drug class has its own advantages and disadvantages. Your healthcare team will help you to decide the best approach after looking at your lab values, your medical history, and any possible risk of interaction with your other medicines.
The good news is that if glaucoma is found early through regular eye exams, it can be treated. It will not be cured, but you can slow it down and protect the optic nerve.

Who is most at risk for glaucoma?

- African Americans and Hispanics
- Adults over age 60
- People who have family members with glaucoma
- Anyone using steroids
- Someone who had an eye injury
- People with high blood pressure
- People who are very near-sighted

If you have glaucoma, take your prescribed medicines on-time. Tell all your health care providers that you have glaucoma so they can adjust your other medicines so they don’t interfere with your glaucoma medicine. Report to your eye doctor any side effects from the medicine and any eye problems such as discharge, scratchiness, itchiness, cloudy or blurred vision or rainbows around lights at night.

Be prepared for emergencies. Just as you do for your other medicines, buy an extra supply of your glaucoma medicine in case you cannot get to the pharmacy and carry a spare written prescription when you travel.

Diabetes Alert Day is Tuesday March 26!

79 million Americans or one in three adults have pre-diabetes plus one-third of those who have diabetes do not know they have it.

Encourage the people you know to take the Diabetes Risk Test to see whether they are at risk for Type 2 diabetes.

To access the test, visit the American Diabetes Association on Facebook or go to www.stopdiabetes.com or call 1-800-DIABETES.

The Risk Test only takes a few minutes, but it can have a big impact on the health of your family and friends.

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Recipe Corner

Spicy Spanish Egg Sandwich
This is a good high protein breakfast or lunch sandwich. The avocado adds healthy, unsaturated fat which will promote a feeling of satiety.

½ cup low cholesterol egg substitute
¼ cup chopped fresh avocado
2 tablespoons chopped tomato, seeded
2 teaspoons salsa, any kind you like
1 flat whole wheat deli bun
Non-stick vegetable oil spray

1. Spray small bowl or ramekin with non-stick vegetable oil spray.
2. Pour in low cholesterol egg substitute. Sprinkle avocado and tomato evenly over the egg.
3. Microwave on medium for about 2 minutes. Lift the edges of the egg so the uncooked portion runs out to the sides. Continue cooking until the egg is set.
4. While the egg mixture is cooking, toast the bun.
5. When the egg dish is done, remove the egg mixture from the ramekin and place it on one side of the toasted bun with the salsa. Top with the second side of the bun and eat immediately.

1 serving

Nutrition Analysis:
Calories: 225  Carbohydrate: 26 grams  Protein: 15 grams
Fat: 6.5 grams  Saturated Fat: 0.7 grams  Cholesterol: 0 milligrams
Sodium: 467 milligrams  Fiber: 8 grams
Dear Friend,

Diabetes Life Lines is a bi-monthly publication sent to you by your local county Extension agent.

It is written by an Extension Nutrition and Health Specialist and other health professionals from the University of Georgia. This newsletter brings you the latest information on diabetes self-management, healthy recipes and news about important diabetes-related events.

If you would like more information, please contact your local county Extension Office.

Yours truly,

County Extension Agent