



## What is the link between diabetes and PAD?

Peripheral artery disease (PAD) is a common disease that occurs when the arteries in the legs become narrowed or clogged with fatty deposits, or plaque. When leg arteries are clogged, blood flow to the legs and feet is reduced. People with diabetes are at higher risk for having PAD. Some studies have found that one out of three people with diabetes over age 50 has PAD, and PAD is even more common in African Americans and Hispanics who have diabetes.

**Having PAD and diabetes can be a very serious problem.** People who have both diseases are much more likely to have a heart attack or stroke than those who just have PAD, and they are more likely to die at a younger age. Because many people with diabetes do not have feeling in their feet or legs due to nerve disease, they may have PAD but cannot feel any symptoms. As a result, they do not know they have PAD, or they may have it for a long time before it is diagnosed. Further, when blood flow to your feet and legs is narrowed or blocked due to PAD, it takes longer for cuts or wounds to heal, which may increase the risk for amputation (or losing a foot or leg).



## How do I know if I have PAD?

Talk with your health care provider right away if you have any of these **warning signs of PAD**:

- Fatigue, tiredness or pain in your legs, thighs or buttocks that always happens when you walk but that goes away when you rest.
- Foot or toe pain at rest that often disturbs your sleep.
- Skin sores or wounds on your feet or toes that are slow to heal.

Most people with PAD do not have any symptoms. Guidelines released by leading vascular organizations recommend

that people with diabetes over the age of 50 be tested for PAD. Testing is also recommended for people with diabetes under the age of 50 with other risk factors, such as smoking, high blood pressure or cholesterol problems.

To test for PAD, your health provider will examine the pulses in your feet and legs and may order a test called the ankle-brachial index, or ABI. **The ABI is the best test for finding out if you have PAD.** It uses sound waves to find out if there is reduced blood flow in the arteries. It also compares the blood pressure in your ankles with the blood pressure in your arms. PAD also can be diagnosed by other tests that measure blood pressures in the leg (segmental pressure), toe pressures (toe-brachial index or TBI) or artery blood flow (with ultrasound).

## What steps can I take to control my diabetes and PAD?

The good news is you can take steps to prevent damage to your blood vessels and cut your chances of having a heart attack, stroke or losing a leg by taking care of your blood glucose (sugar) and your other heart disease risk factors. We call these the **ABCs of Diabetes**.

**A** is for the A1C test that measures your average blood glucose over the past 2 to 3 months.

**B** is for your blood pressure.

**C** is for your cholesterol.

**Ask your health care team what your ABC numbers are and work together to develop a plan to reach your target goals.** At every visit, ask what your numbers are and keep track of them. If you are not reaching your goals, work with your health care team to change your plan.

**In most cases, these steps can help you manage the ABCs of diabetes and help lower your chances of having a heart attack, stroke or amputation:**

- Include physical activity in your daily routine.
- Reach and stay at a healthy weight.
- Take prescribed medicines, if needed, to control your ABCs.
- Avoid smoking.
- Ask your health care team about taking antiplatelet medicines such as aspirin or clopidogrel to prevent blood clotting.

**What should my ABC target goals be?**

The American Diabetes Association (ADA) suggests the target numbers listed below but your targets may differ. Talk with your health care team about the best targets for you.

**Your Blood Glucose.**

Check your blood glucose using a blood glucose meter as often as your health care team suggests. The meter tells you what your blood glucose is at the time you do the test.

| ADA Targets for Blood Glucose                                    | My Usual Results | My Targets      |
|--|------------------|-----------------|
| <b>Before Meals:</b><br>90 to 130 mg/dl                          | _____ to _____   | _____ to _____  |
| <b>2 hours after the start of a meal:</b><br>Less than 180 mg/dl | less than _____  | less than _____ |

**A1C.**

A1C. At least twice a year, your health care team should order an A1C test. The results will give your average blood glucose for the past 2 to 3 months.

| ADA Target for A1C | My Last Result | My Target |
|--------------------|----------------|-----------|
| Below 7 percent    |                |           |

**Your Blood Pressure.**

At every office visit, your health care team should check your blood pressure.

| ADA Blood Pressure Target | My Last Result | My Target |
|---------------------------|----------------|-----------|
| Below 130/80 mmHg         |                |           |

