

Stress Tests and Heart Disease

For many people, their first sign of heart disease is a heart attack. But stress tests are designed to help identify heart disease before a heart attack can occur.

Stress tests most often are performed in people who have chest discomfort or in those with increased risk factors for heart disease. "As with many things, prevention is better than cure," says Manchester cardiologist Saqib Naseer, MD, a member of the ECHN medical staff. "Heart disease doesn't just happen overnight."

In an exercise stress test, a person walks on a treadmill. Electrodes are applied to the person's chest prior to the test to produce an electrocardiogram, which can determine how well the heart performs during exercise. Every few minutes, the speed and elevation of the treadmill are increased in order to increase the workload of the heart.

As the heart works harder, it required more blood and oxygen to do the job. If the increased need is not met because of narrowing of the arteries that supply the heart muscle, changes may be seen on the electrocardiogram. Blood pressure response also is monitored throughout the test.

To increase the diagnostic power of an exercise stress test, a safe radioactive substance called a radioisotope may be used. This is injected at the peak of exercise through an IV line placed prior to the begin-

ning of the test. Areas of the heart where arteries are narrowed will take up less of the isotope than those areas that are well-supplied. Imaging of the heart done after exercise will reveal any areas of diminished uptake.

For people who cannot walk on a treadmill for various reasons, such as those who have breathing problems or arthritis, a pharmaceutical stress test can be performed. During this test, a medication is injected that causes some of the physical effects of ex-

ercise on the heart. This is followed by an injection of a radioisotope. Imaging can then be done just as it is in exercise testing. In this way, areas of reduced blood flow and cardiac function can be identified.

The warning signs of heart disease are not limited to chest pain. They may also include arm or shoulder pain, upper back pain, chest pressure, squeezing sensations, nausea, feelings of indigestion or heartburn, excessive sweating, shortness of breath, or unusual fatigue.

Heart disease is often thought of as a disease that occurs mostly in middle-aged and older men, but Dr. Naseer says this is not true. "A heart attack can happen without warning, even in young adults, and heart disease is very prevalent in women as well as in men. Anyone who has experienced chest discomfort, even if they don't have risk factors, should consider a stress test." ■

For information about cardiologists on the ECHN medical staff, call Medical Matters, our free physician referral and information service, at 1-888-299-3676, toll-free, any time.



A stress test can help identify heart disease before a heart attack can occur, says cardiologist Saqib Naseer, MD.