

Corporate Medical Policy

Electrostimulation and Electromagnetic Therapy for Wounds

File Name: electrostimulation_and_electromagnetic_therapy_for_wounds
Origination: 02/2010
Last Review: 11/2023

Description of Procedure or Service

Electrical stimulation refers to the application of electrical current through electrodes placed directly on the skin. Electromagnetic therapy involves the application of electromagnetic fields, rather than direct electrical current. Both are proposed as treatments for wounds, generally chronic wounds.

Since the 1950s, investigators have used electrical stimulation as a technique to promote wound healing, based on the theory that electrical stimulation may:

- Increase adenosine 5'-triphosphate (ATP) concentration in the skin
- Increase DNA synthesis
- Attract epithelial cells and fibroblasts to wound sites
- Accelerate the recovery of damaged neural tissue
- Reduce edema
- Increase blood flow
- Inhibit pathogenesis

Electrical stimulation refers to the application of electrical current through electrodes placed directly on the skin in close proximity to the wound. The types of electrical stimulation and devices can be categorized into 4 groups based on the type of current:

- low intensity direct current (LIDC);
- high voltage pulsed current (HVPC);
- alternating current (AC);
- transcutaneous electrical nerve stimulation (TENS).

Electromagnetic therapy is a related but distinct form of treatment that involves the application of electromagnetic fields, rather than direct electrical current.

At present, no electrical stimulation or electromagnetic therapy devices have received approval from the U.S. Food and Drug Administration (FDA) specifically for the treatment of wound healing. A number of devices have been cleared for marketing for other indications. Use of these devices for wound healing is an off-label indication.

Related Policies:

Topical Negative Pressure Therapy for Wounds
Non-Contact Ultrasound Treatment for Wounds
TENS (Transcutaneous Electrical Nerve Stimulator)

*****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

Electrostimulation and Electromagnetic Therapy for Wounds

Electrical stimulation or electromagnetic therapy is considered investigational for the treatment of wounds. BCBSNC does not provide coverage for investigational services or procedures.

Electrical stimulation performed by individuals in the home setting is considered investigational for the treatment of wounds. BCBSNC does not provide coverage for 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 Electrostimulation and Electromagnetic Therapy for Chronic Wounds is covered

Not applicable.

When Electrostimulation and Electromagnetic Therapy for Chronic Wounds is not covered

Electrical stimulation for the treatment of wounds, including but not limited to low-intensity direct current (LIDC), high-voltage pulsed current (HVPC), alternating current (AC), and transcutaneous electrical nerve stimulation (TENS), is considered **investigational**.

Electrical stimulation performed by individuals in the home setting for the treatment of wounds is considered **investigational**.

Electromagnetic therapy for the treatment of wounds is considered **investigational**.

Policy Guidelines

For individuals who have any wound type (acute or nonhealing) who receive electrostimulation, the evidence includes systematic reviews and randomized controlled trials (RCTs). Relevant outcomes are symptoms, change in health status, morbid events, quality of life, and treatment related morbidity. Systematic reviews of RCTs on electrical stimulation have reported improvements in some outcomes, mainly intermediate outcomes such as decrease in wound size and/or the velocity of wound healing. There are few analyses on the more important clinical outcomes of complete healing and the time to complete healing, and many of the trials are of relatively low quality. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have any wound type (acute or nonhealing) who receive electromagnetic therapy, the evidence includes two systematic reviews of RCTs (one on pressure ulcers and the other on leg ulcers) and an RCT of electromagnetic treatment following Cesarean section. Relevant outcomes are symptoms, change in health status, morbid events, quality of life, and treatment related morbidity. The systematic reviews identified a few RCTs with small sample sizes that do not permit definitive conclusions. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Billing/Coding/Physician Documentation Information

Electrostimulation and Electromagnetic Therapy for Wounds

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.bcsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable codes: E0761, E0769, G0281, G0282, G0295, G0329

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]. 2.01.57, 10/6/09.

