09-E0000-25

Original Effective Date: 09/15/02

Reviewed: 05/25/23

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Subject: Neuromuscular Electrical Stimulation (NMES)

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

DESCRIPTION:

A neuromuscular electrical stimulator (NMES) is a two-channel device that transmits electrical impulses through the skin (transcutaneous) to selected muscle groups by way of electrodes. These devices are designed for use in the home for treating muscle atrophy caused by lack of use.

In comparison with a TENS device, a NMES device delivers a stronger electrical current and has a wider pulse width to produce muscle contractions.

There are two categories of NMES. One stimulates the muscle in resting state, used to treat patients with muscle atrophy. The other enhances functional activity in neurologically impaired patients and uses electrical impulses to activate paralyzed or weak muscles in a precise sequence and has been used in the rehabilitation of upper and lower extremities. Neuromuscular electric stimulation used for this application is commonly referred to as functional electric stimulation (FES) and is discussed in a separate guideline.

POSITION STATEMENT:

NOTE: Refer to MCG **09-E0000-54, Functional Neuromuscular Stimulation** for information regarding Bioness L300™.

Neuromuscular electrical stimulators (NMES) **meet the definition of medical necessity** when prescribed for the treatment of disuse atrophy when both of the following conditions exist:

- The nerve supply to the muscle is intact (including brain, spinal cord, and peripheral nerves) **AND**
- The muscle atrophy is caused by other non-neurological reasons.

Examples of conditions for which NMES devices **meet the definition of medical necessity** include, but are not limited to:

- Post-hip replacement surgery prior to the initiation of rehabilitative training (usually within one month);
- After removal of casting or splinting of a leg following major knee surgery, prior to the initiation of rehabilitation (usually within one month);
- Contractures resulting from severe burns where there is reasonable expectation for improvement (for as long as significant improvement continues to occur).

Note: E0731 used with an FDA-approved NMES device that meets criteria, is covered when prescribed by a physician.

Neuromuscular electrical stimulators **do not meet the definition of medical necessity** when used in the treatment of:

- Muscle weakness due to central nervous system, spinal, or peripheral nerve diseases/conditions affecting motor **OR** sensory pathways to and from the muscle(s) being stimulated (i.e., stroke, spinal cord injury, peripheral nerve injury);
- Injuries such as strains and sprains;
- Pain not associated with disuse atrophy.

The application of NMES is considered **experimental or investigational** when used in the treatment of scoliosis. The evidence is insufficient to determine the effects of the technology on health outcomes.

BILLING/CODING INFORMATION:

HCPCS Coding:

E0731	Form-fitting conductive garment for delivery of TENS or NMES (with conductive fibers separated from the patient's skin by layers of fabric)
E0744	Neuromuscular stimulator for scoliosis **(Investigational)**
E0745	Neuromuscular stimulator, electronic shock unit
E0770	Functional electrical stimulator, transcutaneous stimulation of nerve and/or muscle groups, any type, complete system, not otherwise specified.

REIMBURSEMENT INFORMATION:

NMES is subject to medical review of documentation that supports medical necessity. The following information may be required documentation: attending physician visit notes, physician history and physical, and surgical operative notes.

LOINC Codes:

DOCUMENTATION TABLE	LOINC CODES	LOINC TIME FRAME MODIFIER CODE	LOINC TIME FRAME MODIFIER CODES NARRATIVE
Attending physician visit note	18733-6	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.

Physician history and physical	28626-0	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.
Physician operative note	28573-4	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.

Supplies for Rented NMES Units

The reimbursement for supplies used with a rented NMES (E0745) unit is included in the rental allowance and includes the following:

- Electrodes (any type) (A4556),
- Conductive paste or gel (if needed, depends on the type of electrode used) (A4558),
- Tape or other adhesive (if needed) (A4364),
- Adhesive removal, skin preparation materials (A4455),
- Batteries (9 volt or AA, single use or rechargeable), **AND**
- Battery charger (if rechargeable batteries are used).

Supplies for Purchased NMES Units

If the NMES unit (E0745) is purchased, the initial allowance includes lead wires and one month's supply of electrodes, conductive paste or gel (if needed), and batteries.

