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AMERICAN SOCIETY OF
NUCLEAR CARDIOLOGY



Stress tests for chest pain

When you need an imaging test—and when you don't

If you have chest pain that suggests you might have heart disease, a test that stresses the heart can help you and your doctor decide how to treat the problem. In some cases, an imaging test that takes pictures of your heart while it is stressed can provide more information. But if you're at low risk for having a heart problem, even if you have symptoms, you usually don't need the imaging test. Here's why.

Some chest pain isn't from heart disease.

A cardiac stress test makes the heart work hard so your doctor can see if it responds normally. Adding imaging—with sound waves (ultrasound or echocardiography) or a small dose of a radioactive substance (nuclear cardiology)—will make can help determine the extent and severity of heart disease. But chest pain can have many possible causes besides heart disease, such as indigestion, anxiety, or muscle injury. If the doctor's initial evaluation shows that you probably don't have a heart problem, you may not need a stress test at all. And if you do, a simple exercise stress test—in which you walk or jog on a treadmill while connected to an electrocardiogram



(ECG)—should often be the first choice because it has little risk and is inexpensive, easy to perform, and usually accurate in low-risk people.

They can pose risks.

Imaging stress tests are usually safe and can be done with little or no radiation. But for people at low risk, such tests may produce false-positive results, which can trigger unnecessary follow-up

tests that expose you to additional radiation. Inappropriate testing can also lead to unnecessary treatment.

They can be expensive.

An imaging stress test costs between \$500 and \$2,000, compared with \$200 to \$300 for an ECG treadmill test. Since imaging tests can provide more information, they may be worth it. But money spent on inappropriate tests is money wasted, especially when they lead to more unnecessary tests and further expense. So the tests should be used only when they will help you and your doctor manage your disease.

When do people with chest pain need imaging tests?

An imaging stress test should often be ordered if you have chest pain that comes on with exertion or emotional stress and goes away with rest, especially if you're a man over 40 or a woman over 50. The test can also make sense if you have an ECG with abnormalities that prevent an accurate interpretation during an ECG treadmill test, or if you can't exercise. Patients at higher risk, such as smokers or those with uncontrolled diabetes or high blood pressure, can also be candidates.

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Consumer Reports' Advice

How should you manage chest pain?

People with the symptom should take the following steps:

- **Learn the cause.** Many people with chest pain fear a heart attack, but non-cardiac causes are common, including heartburn, panic attacks, strained rib muscles, or in some cases even a blood clot in the lungs. In most cases of chest pain, it's best to check with your doctor, who can determine the probable cause by conducting a medical history and physical exam. The tests your doctor orders depend on the suspected cause of the pain.

- **Try medications first.**

If testing confirms heart disease but shows no immediate threat of a heart attack, the best first choice is often lifestyle changes plus drugs. Those measures help lower blood pressure and cholesterol levels, ease chest pain, and prevent blood clots.



- **Know the signs of a heart attack.**

Those typically include pressure, squeezing, tightness, or pain in the center of the chest that may last for several minutes or go away and come back. The pain can spread to your arms, back, stomach, neck, or jaw. Other clues include breaking into a cold sweat, fainting, lightheadedness, nausea, rapid heartbeat, or shortness of breath. If you think you're having a heart attack, call 911 and chew and swallow a 325-milligram aspirin tablet.