Clover Medical Solutions

What Makes the Intellewave Different from other ANS Testing Devices?

Patented Spectral Analysis

Intellewave developed a proprietary algorithm based on artificial intelligence methods.

This device can automatically detect ectopic beats & artifacts to provide high quality HRV analysis.

Why is this important? Because spectral analysis of R-R intervals is sensitive to any artifact or ectopic beat *(i.e. one artifact in the center of the selected data segment dramatically increases the power of high frequency spectral function of R-R intervals variability making PSNS assessment completely wrong)*

Proprietary Sophisticated Algorithm Based on Artificial Intelligence

This proprietary algorithm allows Physicians to recognize up to 81 different variations in the relationship between sympathetic & parasympathetic activities.

Method of Data Selection

Intellewave uses the "definite number of R-R Intervals" selection method. Other companies use the "5 minutes approach". However the "Theory of Random Processes" states that to make a statistical analysis of any random process we must take the same number of random events. Therefore a time based approach cannot get consistency & reproducibility for any HRV statistical analysis.

WHY ANS MONITORING?

Syncope

Peak Sympathetic response to postural change approximately the same or higher than peak response to valsalva is associated with syncope in young people. Too much Parasympathetic response throughout the test is associated with Syncope in older people.

Sleep Apnea

With Sleep Apnea the Sympathetics are exceedingly high & the Parasympathetics are low normal to low.

Diabetes

With Diabetics the Parasympathetic & Sympathetic systems are both out of balance. The more out of balance these 2 branches of the ANS system are, the faster the disease will progress & the less effective their medications.

Hypertension

Parasympathetic tone is low & Sympathetic tone is high. Another situation that arises is Autonomic Hypertension. In this case, Parasympathetic tone is high & the Sympathetic tone is abnormally high.

Orthostatic Hypotension

During the postural change the Parasympathetic tone abnormally increases and/or the sympathetic tone abnormallydecreases in patients with Orthostatic Hypotension.

Cardiac Autonomic Neuropathy

Both the Parasympathetic & Sympathetic tones are low in patients with Cardiovascular Autonomic Neuropathy. If the relative Sympathetic tone is low but still much higher than Parasympathetic tone, the patient is at risk for **SUDDEN CARDIAC DEATH.**