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Research Article

# Scoping Review of Prophylactic Treatments for Reducing Migraine Occurrences

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## Abstract

**Background:**

Migraine is a prevalent neurological disorder with significant socioeconomic and quality-of-life burdens. While acute treatments exist, prophylactic therapies are essential to reducing monthly migraine days (MMDs). This scoping review evaluates pharmacologic, non-pharmacologic, and procedural interventions for migraine prevention, with an emphasis on osteopathic manipulative treatment (OMT), supplements, and emerging therapies.

**Methods:**

A comprehensive literature search was conducted across PubMed, ClinicalTrials.gov, Cochrane Library, OSTMED.Dr, Still OneSearch, CINAHL, ClinicalKey, and Scopus using standardized keywords. Grey literature sources, including major headache organizations, were also reviewed. Studies were included if they examined prophylactic migraine treatments and reported changes in MMDs.

**Results:**

Among pharmacologic interventions, onabotulinumtoxinA (Botox) and CGRP inhibitors demonstrated the greatest reductions in MMDs. Non-pharmacologic approaches, including OMT, acupuncture, and neuromodulation, showed varying effectiveness, often as adjunct therapies. Nutraceuticals, such as magnesium and riboflavin, provided modest benefits. Variability in study design, patient populations, and outcome measures impacted direct comparisons.

**Conclusion:**

A range of prophylactic treatments exist for reducing MMDs, with efficacy varying by patient population. While pharmacologic options remain primary, non-pharmacologic and procedural therapies offer promising alternatives. Future research should standardize outcome measures and explore personalized treatment approaches.

**Keywords:** migraine; prophylactic treatment; osteopathic manipulative treatment; CGRP inhibitors; non-pharmacologic therapy; migraine prevention

## Introduction

Migraine is one of the most prevalent neurological disorders, and is a serious public health concern, affecting approximately 1 out of every 6 Americans. [1]. Although migraine is considered a benign disorder, the socioeconomic burden of migraine is substantial, with migraine-related lost productivity incurring extensive annual costs. [ -4]

The clinical presentation of migraines is highly variable among individuals but commonly includes recurrent, intense unilateral throbbing headaches, often accompanied by anorexia, nausea, vomiting, phonophobia, and photophobia. [5-6] Acute migraine attacks are typically divided into four phases—prodrome, aura, headache, and postdrome—that follow a sequential progression. However, the specific manifestation, overlap, duration, and intensity of these phases can vary significantly between individuals and even across episodes. [7]

The prodrome phase occurs hours to days before headache onset and is characterized by subtle warning signs like mood changes, neck stiffness, fatigue, increased urination and food cravings. [8] The aura phase, when

present, manifests as transient neurological symptoms such as visual, sensory, or motor disturbances that typically develop within an hour of headache onset. [9] The headache phase is the most debilitating, marked by severe pain and sensitivity to external stimuli. Finally, the postdrome phase, often referred to as the "migraine hangover," is associated with lingering symptoms, including fatigue, difficulty concentrating, mood disturbances, and residual head discomfort.[10] Migraine attacks can be triggered by a variety of factors, including stress, illness, emotions, and hormonal fluctuations, such as those occurring during the menstrual cycle.

Emerging research has advanced our understanding of migraine pathophysiology, shedding light on underlying mechanisms. Cortical spreading depression (CSD), a self-propagating wave of neuronal and glial depolarization across the cerebral cortex, has been implicated as a key driver of migraines. CSD is hypothesized to generate the aura phase, activate trigeminal nerve afferents, and disrupt the blood-brain barrier through matrix metalloproteinase activation and upregulation.[8] Additionally, while vasodilation of dural and extracranial vessels has long been considered central to migraine pain, recent findings challenge this theory, suggesting that other mechanisms may play a more pivotal role. [9]

The pathophysiology of migraines involves the activation of the trigeminal vascular system. While vasodilation of cranial blood vessels is no longer considered the primary or sole mechanism behind migraines, our current understanding suggests that blood vessels still play a role. The reason for this logic is that blood vessels release and respond to various mediators, such as growth factors, cytokines, ATP, and NO, and many of these mediators are also known to have actions in neurons that can lead to migraines. On the other hand, blood vessels are capable of facilitating bi-directional communication with the nervous system through the release of substances like norepinephrine and calcitonin gene-related peptide (CGRP), which directly impact the cells present in the vessels. This means that various normal and pathological processes taking place within and among vascular cells can serve as channels for interaction between the vascular system and the nervous system, without requiring alterations in vascular tone. [ ]

CGRP is a 37-amino acid neuropeptide that is produced as a consequence of alternative RNA processing of the calcitonin gene. It is known to have strong vasodilatory effects, and it is mainly released from C and Aδ sensory fibers. [] CGRP receptors are located in various neuronal tissues, such as the trigeminal ganglion, cerebral and meningeal vasculature, trigeminal nucleus caudalis (located in the brainstem) and the thalamus. Activation of these receptors within the trigeminovascular system plays an important role in the events that ultimately lead to the experience of pain with migraines, as evidenced by the ability of IV administered exogenous CGRP to cause migraine-like headaches. [ - ] After nerve stimulation, the release of CGRP occurs through calcium-dependent exocytosis from its storage vesicles. Once released, it is hypothesized that CGRP binds to CGRP receptors, and relays migraine pain through the brainstem into the brain via the trigeminovascular system. []

With this rather new discovery between the correlation of CGRP and migraines, many new studies have explored the efficacy of CGRP antagonists, specifically in comparison to other preventative medications. In fact, as of April 23, 2023, the FDA has approved expanding the indication of QULIPTA (atogepant) for the preventive treatment of migraine in adults. [ ] Atogepant has shown to significantly reduce monthly migraine days, monthly headache days, and monthly medication use days in comparison to a placebo, with no significant difference in adverse effects.[ ]

While CGRP antagonists as well as other medication classes like the serotonin receptor agonists (triptans) have demonstrated efficacy in the acute treatment of migraines, the focus of this scoping review is distinct. This review aims to explore and evaluate a broad range of preventive interventions aimed at reducing the frequency of migraine attacks. These interventions include pharmacological agents, such as beta-blockers, antiepileptic drugs, and CGRP inhibitors, as well as non-pharmacological approaches, such as osteopathic manipulative treatment (OMT), acupuncture, and mindfulness-based therapies. Additionally, the review will assess the potential of nutraceuticals, including magnesium, riboflavin (vitamin B2), and coenzyme Q10, as well as dietary modifications and lifestyle interventions.

The effectiveness of these preventive strategies will be evaluated based on their ability to reduce monthly migraine days (MMDs). It is important to note that this review will not focus on interventions aimed at decreasing the intensity or severity of migraine symptoms, which are often measured using tools such as the Headache Impact Test-6 (HIT-6) or the Migraine Disability Assessment (MIDAS) scores. By concentrating on MMD reduction, this review seeks to provide a targeted analysis of diverse approaches to migraine prevention, contributing to a deeper understanding of their roles in long-term management.

## Methods

A comprehensive search strategy has been developed in consultation with a medical librarian (Leslie Golamb) to ensure breadth and relevance.

The search began with an exploration of grey literature sources to refine keyword selection and identify additional relevant studies. Google was used for preliminary searches to explore osteopathic treatments for chronic migraines, uncover relevant grey literature, and establish key search terms. Information was gathered from reputable organizations, including the American Migraine Foundation, the Association of Migraine Disorders, the National Headache Foundation, and the American Academy of Neurology. These sources provided insights into current best practices, research priorities, and established approaches to migraine prophylaxis, helping to inform the direction of the database search.

