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Q/ Are manual therapies effective at reducing chronic tension headache frequency in adults?

EVIDENCE-BASED ANSWER

A/ **MAYBE.** Among patients with chronic tension headaches, manual therapies may reduce headache frequency more than sham manual therapy, usual care, or exercise treatments—by 1.5 to 4.2 headaches or days with headache per week (strength of recommendation, **B**; preponderance of evidence from primarily small, heterogeneous randomized controlled trials [RCTs]).

Evidence summary

Small studies offer mixed evidence of benefit

Seven RCTs using manual therapies to treat chronic tension headaches have reported the change in headache frequency (TABLE¹⁻⁷). Most, but not all, manual therapies significantly improved headache frequency.

Participants ranged in age from 18 to 65 years, with mean age ranges of 33 to 42 years in each study. At baseline, patients had 10 or more tension-type headaches per month. The manual therapies varied in techniques, duration, and the training of the person performing the intervention:

- Twice-weekly chiropractic spinal manipulation for 6 weeks¹
- Soft-tissue therapy plus spinal manipulation (8 treatments over 4 weeks)²
- Chiropractic spinal manipulation with or without amitriptyline for 14 weeks³
- Corrective osteopathic manipulation treatment (OMT) techniques tailored for each patient for 1 month⁴
- High-velocity low-amplitude manipulation (HVLA) plus exercise or myofascial release plus exercise twice weekly for 8 weeks⁵
- Manual therapy treatment consisting of a combination of mobilizations

of the cervical and thoracic spine, exercises, and postural correction for up to 9 sessions of 30 minutes each⁶

- One hour of direct or indirect myofascial release treatment twice weekly for 12 weeks.⁷

Three studies involved chiropractic providers.¹⁻³ One study (n = 19) found a positive effect, in which chiropractic manipulation augmented with amitriptyline performed better than chiropractic manipulation alone.³ Another chiropractic study did not find an immediate posttreatment benefit but did report significant headache reduction at the 4-week follow-up interval.¹ The third chiropractic study did not show additional benefit from HVLA manipulation.²

One small study involving osteopathic physicians using OMT found reduced headache frequency after 12 weeks but not at 4 weeks.⁴ Another study, comparing HVLA or myofascial release with exercise to exercise alone, found benefit for the HVLA group but not for myofascial release; interventions in this study were performed by a physician with at least 6 years of unspecified manual therapy experience.⁵ A small study of manual therapists found improvement at the end of manual therapy but not at 18 months.⁶ Another small study using providers with 10 months' experi-

TABLE

Summary of RCTs comparing manual therapy vs usual/sham treatment for headache frequency¹⁻⁷

Comparison	No. of patients	Post-intervention evaluation timing (wk) ^a	Results	Patient blinded to treatment?	Provider type
Chiropractic manipulation vs amitriptyline ¹	126	0 4	+1.8 headaches/wk -4.2 ^b headaches/wk	No	Chiropractor
Soft-tissue therapy + HVLA vs soft-tissue therapy + placebo laser therapy ²	75	0 12	-0.4 hr/d -0.1 hr/d	Yes	Chiropractor
Chiropractic manipulation + amitriptyline or placebo vs sham chiropractic manipulation + amitriptyline or placebo ³	19	0	Chiropractic manipulation: -2.0 headaches/mo Amitriptyline: -3.1 headaches/mo Amitriptyline + chiropractic manipulation: -8.4 ^c headaches/mo	Yes	Chiropractor
Osteopathic manipulation therapy vs cranial rhythmic impulse ⁴	40	0 4 12	NS NS -33% ^{b,d} d/mo	No	Osteopathic physician
HVLA + exercise or MFR + exercise vs exercise alone ⁵	39	0 and 12	HVLA: -3.3 ^b and -3.0 ^b d/2 wk MFR: -1.4 and -1.0 d/2 wk Exercise: -0.1 and -0.5 d/2 wk	No	Physician, 6-yr unspecified manual therapy experience
Manual therapies vs usual care ⁶	80	0 18	-6.4 ^b d/2 wk -4.9 ^b d/2 wk	No	Manual therapist
Direct or indirect MFR vs sham ⁷	56	4	Direct MFR: -5.8 ^b d/mo Indirect MFR: -5.4 ^b d/mo	Yes	Unspecified, ≥ 10 mo MFR experience

HVLA, high-velocity low-amplitude manipulation; MFR, myofascial release; NS, not significant; RCTs, randomized controlled trials.

^a Zero (0) weeks indicates the evaluation was done immediately following completion of the intervention.

^b Reached statistical significance ($P < .05$).

^c Reached statistical significance ($P < .05$) when adjusted for significant baseline differences in patient age and headache frequency.

^d Between-group difference in % change in days with headache/mo.

ence with myofascial release found reduced headache frequency 4 weeks after a course of direct and indirect myofascial release (compared with sham release).⁷

Editor’s takeaway

It isn’t hard to imagine why muscle tension headaches might respond to certain forms of manual therapy. However, all available studies of these modalities have been small

(< 100 patients) or lacked blinding, introducing the potential for significant bias. Nevertheless, for now it appears reasonable to refer interested patients with tension headache to an osteopathic physician for OMT or myofascial release to reduce headache frequency. **JFP**

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Treatment is primarily topical

Mild cases of rosacea often can be managed with topical antibiotic creams. More severe cases may require systemic antibiotics such as tetracycline or doxycycline, although these are used with caution due to the potential for antibiotic resistance.

Ivermectin 1% cream is a US Food and Drug Administration–approved medication that is applied once daily for up to a year to treat the inflammatory pustules associated with Demodex mites. Although it is costly, studies have shown better results with topical ivermectin than with other topical medications (eg, metronidazole 0.75% gel or cream). However, metronidazole 0.75% gel applied twice daily and oral tetracycline 250 mg or doxycycline 100 mg daily or twice daily for at least 2 months often are utilized when the cost of topical ivermectin is prohibitive.¹⁰

■ Our patient was treated with a combination of doxycycline 100 mg daily for 30 days and ivermectin 1% cream daily. He was also instructed to apply sunscreen daily. He im-

proved rapidly, and the daily topical ivermectin was discontinued after 6 months.

JFP

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