

Corporate Medical Policy

H-Wave Electrical Stimulation

File Name: h_wave_electrical_stimulation
Origination: 6/2009
Last CAP Review: 11/2011
Next CAP Review: 11/2012
Last Review: 1/2012

Description of Procedure or Service

H-wave stimulation is a distinct form of electrical stimulation, and an H-wave device is U.S. Food and Drug Administration (FDA) -approved for medical purposes that involve repeated muscle contractions. H-wave electrical stimulation has been evaluated primarily as a pain treatment, but it has also been studied for other indications such as wound healing and improving post-surgical range of motion. Both office-based and home models of the H-wave device are available.

Background

H-wave stimulation is a form of electrical stimulation that differs from other forms of electrical stimulation, such as transcutaneous electrical nerve stimulation (TENS), in terms of its wave form. While H-wave stimulation may be performed by physicians, physiatrists, chiropractors, or podiatrists, H-wave devices are also available for home use. H-wave stimulation has been used for the treatment of pain related to a variety of etiologies, such as diabetic neuropathy, muscle sprains, temporomandibular joint dysfunctions, or reflex sympathetic dystrophy. H-wave stimulation has also been used to accelerate healing of wounds such as diabetic ulcers and to improve range of motion and function after orthopedic surgery.

H-wave electrical stimulation must be distinguished from the H-waves that are a component of electromyography.

Regulatory Status

In 1992, the H-Wave® muscle stimulator (Electronic Waveform Lab, Huntington Beach, CA) was cleared for marketing by the FDA through the 510(k) process. The FDA classified H-wave stimulation devices as “powered muscle stimulators.” As a class, the FDA describes these devices as being “intended for medical purposes that repeatedly contracts muscles by passing electrical currents through electrodes contacting the affected body area.” According to the FDA, manufacturers may make the following claims regarding the effect of the device: “1) relaxation of muscle spasms; 2) prevention or retardation of disuse atrophy; 3) increasing local blood circulation; 4) muscle re-education; 5) immediate post-surgical stimulation of calf muscles to prevent venous thrombosis; and, 6) maintaining or increasing range of motion.”

Uses of the device not cleared by the FDA include, but are not limited to, treatment of diabetic neuropathy and wound healing.

Related Policies:

TENS (Transcutaneous Electrical Stimulation)
Interferential Stimulation

H-Wave Electrical Stimulation

Electrostimulation and Electromagnetic Therapy for Wounds
Percutaneous Electrical Nerve Stimulation (PENS) or Percutaneous Neuromodulation
Therapy (PNT)

*****Note: This Medical Policy is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.**

Policy

H-Wave Electrical Stimulation is considered investigational for all applications. BCBSNC does not cover investigational services or procedures.

Benefits Application

This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore member benefit language should be reviewed before applying the terms of this medical policy.

When H-Wave Electrical Stimulation is covered

Not applicable.

When H-Wave Electrical Stimulation is not covered

H-wave electrical stimulation is considered investigational for all indications, including but not limited to:

1. Pain related to a variety of etiologies, such as diabetic neuropathy, muscle sprains, temporomandibular joint dysfunctions, or reflex sympathetic dystrophy,
2. Acceleration of wound healing, including diabetic ulcers,
3. Post-operative treatment to improve function and/or range of motion.

Policy Guidelines

Two small controlled trials are insufficient to permit conclusions about the effectiveness of H-wave electrical stimulation as a pain treatment. Additional sham-controlled studies are needed from other investigators, preferably studies that are clearly blinded, specify the handling of any withdrawals, and provide long-term, comparative follow-up data. One small RCT represents insufficient evidence on the effectiveness of H-wave simulation for improving strength and function after rotator cuff surgery. No comparative studies have been published evaluating H-wave stimulation to accelerate wound healing. The data are not sufficient to determine if H-wave stimulation improves health outcomes.

Billing/Coding/Physician Documentation Information

This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at www.bcbsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable service codes: 97014, E0745

H-Wave Electrical Stimulation

BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

Scientific Background and Reference Sources

- BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.13, 1/10/08.
- Senior Medical Director - 3/2009
- BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.13, 9/10/2009
- Specialty Matched Consultant Advisory Panel – 11/2010
- BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.13, 11/11/2010
- Medical Director – 2/2011
- Specialty Matched Consultant Advisory Panel – 11/2011
- BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.13, 11/10/2011

Policy Implementation/Update Information

- 6/8/09 New medical policy adopted. Reviewed with Senior Medical Director 5/7/09. "BCBSNC will not provide coverage for H-Wave Electrical Stimulation because it is considered investigational. BCBSNC does not cover investigational services." Notice given 6/8/09. Policy effective 9/14/09. (btw)
- 6/22/10 Policy Number(s) removed (amw)
- 12/21/10 Specialty Matched Consultant Advisory Panel review 11/29/2010. No change to policy intent. "Policy Guidelines" section updated. References add. (btw)
- 3/15/11 "Description" section revised. Added "Post-operative treatment to improve function and/or range of motion." to the "When Not Covered" section. Updated the "Policy Guidelines" section. References added. Reviewed by Medical Director 2/17/11. (btw)
- 1/10/12 Specialty Matched Consultant Advisory Panel review 11/30/11. No change to policy intent. (btw)
- 2/7/12 Reference added. (btw)

Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.