



Diabetes Life Lines

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Blood Pressure Control When You Have Diabetes

Cardiovascular disease is the main cause of death in people with diabetes. Therefore, it is important for you to know your blood pressure (BP) and to keep it controlled. Current guidelines recommend that the systolic blood pressure (the top number) be kept below 130 and that the diastolic blood pressure (the bottom number) be kept below 80.

Lifestyle changes are essential in controlling BP. These include:

- maintaining a healthy weight;
- having a diet rich in fruits and vegetables and low in fats;
- reducing sodium intake;
- doing regular physical activity;
- limiting alcohol;
- and not smoking

If these changes are not enough to reduce your BP to under 130/80, medicine may be required. There are many medicines that can manage high BP. However, the first types usually used are called ACE inhibitors or medicines known as ARBs. Clinical trials with ACE inhibitors and ARBs have shown reductions in both cardiovascular risk and kidney damage that can be seen in diabetes.

- Some examples of ACE inhibitors include Vasotec[®] (enalapril), Zestril[®] (lisinopril), Accupril[®] (quinapril) and Altace[®] (ramipril).
- Some of the ARBs include Diovan[®] (valsartan), Cozaar[®] (losartan) and Benicar[®] (olmesartan).

Someone with a very high BP, such as over 160/100, will need two medicines right away instead of just one. In fact, many people require multiple medicines to reach their BP goals. A doctor typically adds a diuretic such as hydrochlorothiazide or chlorthalidone. After a diuretic, other medicines that may be added include a calcium channel blocker or a beta blocker.

- Some examples of calcium channel blockers are Norvasc[®] (amlodipine) and Plendil[®] (felodipine).
- Some beta blockers include Tenormin[®] (atenolol), Zebeta[®] (bisoprolol) and Toprol XL[®] (metoprolol succinate).



Checking your BP at home, as well as at your doctor's office, can be helpful. Home BP monitoring can eliminate false readings that may result from feeling nervous at the doctor's office. You can use an electronic or a manual device. Your doctor's staff can teach you how to use it correctly. They may even give you some written instructions to help.

Some points to remember when you check with a manual device at home include:

- Find a quiet place to check your BP.
- Rest in a chair next to a table for 5 minutes before checking your BP.
- Let your arm rest comfortably at heart level.
- Sit up straight with your legs uncrossed.
- Locate your pulse just above the bend of your elbow. This is the brachial artery.
- Apply the BP cuff so that the lower edge is about 1 inch above the bend of the elbow.
- Place the stethoscope over the brachial artery.
- Inflate the cuff until the gauge is about 30 points above your expected systolic BP.
- Slowly release the pressure on the cuff as you listen for the sound of pulse beats in the brachial artery.
- Note the reading on the gauge when you hear the first pulse beat. This is the systolic BP.
- Continue to slowly deflate the cuff.
- Note the reading on the gauge when you stop hearing the pulse beats. This is the diastolic BP.
- Write down your blood pressure and also the date and time so you can give this information to your doctor at your next visit.

Back to the Basics: Diabetes and Exercise

Exercise is part of a healthy lifestyle for people with diabetes, but before starting, talk to your doctor to make sure it is safe for you.

How will exercise affect your blood glucose levels?

Exercise affects everyone differently. Do not exercise if your blood glucose is too high or too low. If you keep good blood glucose records, you will find out what glucose levels are best for your workout.

If Your Blood Glucose Before Exercise is

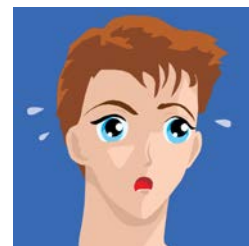
Lower than 100mg/dl: Your blood glucose may be too low to exercise safely. You may need to consume about 15 grams of carbohydrate before you start.

100 to 250 mg/dl: Your blood glucose is likely in a safe range for exercise.

250 mg/dl or higher: If your blood glucose is in this range, check your urine for ketones. If ketones are present, do not exercise. Get your blood glucose down first. Ketones in your urine mean you do not have enough insulin to control your blood glucose.

What About During Exercise?

Stop and check your blood glucose if you start to feel shaky, nervous, confused or have other signs of



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low blood glucose. If it is low, consume 15 grams of carbohydrate, wait 15 minutes, and recheck your blood glucose. Once it is in the desired range, begin exercising again.

