



Dosage of Acupuncture Literature Review

Insurance benefits

- **Objective:** To identify “characteristics [including insurance status] of US adults who used a full course of acupuncture (26 treatments), a short course (1-5 treatments) or no acupuncture.”
- **Methods:** Population-based survey data from the 2012 National Health Interview Survey (NHIS); Regression analysis filled past and future data gaps. Demographic and health status covariates to filter and analyze data.
- **Results**
 - Overall acupuncture use was low, at 1.5%. Of that percentage, 38% completed a full course.
 - Women and those with higher education and socioeconomic status more likely to use acupuncture
 - Individuals with insurance benefits and higher education more likely to complete full course
 - Having health insurance “attenuated disparities in [acupuncture] use by sex and race/ethnicity.”
- **Conclusions**
 - Acupuncture is effective, low risk, and low cost; it could be used more widely for non-pharmacologic treatment of common pain conditions.
 - Policy makers can consider the importance of health insurance benefits for acupuncture access, to acupuncture usage and completion of full treatment cycles. Not having acupuncture insurance benefits “may contribute to disparities in use and health outcomes.”¹

Chronic low back pain

Claudia vitz? 6 doses min req'd

Knee osteoarthritis

- **Objective:** To learn if the effectiveness of acupuncture in treating knee osteoarthritis (OA) was dose-related
- **Methods:** Systematic review of English/Chinese databases through January 2017 using the Cochrane Collaboration tool and Slavin’s “qualitative best-evidence synthesis approach”

- **Results:** Eight studies (1 low dosage (LD), 1 medium dosage (MD), 6 high dosage (HD) acupuncture) were included for meta-analysis involving 2,106 participants.
 - “Strong evidence” supporting a “positive correlation between high dosage acupuncture treatment and positive outcomes.”
- **Conclusion:** Acupuncture effectiveness for knee OA may indeed be correlated with acupuncture dosage, with higher doses offering more favorable clinical outcomes. ²

Sciatica

- **Objective:** Pilot study to determine the “required sample size for and feasibility of a full-scale randomized controlled trial examining the impact of the “dose” effect of acupuncture for sciatica
- **Methods:** RCT involving 31 sciatica patients ages 35-70 years; low-dose manual acupuncture (MAL) group (15 participants); high dose manual acupuncture (MAH) group (16 participants); acupuncture 2 times per week for 4 weeks
- **Outcomes:** primary = Visual analog scale (VAS) score; supporting measures: Roland Disability Questionnaire for Sciatica (RDQS), Sciatica Bothersomeness Index (SBI), World Health Organization Quality of Life in the Brief Edition (WHOQOL-BREF) scores (all at baseline and 4 weeks)
- **Results:** 30 patients completed study; all had statistically significant VAS score improvement (5.48 ± 2.0 , $p < 0.001$), RDQS scores (3.18 ± 2.83 , $p = 0.004$), SBI scores (2.85 ± 3.23 , $p = 0.008$); WHOQOL-BREF scores were not improved. MAL and MAH groups = no significant difference; “MAH group showed more desirable outcomes and significant improvement “in the physical subscale of the WHOQOL-BREF ($p < 0.05$).”
- **Conclusion:** acupuncture is “safe and and may effectively relieve symptoms and disability in patients with non-acute sciatica.” ³

Acupuncture dosage

- Dosage includes: number of needles, stimulation mode, number and duration of treatments, needling techniques of amplitude, frequency, and depth
- The authors stated: “it is believed that low-dose acupuncture stimulation elicits weak responses, while high-dose stimulation produces greater responses.”
- Some individuals are low responders (LR) while others are high responders (HR).
- Information gathered during patient intake/treatment (such as de qi sensation) helps practitioners modulate dosage. De qi has been “associated with the activation of specific brain regions” and signals that the appropriate neural [and biomechanical as well as biochemical] pathways have been stimulated.
- Studies cited in which acupuncture dosage plays a prominent role:
 - knee osteoarthritis: a systematic review of outcomes showed a higher acupuncture dose was related to “better treatment outcomes.”

- tension headache: “mode of stimulation, needle retention time and treatment frequency” were shown to modulate outcomes
- menstrual pain: dose-response relationship involved needle location, number of needles, and treatment frequency. ⁴

References

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3. Liu C-H, Kung Y-Y, Lin C-L, Yang J-L, Wu T-P, Lin H-C, Chang Y-K, Chang C-M, Chen F-P. Therapeutic Efficacy and the Impact of the “Dose” Effect of Acupuncture to Treat Sciatica: A Randomized Controlled Pilot Study. *J Pain Res*. 2019;12:3511–3520.
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