

## Comprehensive Non-Invasive System Includes:

- Autonomic Balance Analysis
- Cardiovascular Pulse Wave Velocity Analysis
- ECG Analysis
- Cardiovascular Fitness Analysis
- Metabolic Report
- Arterial Vascular Assessment
- Peripheral Arterial Tone

## QANS Assessment System include

- QANS-QHRV Device
- Laptop
- Proprietary Software
- 3 Lead ECG
- Dual Plethysmography
- Printer

Testing of Arterial Circulation and the Autonomic Nervous System accepted by most private and public insurance.

# QANS ASSESSMENT SYSTEM

## A CLINICAL POWERFUL, EASY TO USE, NON-INVASIVE SYSTEM

**In 15 Minutes Identify Patients At Risk** for Sudden Death, Silent Heart Attack, Hypertension Cardiac Autonomic Neuropathy, Diabetic Autonomic Neuropathy, Vascular Abnormalities, Orthostatic Hypotension, Syncope and other Hidden Diseases.

Testing of the Autonomic Nervous System is a Recommended Standard of Care by the American Diabetes Association for patients with Type 1 and Type 2 diabetes



For more information, call:

855-565-2500

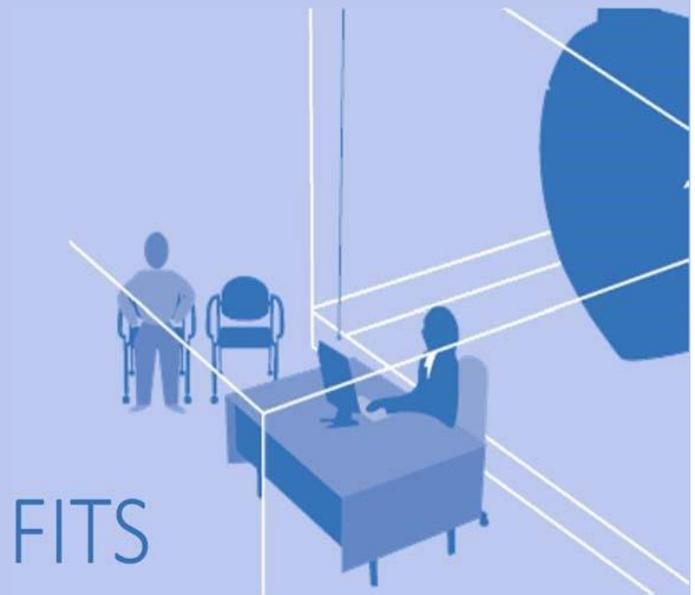
[www.advancedclinicalproducts.com](http://www.advancedclinicalproducts.com)

# THE FUTURE OF HEALTH CARE: AUTONOMIC NERVOUS SYSTEM TESTING

QANS Assessment® provides comprehensive, fully automated autonomic testing equipment that is useful for physicians to gauge their patient's health and uncover hidden disease.

Testing the autonomic nervous system can identify clinical autonomic disorders, uncover major illness and other hidden diseases, such as:

- Sudden Death
- Silent Heart Attack
- Hypertension
- Cardiac Autonomic Neuropathy
- Vascular Abnormalities
- Orthostatic Hypotension
- Syncope



## PHYSICIAN BENEFITS

QANS Assessment® is a valuable tool in diagnosing hidden illnesses. Having the ability to quickly and easily test patients and receive immediate comprehensive interpretive reports after the test is invaluable to medical practitioners. The benefits of QANS Assessment® are numerous, including:

Testing takes only 15 minutes to run a full battery of tests including cardiovascular fitness assessment. The individual test modules take as little as 6 to 10 minutes.

Interpretive reports are generated immediately after testing. The reports are very easy to read and understand and include additional details and graph options for the physician. QANS Assessment® has 39 standardized tests. In addition, provides you with the ability to customize your own tests and create your own templates.

