## Exercise Stress Test

An exercise stress test is usually performed when a patient complains of chest pain or tightness, shortness of breath, and/or fatigue. The primary purpose of this test is to identify patients with blockages in the arteries that may lead to a heart attack. It is also used to identify safe levels of exercise for some patients as well as exercise endurance in patients who have had heart attacks, balloon procedures, or heart bypass surgery. Although stress testing is safe under most circumstances, it carries a small risk of a heart attack and rarely death. Therefore you should talk to your physician prior to proceeding with the test. You will be asked to sign a consent form acknowledging these risks prior to the test. You cannot perform the test without signing the consent form. Throughout the test your physician or a health care provider will monitor you closely. Emergency equipment is kept on-site including oxygen, a defibrillator and medications in case they are needed.

After the consent is signed, leads are placed on the chest, arms, and legs similar to an ECG to monitor your heart rate, rhythm, and signs that your heart is not getting enough oxygen. Blood pressure is measured before, during, and after exercising. Exercise is performed by walking on a treadmill. Typical protocols are usually done in stages, each lasting three minutes. After each stage, the speed is increased, as well as the incline on the treadmill. Guidelines on how long each patient should go are based on age, which determines heart rate goal, development of symptoms such as chest pain, and the indication for the test. In general, the longer you exercise, the more information your doctor gets about your heart. Throughout the test you will be asked if you have chest pain, shortness of breath or any other symptoms. However you should feel free to tell your doctor how you are feeling regardless if you are asked, in particular if you need to stop. You should never stop walking on the treadmill without notifying the technician or physician as injury may result.

Once you are done exercising, you will be monitored for several minutes to allow your heart rate and blood pressure to come down. Again you will be asked how you are feeling. If you are feeling well and your stress test is normal, you will be sent home. If there are any abnormalities identified during the stress test your doctor will discuss your options with you. Typically an abnormal stress test may lead to heart catheterization, changes or addition of medications, or further testing.

Preparation for a stress test usually involves an overnight fast or at least 3-4 hours prior to the test if it is being done in the afternoon. If you are diabetic, you should ask your doctor for instructions regarding your insulin or diabetic medications on the day of the test. Typically these medications are held or the doses are lowered. If you are on heart medications such as nitroglycerin, beta-blocker or calcium channel blocker these medications may need to be held prior to your test. You should wear comfortable clothes and good walking shoes. For women, it is best to wear a loose fitting top that opens in the front.

A typical stress test lasts 9-12 minutes however with preparation, it may take $30-45$ minutes. Keep in mind this is just for a plain treadmill test. If you have imaging such as ultrasound (echo) or nuclear scan, this may last longer. Refer to these actual tests for better estimation of time required. If you are unable to walk on a treadmill for whatever reason, notify your physician so that you may have an alternative stress test that does not require physical exercise.

The indications for this procedure have been explained to me. I understand the risks involved and I am willing to proceed with the stress test.
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