A separate allowance is made for medically necessary replacement supplies used with a purchased NMES unit. Reimbursement for NMES supplies is limited to one unit of A4595 per month.

Replacement of damaged lead wires (A4557) is rarely medically necessary more frequently that every 12 months.

Reimbursement for A4595 includes the following:

- Electrodes (any type) (A4556),
- Conductive paste or gel (if needed, depends on the type of electrode used) (A4558),
- Tape or other adhesive (if needed) (A4364),
- Adhesive removal, skin preparation materials (A4455),
- Batteries (9 volt or AA, single use or rechargeable), **AND**
- Battery charger (if rechargeable batteries are used).

Other Supplies

No separate or additional reimbursement is made for the following supply items:

- Adapters (i.e., snap, banana, alligator, tab, button, clip)

- Belt clips
- Adhesive remover
- Additional connection cable for lead wires
- Carrying pouches or covers.

Sequential stimulators (e.g., RS-4i) are considered deluxe items that are reimbursed as TENS units; no additional allowance is made for these devices, above the allowance for a TENS unit.

PROGRAM EXCEPTIONS:

Federal Employee Program (FEP): Follow FEP guidelines.

State Account Organization (SAO): Follow SAO guidelines.

Medicare Advantage products: The following National Coverage Determinations (NCDs) were reviewed on the last guideline reviewed date: Neuromuscular Electrical Stimulation (NMES) (160.12) and Supplies Used in the Delivery of Transcutaneous Electrical Nerve Stimulation (TENS) and Neuromuscular Electrical Stimulation (NMES) (160.13); located at cms.gov.

DEFINITIONS:

None Applicable.

RELATED GUIDELINES:

Functional Neuromuscular Stimulation, 09-E0000-54

Transcutaneous Electric Nerve Stimulation (TENS), 02-61000-04

OTHER:

None Applicable.

REFERENCES:

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2. Centers for Medicare and Medicaid Services (CMS). National Coverage Determination (NCD) Supplies Used in the Delivery of Transcutaneous Electrical Nerve Stimulation (TENS) and Neuromuscular Electrical Stimulation (NMES) (160.13); accessed at cms.gov.
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13. Sachetti A, Carpes MF, et al, Safety of neuromuscular electrical stimulation among critically ill patients: systematic review. Rev Bras Ter Intensiva. 2018 Apr-Jun;30(2):219-225.
14. U.S. Food and Drug Administration (FDA); accessed at fda.gov.
15. Verweij LM, Van Schoor NM, Deeg JH, Dekker J, Visser M. Physical Activity and Incident Clinical Knee Osteoarthritis in Older Adults. Arthritis Care & Research, February 2009.
16. Winstein CJ, Stein J, Arena R, et al. Guidelines for Adult Stroke Rehabilitation and Recovery: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. Stroke. 2016 Jun;47(6):e98-e169.

COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy and Coverage Committee on 05/25/23.

GUIDELINE UPDATE INFORMATION:

09/15/02	Reformatted Medical Coverage Guideline.
10/15/03	Scheduled review; no change in coverage statement.
07/15/06	Unscheduled review with revisions consisting of adding reimbursement information for supplies.
10/15/07	Reviewed and reformatted guideline; updated references.
11/15/08	Scheduled review; no change in position statement; updated references.
01/01/09	Annual HCPCS coding update: added E0770.
11/15/09	Scheduled review; position statement unchanged; references updated.
01/01/10	Annual HCPCS coding update: removed A4365.

10/15/10	Revisions; related ICD-10 codes added; formatting changes.
07/15/11	Revision; formatting changes.
05/11/14	Revision: Program Exceptions section updated.
09/15/14	Revision: added E0731 to Billing/Coding Information section.
11/01/15	Revision: ICD-9 Codes deleted.
09/15/16	Revision; billing/coding section updated.
10/01/16	Revision; coding section updated; formatting changes.
09/15/18	Review; description, position statements, reimbursement, program exception,and references updated.
06/15/20	Review; Maintain position statements and update references.
04/15/21	Review; Position statement section and references updated.
06/15/23	Review: Position statements maintained; references updated.