

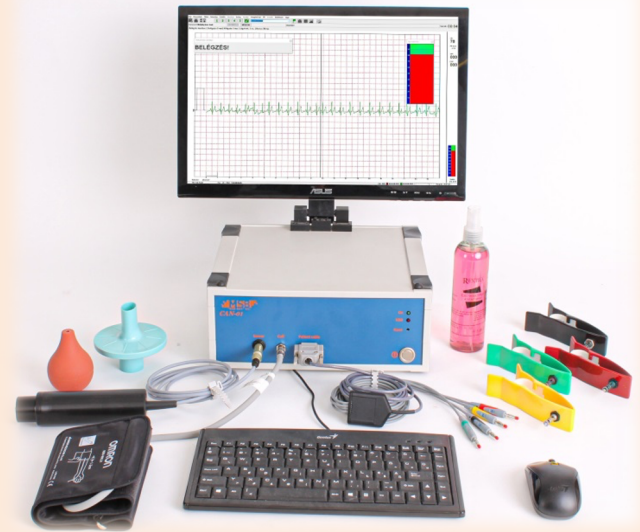
CARDIAL AUTONOMOUS NEUROPATHY SYSTEM

CAN-01

SYSTEM

CAN-01 Cardiac Autonomous Neuropathic Measurement and Evaluation System identifies age-related cardiovascular changes caused by metabolic diseases.

The system measures, evaluates, stores and prints the results of the Ewing 5 cardiovascular reflex test in medical report format which is based on an intelligent technology (in any ECG electrode layout). Tests can also be performed at the assistant level qualification.



DESCRIPTION OF REFLEX TESTS

Configuring the test, the system provides a predefined table of standard values. The steps and associated times of the table as well as the tests can be reconfigured to suit the needs of the test leader.

Investigation of parasympathetic functions

- ✓ **Deep Breath Test:** Determination of respiratory rate change. Determining the maximum and minimum instantaneous frequency difference of the shortest RR distance during inhalation and the longest RR distance during exhalation.
- ✓ **Valsalva maneuver:** Determining the quotient of the longest RR distance after exhalation and the shortest RR distance during exhalation by heart rate response to a forced blowing of 40 mmHg for 15 seconds.
- ✓ **Change in heart rate on standing up (30/15 quotient):** After 3 minutes of rest, determining the quotient of the RR distance between 30 and 15 cycles of ECG measured at the beginning of 5 seconds of standing up and 1 minute of standing.

Investigation of sympathetic functions

- ✓ **Change in blood pressure on standing up:** Blood pressure measurement after lying down for 10 minutes in lying position, then at 1, 5, and 10 minutes after standing up. A drop in systolic blood pressure of 10 mmHg or less indicates intact innervation. A drop in blood pressure between 11 and 29 mmHg is considered a limit, and a difference of blood pressure of 30 mmHg or more is considered abnormal.
- ✓ **Handgrip test:** Squeeze 30% of the maximum strength of the hand muscle for 3 minutes. Blood pressure is measured before the test as well as during the test each minute. An increase in diastolic blood pressure greater than 16 mmHg is normal, however an increase in diastolic blood pressure of 11-15 mmHg or less is abnormal.

PRIORITY AREAS OF APPLICATION AND CONDITIONS

- ❖ The system can be used effectively in the case of children, adolescents and adults. Data and primary curve cycles can be transmitted electronically linked to the patient ID, by the built-in **Database Management Software** (default).
 - ❖ Cardiology clinics, outpatient clinics.
 - ❖ Cardiac load tests.
 - ❖ Diabetology clinics, outpatient clinics.
 - ❖ Rehabilitation centers.
 - ❖ General Practitioner Community.
- ❖ **References:** Heim Pál National Paediatric Institute, University of Szeged Department of Internal Medicine, Semmelweis University Departments of Internal Medicine and Oncology, Roy Academic Directorate of Diabetes & Endocrinology University of Sheffield, Wörwag Pharma (Hungary, Romania, Baltics), Royal Prince Alfred Hospital University of Sydney.