



Medical Policy

Electrostimulation and Electromagnetic Therapy for Treating Wounds

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Policy Number: 655

BCBSA Reference Number: 2.01.57

NCD/LCD: National Coverage Determination (NCD) for Electrical Stimulation (ES) and Electromagnetic Therapy for the Treatment of Wounds (270.1)

Related Policies

- Transcutaneous Electrical Nerve Stimulation – TENS, #[003](#)
- Non-Contact Ultrasound Treatment for Wounds, #[657](#)
- Negative Pressure Wound Therapy in the Outpatient Setting, #[543](#)

Policy

Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity

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 [INVESTIGATIONAL](#).

Electrical stimulation performed by the patient in the home setting for the treatment of wounds is [INVESTIGATIONAL](#).

Electromagnetic therapy for the treatment of wounds is [INVESTIGATIONAL](#).

Medicare HMO BlueSM and Medicare PPO BlueSM Members

BCBSMA covers electrical stimulation and electromagnetic therapy for the treatment of wounds for the following indications for Medicare HMO Blue and Medicare PPO Blue members in accordance with CMS NCD:

- Chronic Stage III or Stage IV pressure ulcers, arterial ulcers, diabetic ulcers, and venous stasis ulcers,
- When performed by a physician, physical therapist, or incident to a physician service.

BCBSMA does not cover electrical stimulation and electromagnetic therapy for the treatment of wounds for the following indications for Medicare HMO Blue and Medicare PPO Blue members in accordance with CMS NCD:

- As an initial treatment modality,
- For continued treatment if measurable signs of healing have not been demonstrated within any 30-day period of treatment,
- Unsupervised use of ES or electromagnetic therapy for wound therapy.

All other uses of ES and electromagnetic therapy not otherwise specified for the treatment of wounds remain at local contractor discretion.

Medical necessity criteria and coding guidance can be found through the link below.

[National Coverage Determinations \(NCDs\)](#)

National Coverage Determination (NCD) for Electrical Stimulation (ES) and Electromagnetic Therapy for the Treatment of Wounds (270.1)

Note: To review the specific NCD, please remember to click “accept” on the CMS licensing agreement at the bottom of the CMS webpage.

Prior Authorization Information

Inpatient

- For services described in this policy, precertification/preauthorization **IS REQUIRED** for all products if the procedure is performed **inpatient**.

Outpatient

- For services described in this policy, see below for products where prior authorization **might be required** if the procedure is performed **outpatient**.

	Outpatient
Commercial Managed Care (HMO and POS)	This is not a covered service.
Commercial PPO and Indemnity	This is not a covered service.
Medicare HMO BlueSM	Prior authorization is required .
Medicare PPO BlueSM	Prior authorization is required .

CPT Codes / HCPCS Codes / ICD-9 Codes

The following codes are included below for informational purposes. Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member’s contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

CPT Codes

There is no specific CPT code for this service.

HCPCS Codes

HCPCS codes:	Code Description
G0281	Electrical stimulation (unattended), to one or more areas, for chronic stage III and stage IV pressure ulcers, arterial ulcers, diabetic ulcers, and venous stasis ulcers not demonstrating measurable signs of healing after 30 days of conventional care, as part of a therapy plan of care.
G0282	Electrical stimulation, (unattended), to one or more areas, for wound care other than described in G0281
G0295	Electromagnetic therapy, to one or more areas, for wound care other than described in G0329 or for other uses.

G0329	Electromagnetic therapy, to one or more areas, for chronic stage III or stage IV pressure ulcers, arterial ulcers, diabetic ulcers, and venous stasis ulcers not demonstrating measurable signs of healing after 30 days of conventional care as part of a therapy plan of care.
E0761	Non-thermal pulsed high-frequency radiowaves, high peak power electromagnetic energy treatment device.
E0769	Electrical stimulation or electromagnetic wound treatment device, not otherwise classified.

