

Gait Analysis and Surface Electromyography, Medical 345

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Effective Date 1/1/2026

Next Review Date 9/2026

Coverage Policy Medical 345

Version 3

Member-specific benefits take precedence over medical policy and benefits may vary across plans. Refer to the individual's benefit plan for details.*

Description & Definitions:

Surface electromyography (SEMG) is a non-invasive, computer-based procedure, most commonly used in an office setting to assess muscle function by recording muscle activity from above the muscle on the skin surface. Can be combined with camera and computer system used to quantify and graphically display human movement patterns for adults and children.

Criteria:

Computerized gait analysis and SEMG is considered medically necessary when **ALL of the following** criteria are met:

- **1 or more of the following** diagnoses is present:
 - A child or adolescent has a diagnosis of cerebral palsy.
 - Spina Bifida Meningomyelocele.
 - Traumatic brain injury.
 - Incomplete quadriplegia.
 - Spastic hemiplegia.
 - Spastic diplegia.
- The use of computerized gait analysis is being used for the evaluation of musculoskeletal gait function to assess and aid in planning for orthopedic surgery or interventional neurology (e.g., nerve blocks to reduce spasticity orthotic application) in ambulatory members with certain gait dysfunctions associated with the following conditions.

Computerized Gait analysis and SEMG for any other indication are considered experimental, investigational, or unproven.

Document History:

Revised Dates:

- September 2025: Implementation date of January 1, 2026. No changes to criteria. Updated to new format only.

Reviewed Dates:

- 2024: September – no changes references updated
- 2023: September

Origination Date: September 2023

Coding:

Medically necessary with criteria:

| Coding | Description |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 96000 | Comprehensive computer-based motion analysis by video-taping and 3D kinematics; |
| 96001 | Comprehensive computer-based motion analysis by video-taping and 3D kinematics; with dynamic plantar pressure measurements during walking |
| 96002 | Dynamic surface electromyography, during walking or other functional activities, 1-12 muscles |
| 96003 | Dynamic fine wire electromyography, during walking or other functional activities, 1 muscle |
| 96004 | Review and interpretation by physician or other qualified health care professional of comprehensive computer-based motion analysis, dynamic plantar pressure measurements, dynamic surface electromyography during walking or other functional activities, and dynamic fine wire electromyography, with written report |

Considered Not Medically Necessary:

| Coding | Description |
|--------|-------------|
| | None |

The preceding codes are included above for informational purposes only and may not be all inclusive. Additionally, inclusion or exclusion of a treatment, procedure, or device-code(s) does not constitute or imply member coverage or provider reimbursement.

Policy Approach and Special Notes: *

- Coverage:
 - See the appropriate benefit document for specific coverage determination. Individual specific benefits take precedence over medical policy.
- Application to products:
 - Policy is applicable to Sentara Health Plan Medicare products.
- Authorization requirements:
 - Pre-certification by the Plan is required.
- Special Notes:
 - This medical policy expresses Sentara Health Plan's determination of medically necessity of services, and they are based upon a review of currently available clinical information. Medical policies are not a substitute for clinical judgment or for any prior authorization requirements of the health plan. These policies are not an explanation of benefits.
 - Medical policies can be highly technical and complex and are provided here for informational purposes. These medical policies are intended for use by health care professionals. The medical policies do not constitute medical advice or medical care. Treating health care professionals are solely responsible for diagnosis, treatment and medical advice. Sentara Health Plan members should discuss the information in the medical policies with their treating health care professionals. Medical technology is constantly evolving and these medical policies are subject to change without notice, although Sentara Health Plan will notify providers as required in advance of changes that could have a negative impact on benefits.

References:

Specialty Association Guidelines; Government Regulations; Winifred S. Hayes, Inc; UpToDate; Literature Review; Specialty Advisors; National Coverage Determination (NCD); Local Coverage Determination (LCD).

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(2025). Retrieved Aug 05, 2025, from Virginia Department of Medical Assistance Services: <https://vamedicaid.dmas.virginia.gov/manuals/provider-manuals-library#gsc.tab=0&gsc.q=gait%20analysis&gsc.sort=21>

21 CFR Part 882 Subpart B. (2025). Retrieved Aug 06, 2025, from Code of Federal Regulations: <https://www.ecfr.gov/current/title-21/part-882/subpart-B>

Recommendations of the GAMMA association for the standardization of clinical movement analysis laboratories.

(2025, Mar). Retrieved Aug 05, 2025, from World Health Organization: <https://www.sciencedirect.com/science/article/pii/S096663622400688X>

Simons, S. (2023, Oct 31). Clinical assessment of walking and running gait. Retrieved Aug 05, 2025, from UpToDate: https://www.uptodate.com/contents/clinical-assessment-of-walking-and-running-gait?search=gait%20analysis&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1#H920144012

Keywords:

Gait Analysis, Surface electromyography, motion analysis, 3D kinematics, walking video, computerized gait