

Medical Coverage Policy | Electrical Stimulation and Electromagnetic Therapy for Wound Treatments



EFFECTIVE DATE: 06|01|2023

POLICY LAST REVIEWED: 02|07|2024

OVERVIEW

Electrical stimulation or electrostimulation (ES) 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.

This policy is applicable to Commercial Products only. For Medicare Advantage Plans, please see Related Policies section below.

MEDICAL CRITERIA

Not applicable

PRIOR AUTHORIZATION

Not applicable

POLICY STATEMENT

Commercial Products

The following are considered not medically necessary as the evidence is insufficient to determine the effects of the technology on health outcomes:

- Electrical stimulation for the treatment of wounds including, but not limited to, low-intensity direct current, high-voltage pulsed current, alternating current, and transcutaneous electrical nerve stimulation
- Electrical stimulation performed by individuals in the home setting for the treatment of wounds
- Electromagnetic therapy for the treatment of wounds

COVERAGE

Benefits may vary between groups and contracts. Please refer to the appropriate Benefit Booklet, Evidence of Coverage, or Subscriber Agreement for applicable not medically benefits/coverage.

BACKGROUND

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.

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 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 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 2 systematic reviews of RCTs (1 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 that the technology results in an improvement in the net health outcome.

CODING

Commercial Products

The following HCPCS code(s) are not medically necessary:

- 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 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

The following HCPCS code(s) are not separately reimbursed:

- 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.

RELATED POLICIES

Medicare Advantage Plans National and Local Coverage Determinations

Non-Reimbursable Health Service Codes

PUBLISHED

Provider Update, April 2024

Provider Update, April 2023

Provider Update, April 2022

Provider Update, March 2021

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