Following this preliminary investigation, systematic searches were conducted across multiple academic databases, including PubMed, ClinicalTrials.gov, Cochrane Library, OSTMED. Dr, Still One Search, CINAHL, Clinical Key, and Scopus. A standardized set of search terms was applied across databases to ensure consistency and comprehensive coverage. These included variations of "migraine," "migraine headache," "prophylactic treatment," "preventive treatment," "long-term treatment," "therapy," "intervention," "management," and "osteopathic manipulative treatment (OMT)." In PubMed, searches utilized Medical Subject Headings (MeSH) in combination with these keywords, while in other databases, similar Boolean strategies were employed to maximize relevant results. Filters were applied to restrict results to studies published from 2010 onward, with Scopus searches further refined to include only journal articles, conference proceedings, and trade journals from 2014 onward. ClinicalTrials.gov and the Cochrane Library were specifically searched for ongoing or completed clinical trials and systematic reviews evaluating OMT as a migraine prophylaxis. OSTMED. Dr, an osteopathic-focused database, was searched using the keyword “migraine headache.” Broad searches in Still One Search, CINAHL, and Clinical Key incorporated the same standardized terms, with filters applied for peer-reviewed journal articles. By maintaining consistency in search terminology, the review ensured a systematic and reproducible approach to identifying relevant literature.

Our systematic search strategy ensured we captured a wide range of studies on prophylactic and preventive migraine treatments, with a specific emphasis on osteopathic interventions alongside supplements and medications. The inclusion criteria for this review were peer-reviewed articles published in English that addressed prophylactic treatments for chronic migraines, including pharmacological, non-pharmacological, or procedural interventions. Filters and date restrictions helped focus on the most recent and relevant research from 2010 onward. Studies that exclusively focused on acute treatment or did not provide evidence-based outcomes were excluded. This structured approach ensured a

comprehensive review of existing evidence on prophylactic migraine treatments and their impact on reducing MMDs.

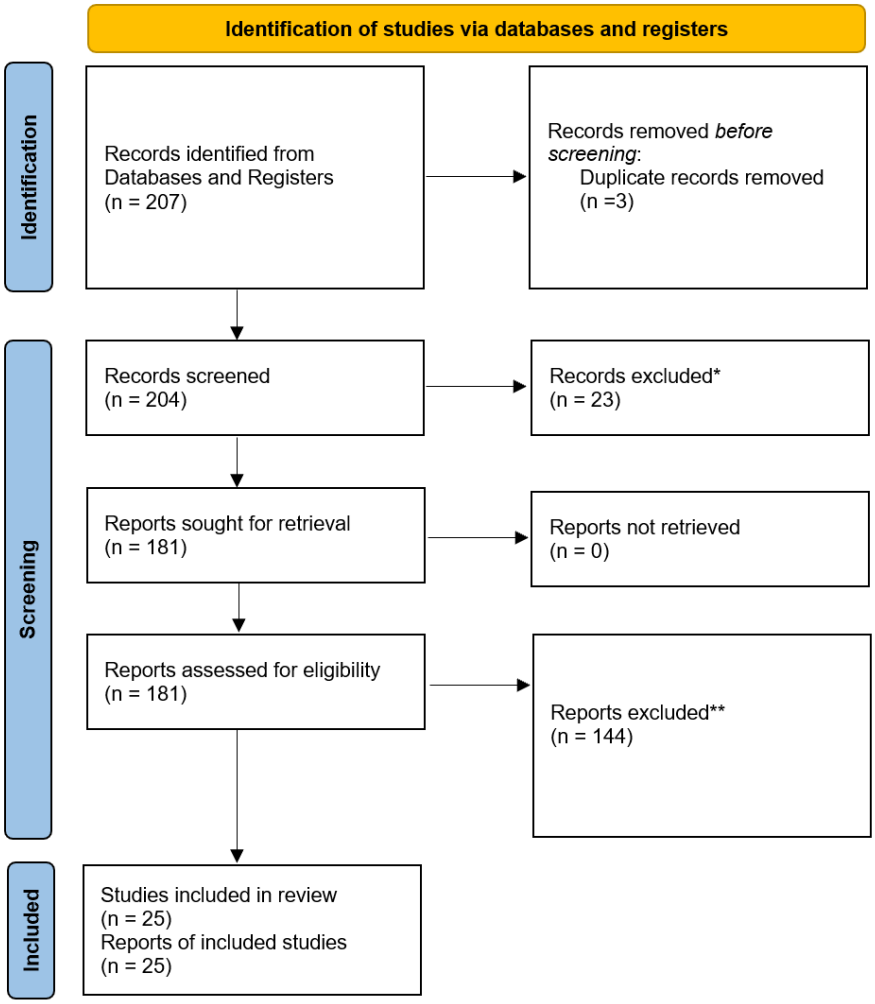


**Figure 1:**

* Reports were excluded at this stage if the study did not focus on either medications/ supplements/ or non-pharmacological modalities that can be used to prevent migraine occurrences

** Reports were excluded at this stage if the reduction in monthly migraine days was not explicitly reported or if the evidence quality was deemed insufficient

Reference: Page MJ, McKenzie JE, Bossuyt PM, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ. 2021;372:n71. doi:10.1136/bmj.n71.

## Results

In our review, we included detailed information for each study, such as the population being studied, the intervention implemented, the outcomes measured, the study design, publication characteristics, quality of evidence, and the average reduction in monthly migraine days. Notably, all included articles provided a numerical value for the change in monthly migraine days, comparing the period before and after the intervention. However, it is important to highlight that several studies used the terms "migraine days" and "headache days" interchangeably, which may introduce variability in the reported outcomes.

The evidence quality for each article in the chart is assessed using established research appraisal criteria frequently applied in evidence-based practice. Articles are classified into three categories: high, moderate, and low evidence quality. High-quality evidence includes randomized controlled trials (RCTs), systematic reviews, or meta-analyses with rigorous methodologies, adequate sample sizes, proper blinding and randomization, validated outcome measures, transparent and reproducible data, and publication in high-impact, peer-reviewed journals. Moderate-quality evidence encompasses cohort or observational studies and less robust systematic reviews, often with moderate sample sizes, limited blinding or randomization, and some methodological weaknesses, while still appearing in reputable peer-reviewed journals. Low-quality evidence involves case reports, case series, pilot studies, or poorly conducted observational studies, characterized by small sample sizes, lack of randomization or blinding, subjective outcome measures, and publication in lower-tier or non-peer-reviewed sources.

Additionally, relevance to migraine prevention or treatment, disclosure of conflicts of interest, and publication recency are considered to ensure the evidence aligns with current clinical practices. These criteria provide a consistent and transparent framework for evaluating the quality of evidence included in the chart.

Data was then charted and organized first on evidence quality, then on the reduction of monthly migraine days.

