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## **STRESS TESTING PATIENT INFORMATION**

**TREADMILL STRESS TEST:** The exercise stress testing is the most widely used cardiac (heart) screening test. The patient exercises on a treadmill according to a standardized protocol, with progressive increases in the speed and elevation of the treadmill (typically changing at three minute intervals). During exercise stress testing, the patient's electrocardiogram (EKG), heart rate, heart rhythm, and blood pressure are continuously monitored. If a coronary arterial blockage results in decreased blood flow to a part of the heart during exercise, certain changes may be observed in the EKG (the electrocardiogram), as well as in the response of the heart rate and blood pressure.

**TREADMILL STRESS ECHOCARDIOGRAPHY:** During stress echocardiography, the sound waves of ultrasound are used to produce images of the heart at rest and at the peak of exercise. In a heart with normal blood supply, all segments of the left ventricle (the major pumping chamber of the heart) exhibit enhanced contractions of the heart muscle during peak exercise. Conversely, in the setting of heart disease, if a segment of the left ventricle does not receive optimal blood flow during exercise, that segment will demonstrate reduced contractions of the heart muscle relative to the rest of the heart on the exercise echocardiogram. Stress echocardiography is very useful in enhancing the interpretation and can be used to exclude the presence of heart disease.

**DOBUTAMINE STRESS ECHOCARDIOGRAPHY:** Many patients are unable to exercise maximally for stress testing due to a variety of conditions including arthritis, severe lung disease, severe cardiac disease, orthopedic conditions, and diseases of the nervous system. In such patients, pharmacological stress testing is often employed. During a physiologic stress test, certain medications are administered which stimulate the heart to mimic the physiologic effects of exercise. One of these medications is dobutamine, which is similar to adrenaline. Dobutamine is carefully administered to gradually increase the heart rate and strength of the contractions of the heart muscle. Pharmacological stress testing is commonly performed in patients who are thought to be at high risk for significant heart disease and who are scheduled for major non-cardiac surgical procedures. These patients are often unable to perform exercise stress testing due to the underlying condition for which they require surgery. In this setting, pharmacological stress testing is invaluable in assessing the cardiac risk of patients prior to surgery.

### **INSTRUCTIONS:**

No caffeine or alcohol 24 hours prior to the appointment time.

Nothing to eat or drink 2 hours prior to the appointment time.

Do not take any Beta Blockers – high blood pressure medication in the morning. Patient is to bring medications with him/her. All other medications are okay to take.

Patients with asthma or wheezing – please bring breathing medications / inhaler to the office and alert the technician (only for nuclear testing patients).

Wear comfortable clothes (loose clothing with a front opening) and shoes.

No creams, lotions or powder on the chest.

Stress test will take about an hour; nuclear test will take approximately 3 hours.

The exam may include an ultrasound of your heart and a continuous electrocardiogram. The exam will take from 45 minutes to 1 ½ hours to complete.

If you have any problems or concerns, please contact our office to speak with a nurse or doctor.