Description

Standard Treatment

Conventional or standard therapy for chronic wounds involves local wound care, as well as systemic measures including debridement of necrotic tissues, wound cleansing, and dressing that promotes a moist wound environment, antibiotics to control infection, and optimizing nutritional supplementation. Avoidance of weight-bearing is another important component of wound management.

Electrostimulation

Since the 1950s, investigators have used electrostimulation to promote wound healing, based on the theory that electrostimulation may:

- Increase adenosine 5'-triphosphate 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.

Electrostimulation refers to the application of electrical current through electrodes placed directly on the skin near the wound. The types of electrostimulation and devices can be categorized into groups based on the type of current. This includes low-intensity direct current, high-voltage pulsed current, alternating current, and transcutaneous electrical nerve stimulation.

Electromagnetic Therapy

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

Summary

Electrostimulation (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.

For individuals who have any wound type (acute or nonhealing) who receive electrostimulation, the evidence includes systematic reviews, a meta-analysis, and 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 a decrease in wound size and/or the speed of wound healing. There are few analyses of the more important clinical outcomes of complete healing and the time to complete healing, and many of the trials are relatively low quality. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals who have any wound type (acute or nonhealing) who receive electromagnetic therapy, the evidence includes 2 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 drawing definitive conclusions. The evidence is insufficient to determine the effects of the technology on health outcomes.

Policy History

Date	Action
3/2020	BCBSA National medical policy review. Description, summary and references updated. Policy statements unchanged.
3/2019	BCBSA National medical policy review. Description, summary and references updated. Policy statements unchanged.
2/2018	New references added from BCBSA National medical policy.
10/2017	New references added from BCBSA National medical policy.
7/2017	Clarified coding information.
11/2015	New references added from BCBSA National medical policy.
7/2014	Updated Coding section with ICD10 procedure and diagnosis codes, effective 10/2015.
3/2014	BCBSA National medical policy review. New investigational indications described. Effective 3/1/2014. Coding information clarified.
11/2011-4/2012	Medical policy ICD 10 remediation: Formatting, editing and coding updates. No changes to policy statements.
11/2011	Reviewed - Medical Policy Group - Plastic Surgery and Dermatology. No changes to policy statements.
12/2010	Reviewed - Medical Policy Group - Plastic Surgery and Dermatology. No changes to policy statements.
12/2009	Reviewed - Medical Policy Group - Plastic Surgery and Dermatology. No changes to policy statements.
9/2009	BCBSA National medical policy review. No changes to policy statements.
6/2009	BCBSA National medical policy review. No changes to policy statements.
12/2008	Reviewed - Medical Policy Group - Plastic Surgery and Dermatology. No changes to policy statements.
7/2008	BCBSA National medical policy review. Changes to policy statements.
3/2008	Reviewed - Medical Policy Group - Allergy and ENT/Otolaryngology. No changes to policy statements.
3/2007	BCBSA National medical policy review. No changes to policy statements.
3/2007	Reviewed - Medical Policy Group - Allergy and ENT/Otolaryngology. No changes to policy statements.

Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:

[Medical Policy Terms of Use](#)

[Managed Care Guidelines](#)

[Indemnity/PPO Guidelines](#)

[Clinical Exception Process](#)

[Medical Technology Assessment Guidelines](#)

