

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



**EFFECTIVE DATE:** 10|01|2015

**POLICY LAST UPDATED:** 01|06|2021

### 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.

### MEDICAL CRITERIA

Not applicable

### PRIOR AUTHORIZATION

Not applicable

### POLICY STATEMENT

#### Commercial Products

Electrical stimulation and electromagnetic therapy for the treatment of chronic wounds is considered not medically necessary as the evidence is insufficient to determine the effects of the technology on health outcomes.

### 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

The normal wound healing process involves inflammatory, proliferative, and remodeling phases. When the healing process fails to progress properly and the wound persists for longer than 1 month, it may be described as a chronic wound. The types of chronic wounds most frequently addressed in studies of electrical stimulation for wound healing are: 1) pressure ulcers, 2) venous ulcers, 3) arterial ulcers, and 4) diabetic ulcers. 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. Not bearing weight is another important component of wound management.

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: 1) low-intensity direct current (LIDC), 2) high-voltage pulsed current (HVPC), 3) alternating current (AC), and 4) 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.

Currently, 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.

There is insufficient evidence from well-designed randomized controlled trials (RCTs) that electrostimulation or electromagnetic stimulation improves health outcomes for wound care patients beyond that provided by standard treatment. Some small RCTs on electrostimulation have reported improvements in some intermediate outcomes, such as decrease in wound size and/or the velocity of wound healing. However, these studies have not demonstrated consistent improvements on the more important clinical outcomes of complete healing and the time to complete healing. For electromagnetic therapy, there is a lack of high-quality RCTs. Therefore, these treatments are considered not medically necessary for the treatment of wounds as the evidence is insufficient to determine the effects of the technology on health outcomes.

### **CODING**

The following codes 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 codes 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**

BlueCHiP for Medicare National and Local Coverage Determinations

### **PUBLISHED**

Provider Update, March 2021

Provider Update, April 2020

Provider Update, June 2019

Provider Update, September 2018

Provider Update, December 2017

### **REFERENCES**

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14. CMS Manual System. Pub. 100-43 Medicare National Coverage Determinations. 2004; 2015. Available at: [www.cms.hhs.gov](http://www.cms.hhs.gov). Accessed December 6.

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