

Discogenic Low Back Pain Surgery and Treatment with Pulsed Electromagnetic Field Therapy

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Spine fusion for discogenic low back pain: outcomes in patients treated with or without pulsed electromagnetic field stimulation.

Sixty-one randomly selected patients who underwent lumbar fusion surgeries for discogenic low back pain between 1987 and 1994 were retrospectively studied. All patients had failed to respond to preoperative conservative treatments. Forty-two patients received adjunctive therapy with pulsed electromagnetic field (PEMF) stimulation, and 19 patients received no electrical stimulation of any kind. Average follow-up time was 15.6 months postoperatively. Fusion succeeded in 97.6% of the PEMF group and in 52.6% of the unstimulated group ($P < .001$). The observed agreement between clinical and radiographic outcome was 75%. The use of PEMF stimulation enhances bony bridging in lumbar spinal fusions. Successful fusion underlies a good clinical outcome in patients with discogenic low back pain.

1: Clin Rheumatol. 1996 Jul;15(4):325-8. Links Outcomes after posterolateral lumbar fusion with instrumentation in patients treated with adjunctive pulsed electromagnetic field stimulation. Bose B.

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Fusion success and clinical outcome were determined in 48 high-risk patients who underwent posterolateral lumbar fusions with internal fixation and were treated with adjunctive pulsed electromagnetic field (PEMF) stimulation postoperatively. An independent radiographic assessment demonstrated a success rate of 97.9%. Following treatment, 59% of the working patients returned to their employment. Overall clinical assessment was excellent in 4.2% of patients, good in 79.2%, and fair in 16.7%; no patient had a poor clinical assessment.