Senior Medical Director review - 1/6/2010

Medicare Technology Assessments for Electrostimulation for Wounds (CAG-00068N). Retrieved 10/12/11 from <http://www.cms.hhs.gov/mcd/viewtechassess.asp?id=27>

Association for the Advancement of Wound Care (AAWC). Association for the Advancement of Wound Care guideline of pressure ulcer guidelines. Malvern, PA: Retrieved 10/12/11 from www.guideline.gov

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.57, 10/4/2011

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.57, 10/11/2012

Specialty Matched Consultant Advisory Panel – 12/2012

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.57, 10/10/13

Specialty Matched Consultant Advisory Panel – 11/2013

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.57, 9/11/14

Specialty Matched Consultant Advisory Panel – 11/2014

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.57, 9/10/15

Specialty Matched Consultant Advisory Panel – 11/2015

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.57, 1/14/16

Specialty Matched Consultant Advisory Panel – 11/2016

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.57, 9/14/2017

Specialty Matched Consultant Advisory Panel – 11/2017

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.57, 1/11/2018

Specialty Matched Consultant Advisory Panel – 11/2018

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.57, 1/17/2019

Specialty Matched Consultant Advisory Panel – 11/2019

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.57, 1/16/2020

Specialty Matched Consultant Advisory Panel – 11/2020

BCBSA Medical Policy Reference Manual [Electronic Version]. 2.01.57, 1/14/2021

Specialty Matched Consultant Advisory Panel – 11/2021

Specialty Matched Consultant Advisory Panel – 11/2022

Specialty Matched Consultant Advisory Panel - 11/2023

Electrostimulation and Electromagnetic Therapy for Wounds

Medical Director Review- 11/2023

Policy Implementation/Update Information

- 2/2/2010 Notification of new policy. Electrical stimulation and electromagnetic therapy for the treatment of wounds is considered **investigational**. Electrical stimulation performed by the patient in the home setting for the treatment of wounds is considered **investigational**. Notification given 2/2/2010. Effective date 5/11/2010. (pmo)
- 6/22/10 Policy Number(s) removed (amw)
- 12/21/10 The word “chronic” was removed from the policy name. Specialty Matched Consultant Advisory Panel review 11/29/10. Policy accepted as written. (adn)
- 12/20/11 Policy Guidelines and References updated. No change to policy statement of coverage criteria. Electrostimulation and electromagnetic therapy are considered investigational for treatment of wounds. Specialty Matched Consultant Advisory Panel review 11/30/11. (adn)
- 1/1/13 Reference added. Specialty Matched Consultant Advisory Panel review 12/4/12. No change to Policy Statement. (sk)
- 1/14/14 Reference added. Specialty Matched Consultant Advisory Panel review 11/20/13. When Not Covered section reworded for clarity. No change to Policy statement. (sk)
- 11/11/14 Reference added. (sk)
- 12/9/14 Specialty Matched Consultant Advisory Panel review 11/24/14. No change to Policy statement. (sk)
- 12/30/15 Reference added. Specialty Matched Consultant Advisory Panel review 11/18/15. (sk)
- 4/1/16 Reference added. Policy Guidelines updated. (sk)
- 12/30/16 Specialty Matched Consultant Advisory Panel review 11/30/2016. (sk)
- 12/15/17 Reference added. Specialty Matched Consultant Advisory Panel review 11/29/2017. (sk)
- 3/9/18 Reference added. (sk)
- 12/14/18 Specialty Matched Consultant Advisory Panel review 11/28/2018. (sk)
- 2/12/19 Reference added. (sk)
- 12/10/19 Specialty Matched Consultant Advisory Panel review 11/20/2019. (sk)
- 7/21/20 Reference added. (sk)
- 12/8/20 Specialty Matched Consultant Advisory Panel review 11/18/2020. (sk)
- 3/9/21 Reference added. (sk)
- 11/30/21 Specialty Matched Consultant Advisory Panel review 11/17/2021. (sk)

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- 5/2/23 Specialty Matched Consultant Advisory Panel review 11/16/2022. (sk)
- 12/5/23 Reference added. Specialty Matched Consultant Advisory Panel review 11/2023. Medical Director Review 11/2023. (rp)

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.