



Proven Solutions for Cost Containment

PMSI Product Knowledge



Electro-Medical Therapy
Cold and Heat Therapy
Continuous Passive Motion

Pharmacy

**Medical Services
and Equipment**

Settlement Solutions

Electro-Medical Therapy

Product Knowledge

- Transcutaneous electrical nerve stimulation (TENS)
- Neuromuscular electrical nerve stimulation
- High-volt pulsed galvanic stimulation
- Interferential stimulation
- Microcurrent electrical nerve stimulation
- Bone growth stimulator

Product Knowledge

TENS Units

Transcutaneous Electrical Nerve Stimulation: Primarily used for managing chronic pain. Works by blocking the pain signal, and by increasing endorphins in the body. Can be worn all day or on an as-needed basis. Device features include adjustable pulse rate, pulse width, and amplitude (intensity). Higher-priced units offer modulation (variations) of pulse rate, width, and/or amplitude settings, and other user-friendly features. Placements of electrodes are usually at pain site or along the nerve channels, called dermatomes.

- **Approved Indications:** Acute and chronic pain relief
- **Common Uses:** Back and cervical muscular and disc syndromes, RSD, arthritis, shoulder syndromes, neuropathies, and many other conditions

Product Knowledge

Muscle Stimulator (NMES)

Neuromuscular Electrical Nerve Stimulation: Primarily used for preventing disuse atrophy (muscle wasting). Stronger than a TENS unit, with a wider pulse width to elicit muscle contraction for a period of time. More than just nerve stimulation, muscles are contracted and relaxed on and off to strengthen muscles, increase blood circulation to the area, and/or to reduce edema. Device features include adjustable pulse rate, width, amplitude, ramp, alternating or synchronous stimulation. Higher-priced devices offer accessory jacks for remote switches, AC Adapters, and other user-friendly features. Electrode placement is very important, mostly over motor points or on the belly of muscles.

- **Approved Indications:** Maintain or increase range of motion, prevent or retard disuse atrophy, muscle re-education, relaxation of muscle spasm, increase circulation, prevention of venous thrombosis
- **Common Uses:** Post-orthopedic surgery, joint replacement, strengthening programs, gait training, shoulder subluxation and reduction of muscle spasm
- **How It Differs from TENS:** Stimulates motor nerves to contract muscle while TENS stimulates sensory nerves to block pain; reduces edema and increases circulation through muscle pumping

Product Knowledge

HVPG

High-Volt Pulsed Galvanic Stimulation: Primarily used for quickly increasing circulation or reducing edema in a specified area. Also used widely by PTs for wound healing. Uses high-voltage and direct current (DC) as opposed to low voltage and alternating current (AC) common in TENS or NMES. Device features include adjustable pulse rate, positive or negative polarity switch, alternating or synchronous stimulation. Large "dispersive" pad is needed to ground the current. Smaller "active" pads are placed over treatment site.

- **Approved Indications:** Maintain or increase range of motion, disuse atrophy, muscle re-education, increase circulation, prevent venous thrombosis and edema reduction
- **Common Uses:** Post-op orthopedic surgery, pain control, sprains and strains, degenerative joint disease and edema reduction
- **How it Differs from TENS:** Reduces edema; pulsed direct current vs. alternating current; able to use in water bath (immersion technique)

Product Knowledge

INF

Interferential Stimulation: Primarily used to manage deep chronic pain. INF current uses very high pulse rate, usually 4001 – 4150 pulses per second. This higher frequency goes through the skin and muscle better than TENS or other modalities thus can be more effective in pain control. Provides more analgesic, or nerve blocking effect. Device features include adjustable pulse rate, two or four electrode treatment selection, and modulation of pulse rate. Because of such frequency, these devices will require a lot of power. Batteries will not last long. AC adapters are usually provided with device. Electrode placement should be in an "X" pattern, as the point of intersection provides a third stronger frequency.

- **Approved Indications:** pain control and edema reduction
- **Common Uses:** pre- and post-orthopedic surgery, joint injury syndrome, cumulative trauma disorders, inflammatory conditions and pain control of various origins
- **How It Differs From TENS:** deeper penetration with more comfort (compliance), increased circulation and edema reduction

Product Knowledge

MENS

Microcurrent Electrical Nerve Stimulation: Microcurrent electrical nerve stimulation (MENS) uses micro-amperage current as opposed to milliamperage current, which is found primarily in TENS devices. Microamp current is 1/1000 of a milliamp current and is closer to our own body's natural healing current. Whereas TENS is used generally for relief of pain, MENS is thought to work more on a cellular level and aids in the healing process while relieving pain. It has been found that MENS can help increase levels of a chemical called ATP (adenosine triphosphate,) which promotes protein synthesis and healing in tissue cells. MENS is a very subtle, yet powerful current, and treatment levels are usually sub-sensory—the patient barely feels the stimulation. In many cases where TENS or other electrotherapy modalities have been unsuccessful, MENS has been proven to be effective.

