

MEDICAL POLICY – 1.01.24

Interferential Current Stimulation

BCBSA Ref. Policy: 1.01.24

Effective Date: Sept. 1, 2023

Last Revised: Oct. 4, 2023

Replaces: N/A


RELATED MEDICAL POLICIES:

1.01.507 Electrical Stimulation Devices

7.01.588 Percutaneous Electrical Nerve Stimulation and Percutaneous Neuromodulation Therapy

Select a hyperlink below to be directed to that section.

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Introduction

Interferential current stimulation is a type of electrical stimulation that is proposed to reduce musculoskeletal pain, treat stomach disorders such as constipation, irritable bowel syndrome, or heartburn, and post-stroke muscle stiffness (spasticity). Paired electrodes are placed superficially on the skin around the affected area. The electrodes carry alternating high frequency and medium frequency currents. It is believed that this type of stimulation penetrates the tissues more easily and with less unwanted stimulation of nerves to the skin, making it more comfortable than transcutaneous electrical nerve stimulation (TENS). Interferential current stimulation can also deliver higher currents than TENS (another type of electrical stimulation). However, it is considered investigational (unproven). There is not enough evidence to show that it is effective.

Note: The Introduction section is for your general knowledge and is not to be taken as policy coverage criteria. The rest of the policy uses specific words and concepts familiar to medical professionals. It is intended for providers. A provider can be a person, such as a doctor, nurse, psychologist, or dentist. A provider also can be a place where medical care is given, like a hospital, clinic, or lab. This policy informs them about when a service may be covered.

Policy Coverage Criteria

Treatment	Investigational
Interferential current stimulation	Interferential current stimulation is considered investigational.

Coding

Code	Description
HCPCS	
S8130	Interferential current stimulator, 2 channel
S8131	Interferential current stimulator, 4 channel

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Related Information

N/A

Evidence Review

Description

Interferential current stimulation (IFS) is a type of electrical stimulation used to reduce pain. The technique has been proposed to decrease pain and increase function in individuals with osteoarthritis and to treat other conditions such as constipation, irritable bowel syndrome, dyspepsia, and spasticity.



Background

Interferential current stimulation (IFS) is a type of electrical stimulation that has been investigated as a technique to reduce pain, improve function and range of motion, and treat gastrointestinal disorders.

IFS uses paired electrodes of two independent circuits carrying high-frequency and medium-frequency alternating currents. The superficial electrodes are aligned on the skin around the affected area. It is believed that IFS permeates the tissues more effectively and with less unwanted stimulation of cutaneous nerves and is more comfortable than transcutaneous electrical nerve stimulation. There are no standardized protocols for the use of IFS; IFS may vary by the frequency of stimulation, the pulse duration, treatment time, and electrode-placement technique.

Summary of Evidence

For individuals who have musculoskeletal conditions who receive IFS, the evidence includes randomized controlled trials (RCTs) and meta-analyses. Relevant outcomes are symptoms, functional outcomes, quality of life, medication use, and treatment-related morbidity. Placebo-controlled randomized trial(s) have found that IFS when used to treat musculoskeletal pain and impaired function(s), does not significantly improve outcomes.; Meta-analyses for IFS in musculoskeletal conditions have generally found IFS to be no more effective than other therapies. One network meta-analysis did find improvement with IFS compared with control, but the analysis is limited by indirect comparisons. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have gastrointestinal disorders who receive IFS, the evidence includes RCTs. Relevant outcomes are symptoms, functional outcomes, quality of life, medication use, and treatment-related morbidity. IFS has been tested for a variety of gastrointestinal conditions, with a small number of trials completed for each condition. The results of the trials are mixed, with some reporting benefit and others not. This body of evidence is inconclusive on whether IFS is an efficacious treatment for gastrointestinal conditions. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have poststroke spasticity who receive IFS, the evidence includes RCTs. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. The RCTs had small sample sizes and very short follow-up (immediately



posttreatment to 5 weeks). The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Ongoing and Unpublished Clinical Trials

A search of [ClinicalTrials.gov](https://clinicaltrials.gov) in May 2023 did not identify any ongoing or unpublished trials that would likely influence this review.

Practice Guidelines and Position Statements

The purpose of the following information is to provide reference material. Inclusion does not imply endorsement or alignment with the policy conclusions.

Guidelines or position statements will be considered for inclusion if they were issued by, or jointly by, a U.S. professional society, an international society with U.S. representation, or National Institute for Health and Care Excellence (NICE). Priority will be given to guidelines that are informed by a systematic review, include strength of evidence ratings, and include a description of management of conflict of interest.

American College of Occupational and Environmental Medicine

The American College of Occupational and Environmental Medicine published several relevant guidelines. For shoulder disorders, guidelines found the evidence on IFS to be insufficient and, depending on the specific disorder, either did not recommend IFS or were neutral on whether to recommend it.¹⁵ For low back disorders, guidelines found the evidence on IFS to be insufficient and did not recommend it.¹⁶ For knee disorders, guidelines recommended IFS for postoperative anterior cruciate ligament reconstruction, meniscectomy, and knee chondroplasty immediately postoperatively in the elderly.¹⁷ This was a level C recommendation.

American College of Physicians and the American Pain Society

In 2009, the clinical practice guidelines from the American College of Physicians and the American Pain Society concluded that there was insufficient evidence to recommend interferential current stimulation (IFS) for the treatment of low back pain.¹⁸ An update of these



guidelines by the American College of Physicians (2017) confirmed the 2009 findings that there was insufficient evidence to determine the effectiveness of interferential current stimulation (IFS) for the treatment of low back pain.¹⁹

National Institute for Health and Care Excellence

In 2016, the National Institute for Health and Care Excellence published a guideline (NG59) on assessment and management of low back pain and sciatica in people aged 16 and over.³ The guideline states “Do not offer interferential therapy for managing low back pain with or without sciatica”.

Medicare National Coverage

There is no national coverage determination.

Regulatory Status

A number of IFS devices have been cleared for marketing by the U.S. Food and Drug Administration through the 510(k) process, including the Medstar 100 (MedNet Services) and the RS-4i (RS Medical). IFS may be included in multimodal electrotherapy devices such as transcutaneous electrical nerve stimulation and functional electrostimulation.

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History

Date	Comments
08/01/20	New policy, approved July 14, 2020. Interferential current stimulation is considered investigational.



Date	Comments
09/01/21	Annual Review, approved August 3, 2021. Policy updated with literature review through May 3, 2021; references added. Policy statement unchanged.
09/01/22	Annual Review, approved August 8, 2022. Policy updated with literature review through April 22, 2022; reference added. Policy statement unchanged.
09/01/23	Annual Review, approved August 7, 2023. Policy updated with literature review through April 19, 2023; no references added. Policy statement unchanged. Changed the wording from "patient" to "individual" throughout the policy for standardization.
10/04/23	Updated related policy. Policy 7.01.29 Percutaneous Electrical Nerve Stimulation and Percutaneous Neuromodulation Therapy was renumbered to 7.01.588 Percutaneous Electrical Nerve Stimulation and Percutaneous Neuromodulation Therapy.

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