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Subject: Autonomic Nervous System Testing

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DESCRIPTION:

The autonomic nervous system (ANS) controls physiologic processes that are not under conscious control. ANS disorders, also called dysautonomias, are heterogeneous in etiology, clinical symptoms, and severity. ANS disorders can be limited and focal, such as patients with isolated neurocardiogenic syncope or idiopathic palmar hyperhidrosis. At the other extreme, some ANS disorders can be widespread and severely disabling, such as multiple systems atrophy, which leads to widespread and severe autonomic failure.

ANS testing consists of a battery of tests that evaluate the integrity and function of the ANS. These tests are intended as adjuncts to the clinical examination in the diagnosis of ANS disorders. ANS testing is performed in a dedicated ANS testing laboratory. Testing in a dedicated laboratory should be performed under closely controlled conditions, and results should be interpreted by an individual with expertise in ANS testing. Testing using automated devices with results interpreted by computer software has not been validated and thus has the potential to lead to erroneous results.

POSITION STATEMENT:

Autonomic nervous system (ANS) testing, consisting of a battery of tests in several domains, **meets the definition of medical necessity** when **ALL** of the following criteria are met:

- a) Signs and/or symptoms* of autonomic dysfunction are present; **AND**
- b) A definitive diagnosis cannot be made from clinical examination and routine laboratory testing alone; **AND**
- c) Diagnosis of the suspected autonomic disorder will lead to a change in management or will eliminate the need for further testing.

Note: Although there is not a standard battery of tests that are part of ANS testing, a full battery of testing generally consists of individual tests in three categories: 1. Cardiovagal function (heart rate [HR] variability, HR response to deep breathing and Valsalva maneuver); 2. Vasomotor adrenergic function (blood pressure [BP] response to standing, Valsalva maneuver, and hand grip, tilt table testing); 3. Sudomotor function (Quantitative Sudomotor Axon Reflex Test (QSART), Thermoregulatory Sweat Test (TST), silastic sweat imprint, sympathetic skin response, electrochemical sweat conductance). At least one test in each category is usually performed. More than one test from a category will often be included in a battery of tests, but the incremental value of using multiple tests in a category is not known.

*(Symptoms of autonomic disorders can be varied, based on the etiology and location of dysfunction. Cardiovascular manifestations are often prominent. Involvement of the cardiovascular system causes abnormalities in heart rate control and vascular dynamics. Orthostatic hypotension and other manifestations of BP lability can occur, causing weakness, dizziness, and syncope. Resting tachycardia and an inability to appropriately increase heart rate in response to exertion leads to exercise intolerance.)

Autonomic nervous system testing is considered **experimental or investigational** in all other situations when criteria are not met, including but not limited to the evaluation of the following conditions:

- chronic fatigue syndrome
- fibromyalgia
- anxiety and other psychological disorders
- sleep apnea
- allergic conditions
- hypertension
- screening of asymptomatic individuals
- monitoring progression of disease or response to treatment.

The evidence is insufficient to determine the effects of the technology on health outcomes.

The following tests are generally considered to have uncertain value in ANS testing and are considered **experimental or investigational** when used in ANS testing:

- Pupillography
- Pupil edge light cycle
- Gastric emptying tests
- Cold pressor test
- Quantitative direct and indirect testing of sudomotor function (QDIRT) test
- Plasma catecholamine levels
- Skin vasomotor testing
- The ANSAR[®] test.

The evidence is insufficient to determine the effects of the technology on health outcomes.

Autonomic nervous system testing using portable automated devices is considered **experimental or investigational** for all indications. These devices have not been validated and have a greater potential to lead to erroneous results.

BILLING/CODING INFORMATION:

CPT Coding:

95921	Testing of autonomic nervous system function; cardiovagal innervation (parasympathetic function), including 2 or more of the following: heart rate response to deep breathing with recorded R-R interval, Valsalva ratio, and 30:15 ratio
95922	Testing of autonomic nervous system function; vasomotor adrenergic innervation (sympathetic adrenergic function), including beat-to-beat blood pressure and R-R interval changes during Valsalva maneuver and at least 5 minutes of passive tilt
95923	Testing of autonomic nervous system function; sudomotor, including 1 or more of the following: quantitative sudomotor axon reflex test (QSART), silastic sweat imprint, thermoregulatory sweat test, and changes in sympathetic skin potential
95924	Testing of autonomic nervous system function; combined parasympathetic and sympathetic adrenergic function testing with at least 5 minutes of passive tilt
95943	Simultaneous, independent, quantitative measures of both parasympathetic function and sympathetic function, based on time-frequency analysis of heart rate variability concurrent with time-frequency analysis of continuous respiratory activity, with mean heart rate and blood pressure measures, during rest, paced (deep) breathing, Valsalva maneuvers, and head-up postural change (Investigational)
0341T	Quantitative pupillometry with interpretation and report, unilateral or bilateral (Investigational)

REIMBURSEMENT INFORMATION:

Refer to section entitled [POSITION STATEMENT](#).

PROGRAM EXCEPTIONS:

Federal Employee Program (FEP): Follow FEP guidelines.

State Account Organization (SAO): Follow SAO guidelines.

Medicare Advantage products: The following Local Coverage Determination (LCD) was reviewed on the last guideline review date: Autonomic Function Tests (L33609) located at fcso.com.

DEFINITIONS:

No guideline specific definitions apply.

RELATED GUIDELINES:

[Nerve Conduction Studies; F-Wave Studies; H- Reflex Studies, 01-95805-02](#)

[Evoked Potentials, Intraoperative Neurophysiologic Testing, and Quantitative Electroencephalography \(QEEG\), 01-95805-13](#)

Quantitative Sensory Testing, 01-95805-18

OTHER:

None applicable.

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COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy & Coverage Committee on 07/25/19.

GUIDELINE UPDATE INFORMATION:

03/15/15	New Medical Coverage Guideline; formatting changes.
03/15/16	Annual review; program exception and references updated.
08/15/17	Annual review; position statements maintained and references updated; formatting changes.
08/15/18	Annual review; position maintained; description section and references updated.
08/15/19	Annual review; position statements maintained and references updated.