# **Medical PEMF Studies**



## **PAIN**

Effect of pulsed electromagnetic field therapy in patients undergoing total knee arthroplasty: a randomised controlled trial.

# Total Knee Replacement Arthritic Knee Knee After Surgery Femoral Component Cartilage Osteoarthritis Tibial Component

1. Int Orthop. 2014 Feb;38(2):397-403. doi: 10.1007/s00264-013-2216-7. Epub 2013 Dec 20.

Adravanti P(1), Nicoletti S, Setti S, Ampollini A, de Girolamo L.

### **Author information:**

(1)Orthopaedic Surgery Department, Clinic "Città di Parma", Parma, Italy.

Comment in

Int Orthop. 2014 Jun;38(6):1337.

# **Medical PEMF Studies**



**PURPOSE:** It has been reported that even one year after total knee arthroplasty (TKA), a relevant percentage of patients does not attain complete recovery and indicate unfavourable long-term pain outcome. We compared the clinical outcome of 33 patients undergoing TKA randomly assigned to the control or the pulsed electromagnetic field group (I-ONE therapy).

**METHODS:** I-ONE therapy was administered postoperatively four hours per day for 60 days. Patients were assessed before surgery and then at one, two and six months postoperatively using international scores.

**RESULTS:** One month after TKA, pain, knee swelling and functional score were significantly better in the treated compared with the control group. Pain was still significantly lower in the treated group at the six month follow-up. Three years after surgery, severe pain and occasional walking limitations were reported in a significantly lower number of patients in the treated group.

**CONCLUSIONS:** Advantages deriving from early control of joint inflammation may explain the maintenance of results at follow-up. I-ONE therapy should be considered an effective completion of the TKA procedure.

PMCID: PMC3923943

PMID: 24352823 [PubMed - indexed for MEDLINE]