

# Is OMT an effective treatment in adults with tension type or migraine headaches?

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**Clinical Question:** In adults with tension type or migraine headaches, is OMT (osteopathic manipulative therapy) compared to standard treatment alone an effective treatment?

**Answer:** Inconclusive. While some results of small studies are promising, more studies with uniform design are needed for a conclusive answer.

**Level of Evidence for the Answer:** Level B

**Conclusions:**

OMT may be an effective treatment for both migraines and TTH (tension-type headache) and preliminary studies are promising. However, further studies with a more uniform robust study design are necessary for a definite conclusion. Due to inconclusive results, offering OMT in conjunction with standard treatment appears to be reasonable, but not a definite or preferred treatment option.

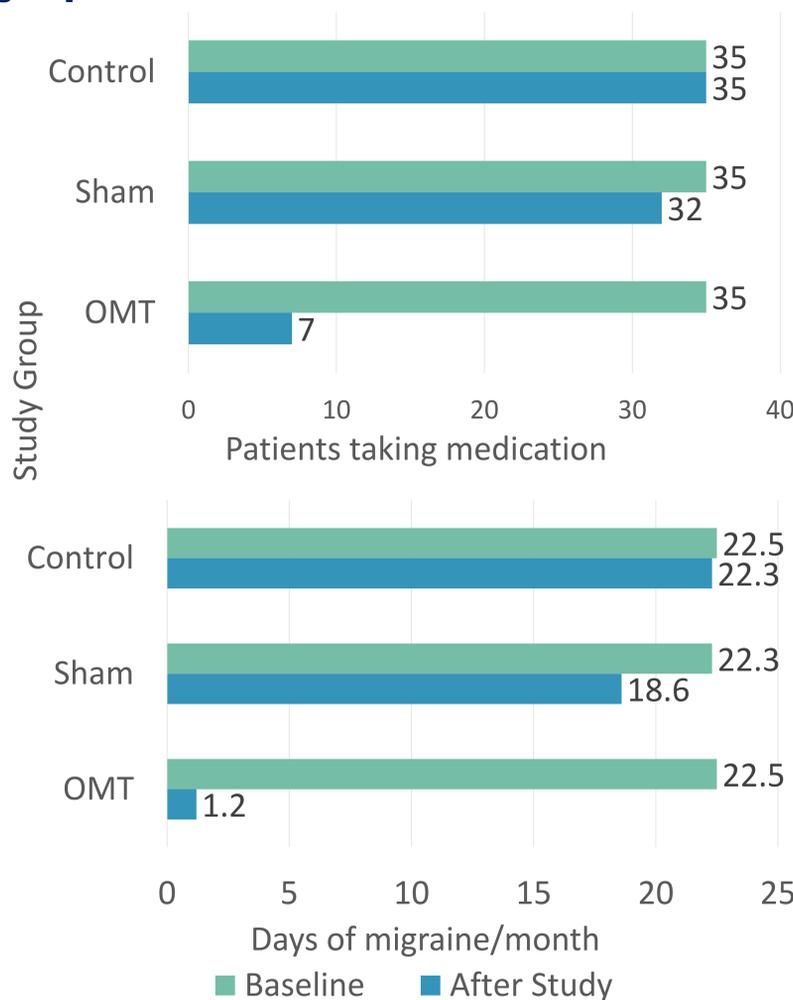
**Search Terms:** adults, headache, migraine, tension type headache, OMT

**Date Search was Conducted:** September 2019

**Inclusion Criteria:** systematic reviews, meta-analyses, randomized controlled trials, OMT, migraine, tension-type headaches

