

# Aortic Aneurysms

The **aorta** is the body's largest artery and carries oxygen-rich blood from the heart to the rest of the body. The wall of the aorta is very elastic and can normally stretch and then shrink back as needed to adapt to blood flow. However, some medical conditions can weaken the arterial wall. These factors, along with the wear and tear that naturally occurs with aging, can result in a weak aortic wall that may stretch and bulge outwards. An **aortic aneurysm** is a stretched and bulging section in the wall of the aorta. A bulging or enlarged vessel is weakened and can burst or rupture, resulting in life-threatening bleeding. This condition is the 10th leading cause of death in men 65 to 74 years of age in the United States.

The January 24/31, 2007, issue of *JAMA* includes an article about aortic aneurysms caused by underlying **inflammation** (response to cellular injury).

## RISK FACTORS FOR AN AORTIC ANEURYSM

- **Atherosclerosis**—hardening of the arteries caused by a buildup of cholesterol and fatty deposits within the lining of the artery wall
- **Genetics**—inherited conditions that adversely affect the supporting connective tissues
- **Aging**—the aorta becomes less elastic and stiffer with age
- **Smoking**—90% of persons with aneurysms have smoked
- **Infections**—can damage the lining of the heart and aorta
- **Inflammation**—the aorta becomes inflamed and scarred
- **High blood pressure**—distends the lining of the aorta
- **Trauma**—falls or motor vehicle collisions can injure the aorta

## EXAMINATIONS AND TESTS

Aortic aneurysms may be suspected or diagnosed by physical examination of the abdomen or by an imaging test. Tests to help determine the location, size, and rate of growth include

- **Abdominal ultrasound**—imaging of the blood vessel by sound waves to track the growth and size of the aneurysm
- **Computed tomography (CT)**—x-ray test to monitor the growth of the aneurysm
- **Magnetic resonance imaging (MRI)**—provides important information about related blood vessels and internal organs
- **Echocardiogram**—an ultrasound test used to study the structure of the heart and aorta
- **Angiogram**—study that can determine the size of the aneurysm and the presence of **dissections** (tears along the vessel wall) and blood clots

## TREATMENT

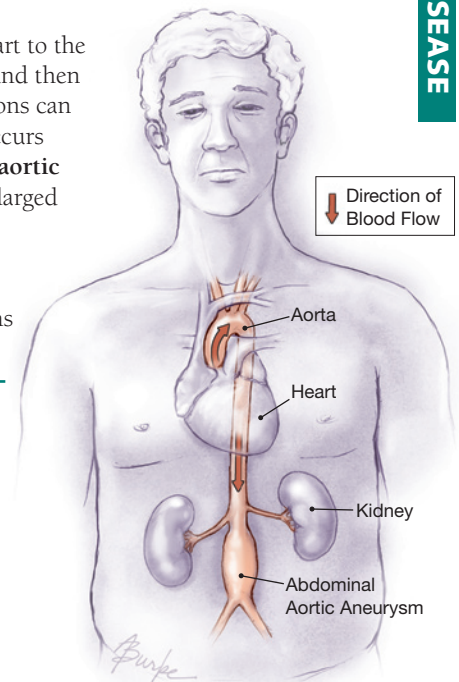
Treatment for an aneurysm depends on its size and location. If the aneurysm is small (less than 4.0 cm [1.6 in] in diameter) and you have no symptoms, your physician may advise a “watch-and-wait” approach with regularly scheduled examinations and imaging studies. Medications to lower high cholesterol and high blood pressure are reasonable approaches coupled with programs that help you exercise, quit smoking, and follow a heart-healthy diet. However, if your aneurysm is larger (more than 5.5 cm [2.2 in] in diameter) or if the aneurysm is growing more than 1 cm (0.4 in) per year, surgery may be the best treatment option.

John L. Zeller, MD, PhD, Writer

Alison E. Burke, MA, Illustrator

Richard M. Glass, MD, Editor

The JAMA Patient Page is a public service of JAMA. The information and recommendations appearing on this page are appropriate in most instances, but they are not a substitute for medical diagnosis. For specific information concerning your personal medical condition, JAMA suggests that you consult your physician. This page may be photocopied noncommercially by physicians and other health care professionals to share with patients. To purchase bulk reprints, call 203/259-8724.



## FOR MORE INFORMATION

- American College of Surgeons  
[www.facs.org](http://www.facs.org)
- American College of Cardiology  
[www.acc.org](http://www.acc.org)

## INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page link on JAMA's Web site at [www.jama.com](http://www.jama.com). Many are available in English and Spanish.

Sources: American College of Surgeons, American College of Cardiology

