Pilot evaluation: Effects of non-invasive, low level pulsed DC magnetic fields on chronic intractable pain states.

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Pilot evaluation : PEMF

- **OBJECTIVE:** To determine if pulsed electromagnetic fields of low amplitude and frequency can effect pain and sleep patterns in patients with chronic intractable pain for greater than 2 years.
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- **PATIENTS/SETTING:**
  - 11 patients suffering intractable chronic pain: 6 Neuropathic, 3 Somatic, 2 Mixed
  - Non-placebo controlled preliminary study where low level pulsed electromagnetic fields were applied at home on a regular basis.
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**INTERVENTION:** Non invasive pulsed electromagnetic field therapy generates a pulsed unidirectional waveform with a peak strength of about 90 gauss on the surface of the electromagnet (and about .05 gauss through a 6 -10 inch mattress).
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**INTERVENTION:**

- PEMF is applied at night through a mattress at about 10 Hz.
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• **RESULTS:**
  - 11 patients
    7 improvements in quality of sleep.

Subjectively assessed by number of hours of sleep, sense of well being, fatigue, energy level.

• Neuropathic pain
  - 4 of 6 improved sleep

• Somatic
  - 1 of 3 improved sleep

• Mixed
  - 2 of 2 improved sleep
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• RESULTS:
  – 11 patients
    7 improvements in pain.

  Subjectively assessed by Visual analog pain scales.

• Neuropathic pain
  – 4 of 6 reduced pain

• Somatic
  – 2 of 3 reduced pain

• Mixed
  – 1 of 2 reduced pain
Pilot evaluation : PEMF

**RESULTS:**

- **11 patients**
  - 8 improvements in either pain or sleep
  
  Subjectively assessed by Visual analog pain scales and quality of sleep.

- **8 patients** - Improvement
  - Average use continuous 2.5 months

- **3 patients** - No improvement
  - Average use 1 week
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**RESULTS:**

- 11 patients
  - 8 improvements in either pain or sleep
  - Subjectively assessed by Visual analog pain scales and quality of sleep.

- 8 patients-Improvement
  - 3 ordered own equipment
  - 1 stopped sleep medication
Pilot evaluation: PEMF

• Summation
  - Pilot study suggests very powerful effect on both sleep and pain on heterogeneous group of patients with chronic intractable pain.
  - Further blinded and placebo controlled studies are warranted.
THE END

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