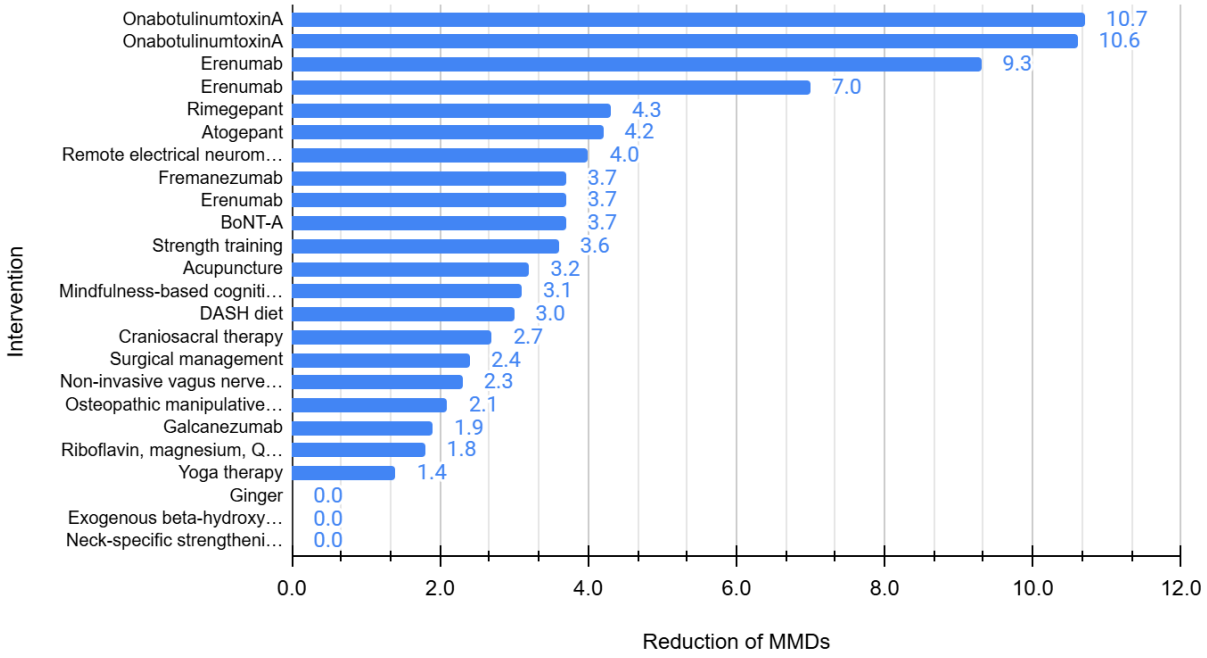


**Figure 2:** Chart of the included studies, looking at the intervention implemented in the study, and the mean reduction of monthly migraine days based on the intervention.

## Discussion

Based on our review process and results, we were able to discover a wide variety of interventions implemented to decrease monthly migraine days in comparison to a placebo. Botox injections in patients with severe chronic migraines showed the greatest reduction of MMDs, with two studies reporting decreases of 10.7 and 10.6 days. Of the studies focused on onabotulinumtoxinA injections, the Phase III Research Evaluating Migraine Prophylaxis Therapy (PREEMPT) injection protocol was followed, which consists of injecting 155 U–195 U to 31–39 sites every 12-weeks.[1] The longevity between trials changed between studies, although the results of effectiveness were similar between trials and studies. However, it is important to note that in several studies, more than 10% of patients dropped out due to adverse side effects.

Erenumab, a calcitonin gene-related peptide (CGRP) monoclonal antibody, demonstrated moderate efficacy, with reductions in MMDs ranging from 7.0 to 9.3 days. The variation in effectiveness across studies suggests that while erenumab provides a meaningful reduction in migraine burden, the response may depend on patient characteristics and baseline migraine severity. Notably, one study reported that the confidence interval for MMD reduction overlapped with zero, indicating that some patients may not experience a significant benefit. This highlights the need for individualized treatment approaches and further research to identify which subgroups may respond best to erenumab.

Rimegepant, an oral CGRP receptor antagonist, showed a more modest reduction in MMDs, with a reported decrease of 4.3 days. While this reduction is smaller than that observed with Botox and erenumab, it is still clinically meaningful, particularly for patients with episodic migraines who may not require as aggressive prophylactic treatment. Given that rimegepant is an oral medication, it may offer a more convenient alternative to injectable treatments for some patients. However, the long-term effectiveness and adherence rates of rimegepant as a preventive option warrant further investigation.

### Study Design and Evidence Quality

The included studies encompassed a range of methodological approaches, including randomized controlled trials (RCTs), systematic reviews, meta-analyses, and real-world observational studies. Each study was assessed for evidence quality based on established appraisal criteria, with all included studies classified as high-quality evidence. The incorporation of systematic reviews and meta-analyses strengthens the reliability of the findings, as these studies aggregate data from multiple sources to provide a more comprehensive assessment of treatment efficacy.

One notable strength of this review is the inclusion of long-term safety and subgroup analyses, which provide valuable insights into the sustained benefits and tolerability of migraine prophylactic treatments. While RCTs remain the gold standard for evaluating treatment efficacy, real-world data from observational studies and meta-analyses of clinical practice data add an important layer of external validity, reflecting how these treatments perform outside of controlled trial settings. However, differences in study design, patient populations, and treatment protocols introduce some heterogeneity, which must be considered when interpreting the findings.

### Variability in Outcome Reporting

A major limitation identified in this review is the inconsistent use of terminology across studies, particularly regarding the distinction between migraine days (MMDs) and headache days (MHDs). While MMDs

specifically refer to days with migraine-level headache symptoms, MHDs encompass a broader range of headache types, including tension-type headaches and less severe headache episodes. Some studies used these terms interchangeably, complicating direct comparisons. This inconsistency highlights the need for standardized outcome reporting in migraine research to enhance clarity and comparability across studies.

Studies reporting a substantial reduction in MMDs often demonstrated statistically significant outcomes. However, placebo groups in these trials also exhibited notable reductions in MMDs, emphasizing the potential impact of placebo effects. This underscores the importance of carefully interpreting the net treatment benefit while accounting for the active placebo response in migraine prophylaxis trials. For example, in the study by. on OnabotulinumtoxinA for migraine treatment, the placebo group experienced a 6.6-day reduction in MMDs compared to an 8.4-day reduction with Botox. Due to this significant placebo effect, the overall evidence quality was rated as "moderate" rather than "high," highlighting the challenges in isolating true treatment effects in migraine prophylaxis research.

Additionally, variability in inclusion and exclusion criteria across the reviewed studies significantly affects result comparability. The baseline number of monthly migraine days (MMDs) varied widely, with some patient populations experiencing higher initial MMDs, making reductions appear more pronounced. These differences in study design and patient selection contribute to inconsistencies in treatment outcomes and reinforce the need for standardized baseline characteristics in migraine research to facilitate more reliable cross-study comparisons.

### Clinical Implications

The findings of this review reinforce the clinical utility of prophylactic migraine treatments, particularly for patients with chronic migraines who experience frequent and debilitating attacks. The substantial reduction in MMDs with onabotulinumtoxinA and erenumab suggests that these treatments may be highly beneficial for patients with a high migraine burden. However, treatment selection should consider not only efficacy but also factors such as tolerability, adherence, and patient preference. For example, Botox requires in-office injections every 12 weeks, which may be inconvenient for some patients, whereas erenumab and rimegepant offer self-administered options with different dosing schedules.

In addition to pharmacologic interventions, non-pharmacologic approaches may also play a role in migraine prevention, either as standalone options for patients seeking alternatives or as adjunct therapies to enhance treatment outcomes. Acupuncture, osteopathic manipulative treatment (OMT), and exercise have shown some efficacy in reducing headache frequency and intensity, potentially providing relief with fewer side effects. Similarly, certain supplements, such as magnesium, riboflavin, and CoQ [10] have been associated with reductions in migraine frequency and may be especially appealing to patients who prefer lifestyle or dietary approaches.

Additionally, the findings highlight the importance of individualized treatment approaches, as some patients may respond better to certain interventions than others. Given the variability in response rates and the presence of adverse effects, shared decision-making between patients and healthcare providers is essential to optimize treatment outcomes. Future studies should explore biomarkers or predictive factors that can help identify which patients are most likely to benefit from specific prophylactic treatments, while also investigating the potential long-term benefits of incorporating non-pharmacologic options into comprehensive migraine management plans.

