



# MDwise

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## Heart Attack and Stroke in Women: Reducing Your Risk

### Table of Contents

- Overview
- Credits
- Appendix
  - Topic Images
    - Atherosclerosis
    - Ischemic Stroke
    - Ischemic Versus Hemorrhagic Stroke
    - Angina Symptoms

### Overview

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Heart disease and stroke are leading causes of death for women throughout the world. More women die from heart disease than from cancer, chronic obstructive pulmonary disease, Alzheimer's, and accidents combined. More women than men die from strokes every year.

But women of all ages can help reduce their risk of heart disease, heart attack, and stroke.

#### What causes heart disease and stroke?

A process called hardening of the arteries, or atherosclerosis (See figure 1 in appendix), can cause heart disease, a heart attack, or a stroke.

Atherosclerosis causes fatty deposits called plaque (say "plak") to build up inside blood vessels called arteries. Arteries carry oxygen-rich blood throughout your body. The plaque can limit blood flow in the arteries.

**Heart disease.** When plaque builds up in the coronary arteries, it is called heart disease or coronary artery disease. The heart doesn't get the blood that it needs to work well. Over time, this can weaken or damage the heart. If the blood flow is blocked, it can cause a heart attack.

**Stroke.** Plaque can also build up in the neck arteries that go to the brain. Plaque in these arteries, called carotid arteries, can limit blood flow to the brain. If the blood flow is blocked, it can cause an ischemic stroke (See figure 2 in appendix) or transient ischemic attack (TIA). Another type of stroke is called a hemorrhagic (See figure 3 in appendix) (say "heh-muh-RAW-jick") stroke. This type of stroke happens when an artery in the brain leaks or bursts. This causes bleeding inside the brain or near the surface of the brain.

**Women are unique.** Heart disease seems to happen slightly differently in women compared to how it happens in men. For example, plaque might build up differently in a woman's arteries so that a doctor cannot see a blockage during a cardiac catheterization test. Researchers are trying to understand these differences

to help find the best ways to prevent, diagnose, and treat women who have heart disease.

## What increases a woman's risk?

Most of the risk factors for heart disease and stroke are the same for women and men. These include smoking, diabetes, high blood pressure, high cholesterol, obesity, lack of exercise, and family history.

But women have certain other things that can raise their risk. These include pregnancy-related problems as well as medicines they may be taking, such as birth control pills or hormone therapy.

**Menopause.** A woman's risk of heart disease and stroke is higher after menopause. This higher chance is not completely understood. But cholesterol, high blood pressure, and fat around the abdomen—all things that raise the risk for heart disease and stroke—also increase around this time.

**Hormone therapy (HT).** If you have menopausal symptoms such as hot flashes and vaginal dryness, you might consider hormone therapy to relieve your symptoms. Because menopause and hormones are linked with the health of your blood vessels, you and your doctor will discuss your health and your risk of heart disease and stroke to make sure hormone therapy is safe for you. Risk for heart disease and other health problems varies based on when you start HT in menopause and how long you take it. Short-term use of hormone therapy in early menopause has less risk than when it is started later in menopause. Risk also depends on the type of HT used (estrogen or estrogen plus progestin).<sup>1, 2</sup>

**Birth control pills.** Using birth control pills might increase your risk if you smoke and are older than 35 or if you have a family history of atherosclerosis or blood-clotting disorders. Healthy, young, nonsmoking women probably do not increase their risk of heart disease and stroke when they take low-dose birth control pills.

**Pregnancy-related problems.** Problems during pregnancy, such as gestational diabetes and preeclampsia, have been linked to a higher risk of heart disease and stroke later in life. Experts are studying whether other pregnancy-related problems are linked to heart disease. Tell your doctor about any problems you had during pregnancy.

**Immune diseases.** Some immune-related diseases, such as lupus and rheumatoid arthritis, have been linked with a higher risk of heart disease in women.

**Migraine headaches.** Migraine headaches, especially migraines with aura, have been linked with stroke in women younger than 55.

## How does your doctor check your risk?

Your doctor can check your risk for a heart attack and stroke by assessing the number of risk factors you have. Your doctor will look at things like your cholesterol, blood pressure, and your age and race.

Your doctor might use a tool to calculate your risk of having a heart attack or a stroke in the next 10 years. There are different tools that doctors use. These tools are not perfect. They may show that your risk is higher or lower than it really is. But these tools give you and your doctor a good idea about your risk.

Knowing your risk is just the starting point for you and your doctor. Knowing your risk can help you and your doctor talk about whether you need to lower your risk. Together, you can decide what treatment is best for you.

## How can you reduce your risk?

You can use healthy lifestyle changes and medicines to reduce your risk of heart disease, heart attack, and stroke. You can also think about the risks and benefits of birth control pills and hormone therapy when you are deciding whether or not to use them.

