



QUADPOLAR INTERFERENTIAL

Electrical stimulation at higher frequencies(5000Hz) penetrates the skin easily due to capacitive effects of the skin, but has little therapeutic effect. Lower frequencies(0-200Hz) are therapeutic, yet produce irritation or even pain if applied directly. Interferential current utilizes two high frequencies to pass through the skin barrier and then mixes the two frequencies to produce a lower, therapeutic frequency within the tissues.

Quadpolar is named such that two channels totalling four(quad) electrodes work in conjunction to provide Interferential treatment by combining the two separate sine waves shown in Figure 1. By criss-crossing these electrodes, the two sine waves mix and produce a "beat" frequency within the tissue shown in Figure 2. This beat is the difference in the two sine waves in Figure 1.

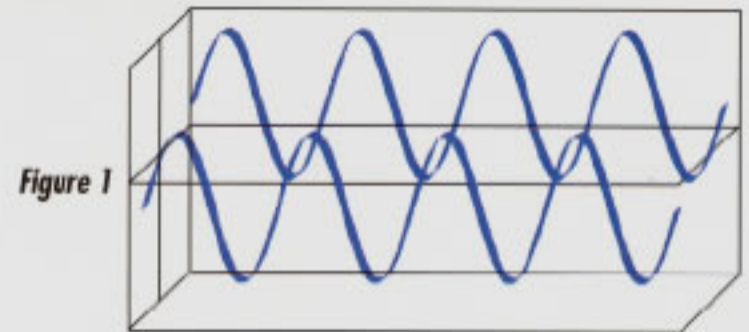


Figure 1

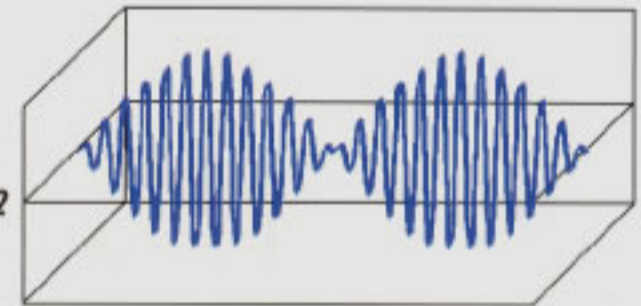


Figure 2

Interferential Protocols by Sam Davis, PT

CARPAL TUNNEL



MODE: Quad IF-Continuous
PULSE RATE: 90-100Hz Scan(days 1-3), then 0-100Hz Scan
VECTOR: Shallow and Slow
TIME: 20 Minutes

DOSAGE: Sensory(day 1) to tolerance(days 7-10)
REGIMEN: Daily
TREATMENTS: 10

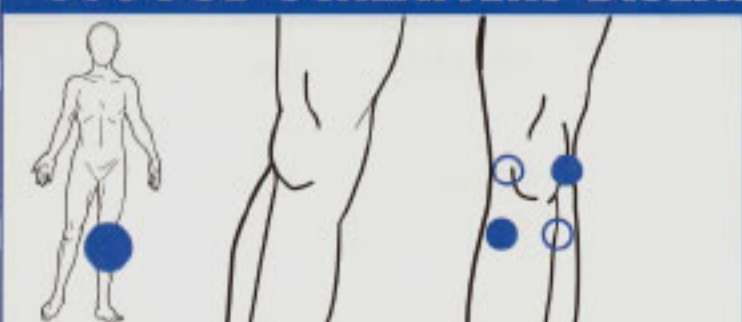
BLADDER SPASM



MODE: Quad IF-Continuous
PULSE RATE: 100Hz Fixed(days 1-2), 90-100Hz Scan(days 3-10)
VECTOR: Shallow and Slow
TIME: 20 Minutes

DOSAGE: Gradual sensory to tolerance
REGIMEN: Daily
TREATMENTS: 10

OSGOOD SCHLATTERS DISEASE



MODE: Quad IF-Continuous
PULSE RATE: 100Hz Fixed or 90-100Hz Scan
VECTOR: Shallow and Normal
TIME: 15 Minutes

DOSAGE: Tolerance just below Motor threshold
REGIMEN: Daily or E.O.D.
TREATMENTS: 15



Quadpolar Interferential Protocols by Sam Davis, PT

PERITONEAL ADHESIONS



MODE: Quad IF-Continuous
PULSE RATE: 0-10Hz Scan
VECTOR: Deep and Slow
TIME: 20 Minutes
REGIMEN: Daily or E.O.D.

DOSAGE: Strong sensory(1-3)
 increase as pain
 subsides-(days 4-10)
TREATMENTS: 6-10

HYPOMOBILITY OF THE LUMBAR SPINAL SEGMENTS



MODE: Quad IF-Chain
PULSE RATE: 0-10Hz Scan⁽¹⁾ then,
 90-100Hz Scan⁽²⁾
VECTOR: Deep and Slow for Intertransversal
TIME: 10-20 Min⁽¹⁾, 10-15 Min⁽²⁾

DOSAGE: Moderate motor², to
 strong motor²
REGIMEN: Daily
TREATMENTS: Variable, 5-10

MYOSITIS OSSIFICANS OF QUADRICEPS



MODE: Quad IF-Continuous
PULSE RATE: 0-100Hz Scan
VECTOR: Shallow and Normal
TIME: 15 min, gradual to 30 min

DOSAGE: Tolerance just below
 Motor threshold
REGIMEN: Daily
TREATMENTS: 10-15

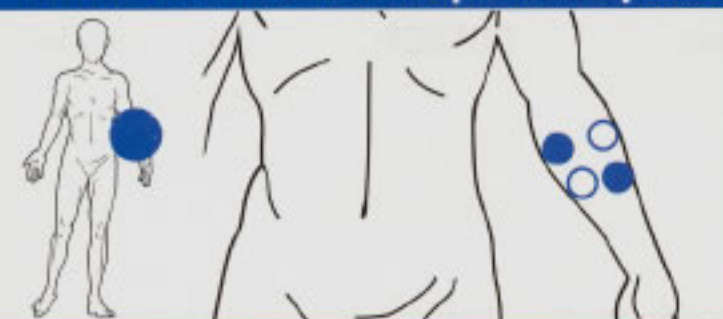
JOINT CONTRACTURES Electode position dependant upon injury location



MODE: Quad IF-Continuous
PULSE RATE: 0-10Hz Scan
VECTOR: Deep and Normal
TIME: 10-15 Minutes

DOSAGE: Sensory to just below
 Motor threshold
REGIMEN: Daily
TREATMENTS: 3-10

TENDINITIS Electode position dependant upon injury location



MODE: Quad IF-Continuous
PULSE RATE: 90-100Hz Scan(days 1-3),
 then 0-100Hz Scan
VECTOR: Medium and Slow
TIME: 5-20 Minutes

DOSAGE: Sensory to just below
 Motor threshold
REGIMEN: Daily
TREATMENTS: 10-15

References: Davis S. *Interferential Current Therapy in Clinical Practice*. Birmingham, AL: The Best of Times, Inc.; 1993 1-148.

NOTE: The practitioner is advised to check the product information and new research indications and contradictions before applying this modality. These protocols are only guidelines and are not meant to indicate that there are not other waveforms, parameters, or modalities applicable to the stated indications. Any individual patient(pathology) must be individually evaluated to determine optimal treatment parameters.

CPT Codes for Electrical Stim include: 97014-electrical stimulation (unattended), 97112-neuromuscular re-education, and 97118-electrical stimulation (manual)