Sentara® Health Plans

Commercial

Neuromuscular Electrical Stimulator, DME 17

Table of Content

Effective Date	06/2002
Next Review Date	09/2025
Coverage Policy	DME 17
Version	10

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

If adjunct as a part of PT evaluation, or when not directly done as a part of PT, pre-certification by the Plan is required.

Limitation: The Plan will rent for a 3-month trial, then convert to purchase if the therapy is effective.

Purpose:

This policy addresses Neuromuscular Electrical Stimulator.

Description & Definitions:

Neuromuscular electrical stimulation (NMES) is a device that sends electrical through electrodes placed on the skin, to aid in muscles contraction.

NMES is used to treat disuse atrophy due to a condition such as limb casting or hip replacement surgery, where the nerve supply to the muscle is intact. The NMES device includes a portable stimulator with electrodes that are placed on the skin over targeted muscle or muscle group.

The current passes through the electrodes into the body, and the motor nerves are stimulated, causing a muscle contraction. The intensity and frequency of stimulation can vary based on the level of muscular function and response to treatment. NMES targets the muscle itself, specifically through the motor nerves. This allows the NMES machine to create a muscle contraction to recruit more muscle fibers when training, warming up or recovering. The use of NMES for the treatment of disuse atrophy is considered effective therapy when the cause of the muscle disuse is not permanent and there is no nervous system involvement.

The type of NMES that is used to enhance the ability to walk is commonly referred to as functional electrical stimulation (FES). These devices are surface units that use electrical impulses to activate paralyzed or weak muscles in precise sequence. FES has been used in the setting of spinal cord injury (SCI), foot drop, and cerebral palsy. There is inconclusive evidence to support the superiority of FES over ankle-foot orthosis for the treatment of foot drop.

Criteria:

Electrical stimulation, functional and neuromuscular devices are considered medically necessary for **1 or more** of the following:

- For **disuse atrophy** in an individual with intact nerve supply to the muscle (including the brain, spinal cord, and peripheral nerves) with **1 or more** of the following:
  - Previous casting or splinting of a limb when unable to participate in physical therapy.
  - Contractures due to scarring of soft tissue (e.g. burn scarring).

    - Hip replacement prior to initiation of physical therapy.
    - Major knee surgery (e.g., total knee replacement) when there is failure to respond to physical therapy.
- For spinal cord injury where restoration of walking is the goal, and the individual has the **ALL** of following characteristics:
    - Intact lower motor units (L1 and below) (both muscle and peripheral nerve).
    - Muscle and joint stability for weight bearing at upper and lower extremities that can demonstrate balance and control to maintain an upright support posture independently.
    - Brisk muscle contraction to NMES and sensory perception of electrical stimulation sufficient for muscle contraction.
    - High motivation, commitment and cognitive ability to use such devices for walking.
    - Ability to transfer independently and independent standing tolerance for at least 3 minutes.
    - Hand and finger function to manipulate controls.
    - At least 6-month post recovery spinal cord injury and restorative surgery.
    - No evidence of hip and knee degenerative disease and no history of long bone fracture secondary to osteoporosis.
    - Willingness to use the device long-term.
- Hemiplegia or hemiparesis with foot drop after chronic stroke, as indicated by **ALL** of the following:
    - Ankle range of motion within limits required for normal gait
    - Cognitively able to understand and comply with rehabilitation protocol
    - Stroke onset greater than 3 months prior
- Peripheral Neuromuscular Stimulator is considered medically necessary for **ALL** of the following:
    - Chronic intractable pain, lasting at least 6 months
    - Individual has failed conservative, braces, local injections, TENS, psychological therapy, attempts to cure the underlying condition causing the pain for at least six months
    - Individual does not have contraindications to the procedure including but not limited to local infections, surgical/medical/psychological conditions that can adversely impact the procedure
    - Individual does not have any substance abuse issues
    - Individual has been educated and psychologically prepared following discussion of risks and benefits by the treating physician
    - Individual had undergone a successful stimulation trial with greater than or equal to 50% reduction in pain intensity before implantation
    - Device is FDA approved
    - Patient has undergone careful screening, evaluation, and diagnosis by multidisciplinary team prior to implantation, including psychological as well as physical evaluation.

