

Stress Testing for Heart Disease and Optimal Health

The cardiovascular system plays a dominant role in the health of any individual. As heart disease has remained the number one killer in the United States for the last 80 years, it is imperative to be well educated on those factors that influence the health of this system.

Many factors have been shown to be associated with adverse cardio-vascular events. These include: high total serum cholesterol, high serum LDLs, high serum Triglycerides, high serum Homocysteine, high serum Fibrinogen. In addition to these serum markers, other tests have been used to manage cardiovascular risk. They include, Blood Pressure, Heart Rate, Blood Oxygen and Electrocardiography.

The advancement of **Photo Plethysmography (PPT)** due to technological innovation has made it a sensible and effective measure by which to monitor cardiovascular health. In addition to measuring the volume of blood in a vessel, PPT can obtain a great deal of information about your overall health. Information collected from PPT includes: Heart Rate, Heart Rate Variability, Blood Volume, Pulse Pressure Wave, Accelerated Pulse Pressure Wave, Autonomic Balance (ability to cope with stress), Blood Vessel Tension (the stiffness of the vessel) just to name a few.

This information can be analyzed by the system's onboard computer. Unlike many standardized parts of medical practice that require a near diseased state to produce a positive result, PPT very effectively shows each patient where their health lies, and what must be done to maintain and improve wellness.

The foundational principles that are used to make the assessment are **Heart Rate Variability** and **Pulse Pressure Waves**.

Your heart needs to respond to a changing environment. In the presence of stress, the heart must increase its rate to provide a greater volume of blood to all the parts of the body, especially the skeletal muscles, heart and lungs. This is the 'fight or flight' (sympathetic) response. Failing to increase in response to a stress represents the first sign of disease. Conversely, when stress disappears, the body should be able to relax and focus on maintaining and repairing the body (parasympathetic). If the body is unable to down-regulate itself back to a resting state, this also represents a diseased state. Measuring **Heart Rate Variability** is the most effective way to assess how well a patient responds to stress. Fatigue and stress resistance can also be measured by this test.

The **Pulse Pressure Wave** is a combination of two actions. When your heart beats, blood is pumped into the body. This generates the pulse that you feel on a wrist or neck. In response to this pressure, the blood vessels contract, generating a second pulse. The relationship of these two waves can generate a great deal of information about the health of the circulatory system. Stiffness of the vessels, poor stroke volume in the heart, a poor response for the circulatory system to the pulse being generated are all factors that can predict the onset of cardiovascular problems.

If you or a loved one are concerned about the health of your cardiovascular system this procedure is a must. If you are interested in assessing your wellness or want to find out just what areas of your health need improvement, make the time to try this technology. Appointments last between 20 and 30 minutes. The cost of the procedure is \$90. As an introduction to the community I will be charging \$50 for existing patients and their loved ones. This will last until Thanksgiving.

Call Colleen, MWF 7 –1, to set-up an appointment at 508 420 0495.

Please be sure to specify that you are taking advantage of the existing patient pricing.