Coverage Guidelines

Neuromuscular Electrical Stimulation (NMES)

Disclaimer:
Please note that Baptist Health Plan updates Coverage Guidelines throughout the year. A printed version may not be most up to date version available. The health plan reserves the right to review and update this policy as needed. Refer to the website to ascertain that you are utilizing the most current available version. Clinical guideline policies are not intended to serve as treatment guidelines or treatment recommendation. Treating providers must use their own clinical judgment in rendering care to their patient population.

For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern. In addition, coverage for Medicare Advantage members may differ. This is a result of applicable coverage statements by the Center for Medicare and Medicaid Services (CMS). The National Coverage Determinations, Local Coverage Determinations, and Local Medical Review Policies may be found at the CMS website, [http://www.cms.gov](http://www.cms.gov). Please note that for all plans, the member’s health plan benefits that are in effect on the rendered date of service must be used in coverage determinations.

DEFINITION

Neuromuscular Electrical Stimulation (NMES) is the stimulation of neuromuscular fibers with an electric current of sufficient strength to cause a muscle contraction. The NMES device is worn externally and may be applied in the home by the patient or the patient’s caregiver. NMES can be grouped into the following two categories:

1. Stimulation of muscles to treat muscle atrophy
2. Enhancement of functional activity in neurologically impaired individuals

Impulses created by an NMES mimic the action normally initiated by the central nervous system. NMES is one component of a rehabilitation program to treat disuse atrophy when the nerve supply to the atrophied muscle remains intact. NMES has also been used for neuromuscular relaxation and contraction.

Functional Electrical Stimulation (FES), a variant of NMES, is not addressed in this paper.
Neuromuscular Electrical Stimulation (NMES) may be considered medically necessary for disuse atrophy unrelated to a neurological condition and with an intact nerve supply to the muscle only when one of the following criteria are met:

- Member has contractures due to scars from a burn, or
- Member has had major knee surgery but has failed to respond to physical therapy, or
- Member’s muscle disuse atrophy has occurred due to previous casting of an arm or leg, or
- Prior to physical therapy when a Member has recently undergone hip replacement surgery.

An NMES form-fitting conductive garment may be considered medically necessary when prescribed by a physician for one of the above listed criteria in any of the following indications:

- Member has a skin problem or other medical condition preventing the application or use of conventional electrodes, tape, other methods of attaching the NMES, or
- It is not feasible to use conventional electrodes, adhesive tapes and lead wires due to the number of or frequency of treatments required, or
- The disuse atrophy requires NMES under a cast where the nerve supply to the muscle is intact, or
- Traditional electrodes cannot be used due to the large area to be treated or the large number of sites that need to be treated.

Neuromuscular Electrical Stimulation (NMES) is experimental and investigational and not medically necessary for any indication not specifically listed above. Acceptable, meaning peer-reviewed, published, randomized controlled trials/studies of human patients, medical literature proving safety and efficacy is not available.

Neuromuscular Electrical Stimulation (NMES) is not medically necessary and/or is experimental/investigational for the following indications:

- Bell’s Palsy
- Cerebral Palsy (CP)
- Cardiac conditioning
- Dysphagia (difficulty swallowing)¹
- General muscle strengthening in healthy members
- Improving ambulatory functioning in members with Multiple Sclerosis
- Incontinence:
  - Pelvic floor electrical stimulation combined with biofeedback for stress incontinence
  - Pelvic floor electrical stimulation for any form of male or female urinary incontinence (such as stress, urge, mixed)
  - Pelvic floor electrical stimulation for post prostatectomy incontinence

¹Note: Dysphagia may be a symptom of other conditions, such as stroke, traumatic brain injury, or multiple sclerosis.
- Pelvic floor electrical stimulation for treatment of detrusor dysfunction or neurogenic incontinence
- Rehabilitation for pediatric members with cerebral palsy (CP):
  - Any indication of NMES for adult members with cerebral palsy
  - To strengthen lower limb muscles in pediatric CP members
  - To strengthen trunk muscles to improve posture in pediatric CP members under two years of age
  - To strengthen upper limb muscles in pediatric CP members
- Treatment of denervated muscles
- Treatment for osteoarthritis of the knee

MEDICAL BACKGROUND

Not all physical therapy providers have been trained to administer NMES and not all facilities have the equipment required for NMES therapy. Inpatient and outpatient hospitals, and comprehensive outpatient rehabilitation facilities tend to be the only qualified settings. The physical therapy necessary to perform NMES must be part of a one-on-one training program.

After reviewing available prospective, controlled studies, Hayes, Inc. determined the “quality of evidence for NMES was limited due to sparse data, methodological weaknesses in individual studies, heterogeneity in study protocols, immediate versus patient-important outcome measures, and/or lack of follow-up.” This decision includes any use of NMES for any indication.

Most of the available research on NMES has been directed at adults with neurological conditions such as stroke, Multiple Sclerosis (MS), spinal cord injury and head injury. There is however, a growing body of evidence that is cautiously supportive of NMES for children with cerebral palsy (CP) to minimize impairment and activity limitations while walking. Dynamic splinting with NMES has been shown to be more effective than either splinting or NMES to improve function and posture in children with CP. Authors of this review “cautiously” advocate NMES as an exercise modality or as a functional intervention to minimize impairment and activity limitations during walking. They also say a growing number of small, upper limb studies supporting use of NMES as an upper limb exercise regime may be beneficial. However, the authors also recognize the need for further research in these areas to determine best practice guidelines.

Dysphagia is difficulty swallowing, usually caused by esophageal problems that occur after a stroke or in people with conditions such as multiple sclerosis, motor neuron disease, Parkinson’s disease, or traumatic brain injury. The National Institute for Health and Clinical Excellence (NICE) is considering the safety and efficacy of NMES as a treatment option for dysphagia, and will produce a final interventional procedures document. The estimated publication date for their recommendation is the summer of 2013. The goal of NMES is to strengthen the muscles involved in swallowing by placing electrodes on the neck or jaw and delivering a small electric current to that area while the patient practices swallowing exercises.
**REGULATORY INFORMATION**

Kentucky – No legislative mandates were found for coverage of NMES for muscular re-education.

Indiana – No legislative mandates were found for coverage of NMES for muscular re-education.

Tennessee – No legislative mandates were found for coverage of NMES for muscular re-education.

**COVERAGE DETAIL**

For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern.

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<th>CPT® Codes</th>
<th>Description</th>
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<th>HCPC® Codes</th>
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<tr>
<td>A4556</td>
<td>Electrodes (e.g., apnea monitor), per pair</td>
<td>Medically necessary when criteria are met</td>
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<td>A4558</td>
<td>Conductive gel or paste, for use with electrical device (e.g., TENS, NMES)</td>
<td>Medically necessary when criteria are met</td>
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<tr>
<td>A4595</td>
<td>Electrical stimulator supplies, 2 lead, per month, (e.g., TENS, NMES)</td>
<td>Medically necessary when criteria are met</td>
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<td>E0731</td>
<td>Form-fitting conductive garment for delivery of TENS or NMES (with conductive fibers separated from the patient’s skin by layers of fabric)</td>
<td>Medically necessary when criteria are met</td>
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<td>E0744</td>
<td>Neuromuscular stimulator for scoliosis</td>
<td>Not medically necessary and/or experimental/investigational</td>
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<td>E0745</td>
<td>Neuromuscular stimulator, electronic shock unit</td>
<td>Medically necessary when criteria are met</td>
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Neuromuscular Electrical Stimulation (NMES)

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REFERENCES


