



Osteoporosis

This study examined the effects of pulsed electromagnetic fields on postmenopausal osteoporosis in 10-month-old female rats. Results showed that EMF treatment for one hour per day for 4 months with a 30-gauss maximum pulse reduced bone mass loss to within 10 percent, while a 70-gauss maximum pulse reduced bone mass loss entirely. **(1)**

This study examined the effects of long-term pulsing electromagnetic fields in the form of repetitive pulse burst waves over a period of 6 months in osteoporotic rats. Results showed increased bone volume and formation activity. **(2)**

This study examined the effects of a 72-Hz pulsating electromagnetic field administered for 10 hours per day over a period of 12 weeks on bone density in women prone to osteoporosis. Results found significant increases in bone mineral density in the area of EMF exposure. **(3)**

In this study, osteoporosis patients received treatment with pulsed electromagnetic fields (50 G, 50-100 Hz) for 30 minutes per session over a period of two years involving 20 sessions. These subjects were compared to similar patients treated with calcitonin. Results indicated PEMF to be effective in reducing pain, and to be even more so when combined with the conventional drug treatment. **(4)**

This controlled study examined the effects of pulsed electromagnetic fields in women suffering from postmenopausal osteoporosis. Treatment consisted of daily 30-minute exposures for 20 days every six months. Results showed that PEMF treatment combined with 100 IU per day of nasal spray synthetic salmon calcitonin arrested bone decrease and significantly increased bone mass relative to patients receiving drug therapy alone. **(5)**

Results of this study found the use of total-body low-frequency magnetic fields (60 G, 50-100 Hz) to be effective in the treatment of patients suffering from osteoporosis-related symptoms. Treatment consisted of a total of 15 exposures of 30 minutes each. **(6)**

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Osteoporosis (Cont.)

Citations:

(1) M. Hinsenkamp, Preliminary Results in Electromagnetic Field Treatment of Osteonecrosis, *Bioelectrochem Bioenerg.* 30, 1993, p. 229-236.

(2) S. Mishima, The Effect of Long-term Pulsing Electromagnetic Field Stimulation on Experimental Osteoporosis of Rats, *Sangyo Ika Daigaku Zasshi*, 10(1), March 1, 1988, p. 31-45.

(3) Tabrah, Bone Density Changes in Osteoporosis-prone Women Exposed to Pulsed Electromagnetic Fields (PEMFs), *Journal of Bone Miner Res*, 5(5), May 1990, p. 437-442.

(4) T.W. Bilotta, The Use of Low-Frequency Low Magnitude PEMFs in Treatment of Osteoporosis, *Journal of Bioelectr*, 8(2), 1989, p. 316.

(5) T.W. Bilotta, Influence of Pulsed Electromagnetic Fields on Post-Menopausal Osteoporosis, *First World Congress for Electricity and Magnetism in Biology and Medicine*, 14-19 June 1992, Lake Buena Vista, FL, p. 78.

(6) Saveriano S. Ricci, Treatment of Senile Osteoporosis Caused Rachialgia with Low-Frequency PEMFs, *Journal of Bioelectr*, 8(2), 1989, p. 321.

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