References

1. Blue Cross and Blue Shield Association Technology Evaluation Center (TEC). Electrical stimulation or electromagnetic therapy as adjunctive treatments for chronic skin wounds. TEC Assessments. 2005; Volume 20:Tab 2.
2. Barnes R, Shahin Y, Gohil R, et al. Electrical stimulation vs. standard care for chronic ulcer healing: a systematic review and meta-analysis of randomised controlled trials. *Eur J Clin Invest*. Apr 2014;44(4):429-440. PMID 24456185
3. Franek A, Kostur R, Polak A, et al. Using high-voltage electrical stimulation in the treatment of recalcitrant pressure ulcers: results of a randomized, controlled clinical study. *Ostomy Wound Manage*. Mar 2012;58(3):30- 44. PMID 22391955
4. Houghton PE, Campbell KE, Fraser CH, et al. Electrical stimulation therapy increases rate of healing of pressure ulcers in community-dwelling people with spinal cord injury. *Arch Phys Med Rehabil*. May 2010;91(5):669-678. PMID 20434602
5. Kawasaki L, Mushahwar VK, Ho C, et al. The mechanisms and evidence of efficacy of electrical stimulation for healing of pressure ulcer: a systematic review. *Wound Repair Regen*. Mar-Apr 2014;22(2):161-173. PMID 24372691
6. Lala D, Spaulding SJ, Burke SM, et al. Electrical stimulation therapy for the treatment of pressure ulcers in individuals with spinal cord injury: a systematic review and meta-analysis. *Int Wound J*. Dec 2016;13(6):1214- 1226. PMID 25869151
7. Liu LQ, Moody J, Traynor M, et al. A systematic review of electrical stimulation for pressure ulcer prevention and treatment in people with spinal cord injuries. *J Spinal Cord Med*. Nov 2014;37(6):703-718. PMID 24969965
8. Thakral G, La Fontaine J, Kim P, et al. Treatment options for venous leg ulcers: effectiveness of vascular surgery, bioengineered tissue, and electrical stimulation. *Adv Skin Wound Care*. Apr 2015;28(4):164-172. PMID 25775200
9. Girgis B, Duarte JA. High Voltage Monophasic Pulsed Current (HVMP) for stage II-IV pressure ulcer healing. A systematic review and meta-analysis.. *J Tissue Viability*, 2018 Sep 5;27(4). PMID 30177421
10. Khouri C, Kotzki S, Roustit M, et al. Hierarchical evaluation of electrical stimulation protocols for chronic wound healing: An effect size meta-analysis. *Wound Repair Regen*. Oct 20 2017. PMID 29052946
11. Polak A, Kloth LC, Blaszczyk E, et al. The Efficacy of Pressure Ulcer Treatment With Cathodal and Cathodal- Anodal High-Voltage Monophasic Pulsed Current: A Prospective, Randomized, Controlled Clinical Trial. *Phys Ther*. Aug 1 2017;97(8):777-789. PMID 28789467
12. Aziz Z, Flemming K. Electromagnetic therapy for treating pressure ulcers. *Cochrane Database Syst Rev*. Dec 12 2012;12:CD002930. PMID 23235593
13. Aziz Z, Cullum N. Electromagnetic therapy for treating venous leg ulcers. *Cochrane Database Syst Rev*. Jul 2 2015;7:CD002933. PMID 26134172
14. Khooshideh M, Latifi Rostami SS, Sheikh M, et al. Pulsed electromagnetic fields for postsurgical pain management in women undergoing cesarean section: a randomized, double-blind, placebo-controlled trial. *Clin J Pain*. Feb 2017;33(2):142-147. PMID 28060214
15. Qaseem A, Humphrey LL, Forciea MA, et al. Treatment of pressure ulcers: a clinical practice guideline from the American College of Physicians. *Ann Intern Med*. Mar 3 2015;162(5):370-379. PMID 25732279
16. Bolton LL, Girolami S, Corbett L, et al. The Association for the Advancement of Wound Care (AAWC) venous and pressure ulcer guidelines. *Ostomy Wound Manage*. Nov 2014;60(11):24-66. PMID 25380098
17. Association for the Advancement of Wound Care (AAWC). Association for the Advancement of Wound Care guideline of pressure ulcer guidelines. Malvern, PA: AAWC; 2010.
18. Wound Ostomy and Continence Nurses Society (WOCN). Guideline for prevention and management of pressure ulcers (injuries). 2016; <https://www.guideline.gov/summaries/summary/50473>. Accessed November 21, 2019.
19. Centers for Medicare & Medicaid Services (CMS). National Coverage Determination (NCD) for Electrical Stimulation (ES) and Electromagnetic Therapy for the Treatment of Wounds (270.1). 2004; <https://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?ncdid=131&ver=3>. Accessed November 21, 2019.