If you exercise more than 30 minutes at a time, check your blood glucose every half hour or so even if you feel fine.

Keeping Safe After Exercise

Check your blood glucose more often for several hours after you work out. The harder you exercise, the longer the time your blood glucose may drop. Carry glucose tablets or other quick acting carbohydrate so you can treat quickly if needed.

How much and how often should you exercise? Work up slowly to a total of thirty minutes of moderate physical activity most days of the week. For example, you might exercise for 10 minutes a day three times this week and 15 minutes a day four times next week. If you want to lose weight, 60 minutes per day may be needed.

What type of exercise should you do?

Moderate physical activity includes brisk walking, swimming laps at a moderate pace, mowing the lawn, tennis, cycling 5 miles per hour, weight lifting, and even scrubbing floors or washing windows!

Thirty minutes usually burns 105 to 210 calories. High intensity activities include

jogging, running, fast lap swimming, cycling more than 10 miles per hour and circuit training. These usually burn over 210 calories in a half hour. Although light intensity activities like slow walking, light gardening and gentle stretching may not burn as many calories (105 calories in 30 minutes), they still add to your overall daily activity.

To learn more about diabetes and exercise, visit the American Diabetes Association's Food and Fitness website at <http://www.diabetes.org/food-and-fitness/?loc=GlobalNavFF>



Something to Think About

Believe in yourself! Have faith in your abilities! Without a humble but reasonable confidence in your own powers you cannot be successful or happy.

Norman Vincent Peale



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Reducing Cardiovascular Disease Is Still Elusive

The Look AHEAD (Action for Health in Diabetes) Trial was initiated to see whether an intensive program to produce weight loss and increase physical activity would result in fewer heart attacks and strokes.

The researchers collected data from 5145 adults who had type 2 diabetes and were overweight. Each person was randomly assigned to either the group getting the intensive lifestyle intervention or to what was called “support and education.” The people in the lifestyle group saw a dietitian or another health coach weekly for 6 months. After that they were contacted twice a month to maintain the desired calorie level and to reinforce the other changes they began during the first six months. In contrast, the support and education group only got some education and follow-up twice a year.

The lifestyle group lost nearly 9% of their weight during the first year. After that, they gained some back, but still managed to keep 5% off. Compared to the second group, they became more fit, had lower blood pressures and triglyceride levels and increased their HDL-cholesterol (the healthy kind) to a higher degree. Also more people in the lifestyle group either needed less diabetes medicine or stopped taking it entirely. They also suffered less sleep apnea. However, the support

and education group had slightly lower LDL-cholesterol (the harmful kind) levels because they took more medicine to control them. After 11 years, the number of heart attacks and strokes was not different between the two groups so the study was stopped. This may have occurred because the support and education group was fairly healthy and over all did not gain weight during the study.

The actual number of cases of cardiovascular disease was relatively low in both groups. The people in the study will continue to be followed to see if differences in their long-term health begin to appear. At least the study showed that people with type 2 diabetes can sustain significant weight loss over time which can improve the quality of their lives.

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Recipe Corner

Spinach Dip

This is an excellent dip to use with cut-up raw vegetables like broccoli, cauliflower, baby carrots, sliced turnips, grape tomatoes, and celery sticks. It is a great snack at a party or to serve as an appetizer.

1 10-ounce package of frozen spinach, thawed
4 ounces canned water chestnuts, drained and finely chopped
½ cup light sour cream
½ cup non-fat plain yogurt
3 finely chopped green onions, use both green and white parts
¼ teaspoon dry tarragon
¼ teaspoon ground dry mustard
1 small clove garlic or half of a large one, minced
Black pepper to taste

1. Using paper towels, squeeze the excess moisture out of the spinach. Place in medium bowl.
2. Add the remaining ingredients and mix well.
3. Refrigerate for at least 2 hours to allow flavors to blend. Stir well before serving.
4. Serve with cut-up raw vegetables.

Serving size 2 tablespoons

Makes 18 servings

Nutrition Analysis for 2 tablespoons of dip:

| | | |
|----------------|------------------------|---------------------------|
| Calories: 19 | Carbohydrate: 2 grams | Protein: 1 gram |
| Fat: 0.5 grams | Saturated Fat: 0 grams | Cholesterol: 2 milligrams |



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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

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