**Exclusion Criteria:** articles older than 2008, older adults, female

**Figure 2. Sample of analysis of outcomes by study group from Cerritelli RCT<sup>5</sup>**

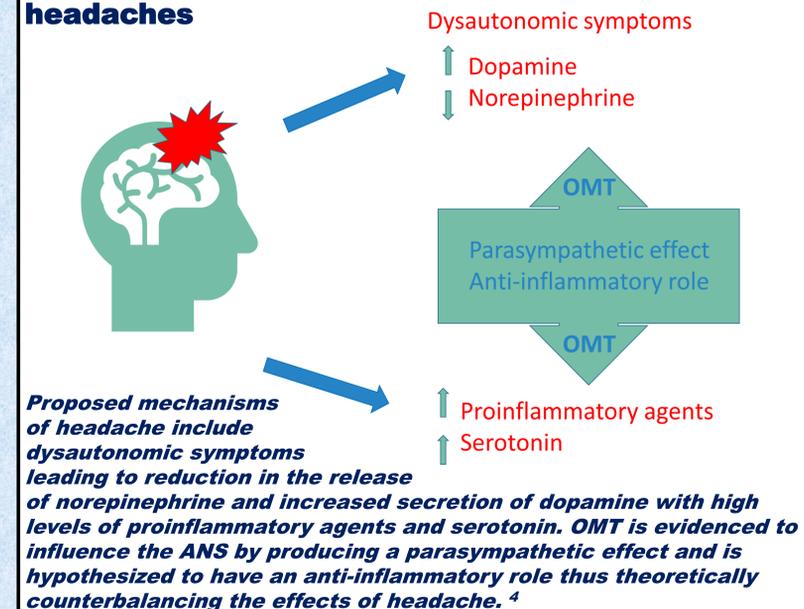


**Summary of the Evidence - continued:**

A 2015 three-armed randomized controlled trial evaluated the effectiveness of OMT in the treatment of chronic migraine.

- 105 participants randomly divided into treatment groups.
- Treatment groups were OMT + medication, sham treatment + medication and medication only or the control group.
- OMT standardization: eight osteopathic sessions over 6 months performed by six osteopaths graduated from Accademia Italiana Osteopatia Tradizionale were completed. The same osteopaths performed the sham treatment.
- Primary outcome measured by the HIT-6 score and measured in change from baseline.
- Results: Statistically significant difference in the overall HIT-6 score between the three groups. A statistically significant reduction in the change in HIT-6 score from baseline was also found when comparing the OMT group to sham and control groups. No difference was found between sham and control. Of the secondary outcomes, pain and disability scores, migraine attacks, and medication use were also significantly reduced in the OMT group.<sup>5</sup>

**Figure 1: Proposed mechanism of OMT effect on headaches**



**Summary of the Evidence:**

In a 2017 systematic review by Cerritelli et al, the use of OMT in headache were investigated in five RCTs or quasi-RCTs.

- All genders, ethnicities, and ages with a headache diagnosis were eligible.
- Sum of 265 participants were enrolled in the included trials
- Any type of OMT performed by an osteopath included as an intervention, but with variability in the frequency and magnitude of OMT.
- Intervention comparisons: sham therapy, standard care or no treatment as control interventions.
- Primary outcome considered the mean difference (MD) in number of headache days per month after at least 4 weeks of treatment.
- Many other secondary outcomes
- Unable to perform a quantitative or meta-analysis of the results due to the high heterogeneity of the included studies.
- Discovered outcomes
  - OMT as effective in reducing migraine episodes, headache impact test- 6 (HIT-6), use of drugs, pain and disability scores.
  - Effectivity at improving pain scores, health-related quality of life (HRQoL), and working disability in female patients with migraine significantly, but did not show a reduction in days of migraine.
  - Lower frequency of headache compared to control and a reduction in medication use.
  - Increase in number of headache-free days per week, but no statistically significant difference between headache degree or headache diary rating.

Overall, while promising, the evaluated evidence is preliminary and methodological quality low.<sup>4</sup>

**Reference List:**

1. Jensen R, Stovner LJ. Epidemiology and comorbidity of headache. *Lancet Neurol* 7(4): 354-261, 2008.
2. Burch R. Migraine and tension-type headache: Diagnosis and Treatment. *Med Clin N Am.* 103(2): 215-233, 2019.
3. Whalen J, Yao S, Leder A. A short review of the treatment of headaches using osteopathic manipulative treatment. *Current pain and headache reports.* 22 (12): 82, 2018.
4. Cerritelli F, Lacorte E, Ruffini N, Vanacore N. Osteopathy for primary headache patients: a systematic review. *Journal of Pain Research.* 10: 601-611, 2017.
5. Cerritelli F, Ginevri L, Messi G, Caprari E, Di Vincenzo M, Renzetti C, Cozzolino V, Barlafante G, Foschi N, Provinciali L. Clinical effectiveness of osteopathic treatment in chronic migraine: 3-Armed randomized controlled trial. *Complementary Therapies in Medicine* 23(2): 149-156, 2015.