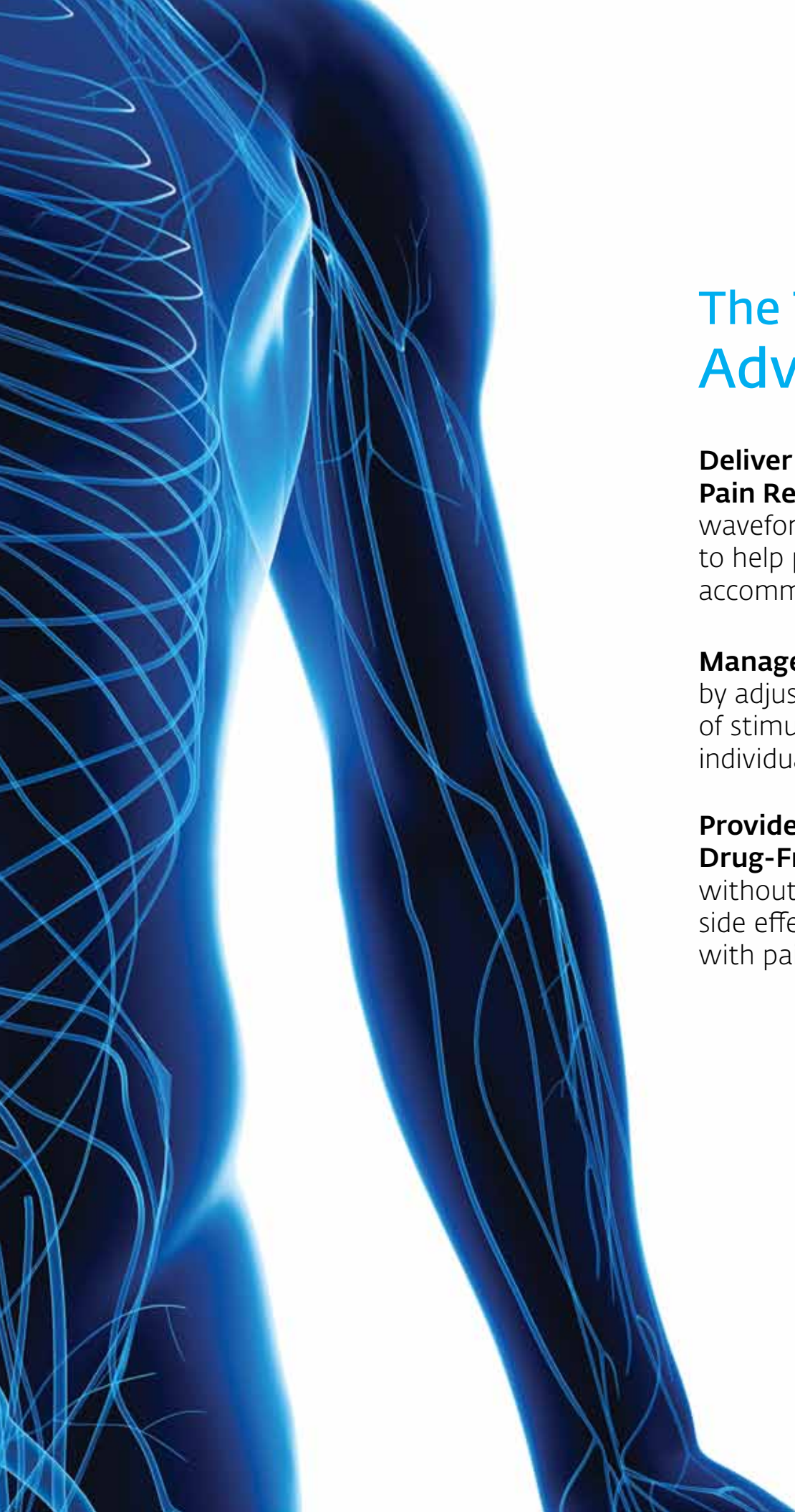




Pain Management

Practical Applications in Electrotherapy





The TENS Advantage™

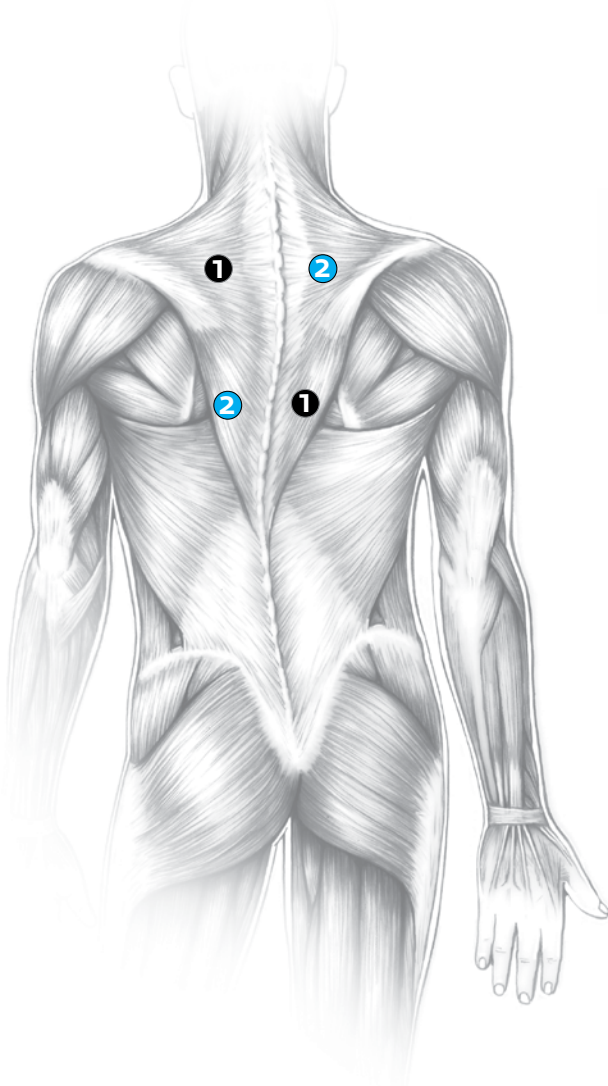
Deliver Immediate Pain Relief using a unique waveform designed to help prevent nerve accommodation.

Manage Dynamic Pain by adjusting the level of stimulation for each individual's needs.

Provide Long-Term, Drug-Free Therapy without adding negative side effects associated with pain medication.

Conditions

Note: These electrode placements serve only as a guide and will vary by indication and individual patient need. Specific electrode placement should be determined by the physician. Please see the back of this brochure for important device information.



