Life-Saving Things an Exercise Stress Test Can Tell You

Cardiovascular disease is the leading cause of death in the U.S., so it should go without saying that monitoring your heart health is imperative.

BY SHARON FEIEREISEN 10/06/2017

What exactly is a stress test?

One of the most effective tools at your doctor's disposal when it comes to monitoring heart health is a stress test, which gives information on whether an artery may or may not be significantly blocked. Unfortunately, most Americans are more likely to adapt to stress than quell it.

How is a stress test usually performed?

Stress testing can be done in several ways. "Traditionally a patient is placed on a treadmill and runs at various rates; a bicycle may also be used," says South Florida cardiologist Adam Splaver, MD. The doctor administering the test will monitor to see how much exercise the patient's heart can manage before an abnormal rhythm starts or blood flow to the heart drops.

What does a stress test reveal?

According to David Greuner, MD, surgical director at NYC Surgical Associates, stress tests can help closely examine symptoms like chest pain, shortness of breath, or heart palpitations, check whether your heart medications are working, and determine the probability of having heart disease and need for further testing. "Doctors may also recommend a stress test if you are starting a new exercise regimen to see if the level of exercise is right for you and what your heart can handle." In fact, there are a number of things to bear in mind when starting a new exercise plan.
How to prepare

Before you take a stress test, according to Dr. Greuner, your doctor will advise you not to smoke, eat or drink anything except for water four hours before the test, and to not eat or drink anything with caffeine 12 hours before the test. Your doctor may also ask you not to take certain heart medications the day of your test.

What to expect

During the stress test, a technician will put electrodes on your chest to monitor your heart, these will be attached to an EKG machine (an EKG shows the heart's electrical activity as line tracings on paper) to monitor your heart's electrical activity during the test. "First your heart rate and blood pressure will be monitored at rest, then the test will begin and you will either start walking on a treadmill or pedaling on a stationary bike," explains Dr. Greuner. "The test will gradually increase in difficulty and you'll continue to exercise until you feel exhausted."

Dobutamine or adenosine stress test

Aside from the standard test, there are other stress tests such as the dobutamine or adenosine stress test, which is for people unable to exercise. "During this test, a doctor administers a drug to make the heart respond as if they were exercising and monitors the patient to determine if there are any blockages in the arteries," explains Dr. Greune. "A stress echocardiogram can visualize the motion of the heart's walls and pumping while the heart is stressed to potentially identify a lack of blood flow."

Nuclear stress test

Another type of stress test is the nuclear stress test, which uses a small amount of radioactive substance to determine the health of the heart and blood flow to the heart. "It's used to help determine which parts of your heart are not working effectively," explains Dr. Greuner.
Is there a chance that results can be wrong?

As with any medical test, there is always room for error and inaccurate results with a stress test. "While an exercise stress test can pick up on a significant blockage, a smaller blockage may be missed and not be picked up," says Dr. Greuner who goes on to explain that if you're taking heart medications this can also have an effect on the results, which is why your doctor may ask you to stop taking certain medications before the test.

Keep demographics in mind

Not finding heart disease when it's there is called a false negative, but it's also possible to have a false positive: Your doctor might think you have heart issues when you're actually fine. The risk of this happening increases depending on who is being tested. "For example, if a 22-year-old woman has a positive stress test, the likelihood of her having coronary artery disease is low and indicates a false positive," notes Dr. Splaver. "However if a 65-year-old male diabetic hypertensive with a family history of cardiovascular disease has a negative stress test, it is most likely a false negative." Clearly the patient's demographic characteristics play a large role in interpreting any stress test and therefore having a skilled cardiologist is key.

Knowing risk factors is imperative

Given the room for error, it's imperative to be aware of the symptoms of heart disease and your risk factors of getting it, such as having a family history. Check out the five heart disease risk factors not a lot of people know about. You also should keep your doctor informed of all symptoms. "A stress test should be used as a tool to determine the probability of a patient having coronary artery disease, but shouldn't be used to completely rule it out or diagnose someone," cautions Dr. Greuner. Lastly, remember that many factors are in your control.