

## **NCD for Neuromuscular Electrical Stimulaton (NMES) (160.12)**

### **Publication Number**

100-3

### **Manual Section Number**

160.12

### **Version Number**

2

### **Effective Date of this Version**

10/1/2006

### **Implementation Date**

10/2/2006

### **Benefit Category**

No Benefit Category

**Note:** This may not be an exhaustive list of all applicable Medicare benefit categories for this item or service.

### **Item/Service Description**

NMES involves the use of a device which transmits an electrical impulse to the skin over selected muscle groups by way of electrodes. There are two broad categories of NMES. One type of device stimulates the muscle when the patient is in a resting state to treat muscle atrophy. The second type is used to enhance functional activity of neurologically impaired patients.

### **Indications and Limitations of Coverage**

#### Treatment of Muscle Atrophy

Coverage of NMES to treat muscle atrophy is limited to the treatment of disuse atrophy where nerve supply to the muscle is intact, including brain, spinal cord and peripheral nerves, and other non-neurological reasons for disuse atrophy. Some examples would be casting or splinting of a limb,

contracture due to scarring of soft tissue as in burn lesions, and hip replacement surgery (until orthotic training begins). (See §160.13 of the NCD Manual for an explanation of coverage of medically necessary supplies for the effective use of NMES.)

#### Use for Walking in Patients with Spinal Cord Injury (SCI)

The type of NMES that is used to enhance the ability to walk of SCI patients 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. Coverage for the use of NMES/FES is limited to SCI patients for walking, who have completed a training program which consists of at least 32 physical therapy sessions with the device over a period of three months. The trial period of physical therapy will enable the physician treating the patient for his or her spinal cord injury to properly evaluate the person's ability to use these devices frequently and for the long term. Physical therapy necessary to perform this training must be directly performed by the physical therapist as part of a one-on-one training program.

The goal of physical therapy must be to train SCI patients on the use of NMES/FES devices to achieve walking, not to reverse or retard muscle atrophy.

Coverage for NMES/FES for walking will be covered in SCI patients with all of the following characteristics:

1. Persons with intact lower motor units (L1 and below) (both muscle and peripheral nerve);
2. Persons with 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;
3. Persons that demonstrate brisk muscle contraction to NMES and have sensory perception electrical stimulation sufficient for muscle contraction;
4. Persons that possess high motivation, commitment and cognitive ability to use such devices for walking;
5. Persons that can transfer independently and can demonstrate independent standing tolerance for at least 3 minutes;
6. Persons that can demonstrate hand and finger function to manipulate controls;
7. Persons with at least 6-month post recovery spinal cord injury and restorative surgery;
8. Persons without hip and knee degenerative disease and no history of long bone fracture secondary to osteoporosis; and

9. Persons who have demonstrated a willingness to use the device long-term.

NMES/FES for walking will not be covered in SCI patient with any of the following:

1. Persons with cardiac pacemakers;
2. Severe scoliosis or severe osteoporosis;
3. Skin disease or cancer at area of stimulation;
4. Irreversible contracture; or
5. Autonomic dysflexia.

The only settings where therapists with the sufficient skills to provide these services are employed, are inpatient hospitals; outpatient hospitals; comprehensive outpatient rehabilitation facilities; and outpatient rehabilitation facilities. The physical therapy necessary to perform this training must be part of a one-on-one training program.

Additional therapy after the purchase of the DME would be limited by our general policies in converge of skilled physical therapy.

#### **Cross Reference**

(Also reference the Medicare Benefit Policy Manual, Chapter 15, "Covered Medical and Other Health Services," §220 and §230, and Medicare Claims Processing Manual, Chapter 5, "Part B Outpatient Rehabilitation and CORF Services," §10.1)

#### **Transmittal Number**

55

#### **Transmittal Link**

<http://www.cms.hhs.gov/transmittals/downloads/R55NCD.pdf>

#### **Revision History**

06/1988 - Added cross-reference to section 45-25. Effective date 04/14/1988. (TN 26)

11/2002 - Provided coverage for walking, and maintained noncoverage for treatment of disuse atrophy in SCI patients. Effective and implementation dates 04/01/2003. ([TN 160](#)) (CR 2314)

05/2006 - Added cross-reference to section 220. Effective date 10/01/2006.

([TN 55](#)) (CR4014)

#### **Claims Processing Instructions**

- [TN 941 \(Medicare Claims Processing\)](#)

#### **National Coverage Analyses (NCAs)**

This NCD has been or is currently being reviewed under the National Coverage Determination process. The following are existing associations with NCAs, from the National Coverage Analyses database.

- [First reconsideration for Neuromuscular Electrical Stimulation \(NMES\) for Spinal Cord Injury \(CAG-00153R\)](#)

#### **Other Versions**

[Neuromuscular Electrical Stimulaton \(NMES\)](#) - Version 1, Effective between 04/01/2003 - 10/01/2006

Source: CMS Manual 100-3 Section 160.12