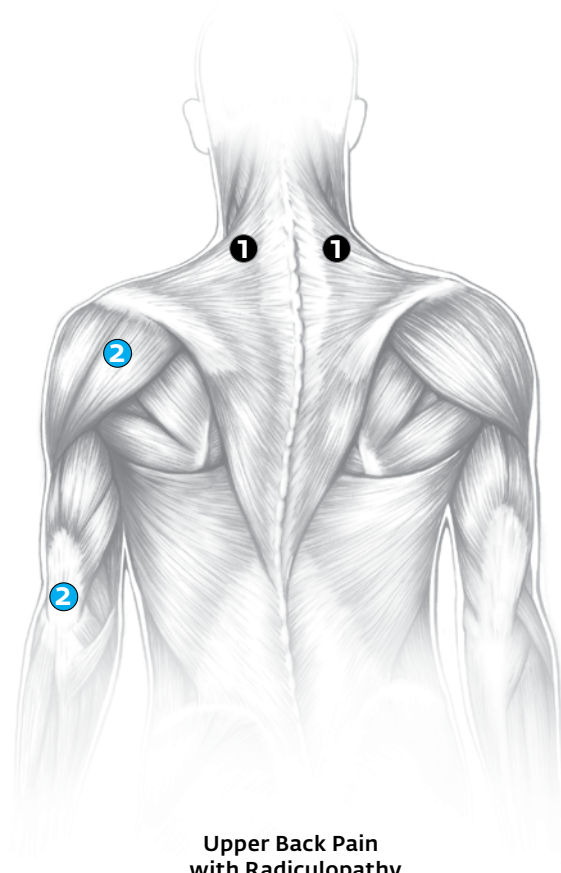
Upper Back Pain

Upper Back

Pain Relief and Exercise Improved Function

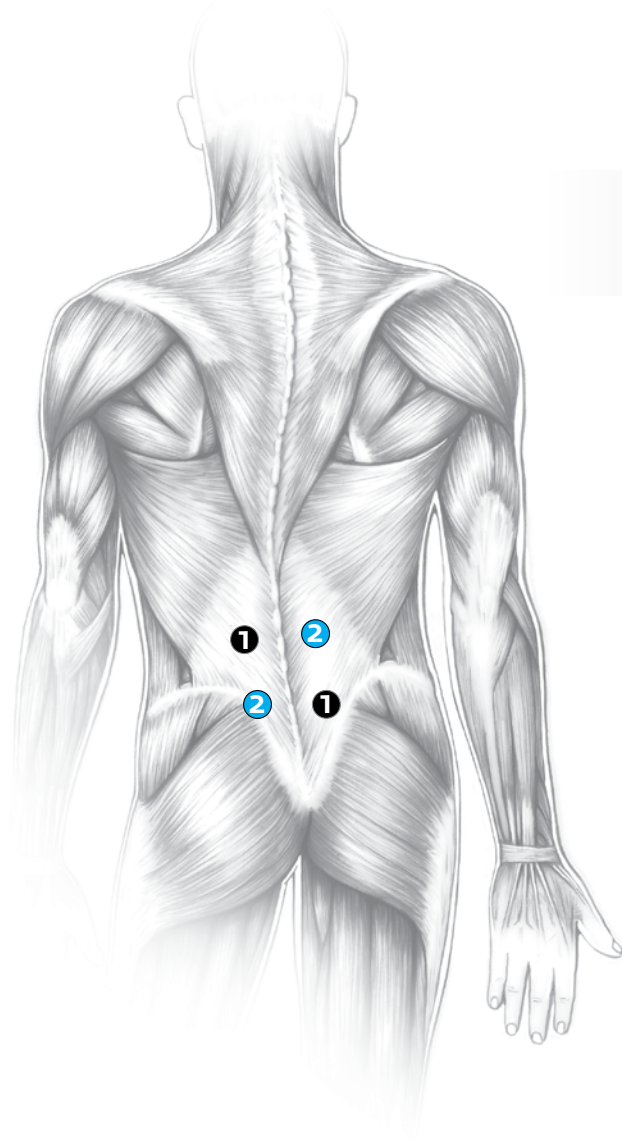
"After the six-week treatment, patients in the TENS and exercise group had a better and clinically relevant improvement in disability, isometric neck muscle strength, and pain. All the improvements in the intervention groups were maintained at the six-month follow-up."

(n = 73; Chiu et al., *Clinical Rehab* 2005)



Upper Back Pain
with Radiculopathy

Conditions



Chronic Low Back Pain

Reduction in Medication

"TENS and (Interferential Current) IFC produced significant effects in relation to pain intensity reduction, disability improvement and reduction in medication consumption."

(n = 150; Facci et al., Sao Paulo Med J 2011)