# HOW AN ANS TEST CAN HELP YOUR PATIENTS

Have you recently been informed by that your hospital or clinic should begin administering ANS tests? Are you aware of health care guidelines that require a care path for your patients? ANS, or Autonomic Nervous System, testing is designed to best evaluate your patient's bodily functions and plays an important role in investigating those who suffer from various diseases. There are no invasive or potentially harmful procedures involved, and often times a single exam lasts less than a half hour and can be performed by an MA. The comprehensive report is also interpreted.

The test involves four separate procedures, each of which is designed to determine a particular aspect of your patient's ANS. The four portions are:

## Resting Phase:

Heart Rate Variability combined with beat-to-beat blood pressure is measured to obtain a baseline of how the autonomic system is functioning during the resting phase.

## Heart Rate during Deep Breathing (HRDB) Test:

Heart Rate Variability combined with beat-to-beat blood pressure is measured and monitored during Deep Breathing. Additional comparisons are made to determine the changes during HRDB from the baseline.

## Valsalva Test:

Heart Rate Variability combined with beat-to-beat blood pressure is measured during Valsalva Maneuver. Additional monitoring and comparisons are obtained to determine the change from the baseline in comparison with the Valsalva maneuver.

## Standing:

Heart Rate Variability coupled with beat-to-beat blood pressure is monitored and measured during Standing, and changes are compared with the baseline.

The data obtained from the ANS test evaluates the Parasympathetic (rest and digest) and the Sympathetic (fight, flight response) system to make sure the entire ANS is in balance.

Obtaining objective data on the parasympathetic and sympathetic component of the ANS can pinpoint health risks such as sudden death, silent heart attacks, syncope, hypertension and other hidden diseases; likewise, beat-to-beat blood pressure under various conditions can be used to test adrenergic functions for conditions like orthostatic hypotension (OH). OH is widely known to be a consequence of chronic diabetes frequently found amongst the elderly population. Since many OH symptoms can be difficult to trace – impaired concentration, fatigue, etc. – ANS testing can fill this void and bring these problems to light sooner.

# WHY TEST?

“According to Published Studies “Cardiovascular autonomic neuropathy occurs in about 17% of patients with type 1 diabetes and 22% of those with type 2”

“Of patients with symptomatic autonomic dysfunction, 25% to 50% die within 1 to 5 years of diagnosis.”

“A patient’s history and physical examination are ineffective for early detection of CAN, and therefore noninvasive tests that have demonstrated efficacy are required”.

“Screening for Autonomic Neuropathy should be instituted at Diagnosis of Type 2 Diabetes and 5 years after the diagnosis of type 1 Diabetes - 2005 ADA Standard of Diabetes Care”

“Although it can cause severe cardiovascular problems and sudden death, surveys show that only 2% of people with diabetes are tested for cardiovascular autonomic neuropathy (CAN)”.

# FEATURES AND BENEFITS

Easily adaptable towards general and specific requirements of almost all medical branches.

Presents a quick and reliable supplementary assessment of basic health risk factors.

Assesses the balance between the activities of the sympathetic and parasympathetic branches of the autonomic nervous system.

Reliably discovers ventricular and supraventricular extra systoles.

Assesses accumulated physical and mental stress.

Assesses physical training needs based upon an individual's personal fitness levels.

Reveals development of possible health risks.

Provides early indications of health risks for quick detection and prevention of illness, disease, and progressive stress conditions before onset and development.

Efficiently screen mass population to detect potential risks and reserve costly, full medical checkups for only those exhibiting health threats.

# APPLICATIONS

Higher variations in the heart rate lead to greater heart rate variability which indicates good health and well-balanced autonomic function (sympathetic and parasympathetic nervous systems). In contrast, steadier heart rate leads to lower heart rate variability which indicates an imbalance in the autonomic function and implies the presence of physiological malfunction.