### Limitations & Future Directions

While this review provides valuable insights into the effectiveness of prophylactic migraine treatments, several limitations should be acknowledged. Variability in study design, patient populations, and outcome reporting introduces challenges in directly comparing results across studies. The interchangeable use of migraine days and headache days highlights the need for greater standardization in migraine research methodologies.

Additionally, while RCTs provide high-quality evidence, real-world data on long-term adherence, effectiveness, and patient satisfaction are still limited. Future studies should focus on long-term observational studies and real-world registries to better understand treatment persistence and patient-reported outcomes. Furthermore, continued head-to-head trials comparing different prophylactic treatments will help refine clinical decision-making by directly assessing their relative efficacy, tolerability, and patient preference.

## Conclusion

This scoping review underscores the effectiveness of onabotulinumtoxinA, erenumab, and rimegepant as prophylactic treatments for migraines, with Botox and CGRP inhibitors demonstrating the greatest reductions in MMDs. However, treatment tolerability, variability in response, and differences in outcome reporting highlight the need for an individualized approach to migraine prevention. Future research should prioritize long-term effectiveness, real-world adherence, and standardization of outcome measures to further guide evidence-based migraine management.

## References:


1. Acupressure Relief for Pain and Headaches. Indian Practitioner. 2022;75(12):39-40. Accessed July 11, 2023.
2. Adragna V, Bertino A, Carano M, Soru A, Taranto G, Desideri R (2015). O052. Migraine without aura and osteopathic medicine, a non-pharmacological approach to pain and quality of life: open pilot study...1st Joint ANIRCEF-SISC Congress. Rome, Italy. 29-31 October 2015. *Journal of Headache & Pain*. 16:1-3.
3. Al-Hadeethi RQ, Al-Ani. SK, Al-Ani RK (2020). Prevalence of Migraine Headache among Secondary School Students in Ramadi City, West of Iraq. *Indian Journal of Public Health Research & Development*;11(4):1584-1589. Accessed July 7, 2023.
4. Alexander J (2016). Resolution of New Daily Persistent Headache After Osteopathic Manipulative Treatment. *J Am Osteopath Assoc*;116(3):182-185.
5. Alsarhan H (2023). A scoring chart to evaluate cases of probable vestibular migraine. *Hearing, Balance & Communication*;21(3):162-168.
6. Arab A, Khorvash F, Kazemi M, Heidari Z, Askari G (2022). Effects of the Dietary Approaches to Stop Hypertension (DASH) diet on clinical, quality of life and mental health outcomes in women with migraine: a randomised controlled trial. *British Journal of Nutrition*. 128(8):1535-1544.
7. Argyriou AA, Dermitzakis EV, Vlachos GS, Vikelis M (2022). Long-term adherence, safety, and efficacy of repeated onabotulinumtoxinA over five years in chronic migraine prophylaxis. *Acta Neurol Scand*;145(6):676-683.
8. Armand CE, Loder E, Ropper AH (2022). Migraine - Treatment and Preventive Therapies. *New England Journal of Medicine*;387(15):e35.
9. Arnadottir TS, Sigurdardottir AK (2013). Is craniosacral therapy effective for migraine? Tested with HIT-6 Questionnaire. *Complement Ther Clin Pract*. 19(1):11-14.
10. Aschenbrenner DS. New Nasal Spray for Migraine Headaches (2023). *AJN American Journal of Nursing* ;123(7):16.
11. Assarzadegan, Farhad; Asgarzadeh, Setareh; Hatamabadi, Hamid R.; Shahrami, Ali; Tabatabaey, Ali; et.al (2016). Serum concentration of magnesium as an independent risk factor in migraine attacks: a matched case–control study and review of the literature. *International Clinical Psychopharmacology* 31(5):p 287-292, September.