Neuromuscular stimulator devices are is considered **not medically necessary** for any use other than those indicated in clinical criteria, to include but not limited to:

- Autonomic dysreflexia
- Bell's palsy
- Cardiac conditioning
- Cerebral palsy
- Chronic Obstructive Pulmonary Disease
- Congestive Heart Failure
- Dysphagia as a result of physiological dysfunction
- Erectile dysfunction
- General muscle strengthening in healthy individuals.
- High-voltage galvanic stimulator (HVG)
- Improving ambulatory function and muscle strength for progressive diseases (e.g., cancer, chronic heart failure, chronic obstructive pulmonary disease, multiple sclerosis) in persons without spinal cord injury
- Individuals with cardiac pacemakers
- InterX 1000 neurostimulator
- Irreversible contracture
- Masseter muscle oral dysfunction after stroke
- Muscle atrophy after stroke

- Pain caused by necrosis of the femoral head.
- Nexwave by Zynex
- Percutaneous Implantation of a neurostimulator electrode array
- Persons with cardiac pacemakers
- Severe scoliosis or severe osteoporosis (for spinal cord injury)
- Skin disease or cancer at area of stimulation
- Threshold/Therapeutic Electrical stimulation (TES)
- Treatment of denervated muscles
- Treatment of knee osteoarthritis
- Upper extremity hemiplegia

Coding:

Medically necessary with criteria:

Coding	Description
64555	Percutaneous implantation of neurostimulator electrode array; peripheral nerve (excludes sacral nerve)
64580	Open implantation of neurostimulator electrode array; neuromuscular A4556 Electrodes (e.g., apnea monitor), per pair A4557 Lead wires (e.g., apnea monitor), per pair
64596	Insertion or replacement of percutaneous electrode array, peripheral nerve, with integrated neurostimulator, including imaging guidance, when performed; initial electrode array
64597	Insertion or replacement of percutaneous electrode array, peripheral nerve, with integrated neurostimulator, including imaging guidance, when performed; each additional electrode array (List separately in addition to code for primary procedure)
64598	Revision or removal of neurostimulator electrode array, peripheral nerve, with integrated neurostimulator
A4558	Conductive gel or paste, for use with electrical device (e.g., TENS, NMES), per oz. A4595 Electrical stimulator supplies, 2 lead, per month, (e.g. TENS, NMES)
E0731	Form - fitting conductive garment for delivery of TENS or NMES (with conductive fibers separated from the patient's skin by layers of fabric)
E0745	Neuromuscular stimulator, electronic shock unit
E0764	Functional neuromuscular stimulator, transcutaneous stimulation of muscles of ambulation with computer control, used for walking by spinal cord injured, entire system, after completion of training program
E0770	Functional electrical stimulator, transcutaneous stimulation of nerve and / or muscle groups, any type, complete system, not otherwise specified

Considered Not Medically Necessary:

Coding	Description
E0744	Neuromuscular stimulator for scoliosis

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. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

Document History:

Revised Dates:

- 2025: January – Procedure codes updated to align changes in service authorization.
- 2024: September – criteria update and references updated
- 2024: February
- 2021: November
- 2020: November

- 2019: October, November
- 2016: April, May
- 2013: October
- 2012: June
- 2011: February
- 2010: November
- 2008: February, March
- 2007: October
- 2005: November
- 2003: July, November

Reviewed Dates:

- 2023: September
- 2022: September
- 2018: December
- 2017: November
- 2015: May
- 2014: May
- 2012: November
- 2011: November
- 2010: December
- 2009: January, December
- 2008: January
- 2006: October
- 2004: June, July
- 2003: June

Effective Date:

- June 2002

References:

Including but not limited to: Specialty Association Guidelines; Government Regulations; Winifred S. Hayes, Inc; UpToDate; Literature Review; Specialty Advisors; National Coverage Determination (NCD); Local Coverage Determination (LCD).

(2023, Sep 21). Retrieved Mar 13, 2024, from MCG: https://careweb.careguidelines.com/ed27/index.html

(2024). Retrieved Mar 13, 2024, from Centers for Medicare and Medicaid Services: https://www.cms.gov/medicare-coverage-database/search-results.aspx?keyword=electrical%20stimulation&keywordType=starts&areaId=s53&docType=NCA,CAL,NCD,MEDCAC,TA,MCD,6,3,5,1,F,P&contractOption=all&sortBy=relevance

(2024). Retrieved Mar 18, 2024, from Carelon Medical Benefits Management: https://guidelines.carelonmedicalbenefitsmanagement.com/?s=Neuromuscular+stimulation&et_pb_searchform_submit=et_search_proccess&et_pb_search_cat=11%2C1%2C96&et_pb_include_posts=yes

21 CFR Part 882 Subpart F. (2008, Jun 23). Retrieved Aug 19, 2024, from Code of Federal Regulations: https://www.ecfr.gov/current/title-21/part-882/subpart-F