QANS delivers laboratory analyses to the physician's office, enabling professionals to assess patient health conveniently and reliably. Applications include:

Verifying the effectiveness of treatment and intervention

Monitoring overall patient health, Screening the general population

Identifying various health issues such as heart palpitations, pain management, sleep apnea, anxiety, stress, psychological disorders, asthma, and neurological conditions

Examining for CAN (Cardiac Autonomic Neuropathy) and DAN (Diabetes Autonomic Neuropathy)

Measuring the Sympathetic Nervous System's predominance in cases such as Metabolic Syndrome, Hypertension or Heart Failure

## HOW IT HELPS YOU:



Monitoring current health of the individual patient closely;

Verifying the efficacy of current treatment protocol and intervention;

Examining patients for CAN and DAN – Cardiac Autonomic Neuropathy and Diabetes Autonomic Neuropathy;

Measuring the Metabolic Syndrome, Hypertension, Heart Failure;

Predicting burn-out syndrome, anxiety, depression, psychological conditions;

Exploring Asthma, COPD, Palpitations, Pain management, Sleep apnea PLUS;

Optimization of treatment for each individual patient;

Immediate reports – qualitative, quantitative and graphic analysis and results of ANS balance, cardiovascular, stress, fitness and overall health assessment for comparison with patient case history and necessary procedural actions;

Efficient patient-centered multiple symptoms treatment management;

Designed for Clinicians  
by Clinicians

# CARDIOVASCULAR ASSESSMENT

Pulse Wave Velocity (PWV) analysis is based on physiological phenomenon, observable and measurable in the arterial elasticity and stiffness during blood circulation.

Standard of Care-Non Invasive-Routine Procedure for General Medicine, Family Practice, Primary Care and Internal Medicine Physicians

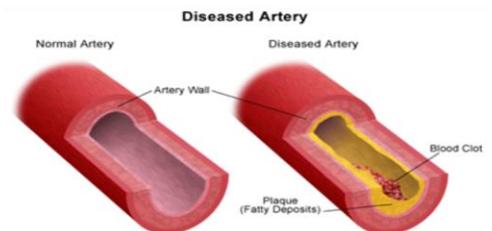
American Heart Association Scientific Position

“There is compelling evidence that the atherosclerosis (fatty deposits of plaque in artery walls) or its precursors begins in childhood and progresses slowly into adulthood. Then it often leads to coronary heart disease, the single largest cause of death in the United States”

“Diseases caused by atherosclerosis are the leading cause of illness and death in the U.S.”

The following patient populations with Atherosclerosis risk factors will benefit from CV assessment procedure along with timely treatment protocol:

- |              |                                  |
|--------------|----------------------------------|
| Stress       | Hyperlipidemia                   |
| Diabetes     | Increasing Age                   |
| Hypertension | Family History of Heart problems |
| Obesity      | Hypercholesterolemia             |
| Smoking      | Hypertriglyceridemia             |



CV assessment procedure provides vital information - (cardiac output, vessel compliance, vascular resistance and left ventricular contractility) - for timely treatment of patient populations with risk factors suggesting possible Atherosclerosis.

# AUTONOMIC BALANCE MONITORING IS RECOMMENDED AS A STANDARD OF CARE BY THE FOLLOWING PRESTIGIOUS ORGANIZATIONS



## COMPREHENSIVE NON-INVASIVE SYSTEM INCLUDES:

Comprehensive Autonomic Balance Analysis (ANS)  
Arterial Vascular Assessment Ankle-Brachial-Index (ABI)  
Cardiovascular Fitness  
Cumulative Mental and Physical Stress  
Pulse Wave Velocity  
Augmentation Index (AI)  
Reflection Index (RI)  
ECG Analysis

Stiffness Index (SI)  
Peripheral Arterial Tone Assessment (PAT)  
Endothelial Dysfunction  
SpO2  
Coronary Artery Respiratory Assessment (CRA)  
Ejection Elasticity Index (EEI)  
Dicrotic Dilation Index (DDI) Dicrotic Elasticity Index (DEI)  
Overall Health Risk Factor