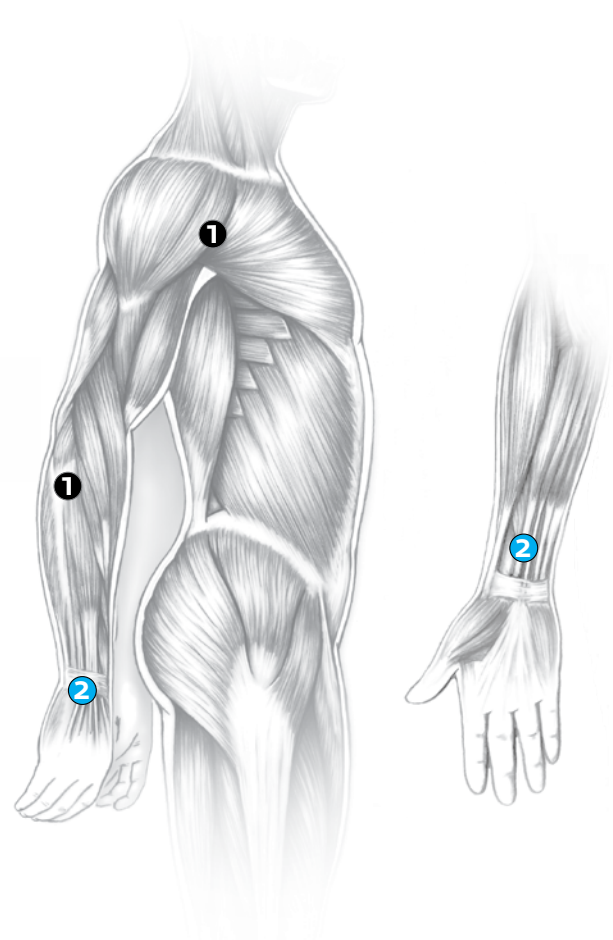
Centralized Low Back Pain

Reflex Sympathetic Dystrophy

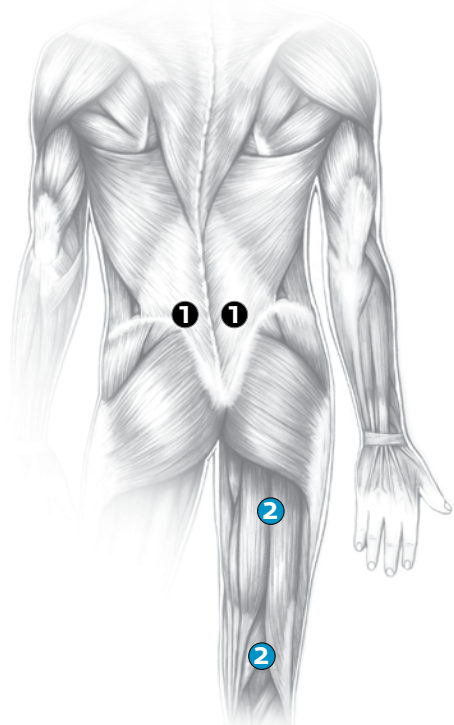
Patients Scored High on Pain Relief

70% of TENS recipients gave an excellent to good pain relief response for their RSD.

(n = 35; Robaina et al., Stereotact Funct Neurosurg 1989)



Note: These electrode placements serve only as a guide and will vary by indication and individual patient need. Specific electrode placement should be determined by the physician. Please see the back of this brochure for important device information.

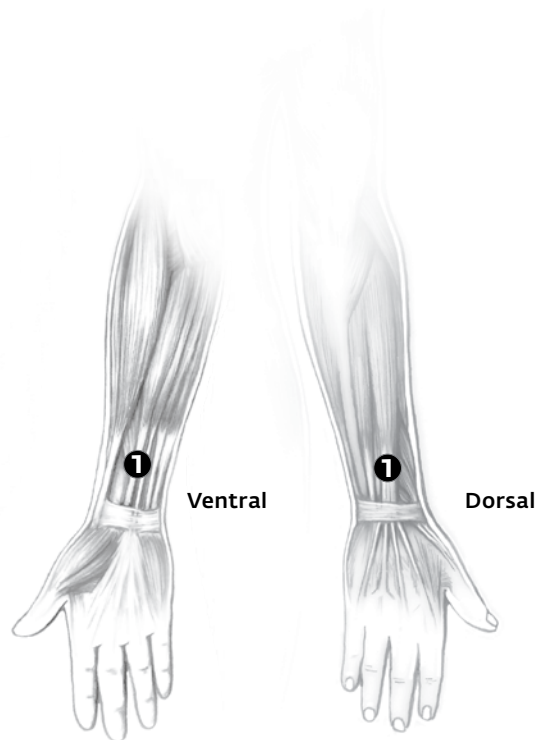


Peripheral Neuropathy†

Improved Pain Relief

"TENS therapy may be an effective and safe strategy in treatment of symptomatic Diabetic Peripheral Neuropathy."

(n = 78; Jin et al., *Diabetes Research and Clinical Practice* 2010)



Rheumatoid Arthritis

Pain Relief Improved Function

"AL-TENS (low frequency and high intensity) is beneficial for reducing pain intensity and improving muscle power scores over placebo."

(n = 73; Brosseau et al., *Cochrane Review: The Cochrane Collaboration* 2008)

Other Painful Conditions

Degenerative Joint Disease

Degenerative Disc Disease

Post-Surgical Back Pain

Phantom Limb Pain

Patient Case Highlight

Post-Laminectomy Syndrome

Background: 45 y/o male presents with constant centralized Rt lumbar pain related to previous injury. 2010 Laminectomy has not offered sufficient relief.

Diagnosis: 722.83 Postlaminectomy syndrome of lumbar region

Treatment: Rest, Ice, Limited Activity, TENS 3 – 4 per day; 30 min; home unit

Outcome: Pt reports better pain relief after four weeks. Able to tolerate moderate activities of daily living.