12. Badaeva AV, Danilov AB, Clayton P, et al (2023). Perspectives on Neuronutrition in Prevention and Treatment of Neurological Disorders. *Nutrients.* 15(11):2505.
13. Baldelli I, Mangialardi ML, Salgarello M, Raposio E (2020). Peripheral Occipital Nerve Decompression Surgery in Migraine Headache. *Plastic and Reconstructive Surgery - Global Open;*8(10):e3019.
14. Barreto T (2021). Acute Treatments for Episodic Migraine in Adults. *American Family Physician*;104(5):509-512.
15. Beier D, Callesen HE, Carlsen LN, et al (2022). Manual joint mobilisation techniques, supervised physical activity, psychological treatment, acupuncture and patient education in migraine treatment. A systematic review and meta-analysis. *Cephalalgia*;42(1):63-72.
16. Benatto MT, Florencio LL, Bragatto MM, Dach F, Fernández-de-las-Peñas C, Bevilaqua-Grossi D (2022). Neck-specific strengthening exercise compared with placebo sham ultrasound in patients with migraine: a randomized controlled trial. *BMC Neurology*;22(1):1-13.
17. Bennett MH, French C, Schnabel A, Wasiak J, Kranke P, Weibel S (2015). Normobaric and hyperbaric oxygen therapy for the treatment and prevention of migraine and cluster headache. *Cochrane Database Syst Rev*;2015(12):CD005219. Published 2015 Dec 28.
18. Biondi DM (2005). Physical treatments for headache: a structured review. *Headache.* 45(6):738-746.
19. Biringer RG (2023). Migraine signaling pathways: purine metabolites that regulate migraine and predispose migraineurs to headache [published online ahead of print, 2023 Mar 22]. *Mol Cell Biochem*. 2023;10.
20. Bomtempo FF, Rocha RB, Cenci GI, Nager GB, Telles JPM (2023). Long-Term Safety and Effectiveness of Erenumab in Patients with Migraine: A Systematic Review and Single-Arm Meta-analysis. *Clinical Drug Investigation*;43(1):45-59. Accessed July 7, 2023.
21. Bond DS, Thomas JG, Lipton RB, et al (2018). Behavioral Weight Loss Intervention for Migraine: A Randomized Controlled Trial. *Obesity* (19307381). 2018;26(1):81-87. Accessed July 7, 2023.
22. Bronfort G, Assendelft WJ, Evans R, Haas M, Bouter L (2001). Efficacy of spinal manipulation for chronic headache: a systematic review. *J Manipulative Physiol Ther*. 24(7):457-466.
23. Bryson J, Buse DC, Lipton RB (2010). Assessment and treatment of the burden of migraine: a case series. *Neurologist*;16(4):254-261.
24. Buchanan EM, Manley HR, Sly JS, Cady RJ, Wikowsky A, Cunningham AL (2023). Development of the functional assessment of migraine scale using a patient guided approach. *Quality of Life Research*;32(3):867-879.
25. Burch R (2021). Preventive Migraine Treatment [published correction appears in Continuum (Minneap Minn). 2021 Oct 1;27(5):1494-1495]. Continuum (Minneap Minn). 2021;27(3):613-632.
26. Buse DC, Rabany L, Lin T, Ironi A, Connelly MA, Bickel JL (2022). Combining Guided Intervention of Education and Relaxation (GIER) with Remote Electrical Neuromodulation (REN) in the Acute Treatment of Migraine. *Pain Medicine*. 2022;23(9):1544-1549.
27. Carpenter A, Cardon B (2023). Transcutaneous electrical nerve stimulation decreases pain in acute migraine. *Evidence-Based Practice*. 2023;26(2):5.
28. Cassady B (2022). Spotlight on Supplements: Feverfew. Environmental Nutrition. 2022;45(10):3. Accessed July 11, 2023.
29. Cerritelli F, Emanuele C, Marcello DV, Luca M, Rina GL, Gabriella M (2013). Is osteopathic manipulative treatment effective in migraine? *International Journal of Osteopathic Medicine*;16(1):e15-6.
30. Cerritelli F, Ginevri L, Messi G, et al (2015). Clinical effectiveness of osteopathic treatment in chronic migraine: 3-Armed randomized controlled trial. *Complement Ther Med*;23(2):149-156.
31. Charles A (2018). A new opportunity after migraine treatment failure? *Lancet* (London, England);392(10161):2241-2242.
32. Channell MK, Mueller LL, Hahn R (2009). Management of chronic posttraumatic headache: a multidisciplinary approach. *JAOA: Journal of the American Osteopathic Association*;109(9):509-513. Accessed July 11, 2023.
33. Chenghui Pi, Yinglu Liu, Lingling Li, et al (2022). Effects on neuromodulation, acupuncture, and aerobic exercises on migraine and tension-type headache outcomes: A systematic review and meta-analysis. *Medicine*;101(45):1-13.
34. Christiansen S, Jürgens TP, Klinger R (2015). Outpatient Combined Group and Individual Cognitive-Behavioral Treatment for Patients With Migraine and Tension-Type Headache in a Routine Clinical Setting. *Headache*;55(8):1072-1091.
35. ClinicalTrials.gov. Comparison of Craniosacral therapy and Myofacial relaxation techniques in people diagnosed with migraine.
36. ClinicalTrials.gov. Osteopathic Manipulative Treatment and migraine headaches. https://classic.clinicaltrials.gov/ct2/show/NCT04976985
37. Croop R, Lipton RB, Kudrow D, et al (2021). Oral rimegepant for preventive treatment of migraine: a phase 2/3, randomised, double-blind, placebo-controlled trial. *Lancet*. 397(10268):51-60.
38. Cuneo A, Yang R, Zhou H, et al (2023). The Utility of a Novel, Combined Biofeedback-Virtual Reality Device as Add-on Treatment for Chronic Migraine: A Randomized Pilot Study. *Clinical Journal of Pain*. 2023;39(6):286-296.
39. D'Andrea G, Cevoli S, Cologno D(2014). Herbal therapy in migraine. *Neurol Sci*;35 Suppl 1:135-140.
40. Da Silva AN(2015). Acupuncture for migraine prevention. *Headache*;55(3):470-473.
41. Derry CJ (2023). Sumatriptan (all routes of administration) for acute migraine attacks in adults - overview of Cochrane reviews. Derry S, Moore RA, Derry S, eds. *Cochrane Database of Systematic Reviews*. (5). Accessed July 7, 2023.
42. Di Lorenzo C, Coppola G, Sirianni G, et al (2015). Migraine improvement during short lasting ketogenesis: a proof-of-concept study. *Eur J Neurol*;22(1):170-177.
43. Diaz K, Chowdhury S, Gegbe N (2018). Is ginger effective for migraine headaches? Evidence-Based Practice. 2018;21(7):E10.
44. Diener HC, Goadsby PJ, Ashina M, et al (2019). Non-invasive vagus nerve stimulation (nVNS) for the preventive treatment of episodic migraine: The multicentre, double-blind, randomised, sham-controlled PREMIUM trial. *Cephalalgia*. 2019;39(12):1475-1487.
45. D'Ippolito M, Tramontano M, Buzzi MG (2017). Effects of Osteopathic Manipulative Therapy on Pain and Mood Disorders in Patients With High-Frequency Migraine. *J Am Osteopath Assoc*;117(6):365-369.
46. D'Onofrio F, Raimo S, Spitaleri D, Casucci G, Bussone G (2017). Usefulness of nutraceuticals in migraine prophylaxis. *Neurol Sci.* 2017;38(Suppl 1):117-120.
47. Dominguez-Moreno R, Do TP, Ashina M (2022). Calcitonin gene-related peptide and pituitary adenylate cyclase-activating polypeptide in migraine treatment. *Current opinion in endocrinology, diabetes, and obesity*;29(2):225-231.
48. Donnet A, Ducros A, Radat F, Allaf B, Chouette I, Lanteri-Minet M (2021). Severe migraine and its control: A proposal for definitions and consequences for care. *Rev Neurol (Paris)*;177(8):924-934.