- **Approved Indications:** Symptomatic pain relief; adjunctively to manage post surgical and post traumatic acute pain
- **Common Uses** – Chronic and acute pain, swelling, TMJ dysfunctions; post-op care, sports injuries and arthritis
- **How It Differs From TENS** – Uses current at a millionth of an amp (microamp): TENS uses milliamps to “block” pain while microamps act on the naturally occurring electrical impulses to decrease pain by stimulating healing.

Product Knowledge

TENS – HCPCS vary

"TENS unit" is a pocket size, portable, battery-operated device that sends electrical impulses to certain parts of the body to block pain signals.

- Supplies consist of:
 - Batteries, lead wires
 - Electrodes
 - Gels and creams
- Follow clinical guidelines for supplies; recommendations based on usage



Product Knowledge

TENS – E0720, E7030, E0770

- AC TENS UNIT
- AR MEDS 3
- AR MEDS 4 CHAN
- BIOMED2000 TENS
- BIOSTIM LX TENS
- EM EPIX VT TENS
- EM NT2000
- EM ORTHO DX
- EM PROMAX
- EM SELECT TENS
- ES TENS 2001
- ES TENS 6000 DUAL CHAN W TIMER
- MAXIMA DIGITAL
- MAXIMA II TENS
- PM ARISTA UNIT
- RS TENS
- SO TENS UNIT
- TENS 6000
- VQ TEAR TECH & OS 3
- VQ TENS
- VQ VECTOR



**Complete
Set Up**



Product Knowledge

TENS – E7031, E746, E762

■ Combo Units

- 4 CHAN IF/MUSCLE
- AN ANDME 2(4CHANNEL COMBO)
- ES IF
- GVII NMS
- IF 5000
- IF MUSCLE STIM
- IF QUARTET
- RS RS4I

■ Garment Units (E0731)

- CONDUCTIVE GARMENT
- ES FLEX GAR BACK
- ES FLEX GAR CERVICAL
- RS FBS COND GARMENT
- RS LB COND GARMENT



Ankle



Wrist



Low Back

Product Knowledge

TENS – INTERFERENTIAL (E0745) and GALVANIC UNITS (E1399)

- AN IF STIM
- BIOSTIM INF INTER
- EM IF 3 WAVE
- EM INFINITY PLUS RR
- EM INFINITY
- EM PV300NMES HV&IF
- ES 4250 IF UNIT
- IF UNIT
- IF2 INTERFERENTIAL
- INF PLUS INTERFR
- TP IF UNIT
- VQ FAST START IF 4000
- AN GALVANIC STIM
- GALVANIC STIMULATOR PGS 123



Product Knowledge

Muscle Stimulators – E0744, E0745, E0746

- AN MUSCLE STIM
- DIGISTIM R-STIM II
- EM EMS+2 NMES
- EMG RETRAINER
- EMS 2000 M MUS.STIM
- EMS+2 M NMS
- FM TRI WAVES STIM
- MUSCLE STIM
- MUSCLE STIM RR
- MUSCLE STIM/IF
- NEURO IIIM NMS
- NEUROSTIMULAR KINETIC
- PGS 3000 NMS
- PM MUSCLE STIM
- RS 4M
- RS BIONICARE 1000 UNIT
- RS OA STIMULATOR
- RS RS2M
- RS RS4 UNIT
- VQ FS EMS
- VQ SURGI STIM 1ST ECO



Product Knowledge

BGS

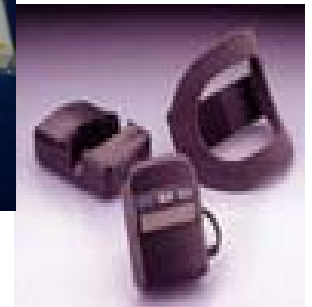
Bone Growth Stimulator: Uses either electronic stimulation or ultrasound to heal broken bones. Used when a bone does not heal for a very long period of time. It is mainly used in patients who are failing to heal from fractures that have occurred over three months or more prior to treatment with these devices. Although the FDA-approved ultrasound bone growth stimulation in 1996, the treatments are still very expensive and there is still much debate about when the treatment should be chosen.

- **Indications:** non-union fracture healing with a distance of one centimeter or less. Patients who smoke, have a history of alcoholism or are suffering with lupus, diabetes or other autoimmune disorders, are considered prime candidates for this therapy.
- **Common Uses:** can be used on just about any bone but it is most effective on very long bones, such as the tibia. It is used most often on spinal fusions, which are very difficult to heal. The one occasion in which the stimulator cannot work is if there is a gap that is too big between the two ends of the broken bone.

