

## Autonomic Testing

Policy Number: PG0349  
Last Review: 09/01/2024

HMO AND PPO  
ELITE (MEDICARE ADVANTAGE)  
MARKETPLACE

### GUIDELINES:

- This policy does not certify benefits or authorization of benefits, which is designated by each individual policyholder terms, conditions, exclusions, and limitations contract. It does not constitute a contract or guarantee regarding coverage or reimbursement/payment. Self-Insured group specific policy will supersede this general policy when group supplementary plan document or individual plan decision directs otherwise.
- Paramount applies coding edits to all medical claims through coding logic software to evaluate the accuracy and adherence to accepted national standards.
- This medical policy is solely for guiding medical necessity and explaining correct procedure reporting used to assist in making coverage decisions and administering benefits.

### SCOPE:

☒ Professional  
☐ Facility

### DESCRIPTION:

The autonomic nervous system (ANS) regulates physiologic processes, such as blood pressure, heart rate, body temperature, digestion, metabolism, fluid and electrolyte balance, sweating, urination, defecation, sexual response, and other processes. Regulation occurs without conscious control, i.e., autonomously. The ANS has two major divisions: the sympathetic and parasympathetic systems. ANS testing measures alterations in the R-R interval of the electrocardiogram (ECG) in response to parasympathetic and sympathetic system stimulation. The aim of such testing is to correlate signs and symptoms of possible autonomic dysfunction with objective measurement in a way that is clinically useful. Many organs are controlled primarily by either the sympathetic or parasympathetic system, although they may receive input from both; occasionally, functions are reciprocal (e.g., sympathetic input increases heart rate; parasympathetic decreases it).

Disorders of the ANS can affect any system of the body; they can originate in the peripheral or central nervous system and may be primary or secondary to other disorders. Symptoms suggesting autonomic dysfunction include orthostatic hypotension, heat intolerance, nausea, constipation, urinary retention, or incontinence, nocturia, impotence, and dry mucous membranes. If a patient has symptoms suggesting autonomic dysfunction, cardiovagal, adrenergic, and sudomotor tests are usually done to help determine severity and distribution of the dysfunction.

ANS Tests may include the following:

1. Cardiovagal innervation - Cardiovagal innervation tests quantitatively measure cardiac vagal innervation (parasympathetic function) and provide information about autonomic nervous system function. These tests largely measure heart rate response and heart rate changes associated with standardized maneuvers (e.g., deep breathing, Valsalva maneuver).
2. Vasomotor adrenergic innervation - Vasomotor adrenergic innervation tests evaluate cardiac and circulatory adrenergic innervation. Tests include beat-to-beat blood pressure and respiratory rate interval response to Valsalva maneuver or sustained hand grip, and cardiovascular response to tilt-up or active standing.
3. Sudomotor - Sudomotor function tests measure pain nerve fiber integrity using the following tests:
  - Quantitative sudomotor axon reflex test (QSART) involves stimulation of sweat gland nerve fibers by iontophoresis of acetylcholine. Sweat response measurements by a sudometer provide information about the integrity of distal postganglionic sympathetic nerve fibers.

- Silastic sweat imprint test is similar to the QSART, but it records sweat droplet imprints on silastic material.
- Thermoregulatory sweat test (TST) evaluates sympathetic skin nerve innervation. The skin is dusted with an indicator powder that changes color in response to sweat production as a result of raising temperature in a heat cabinet.
- Sympathetic peripheral autonomic skin (or surface) potentials (PASPs) are evoked by electrical stimulation of the skin followed by recording electrical potentials over the palm and soles of the feet.

