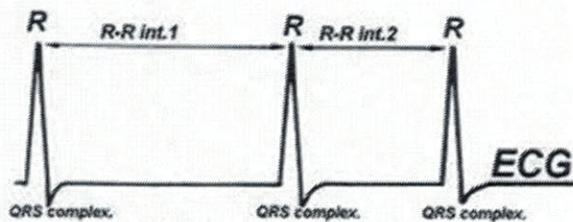


## The Heart as A Stress Meter!

Typically we think of the heart as the pump of our circulatory system. The function of the heart is indirectly measured by:

1. Pulse rate- the number of heart beats in a minute
2. Blood pressure- a measure of the force of contraction (systolic the larger number) and the blood vessel resistance(diastolic the smaller number)
3. ECG- the electrocardiogram measures the electrical activity that creates the timing of the contraction of the different portions of the heart

The ECG tracings can be measured to determine the variability of the length of time between one heart beat and the next. The amount of variation depends on which portion of our autonomic nervous system is most in control. With more variability or randomness we are more under the influence of our parasympathetic nervous system and with less variability and less randomness we are under more sympathetic nervous system influence. Contrary to what most people think a regular consistent heart beat is not always in the best interest of your heart health!



The sympathetic state prepares our body's to perform demanding physical or mental tasks however it is also brought on with emotional duress. The parasympathetic dominant state is important for physical and emotional recovery and resilience. It is normal as you perform the physical and mental tasks of your day to have increased sympathetic tone. Where problems occur is when we don't have adequate time for recovery. Studies have shown we need at least 25% of our day in a recovery or a parasympathetic dominate state.

In fact diminished heart rate variability is a serious risk to our health. Studies have found a correlation to low heart rate variability and heart disease, cancer and early death from all causes.

Dr. Davidson has been helping patients to determine their level of recovery during a day using technology that tracks the beat to beat heart rhythm and calculates Heart rate variability (HRV). The patient wears a monitoring device for three days to gather the

data. This information is then put through the software algorithms and a report is created that outlines your current state of heart rate variability.

Recommendations for lifestyle change to improve your resilience can then be made.

Short term increases in heart rate variability can be made by slow deep breathing known as diaphragmatic breathing. However more sustained change is accomplished with lifestyle changes such as regular cardiovascular training, improved sleep habits, limiting alcohol and meditation.

Are you recovering from the stresses of your lifestyle? How resilient are you?