**Your Cholesterol and Triglycerides.**

Every year, your health care team should check your cholesterol and blood fat (triglyceride) levels.

| ADA Targets     |                              | My Last Result | My Target |
|-----------------|------------------------------|----------------|-----------|
| LDL cholesterol | Below 100 mg/dl              |                |           |
| HDL cholesterol | For men:<br>above 40 mg/dl   |                |           |
|                 | For women:<br>above 50 mg/dl |                |           |
| Triglycerides   | Below 150 mg/dl              |                |           |

## Meal Planning

Many people think that having diabetes means you cannot eat your favorite foods. But you can still eat the foods you like. It is the amount that counts. Ask your health care team to refer you to a dietitian who helps people with diabetes. The two of you will design a meal plan that is right for you and can help you reach your goals.

- Count carbohydrates (also called carbs).** Carbohydrate foods—breads, tortillas, biscuits, rice, crackers, cereal, fruit, juice, milk, yogurt, potatoes, corn, peas and sweets—raise your blood glucose levels the most. Keeping the amount of carbohydrates in your meals and snacks at the right level most of the time can help you stay within your blood glucose targets.
- Choose foods low in saturated fat.** Cutting down on foods that have saturated fat can help you lower your cholesterol and prevent heart disease. Foods high in saturated fat include meats, butter, whole milk, cream, cheese, lard, shortening, many baked goods, and tropical oils such as palm and coconut oil.
- Lose weight if needed.** Try to lose weight by cutting back on food portions and getting more physical activity each day. Try to lose weight by cutting back on food portions and getting more physical activity each day.
- Increase the fiber in your diet.** Include in your diet high-fiber foods such as fruits, vegetables, dried beans and peas, oatmeal and whole grain breads, cereals and pasta.

## Physical Activity

Daily physical activity helps lower your blood glucose, blood pressure and cholesterol levels. It also helps keep your joints flexible, strengthens your heart and bones, tones your muscles and helps you deal with stress.

Your health care team may want to check your heart function before you start doing new activities. They can help you plan an exercise program that is best for you, especially if you have pain in your legs when walking or doing physical activity. Use these tips for adding more activity to your daily routine:

- Be active throughout the day.**

Do some gardening or wash your car by hand. Take the stairs instead of the elevator. Get off the bus one or two stops before your office and walk the rest of the way. Walk around while you talk on the phone.

- Aerobic exercise.**

Examples include: walking briskly, dancing, rowing, swimming, water aerobics or biking. Try to work up to 30 minutes a day, 5 days a week.

- Strength training.**

Try to lift weights a few times a week. The weights do not have to be heavy.

- Stretching**

Start each day by stretching your whole body, especially your arms and legs. During the day, take a stretch break from working at your desk to refresh yourself and reduce stress.



## Medicines

Many people need medicines as well as meal planning and physical activity to reach their blood glucose, blood pressure and cholesterol targets. If you have had type 2 diabetes for a while, you may need a change in your diabetes pills to reach your blood glucose targets. If you need insulin shots, it does not mean that your diabetes is getting worse. It just means that you need a change in how you reach your target numbers.

If it is hard for you to reach your ABC target numbers, talk with your health care team about the medicines you are taking now and what doses. Work with your team to adjust your medicines so that they help you to reach your target goals. Also, be sure to ask if you need to take an antiplatelet medicine, such as aspirin or clopidogrel, to prevent a heart attack or stroke.

## What else do I need to do to take care of my diabetes?

- Check your feet every day** for cuts, blisters, red spots and swelling. Call your health care team right away about any sores that will not heal. Also, ask your health care team to check your feet at every visit.
- Get an eye exam each year** to check the blood vessels in your eyes for any early warning signs of damage.
- Have your urine tested each year** to check how well your kidneys function.
- Get a flu shot every year** and a pneumonia vaccine at least once to keep from getting sick. When you turn 65, you should get a pneumonia vaccine again, unless you have had one in the past 5 years.

## My Life Saving Diabetes Care Plan

Write down three reasons you want to take better care of your diabetes.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Write down three things you will do right away to better manage your diabetes.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Write down the people who can help you manage your diabetes (*for example, your husband or wife, a friend, or your health care team*).

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**Remember:** Finding and treating PAD early can help keep your legs healthy, lower your risk for heart attack or stroke, and save your life and limbs.

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