

SAFE AND SOUND

Pain Management

PRESCRIBING

Transcutaneous Electrical Nerve Stimulation (TENS)

Transcutaneous electrical nerve stimulation (TENS) is the delivery of pulsed low voltage electrical currents across the intact surface of the skin to stimulate peripheral nerves for short term pain relief.

TENS produces analgesia via stimulation of large afferent fibers. This is generally used for mild-moderate acute pain and chronic pain such as low back pain, arthritis, and neuropathic pain. Electrodes are applied to the same dermatome as the pain. The electrodes are periodically stimulated by a direct current generator.

Theories:

- Gate Theory: afferent input from large epicritic fibers competes out input from small pain fibers.
- Conduction block theory: high rates of stimulation exhaust the small nerve fiber ability to transmit signal.

Indications:

- Chronic low back pain
- Painful diabetic neuropathy
- Neuropathic pain
- Visceral pain and dysmenorrhea
- Musculoskeletal pain
- Acute postoperative pain and acute post traumatic pain
- Chronic pain: e.g. (rheumatoid arthritis, osteoarthritis, etc

Contraindications:

- Should not be used in patients with a pacemaker (especially of the demand type).

- Should not be used during pregnancy, because it may induce premature labor.
- Should not be applied over the carotid sinuses due to the risk of acute hypotension through a vasovagal reflex.
- Should not be placed over the anterior neck, because laryngospasm due to laryngeal muscle contraction may occur.
- The electrodes should not be placed in an area of sensory impairment (eg, in cases of nerve lesions, neuropathies), where the possibility of burns exists.
- The electrodes should not be placed over the eyes.
- Should be used cautiously in patients with a spinal cord stimulator or an intrathecal pump.

How to order for outpatient:

If the patient is working with a physical therapist – place an order to physical therapy to add TENS unit for home use.

If patient is not receiving physical therapy - then place an order in EPIC for DME: TENS Unit and route to Cook Children’s Home Health via EPIC or manually fax order to 682-885-8409. Home health will make arrangements for education and delivery with physical therapy.

How to order for inpatient:

TENS units are not currently used inpatient. If you order TENS unit at discharge for home use follow the outpatient instructions.

Most insurance covers TENS units, however most often require a prior authorization.