Product Knowledge

Bone Growth Stimulators – E0747, E0748

- Used post operatively to expedite healing time of bones and for non-union fractures
- Two models available:
 - Spinal
 - Long bone
- Manufacturers: Orthofix, Biomet (formerly EBI), Exogen (Smith and Nephew), DJO



Product Knowledge

Spinal Bone Growth Stimulators – E0748

- Used post-operatively to expedite healing time of bones and for non-union fractures
- Two models available:
 - Spinal
 - Long Bone
- Three major models: Orthofix, EBI, Smith and Nephew



Cold and Heat Therapy

Product Knowledge

- Cold therapy
- Heat therapy

Product Knowledge

Cold Therapy Units – E0218

- Price includes pad
- Knee, Shoulder and Back wraps are available for an additional cost
- Unit requires ice and cold water replaced throughout the day for effective therapy

aka Cryo unit, cold unit, cryo-therapy.



Product Knowledge

Aircast Cryo Cuff – E0218

- Units are sold complete with pad and wrap for knee, shoulder, ankle or back
- This unit is not motorized and therefore is not as expensive
- Unit requires ice and cold water replaced throughout the day for effective therapy

aka cryo cuff



Product Knowledge

Thermophore Moist Heating Pad – E0215

A Thermophore heating pad produces its own moisture by drawing moisture from humidity in the air and retaining it in the outer flannel cover. The Thermophore is more effective than other electric heating pads on the market because it delivers very intense, moist heat; no water needed

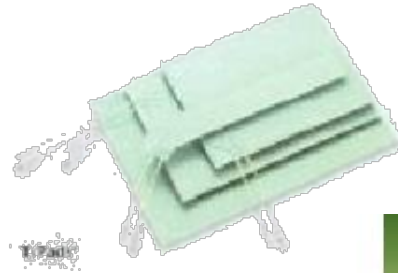
- Available in four sizes: standard, medium, petite and muff



Product Knowledge

K-Pad (T Pump) with Pump and Pad – E0237

- Uses a controlled heat with thermostat.
- Pads available include:
 - Neck
 - Back
 - Leg
 - Arm.
- Gaymar T-pump provides localized heat therapy



Continuous Passive Motion

- Continuous Passive Motion (CPM) is a post-operative treatment method that is designed to aid recovery after joint surgery. In most patients, after extensive joint surgery, attempts at joint motion cause pain and as a result, the patient fails to move the joint. This allows the tissue around the joint to become stiff and for scar tissue to form resulting in a joint that has limited range of motion and often may take months of physical therapy to recover that motion.
- Passive range of motion means that the joint is moved without the patient's muscles being used. Continuous Passive Motion devices are machines that have been developed for patients to use after surgery.
- Applied post-operatively, this device may be used on an inpatient or an outpatient basis. By using a motorized device to very gradually move the joint, it is possible to significantly accelerate recovery time by decreasing soft tissue stiffness, increasing range of motion, promoting healing of joint surfaces and soft tissue, and preventing the development of motion-limiting adhesions (scar tissue). This is accomplished without patient effort (passively) as the machine moves a joint through a defined (prescribed) range of motion for an extended period of time. Studies have shown that patients using CPM devices require less pain medication than patients who have had the same type of surgery and are not using this device.

Product Knowledge

Ankle CPM – E0935

- Must be applied within 72 hours of surgery to be effective
- Used to increase range of motion post operatively

aka passive motion machine



Product Knowledge

Elbow CPM – E0935

- Used to increase range of motion post operatively
- Must be applied within 72 hours of surgery to be effective

aka passive motion machine

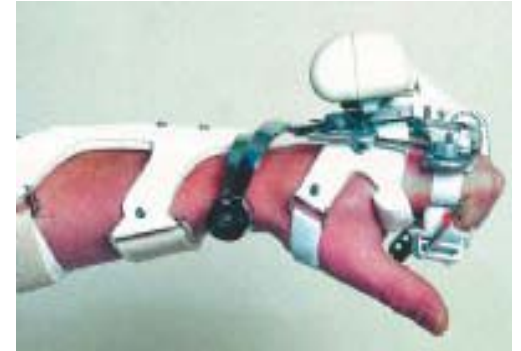


Product Knowledge

Hand CPM – E0935

- Must be applied within 72 hours of surgery to be effective
- Used to increase range of motion post operatively

aka passive motion machine



Product Knowledge

Knee CPM – E0935

- Must be applied within 72 hours of surgery to be effective
- Used to increase range of motion post operatively

aka passive motion machine



Product Knowledge

Shoulder CPM – E0935

- Must be applied within 72 hours of surgery to be effective
- Used to increase range of motion post operatively

aka passive motion machine



Product Knowledge

Wrist CPM – E0935

- Must be applied within 72 hours of surgery to be effective
- Used to increase range of motion post operatively

aka passive motion machine



Product Knowledge

Saunders Cervical Traction – E0855

- This unit is operated hydraulically while the patient is lying on their back
- Requires prescription
- This unit is universal and does not come in different sizes