49. Dougherty CO, Silberstein SD (2012). OnabotulinumtoxinA in the treatment of migraine headache. *Techniques in Regional Anesthesia and Pain Management*;16(1):41-46.
50. Dyńka D, Kowalcze K, Paziewska A (2022). The Role of Ketogenic Diet in the Treatment of Neurological Diseases. *Nutrients*;14(23):5003.
51. Eigenbrodt AK, Ashina H, Khan S, et al (2021). Diagnosis and management of migraine in ten steps. *Nat Rev Neurol*;17(8):501-514.
52. El-Hawary H, Kavanagh K, Janis JE (2023). The Positive and Negative Predictive Value of Targeted Diagnostic Botox Injection in Nerve Decompression Migraine Surgery. *Plastic and Reconstructive Surgery*. June 2023.
53. Esparham A, Stark-Inbar A, Jekel L, et al (2023). Acute Treatment of Migraine in Adolescents: Real-World Analysis of Remote Electrical Neuromodulation (REN). *Pediatric Neurology*.142:51-55.
54. Espí-López GV, Ruescas-Nicolau MA, Nova-Redondo C, Benítez-Martínez JC, Dugailly PM, Falla D (2018). Effect of Soft Tissue Techniques on Headache Impact, Disability, and Quality of Life in Migraine Sufferers: A Pilot Study. *J Altern Complement Med*. 2018;24(11):1099-1107.
55. Evans RW, Taylor FR (2006). "Natural" or alternative medications for migraine prevention. *Headache;* 46(6):1012-1018.
56. Feng X-X, Huang K-Y, Chen L, Zhou K (2023). Clinical efficacy of the shallow puncture and more-twirling acupuncture method in migraine treatment and its effects on serum 5-HT and β -EP levels. *Technology & Health Care*;31:533-540.
57. Estave PM, Margol C, Beeghly S, et al (2023). Mechanisms of mindfulness in patients with migraine: Results of a qualitative study. *Headache: The Journal of Head & Face Pain*;63(3):390-409.
58. Ferracini GN, Florencio LL, Dach F, et al (2017). Myofascial Trigger Points and Migraine-related Disability in Women With Episodic and Chronic Migraine. *Clin J Pain.* 33(2):109-115.
59. Gaul C, Diener HC, Danesch U; Migravent® Study Group(2015). Improvement of migraine symptoms with a proprietary supplement containing riboflavin, magnesium and Q10: a randomized, placebo-controlled, double-blind, multicenter trial. *J Headache Pain*. 16:516.
60. Gazerani P (2020). Migraine and Diet. *Nutrients*;12(6):1658. Published 2020 Jun 3.
61. Gertsch E, Loharuka S, Wolter-Warmerdam K, Tong S, Kempe A, Kedia S (2014). Intravenous magnesium as acute treatment for headaches: a pediatric case series. *J Emerg Med*;46(2):308-312.
62. Gfrerer L, Guyuron B (2017). Surgical treatment of migraine headaches. *Acta neurologica Belgica*;117(1):27-32.
63. Gfrerer L, Raposio E, Ortiz R, Austen WG (2018). Surgical Treatment of Migraine Headache: Back to the Future. *Plastic and Reconstructive Surgery*. 2018;142(4):1036-1045.
64. Ginger Capsules for the Acute Treatment of Migraine Attacks. Accessed July 7, 2023.
65. Goadsby PJ (2006). Migraine: emerging treatment options for preventive and acute attack therapy. *Expert Opin Emerg Drugs*;11(3):419-427.
66. Gross E, Putananickal N, Orsini AL, et al (2019). Efficacy and safety of exogenous ketone bodies for preventive treatment of migraine: A study protocol for a single-centred, randomised, placebo-controlled, double-blind crossover trial. *Trials*;20(1):61. Published 2019 Jan 17.
67. Guo W, Jin H, Wang Y, et al (2021). Efficacy and safety of cutting therapy in the treatment of migraine: A protocol for systematic review and meta-analysis. *Medicine*. 100(50):e28084.
68. Guy's and St Thomas' NHS Foundation Trust, King's College Hospital NHS Trust. A Feasibility Clinical Trial to Evaluate High Frequency Spinal Cord Stimulation for the Treatment of Patients With Chronic Migraine (rCM HF-SCS). Accessed July 7, 2023.
69. Haller H, Lauche R, Sundberg T, Dobos G, Cramer H (2019). Craniosacral therapy for chronic pain: a systematic review and meta-analysis of randomized controlled trials. *BMC Musculoskelet Disord*;21(1):1. Published 2019 Dec 31.
70. He K, Zhan M, Li X, Wu L, Liang K, Ma R (2022). A Bibliometric of Trends on Acupuncture Research About Migraine: Quantitative and Qualitative Analyses. *J Pain Res* ;15:1257-1269. Published 2022 Apr 28.
71. Heineman K (2018). Osteopathic Manipulative Treatment in the Management of Pediatric Headache and Orthodontic Intervention: A Case Report. *AAO Journal*. 28(1):15-18. Accessed July 11, 2023.
72. Hsu Y, Chen C, Wu S, Chen K (2023). Cold intervention for relieving migraine symptoms: A systematic review and meta-analysis. *Journal of Clinical Nursing* (John Wiley & Sons, Inc). 2023;32(11/12):2455-2465.
73. Igarashi H, Shibata M, Ozeki A, Matsumura T (2023). Galcanezumab Effects on Migraine Severity and Symptoms in Japanese Patients with Episodic Migraine: Secondary Analysis of a Phase 2 Randomized Trial. *Neurology and Therapy*12(1):73-87.
74. Ishiyama S, Shibata Y, Ayuzawa S, Matsushita A, Matsumura A, Ishikawa E(2022). Modifying of Functional Connectivity Induced by Peripheral Nerve Field Stimulation using Electroacupuncture for Migraine: A Prospective Clinical Study. *Pain Medicine*. 23(9):1560-1569.
75. Jafari M, Bahrpeyma F, Togha M, Vahabizad F, Hall T (2023). Effects of Upper Cervical Spine Manual Therapy on Central Sensitization and Disability in Subjects with Migraine and Neck Pain. *Muscles, Ligaments & Tendons Journal* (MLTJ). 2023;13(1):177-185.
76. Janis JE, Barker JC, Palettas M (2017). Targeted Peripheral Nerve-directed Onabotulinumtoxin A Injection for Effective Long-term Therapy for Migraine Headache. *Plastic and Reconstructive Surgery - Global Open*. 2017;5(3):e1270.
77. Jara Silva CE, Joseph AM, Khatib M, et al (2022). Osteopathic Manipulative Treatment and the Management of Headaches: A Scoping Review. *Cureus.* 14(8): e27830. Published 2022 Aug 9.
78. Jose A, Nagori SA, Roychoudhury A (2018). Surgical Management of Migraine Headache. *Journal of Craniofacial Surgery*. 29(2):e106-e108.
79. Kaar CRJ, Gerard JM, Nakanishi AK (2016). The Use of a Pediatric Migraine Practice Guideline in an Emergency Department Setting. *Pediatric Emergency Care*. 32(7):435-439.
80. Karlsson WK, Ashina H, Cullum CK, et al (2023). The Registry for Migraine (REFORM) study: methodology, demographics, and baseline clinical characteristics. *J Headache Pain*;24(1):70. Published 2023 Jun 12.
81. King HH (2017). Manual Craniosacral Therapy May Reduce Symptoms of Migraine Headache. *J Am Osteopath Assoc*;117(1):59.
82. Kirell A, Shingleton R (2018). Mobile Behavioral Therapy for Headache: Pilot Study. *Journal of Medical Internet Research*;20(9):28.
83. Kopel D, Gottschalk CH (2023). Migraine--Not Just a Numbers Game: Aim to Improve Quality of Life. *Neurology*. 2023;100(8):357-358.
84. Korucu O, Dagar S, Çorbacioglu ŞK, Emektar E, Cevik Y (2018). The effectiveness of greater occipital nerve blockade in treating acute migraine-related headaches in emergency departments. *Acta Neurologica Scandinavica*;138(3):212-218.
85. Kovacevic G, Stevanovic D, Bogicevic D, et al (2017). A 6-month follow-up of disability, quality of life, and depressive and anxiety symptoms in pediatric migraine with magnesium prophylaxis. *Magnes Res*. 2017;30(4):133-141.