## Heart-healthy lifestyle

A heart-healthy lifestyle can help reduce your risk of heart disease, heart attack, and stroke. And it can help you manage other problems that raise your risk. These problems include high blood pressure, high cholesterol, and diabetes.

Heart-healthy habits include not smoking, eating heart-healthy foods, exercising regularly, and staying at a healthy weight.

## Medicines

You might take medicines, along with making healthy lifestyle changes, to lower your risk. These medicines include:

- Diabetes medicine.
- Blood pressure medicine.
- Cholesterol medicine.
- Aspirin. Your doctor may suggest that you take a daily, low-dose aspirin if the benefits of aspirin to prevent a stroke are greater than the risk of stomach bleeding from taking daily aspirin. But the daily use of low-dose aspirin in healthy women who are at low risk of stroke is not recommended.<sup>3</sup>
- An anticoagulant, also called a blood thinner, to lower your risk of stroke if you have atrial fibrillation.

## Birth control and hormone therapy

- Talk with your doctor about what type of birth control is right for you. Healthy, young, nonsmoking women probably do not increase their risk of heart disease when they take low-dose birth control pills. But birth control pills are more likely to increase a woman's risk if she is older than 35 and smokes cigarettes.
- Talk to your doctor about your risk with hormone therapy. If you need relief for symptoms of menopause, hormone therapy is one choice you can think about. But there are other types of treatment for problems like hot flashes and sleep problems.

## What are symptoms of heart attack and stroke?

Knowing symptoms of a heart attack and a stroke can help save lives.

**Do not wait if you think you are having a heart attack or stroke. Getting help fast can save your life.** Even if you're not sure it's a heart attack or stroke, call for help.

Women are more likely than men to delay seeking help for a possible heart attack. Women delay for many reasons, like not being sure it is a heart attack or not wanting to bother others. But it is better to be safe than sorry.

## Heart attack symptoms

**Call 911 or other emergency services right away** if you have symptoms of a heart attack. These include:

- Chest pain or pressure, or a strange feeling in the chest.
- Sweating.
- Shortness of breath.
- Nausea or vomiting.
- Pain, pressure, or a strange feeling in the back, neck, jaw, or upper belly, or in one or both shoulders or arms.
- Lightheadedness or sudden weakness.
- A fast or irregular heartbeat.

After you call **911**, the operator may tell you to chew 1 adult-strength or 2 to 4 low-dose aspirin. Wait for an ambulance. Do not try to drive yourself.

For men and women, the most common symptom is chest pain or pressure. But women are somewhat more likely than men to have other symptoms like shortness of breath, nausea, and pain or pressure in other parts of their body (See figure 4 in appendix).

## Stroke symptoms

**Call 911 or other emergency services right away** if you have signs of a stroke. These include:

- Sudden numbness, tingling, weakness, or loss of movement in your face, arm, or leg, especially on only one side of your body.
- Sudden vision changes.
- Sudden trouble speaking.
- Sudden confusion or trouble understanding simple statements.
- Sudden problems with walking or balance.
- A sudden, severe headache that is different from past headaches.

Signs of a TIA (transient ischemic attack) are similar to signs of a stroke. But TIA symptoms usually disappear after 10 to 20 minutes, although they may last longer. There is no way to tell whether the symptoms are caused by a stroke or by TIA, so don't wait. Call for help right away.

## Credits

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## Appendix

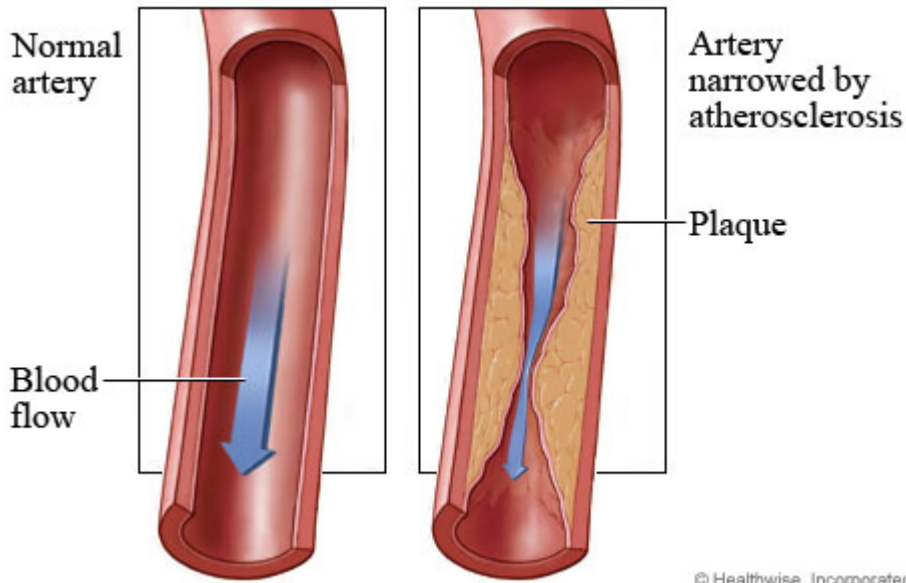
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## Topic Images

