

HEART DISEASE AND DIABETES

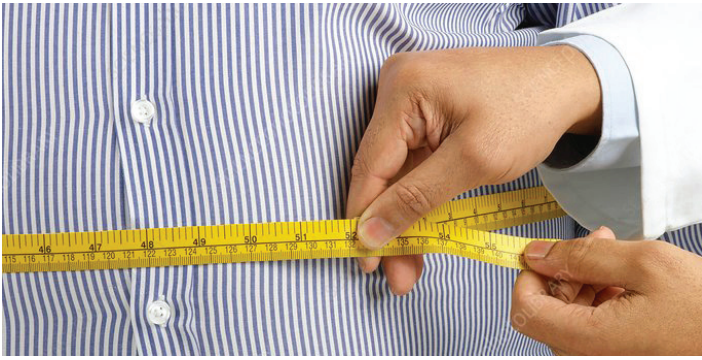


H *heart disease is common in people with diabetes. Data from the National Heart Association shows 65% of people with diabetes will die from some sort of heart disease or stroke.* In general, the risk of **heart disease** death and **stroke** are more than twice as high in people with diabetes.

While all people with diabetes have an increased chance of developing **heart disease**, the condition is more common in those with **type 2 diabetes**. In fact, **heart disease** is the number one cause of death among people with **type 2 diabetes**.

The Framingham Study was one of the first pieces of evidence to show that people with diabetes are more vulnerable to **heart** disease than those people who did not have diabetes. The Framingham Study looked at generations of people, including those with diabetes, to try to determine the health risk factors for developing heart disease. It showed that multiple health factors -- including diabetes -- could increase the possibility of developing heart disease. Aside from diabetes, other health problems associated with heart disease include **high blood pressure**, **smoking**, **high cholesterol levels**, and a family history of early heart disease.





The more health risks factors a person has for heart disease, the higher the chances that they will develop heart disease and even die from it. Just like anyone else, people with diabetes have an increased risk of dying from heart disease if they have more health risk factors. However, the probability of dying from heart disease is 2 to 4 times higher in a person with diabetes. So, while a person with one health risk factor, such as **high blood pressure**, may have a certain chance of dying from heart disease, a person with diabetes has double or even quadruple the risk of dying.

For example, one medical study found that people with diabetes who had no other health risk factors for heart disease were 5 times more likely to die of heart disease than those without. Another medical study showed that people with diabetes, no matter the number of other **heart disease risk** factors, were as likely to have a **heart attack** as someone without diabetes who has already had a **heart attack**.

Heart disease experts recommend that all people with diabetes have their heart disease risk factors treated as aggressively as people who have already had **heart attacks**.

What Causes Heart Disease in People with Diabetes?

The most common **cause of heart disease** in people with diabetes is hardening of the coronary arteries or **atherosclerosis**, which is a buildup of **cholesterol** in the **blood** vessels that supply oxygen and **nutrition** to the heart.

When the **cholesterol** plaques can break apart or rupture, the body tries to repair the plaque rupture by sending platelets to seal it up. Because the artery is small, the platelets could block the flow of blood, not allowing for oxygen delivery and a heart attack develops. The same process can happen in all of the **arteries** in the body, resulting in lack of blood to the

brain, causing a **stroke** or lack of blood to the feet, hands, or arms causing peripheral vascular disease.

Not only are people with diabetes at higher risk for heart disease, they are also at higher risk for **heart failure**, a serious medical condition in which the heart is unable to pump blood adequately. This can lead to fluid build-up in the **lungs** that causes difficulty breathing, or fluid retention in other parts of the body (*especially the legs*) that causes swelling.

What Are Some Symptoms of a Heart Attack?

The symptoms of a heart attack include:

- Shortness of breath
- Feeling faint
- Feeling dizzy
- Excessive and unexplained **sweating**
- Pain in the shoulders, jaw, and left arm
- **Chest pain** or pressure (*especially during activity*)
- **Nausea**

Remember not everyone has pain and these other classic symptoms with a heart attack. This is especially true for women.

** If you are experiencing any of these symptoms, you should call your doctor, call 911, or go to the nearest emergency room immediately.*

Peripheral vascular disease has the following symptoms:

- Cramping in your legs while walking (*intermittent claudication*) or hips or buttocks pain
- Cold feet
- Decreased or absent pulses in the feet or legs
- Loss of fat under the **skin** of the lower parts of the legs
- Loss of **hair** on the lower parts of the legs



How Is Heart Disease Treated in Those With Diabetes?

There are several treatment options for heart disease in those with diabetes, depending on the severity of the heart disease, including:

- **Aspirin** therapy* to reduce the risks of clots that lead to heart attacks and strokes
- Diet
- **Exercise** not only for weight loss, but to improve blood sugar levels, **cholesterol levels**, **high blood pressure**, and to decrease abdominal fat, a risk factor of heart disease
- Medicines
- Surgery

How Is Peripheral Vascular Disease Treated?

Peripheral vascular disease is treated by:

- Participation in a regular walking program (*45 minutes per day, followed by rest*)
- Special footwear
- Aiming for an A1c below 7%
- Lowering your **blood pressure** to less than 130/80
- Getting your cholesterol to below 100
- **Aspirin** therapy*
- Medicines
- Stopping **smoking**
- Surgery (*in some cases*)

** Low-dose aspirin therapy is recommended for men and women with types 1 or 2 diabetes who are over age 40 and are at high risk for heart disease and peripheral vascular disease. Talk to your doctor to determine if aspirin therapy is right for you. If you have certain medical conditions, aspirin therapy may not be recommended.*

How Can Heart Disease Be Prevented in a Person With Diabetes?

The best way to prevent heart disease is to take good care of yourself and your diabetes.

- Keep your **blood sugar** as normal as possible
- Control your blood pressure, with **medication** if necessary. The target for people with diabetes is under 130/80
- Get your **cholesterol numbers** under control. You may need to take medication to do this
- Lose weight if you are **obese**
- Ask your doctor if you should take an aspirin a day
- **Exercise** regularly
- Eat a heart-healthy diet such as the **Mediterranean diet** or **DASH diet**
- **Quit smoking**
- Work to reduce daily stress