**POLICY:**

**Paramount Commercial Insurance Plans and Elite (Medicare Advantage) Plans**

- **Autonomic testing (95921, 95922, 95923, 95924) does not require prior authorization for all product lines when the coverage criterion is met.**

**COVERAGE CRITERIA:**

**Paramount Commercial Insurance Plans and Elite (Medicare Advantage) Plans**

Autonomic function testing is covered as reasonable and necessary when used as a diagnostic tool to evaluate symptoms indicative of vasomotor instability and the ANS testing is directed at establishing a more accurate or definitive diagnosis or contributing to clinically useful and relevant medical decision making for at least one of the following indications:

1. To diagnose the presence of autonomic neuropathy in a patient with signs or symptoms suggesting a progressive autonomic neuropathy.
2. To evaluate the severity and distribution of a diagnosed progressive autonomic neuropathy.
3. To differentiate the diagnosis between certain complicated variants of syncope from other causes of loss of consciousness.
4. To evaluate inadequate response to beta blockade in vasodepressor syncope.
5. To evaluate distressing symptoms in a patient with a clinical picture suspicious for distal small fiber neuropathy in order to diagnose the condition.
6. To differentiate the cause of postural tachycardia syndrome.
7. To evaluate change in type, distribution, or severity of autonomic deficits in patients with autonomic failure.
8. To evaluate the response to treatment in patients with autonomic failure who demonstrate a change in clinical exam.
9. To diagnose axonal neuropathy or suspected autonomic neuropathy in the symptomatic patient.
10. To evaluate and treat patients with recurrent unexplained syncope or demonstrate autonomic failure, after more common causes have been excluded by other standard testing.

Autonomic function testing is considered medically necessary for use as a diagnostic tool for any of the following conditions/disorders:

1. Amyloid neuropathy
2. Diabetic autonomic neuropathy
3. Disorders of the autonomic nervous system
4. Distal small fiber neuropathy
5. Idiopathic neuropathy
6. Long-COVID syndrome with suspected autonomic disorder
7. Multiple system atrophy
8. Postural tachycardia syndrome
9. Pure autonomic failure
10. Recurrent, unexplained syncope
11. Reflex sympathetic dystrophy or causalgia (sympathetically maintained pain)
12. Sjogren's syndrome
13. Suspected axonal neuropathy
14. Syncope and collapse

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

1. Chronic fatigue syndrome
2. Myalgic encephalomyelitis
3. Fibromyalgia
4. Raynaud phenomenon
5. Anxiety and other psychologic disorders
6. Sleep apnea
7. Allergic conditions
8. Hypertension
9. Screening of asymptomatic individuals
10. Monitoring progression of disease or response to treatment
11. Predicting foot ulcers
12. Traumatic brain injury
13. Traumatic brachial plexus injury

The following indications for autonomic function testing are considered not medically reasonable and necessary and are non-covered:

1. Screening patients without signs or symptoms of autonomic dysfunction, including patients with diabetes, hepatic or renal disease.
2. Testing for the sole purpose of monitoring disease intensity or treatment efficacy in diabetes, hepatic or renal disease.
3. Testing results that are not used in clinical decision-making or patient management.
4. Testing performed by physicians who do not have evidence of training, and expertise to perform and interpret these tests. Physicians must have knowledge, training, and expertise to perform and interpret these tests, and to assess and train personnel collaborating with them. This training and expertise must have been acquired within the framework of an accredited residency and/or fellowship program or must reflect extensive continued medical education activities. If these skills have been acquired by way of continued medical education, the courses must be comprehensive, offered, sponsored or endorsed by an academic [institution] in the United States and/or by the applicable specialty/subspecialty society in the United States, and designated by the American Medical Association (AMA) as category I credit or the American Osteopathic Association (AOA).
5. Testing with ANSAR ANX 3.0 or a similar machine is considered investigational for screening and will be non-covered.
6. Autonomic testing using automated devices, in which software automatically generates an interpretation (e.g., ANSAR, Medea QANS/QHRV System), in the evaluation of gastroesophageal reflux disease, hypertension, irritable bowel syndrome, paradoxical parasympathetic syndrome, and all other indications because its clinical value has not been established.
7. Sympathetic skin response testing for any indications because it has a relatively low sensitivity and uncertain specificity. Sympathetic peripheral autonomic skin (or surface) potentials has not demonstrated equivalence or superiority to currently accepted standard means of diagnostic techniques. The peer-reviewed medical literature does not support its effectiveness.
8. The use of quantitative direct and indirect reflex testing (QDIRT) of sudomotor function because its clinical value has not been established.
9. Quantitative pilomotor axon reflex test (QPART) for evaluating pilomotor function because its clinical value has not been established.
10. Measurement of cardiac baroreflex sensitivity for assessing autonomic nervous system dysfunction after stroke, cognitive function because its clinical value for this indication has not been established.
11. Ambulatory autonomic nervous system monitors (e.g., BioHarness) because their clinical value has not been established.