86. Lanteri-Minet M, Ducros A, Francois C, Olewinska E, Nikodem M, Dupont-Benjamin L (2022). Effectiveness of onabotulinumtoxinA (BOTOX®) for the preventive treatment of chronic migraine: A meta-analysis on 10 years of real-world data. *Cephalalgia*. 42(14):1543-1564.
87. Law EF, Ritterband L, Zhou C, Palermo TM (2023). Intervention for Sleep and Pain in Youth (ISPY-RCT): protocol for a two-phase randomized controlled trial of sequenced cognitive-behavioral therapy for insomnia and pain management in adolescents with migraine. *Trials*;24(1):1-14.
88. Law S, Derry S, Moore RA (2013). Naproxen with or without an antiemetic for acute migraine headaches in adults. *Cochrane Database Syst Rev*. 2013;2013(10):CD009455. Published 2013 Oct 20.
89. Li D, Guo Y, Xia M, Zhang J, Zang W (2022). Dietary intake of thiamine and riboflavin in relation to severe headache or migraine: A cross-sectional survey. *Headache: The Journal of Head & Face Pain*;62(9):1133-1142.
90. Linde K, Allais G, Brinkhaus B, et al (2016). Acupuncture for the prevention of episodic migraine. *Cochrane Database Syst Rev*.2016(6):CD001218. Published 2016 Jun 28.
91. Lipton JA, Matthew E (2014). Resolution of post-traumatic temporomandibular joint pain, headache and vision changes with OMM in the unified field: A case report. *American Academy of Osteopathy Journal*;24(1):22-28.
92. Lipton RB, Croop R, Stock DA, et al (2023). Safety, tolerability, and efficacy of zavegepant 10 mg nasal spray for the acute treatment of migraine in the USA: a phase 3, double-blind, randomised, placebo-controlled multicentre trial. *Lancet Neurology*. 22(3):209-217.
93. Lipton RB, Pozo-Rosich P, Blumenfeld AM, et al (2023). Effect of Atogepant for Preventive Migraine Treatment on Patient-Reported Outcomes in the Randomized, Double-blind, Phase 3 ADVANCE Trial. *Neurology*;100(8):e764-e777.
94. Lipton RB, Silberstein SD (2015). Episodic and Chronic Migraine Headache: Breaking Down Barriers to Optimal Treatment and Prevention. *Headache: The Journal of Head & Face Pain*. 55:103-122. Accessed July 7, 2023.
95. Lipton RB, Silberstein S (2018). Migraine Headache: Diagnosis and Current and Emerging Preventive Treatments. *Prim Care Companion CNS Disord*. 2018;20 suppl E1:li17059su1c. Published 2018 Dec 27.
96. Loh NR, Whitehouse WP, Howells R (2022). What is new in migraine management in children and young people?. *Arch Dis Child*;107(12):1067-1072.
97. Long C, Ye J, Chen M, Gao D, Huang Q (2022). Effectiveness of yoga therapy for migraine treatment: A meta-analysis of randomized controlled studies. *American Journal of Emergency Medicine*;58:95-99.
98. Lucius K (2022). Migraine Headache: Dietary Approaches and Nutritional Supplements. *Integrative & Complementary Therapies*;28(2):93-103.
99. Lucia Mangialardi M, Baldelli I, Salgarello M, Raposio E (2020). Decompression Surgery for Frontal Migraine Headache. *Plastic and Reconstructive Surgery - Global Open*. 2020;8(10):e3084.
100. Ma P, Dong X, Qu Y, et al (2021). A Narrative Review of Neuroimaging Studies in Acupuncture for Migraine. *Pain Research & Management*. November 2021:1-9.
101. Maier JA, Pickering G, Giacomoni E, Cazzaniga A, Pellegrino P(2020). Headaches and Magnesium: Mechanisms, Bioavailability, Therapeutic Efficacy and Potential Advantage of Magnesium Pidolate. *Nutrients*. 2020;12(9):2660.
102. Mainnah M, Septriana M, M. S. W (2022). The Role of Acupuncture Therapy to Overcome Oneside Head Pain (Migraine). *Journal of Vocational Health Studies*. 5(3):192-202.
103. Mann JD, Faurot KR, Wilkinson L, et al (2008). Craniosacral therapy for migraine: protocol development for an exploratory controlled clinical trial. *BMC Complement Altern Med* ;8:28. Published 2008 Jun 9.
104. Mannix S, Skalicky A, Buse DC, et al (2016). Measuring the impact of migraine for evaluating outcomes of preventive treatments for migraine headaches. *Health & Quality of Life Outcomes*;14:1-11.
105. Martic-Biocina S, Zivoder I, Kozina G (2017). Biofeedback and neurofeedback application in the treatment of migraine. *Psychiatr Danub*. 2017;29(Suppl 3):575-577.
106. Martin BR, Seaman DR (2015). Dietary and Lifestyle Changes in the Treatment of a 23-Year-Old Female Patient With Migraine. *Journal of Chiropractic Medicine*;14(3):205-211.
107. Martins LB, Rodrigues AM dos S, Monteze NM, et al (2020). Double-blind placebo-controlled randomized clinical trial of ginger ( ) in the prophylactic treatment of migraine. *Cephalalgia*;40(1):88-95.
108. Martinelli D, Pocora MM, De Icco R, et al (2023). Searching for the Predictors of Response to BoNT-A in Migraine Using Machine Learning Approaches. *Toxins (Basel)*. 15(6):364. Published 2023 May 29.
109. Matera DV, Smith B, Lam B (2019). Revisiting the expanded use of hyperbaric oxygen therapy for treatment of resistant migraines. *Med Gas Res*;9(4):238-240.
110. Meng SH, Wang MX, Kang LX, et al (2021). Dietary Intake of Calcium and Magnesium in Relation to Severe Headache or Migraine. *Front Nutr*. 2021; 8:653765. Published 2021 Mar 5.
111. Migraines: Acupuncture vs. Electroacupuncture. *Acupuncture Today*. 2022;23(7):6. Accessed July 11, 2023.
112. Mitsikostas DD, Rapoport AM (2015). New players in the preventive treatment of migraine. *BMC Med* ;13:279. Published 2015 Nov 10.
113. Mo H, Chung SJ, Rozen TD, Cho SJ (2022). Oxygen Therapy in Cluster Headache, Migraine, and Other Headache Disorders. *J Clin Neurol* ;18(3):271-279.
114. Moisset X, Pereira B, Ciampi de Andrade D, Fontaine D, Lantéri-Minet M, Mawet J (2020). Neuromodulation techniques for acute and preventive migraine treatment: a systematic review and meta-analysis of randomized controlled trials. *J Headache Pain*. 21(1):142. Published 2020 Dec 10.
115. Moore JC, Miner JR (2012). Subcutaneous delivery of sumatriptan in the treatment of migraine and primary headache. *Patient Preference & Adherence*. 6:27-37.
116. Mouaanaki SA, Carlsen LN, Bendtsen L, Jensen RH, Schytz HW (2022). Treatment experiences and clinical characteristics in migraine and tension-type headache patients before the first visit to a tertiary headache center. *Cephalalgia*;42(11-12):1265-1273.
117. Movahed MR (2023). Highly Effective Pressure Point Applied Between the Thumb and Index Finger for the Treatment of Migraine Attacks. *Alternative Therapies in Health & Medicine* ;29(3):271-273. Accessed July 11, 2023.
118. Mueller LL (2007). Diagnosing and managing migraine headache. *J Am Osteopath Assoc*. 2007;107(10 Suppl 6):ES10-ES16.
119. Muñoz-Gómez E, Inglés M, Aguilar-Rodríguez M, et al (2022). Effect of a Craniosacral Therapy Protocol in People with Migraine: A Randomized Controlled Trial. *J Clin Med*;11(3):759. Published 2022 Jan 30.
120. Muñoz-Gómez E, Inglés M, Serra-Añó P, Espí-López GV (2021). Effectiveness of a manual therapy protocol based on articulatory techniques in migraine patients. A randomized controlled trial. *Musculoskelet Sci Pract*; 54:102386.
121. Muñoz-Gómez E, Serra-Añó P, Mollà-Casanova S, et al (2022). Potential Add-On Effects of Manual Therapy Techniques in Migraine Patients: A Randomised Controlled Trial. J *Clin Med*. 2022;11(16):4686. Published 2022 Aug 11.