This case highlight serves only as an example. Results may not be typical. Results will vary according to specific procedures, indications, and patient progress.

Procedures



Corticosteroid Injections



Radiofrequency Ablation

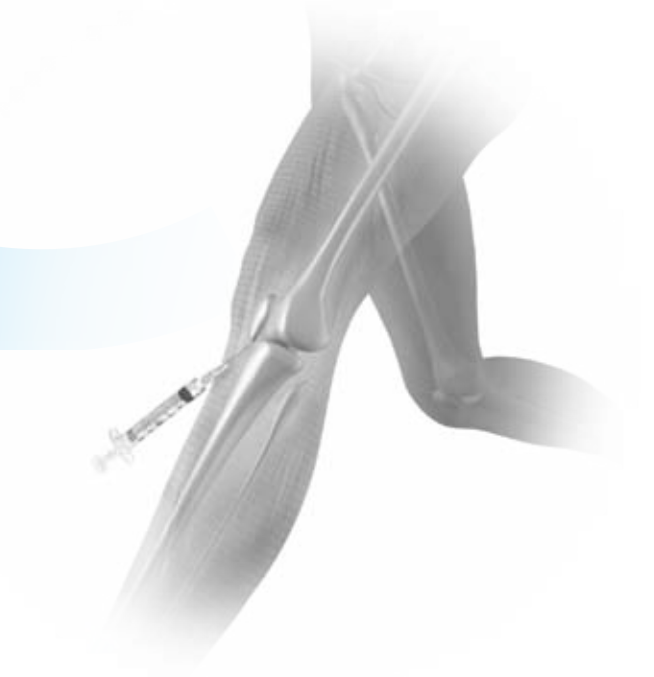


Manual Therapy



TENS may work well by complementing other pain management applications.

Hyaluronic Acid Injections



Empi TENS devices have not been comparatively tested with these procedures nor have they been FDA cleared as an adjunctive treatment to these procedures for pain management.



Typical TENS Treatment:

Frequency: 3 – 4 time a day
Duration: 30 – 60 minute sessions
Intensity: ~ 2-3x sensory threshold
(strong but comfortable)

Treatment protocols may vary and should be performed under the supervision of a clinician.

Empi Select and Empi Active TENS devices are indicated for

- Symptomatic relief and management of chronic, intractable pain
- Adjunctive treatment for post-surgical and post-traumatic acute pain
- Relief of pain associated with arthritis

A Better Prescription for Pain™

Empi Electrotherapy products are prescription devices. Contact your local Sales Representative for more information or if you want to prescribe the device.

For full instructions for use, contraindications, warnings, precautions, dangers, and adverse reactions, refer to the TENS device's instruction manual.

1. Facci L, Nowotny J, Tormem F and Trevisani V. Effects of Transcutaneous Electrical Nerve Stimulation and Interferential Currents in Patients with Nonspecific Chronic Low Back Pain: Randomized Clinical Trial. *Sao Paulo Med J*. Vol 4, N 129, (206-16) Apr 2011.
2. Chiu T, Hui-Chan C, and Cheing G. A Randomized Clinical Trial of TENS and Exercise for Patients with Chronic Neck Pain. *Clin Rehabil* Vol 19, No 12, (850-60) Dec 2005.
3. Jin D, Xu Y, Geng D, and Yan T. Effect of Transcutaneous Electrical Nerve Stimulation on Symptomatic Diabetic Peripheral Neuropathy: A Meta-Analysis of Randomized Controlled Trials. *Diabetes Res Clin Pract*. Vol 89, No 1, (10 – 15) Jul 2010.
4. Robaina F, Rodriguez J, de Vera J, and Martin M. Transcutaneous Electrical Nerve Stimulation and Spinal Cord Stimulation for Pain Relief in Reflex Sympathetic Dystrophy. *Stereotact Funct Neurosurg*. Vol 52, No 1, (53-62) Jan 1989.
5. Brosseau L, Yonge KA, Robinson V, and others. Transcutaneous Electrical Nerve Stimulation (TENS) for the Treatment of Rheumatoid Arthritis in the Hand. *Cochrane Database of Systematic Reviews* 2003, Issue 2.



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Together in Motion™

† Electrodes need to be placed on skin with good sensation. If patient cannot feel stimulation on suggested areas, move electrodes proximal to the painful site, placing them along the nerve pathway.