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Acupuncture for chronic knee pain: a randomized clinical trial.

[Hinman RS](#)¹, [McCrory P](#)², [Pirota M](#)³, [Relf J](#)³, [Forbes A](#)⁴, [Crossley KM](#)⁵, [Williamson E](#)⁶, [Kyriakides M](#)³, [Novy K](#)³, [Metcalf BR](#)¹, [Harris A](#)⁷, [Reddy P](#)⁸, [Conaghan PG](#)⁹, [Bennell KL](#)¹.

+ Author information

Abstract

IMPORTANCE: There is debate about benefits of acupuncture for **knee** pain.

OBJECTIVE: To determine the efficacy of laser and needle acupuncture for chronic **knee** pain.

DESIGN, SETTING, AND PARTICIPANTS: Zelen-design clinical trial (randomization occurred before informed consent), in Victoria, Australia (February 2010–December 2012). Community volunteers (282 patients aged ≥50 years with chronic **knee** pain) were treated by family physician acupuncturists.

INTERVENTIONS: No acupuncture (control group, n = 71) and needle (n = 70), laser (n = 71), and sham laser (n = 70) acupuncture. Treatments were delivered for 12 weeks. Participants and acupuncturists were blinded to laser and sham laser acupuncture. Control participants were unaware of the trial.

MAIN OUTCOMES AND MEASURES: Primary outcomes were average **knee** pain (numeric rating scale, 0 [no pain] to 10 [worst pain possible]; minimal clinically important difference [MCID], 1.8 units) and physical function (Western Ontario and McMaster Universities **Osteoarthritis** Index, 0 [no difficulty] to 68 [extreme difficulty]; MCID, 6 units) at 12 weeks. Secondary outcomes included other pain and function measures, quality of life, global change, and 1-year follow-up. Analyses were by intention-to-treat using multiple imputation for missing outcome data.

RESULTS: At 12 weeks and 1 year, 26 (9%) and 50 (18%) participants were lost to follow-up, respectively. Analyses showed neither needle nor laser acupuncture significantly improved pain (mean difference; -0.4 units; 95% CI, -1.2 to 0.4, and -0.1; 95% CI, -0.9 to 0.7, respectively) or function (-1.7; 95% CI, -6.1 to 2.6, and 0.5; 95% CI, -3.4 to 4.4, respectively) compared with sham at 12 weeks. Compared with control, needle and laser acupuncture resulted in modest improvements in pain (-1.1; 95% CI, -1.8 to -0.4, and -0.8; 95% CI, -1.5 to -0.1, respectively) at 12 weeks, but not at 1 year. Needle acupuncture resulted in modest improvement in function compared with control at 12 weeks (-3.9; 95% CI, -7.7 to -0.2) but was not significantly different from sham (-1.7; 95% CI, -6.1 to 2.6) and was not maintained at 1 year. There were no differences for most secondary outcomes and no serious adverse events.

CONCLUSIONS AND RELEVANCE: In patients older than 50 years with moderate or severe chronic **knee** pain, neither laser nor needle acupuncture conferred benefit over sham for pain or function. Our findings do not support acupuncture for these patients.

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