General professional standards with FDA clearance apply for all equipment used in ANS testing.

Autonomic nervous system should be performed in a dedicated autonomic nervous system testing laboratory.

Testing in a dedicated laboratory should be performed under closely controlled conditions, and interpretation of the results should be performed by an individual with expertise in autonomic nervous system testing. Testing using automated devices with interpretation of the results performed by computer software has not been validated and thus has the potential to lead to erroneous results.

Diagnostic testing may be allowed once to confirm or exclude specific autonomic disease. For patients with diagnosed autonomic disorders, repeat testing is governed by a change in clinical status or response to a therapeutic intervention. If a repeat test is needed, it is not expected to exceed once per year.

#### **CODING/BILLING INFORMATION:**

**The appearance of a code in this section does not necessarily indicate coverage. Codes that are covered may have selection criteria that must be met. Payment for supplies may be included in payment for other services rendered.**

<b>CPT CODES</b>	
<b>95921</b>	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
<b>95922</b>	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
<b>95923</b>	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
<b>95924</b>	Testing of autonomic nervous system function; combined parasympathetic and sympathetic adrenergic function testing with at least 5 minutes of passive tilt

#### **REVISION HISTORY EXPLANATION: ORIGINAL EFFECTIVE DATE: 09/17/2015**

<b>Date</b>	<b>Explanation &amp; Changes</b>
<b>09/17/15</b>	<ul style="list-style-type: none"> <li>Policy created to reflect most current clinical evidence per TAWG</li> </ul>
<b>10/28/16</b>	<ul style="list-style-type: none"> <li>Procedure 95943 will no longer require a prior authorization for Advantage. Policy created to reflect most current clinical evidence per TAWG</li> </ul>
<b>12/21/2020</b>	<ul style="list-style-type: none"> <li>Medical policy placed on the new Paramount Medical Policy Format</li> </ul>
<b>03/02/2022</b>	<ul style="list-style-type: none"> <li>Removed coverage related to code 95943, deleted 1/1/2022. (If a physician finds that this non-standardized component information of autonomic function testing is useful in a patient assessment and clinical decision making given certain patient risks/signs/symptoms, this would be included in the physician's basic evaluation and management service and not separately covered.)</li> <li>Policy updated to reflect most current clinical evidence</li> </ul>
<b>02/23/2023</b>	<ul style="list-style-type: none"> <li>Medical Policy updated to reflect Medicaid coverage to Anthem as of 02/01/2023</li> </ul>
<b>03/08/2024</b>	<ul style="list-style-type: none"> <li>Medical policy placed on the new Paramount Medical Policy Format</li> </ul>
<b>09/01/2024</b>	<ul style="list-style-type: none"> <li>Medical Policy reviewed and updated to reflect the most current clinical evidence.</li> </ul>

**Paramount reserves the right to review and revise our policies periodically when necessary. When there is an update, we will publish the most current policy to**

<https://www.paramounthealthcare.com/providers/medical-policies/policy-library>

#### **REFERENCES/RESOURCES**

Centers for Medicare and Medicaid Services, CMS Manual System and other CMS publications and services <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals> <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Internet-Only-Manuals-IOMs>

American Medical Association, *Current Procedural Terminology (CPT®)* and associated publications and services <https://www.ama-assn.org/amaone/cpt-current-procedural-terminology>

Centers for Medicare and Medicaid Services, Healthcare Common Procedure Coding System, HCPCS Release and Code Sets <https://www.cms.gov/Medicare/Coding/HCPCSReleaseCodeSets/HCPCS-Quarterly-Update>

U.S. Preventive Services Task Force, <https://www.uspreventiveservicestaskforce.org/uspstf/>  
Industry Standard Review

Hayes, Inc., <https://www.hayesinc.com/>

Industry Standard Review