Celli, B. (2024, Feb 05). Pulmonary rehabilitation. Retrieved Mar 18, 2024, from UpToDate: https://www.uptodate.com/contents/pulmonary-rehabilitation?search=Neuromuscular+electrical+stimulation&source=search_result&selectedTitle=4%7E17&usage_type=default&display_rank=4

Functional Electrical Stimulation for Foot Drop in Acute or Subacute Phases of Stroke Recovery. (2024, Jun 14). Retrieved Aug 19, 2024, from Hayes: https://evidence.hayesinc.com/report/hta.footdrop5254

Functional Electrical Stimulation for Foot Drop in Chronic Phase of Stroke Recovery. (2024, Jun 14). Retrieved Aug 14, 2024, from Hayes - a symplr company: https://evidence.hayesinc.com/report/hta.footdrop5228

Johnston, T., Keller, S., & Denzer-Weiler, C. (2021, Apr). A Clinical Practice Guideline for the Use of Ankle-Foot Orthoses and Functional Electrical Stimulation Post-Stroke. Retrieved Aug 19, 2024, from Academy of Neurologic Physical Therapy: https://journals.lww.com/jnpt/Fulltext/2021/04000/A_Clinical_Practice_Guideline_for_the_Use_of.6.aspx

NCD: Electrical Nerve Stimulators (160.7). (1995, Aug 07). Retrieved Aug 19, 2024, from Centers for Medicare and Medicaid Services: https://www.cms.gov/medicare-coverage-database/view/ncd.aspx?ncdid=240&ncdver=1&keyword=nerve%20stimulator&keywordType=starts&areaId=s53&docType=NCA,CAL,NCD,MEDCAC,TA,MCD,6,3,5,1,F,P&contractOption=all&sortBy=relevance&bc=1

NCD: Neuromuscular Electrical Stimulation (NMES) (160.12). (2006, Oct 01). Retrieved Mar 14, 2024, from Centers for Medicare and Medicaid Services: https://www.cms.gov/medicare-coverage-database/view/ncd.aspx?ncdid=175&ncdver=2&

NCD: Supplies Used in the Delivery of Transcutaneous Electrical Nerve Stimulation (TENS) and Neuromuscular Electrical Stimulation (NMES) (160.13). (1988, Jul 14). Retrieved Mar 13, 2024, from Centers for Medicare and Medicaid Services: https://www.cms.gov/medicare-coverage-database/view/ncd.aspx?ncdid=151&ncdver=1&

Percutaneous Peripheral Nerve Stimulation for Treatment of Chronic Pain. (2024, May 08). Retrieved Aug 16, 2024, from Hayes: https://evidence.hayesinc.com/report/hta.pns5224

Provider Manual Title: Durable Medical Equipment - Chapter IV: Covered Services and Limitations. (2024, Jan 01). Retrieved Mar 18, 2024, from Department of Medical Assistance Services - MES Public Portal: https://vamedicaid.dmas.virginia.gov/sites/default/files/2024-01/DME%20Chapter%20IV%20%28updated%201.4.24%29_Final.pdf

Functional Electrical Stimulation (FES) for Treatment of Foot Drop in Multiple Sclerosis Patients. (2023, Nov 14). Retrieved Aug 18, 2024, from Hayes: https://evidence.hayesinc.com/report/htb.functional2112

Special Notes: *

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.

Services mean both medical and behavioral health (mental health) services and supplies unless We specifically tell You otherwise. We do not cover any services that are not listed in the Covered Services section unless required to be covered under state or federal laws and regulations. We do not cover any services that are not Medically Necessary. We sometimes give examples of specific services that are not covered but that does not mean that other similar services are covered. Some services are covered only if We authorize them. When We say You or Your We mean You and any of Your family members covered under the Plan. Call Member Services if You have questions.

MUST SEE MEMBER BENEFIT FOR DETERMINATION.
We only cover DME that is Medically Necessary and prescribed by an appropriate Provider. We also cover colostomy, ileostomy, and tracheostomy supplies, and suction and urinary catheters. We do not cover DME used primarily for the comfort and wellbeing of a Member. We will not cover DME if We deem it useful, but not absolutely necessary for Your care. We will not cover DME if there are similar items available at a lower cost that will provide essentially the same results as the more expensive items.

Pre-Authorization is Required for All Rental Items.

Pre-Authorization is Required for All Repair and Replacement.

Keywords:

SHP Neuromuscular Electrical Stimulator, SHP DME 17, SHP Durable Medical Equipment 17, Dysphagia, atrophy, scarring, burns, NMES, therapeutic electrical stimulation, threshold electrical stimulation, TES, InterX 1000 neurostimulator, Nexwave by Zynex