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Figure 1

**Atherosclerosis**

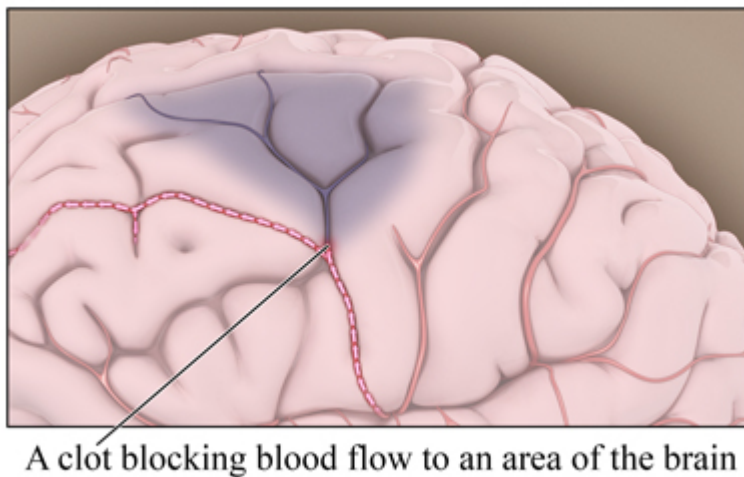


Atherosclerosis, sometimes called "hardening of the arteries," occurs when cholesterol, calcium, and other substances build up in the inner lining of the arteries, forming a material called plaque. Over time, plaque buildup may narrow the artery and limit blood flow through it.

Coronary artery disease is atherosclerosis in the heart (coronary) arteries. Peripheral arterial disease of the legs is atherosclerosis in the leg arteries. If atherosclerosis affects the brain arteries (carotid or cerebral arteries), a stroke can occur.

**Figure 2**

## Ischemic Stroke

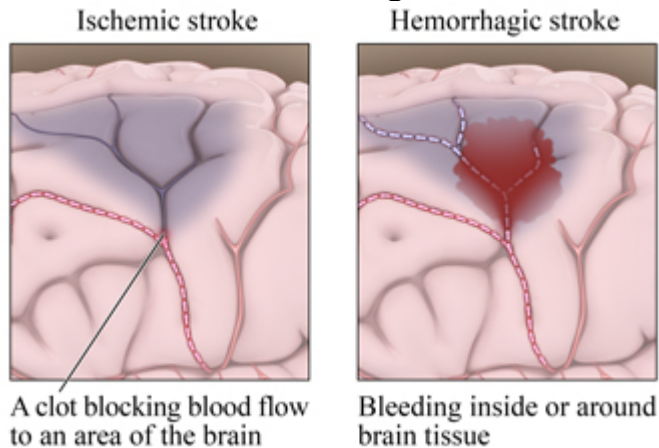


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An ischemic stroke develops when a blood vessel (artery) supplying blood to an area of the brain becomes blocked by a blood clot. The clot may form in the blood vessel (thrombus) or travel from somewhere else in the blood system (embolus).

Figure 3

## Ischemic Versus Hemorrhagic Stroke



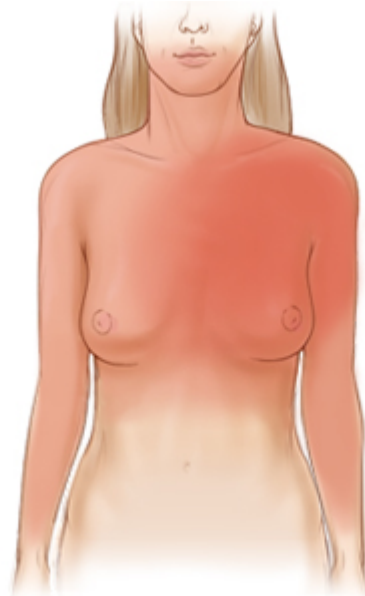
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An ischemic stroke happens when a blood vessel (artery) supplying blood to an area of the brain becomes blocked by a blood clot.

A hemorrhagic stroke happens when an artery in the brain leaks or bursts (ruptures).

Figure 4

## Angina Symptoms



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Most people feel angina symptoms in the chest. The most common symptom is chest pain or pressure, or a strange feeling in the chest. But you might feel symptoms in other parts of your body. Some people feel pain, pressure, or a strange feeling in the back, neck, jaw, or upper belly, or in one or both shoulders or arms.

Women are somewhat more likely than men to have other symptoms like shortness of breath, nausea, and back or jaw pain. Some women describe their symptoms as mild. Others feel tired when they have angina.

Other symptoms of angina include shortness of breath, nausea or vomiting, lightheadedness or sudden weakness, or a fast or irregular heartbeat.

Note: The "printer friendly" document will not contain all the information available in the online document. Some information (e.g. cross-references to other topics, definitions or medical illustrations) is only available in the online version.

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