122. Murray K, O'Neal KS, Weisz M (2015). Dietary suggestions for migraine preventions. *American Journal of Health-System Pharmacy* ;72(7):519-521.
123. Nagori SA, Jose A, Roychoudhury A (2019). Surgical Management of Migraine Headaches: A Systematic Review and Meta-analysis. *Annals of Plastic Surgery*. 83(2):232-240.
124. Natbony LR, Zhang N (2020). Acupuncture for Migraine: a Review of the Data and Clinical Insights. *Curr Pain Headache Rep*;24(7):32. Published 2020 May 29.
125. Nattagh-Eshtivani E, Sani MA, Dahri M, et al (2018). The role of nutrients in the pathogenesis and treatment of migraine headaches: Review. *Biomed Pharmacother*. 2018;102:317-325.
126. Nierenburg H, Stark-Inbar A (2022). Nerivio® remote electrical neuromodulation for acute treatment of chronic migraine. *Pain Management*;12(3):267-281.
127. Nierenburg H, Vieira JR, Lev N, et al (2020). Remote Electrical Neuromodulation for the Acute Treatment of Migraine in Patients with Chronic Migraine: An Open-Label Pilot Study. *Pain and Therapy* ;9(2):531-543.
128. Nissan GR, Diamond ML (2005). Advances in migraine treatment. *J Am Osteopath Assoc* ;105(4 Suppl 2):9S-15S.
129. A non-oral gepant for acute treatment of migraine. *Headache: The Journal of Head & Face Pain*. 2022;62(9):1075-1076.
130. Odawara M, Hashizume M, Yoshiuchi K, Tsuboi K (2015). Real-Time Assessment of the Effect of Biofeedback Therapy with Migraine: A Pilot Study. *Int J Behav Med*;22(6):748-754.
131. Ohlsen BA (2012). Combination of acupuncture and spinal manipulative therapy: management of a 32-year-old patient with chronic tension-type headache and migraine. *Journal of Chiropractic Medicine*11(3):192-201.
132. Ökmen BM, Güneş A, Altan L (2022). Evaluation of the efficacy of therapeutic ultrasound in the treatment of migraine. *Turkish Journal of Physical Medicine & Rehabilitation* (2587-1250);68(4):475-483.
133. Olesiejuk M, Marusiak J, Chalimoniuk M (2023). Myofascial Trigger Points therapy decreases myotonometric tone and stiffness of trapezius muscle, benefits headaches and muscle pain in migraine. *NeuroRehabilitation*;52(2):299-310.
134. Olla D, Sawyer J, Sommer N, Moore IJB (2020). Migraine Treatment. *Clinics in Plastic Surgery*;47(2):295-303.
135. Orr SL, Venkateswaran S (2014). Nutraceuticals in the prophylaxis of pediatric migraine: Evidence-based review and recommendations. *Cephalalgia* ;34(8):568-583.
136. Özge A, Uludüz D, Karadaş Ö, Mehtar Bozkurt M (2021). Erenumab in Mechanism-based Migraine Treatment. *Turkish Journal of Neurology / Turk Noroloji* Dergisi.;17(3):229-239.
137. Paemeleire K, Goodman AM (2012). Results of a patient survey for an implantable neurostimulator to treat migraine headaches. *The Journal of Headache and Pain*. 2012;13(3):239-241.
138. Pan L-LH, Chen W-T, Wang Y-F, et al (2022). Resting-state occipital alpha power is associated with treatment outcome in patients with chronic migraine. *PAIN*.163(7):1324-1334.
139. Pan L-LH, Hsiao F-J, Chen W-T, Wang S-J (2022). Resting State Electrophysiological Cortical Activity: A Brain Signature Candidate for Patients with Migraine. *Current Pain and Headache Reports*;26(4):289-297.
140. Parlongue G, Cerdan EV, Koenig J, Williams DP (2021). Smartphone based music intervention in the treatment of episodic migraine headaches – A pilot trial. *Complementary Therapies in Medicine*. 2021;63.
141. Patel PS, Minen MT (2019). Complementary and Integrative Health Treatments for Migraine. *J Neuroophthalmol*. 2019;39(3):360-369.
142. Peters GL, Hennessey EK (2021). Rimegepant: acute treatment for migraine headaches. *Pain Management*. 11(3):259-266.
143. Pietrzak D, Kasperek K, Rękawek P, Piątkowska-Chmiel I (2022). The Therapeutic Role of Ketogenic Diet in Neurological Disorders. *Nutrients.* 2022;14(9):1952.
144. Pires RD, Rocha NS, Esteves JE, Rodrigues ME (2017). Use of pressure dynamometer in the assessment of the pressure pain threshold in trigger points in the cranicervical muscles in women with unilateral migraine and tension-type headache: an observational study. *International Journal of Osteopathic Medicine*;26:28-35.
145. Plank S, Goodard JL, Pasierb L, Simunich TJ, Croner JR (2013). Standardized set-point acupuncture for migraines. *Alternative Therapies in Health & Medicine*;19(6):32-37. Accessed July 7, 2023.
146. Poudel S, Quinonez J, Choudhari J, et al (2021). Medical Cannabis, Headaches, and Migraines: A Review of the Current Literature. *Cureus*;13(8):e17407. Published 2021 Aug 24.
147. Puledda F, Goadsby PJ (2017). An Update on Non-Pharmacological Neuromodulation for the Acute and Preventive Treatment of Migraine. *Headache.* 2017;57(4):685-691.
148. Puledda F, Shields K (2018). Non-Pharmacological Approaches for Migraine. *Neurotherapeutics*;15(2):336-345.
149. Putananickal N, Gross EC, Orsini AL, et al (2022). Efficacy and safety of exogenous beta-hydroxybutyrate for preventive treatment in episodic migraine: A single-centred, randomised, placebo-controlled, double-blind crossover trial. *Cephalalgia*;42(4-5):302-311.
150. Rafie, Shahram & Namjoyan, Forough & Golfakhrabadi, Fereshteh & Yousefbeyk, Fatemeh & Hassanzadeh, Alireza(2016). Effect of lavender essential oil as a prophylactic therapy for migraine: A randomized controlled clinical trial. *Journal of Herbal Medicine*. 6.
151. Rajapakse T, Davenport WJ (2019). Phytomedicines in the Treatment of Migraine. *CNS Drugs*;33(5):399-415.
152. Rajapakse T, Pringsheim T(2016). Nutraceuticals in Migraine: A Summary of Existing Guidelines for Use. *Headache*;56(4):808-816.
153. Rapoport AM, Freitag F, Pearlman SH (2010). Innovative delivery systems for migraine: The clinical utility of a transdermal patch for the acute treatment of migraine. *CNS Drugs*. 24(11):929-940.
154. Rezaeian T, Ahmadi M, Mosallanezhad Z, Nourbakhsh MR (2021). The impact of myofascial release and stretching techniques on the clinical outcomes of migraine headache: A randomized controlled trial. *J Res Med Sci* ; 26:45. Published 2021 Jul 31.
155. Rhyne DN, Anderson SL, Gedde M, Borgelt LM (2016). Effects of Medical Marijuana on Migraine Headache Frequency in an Adult Population. *Pharmacotherapy*. 36(5):505-510.
156. Rist PM, Hernandez A, Bernstein C, et al (2019). The Impact of Spinal Manipulation on Migraine Pain and Disability: A Systematic Review and Meta-Analysis. *Headache*. 59(4):532-542.
157. Rao R, Hershey AD (2020). An update on acute and preventive treatments for migraine in children and adolescents. *Expert Rev Neurother* ;20(10):1017-1027.
158. Rowlands E, Pozun A (2023). Osteopathic Manipulative Treatment: Suboccipital Release. In: StatPearls. Treasure Island (FL): StatPearls Publishing; March 8.
159. Rundblad L, Cullum CK, Sacco S, et al (2022). Use of Non-pharmacological Therapies in Individuals With Migraine Eligible for Treatment With Monoclonal Antibodies Targeting Calcitonin Gene-Related Peptide (CGRP)-Signaling: A Single-Center Cross-Sectional Observational Study. *Front Pain Res (Lausanne*). 2022;3:935183.
160. Safonov MI, Naprienko MV (2017). Analiz éffektivnosti refleksoterapii v kompleksnom lechenii khronicheskoĭ migreni [Analysis of the efficacy of reflexology in the complex treatment of chronic migraine]. *Zh Nevrol Psikhiatr Im S S Korsakova*;117(5):22-25.

161. Saigle V (2023). A patient's perspective on trying to access migraine treatment in Northern British Columbia. *CMAJ : Canadian Medical Association journal* = journal de l'Association medicale canadienne;195(5):E198.
162. Saltychev M, Juhola J (2022). Effectiveness of High-Frequency Repetitive Transcranial Magnetic Stimulation in Migraine: A Systematic Review and Meta-analysis. *American Journal of Physical Medicine & Rehabilitation*. 2022;101(11):1001-1006.
163. Schwedt TJ (2019). New and Emerging Treatments for the Acute and Preventive Therapy of Migraine and Other Headaches. *Headache* ;59 Suppl 2:1-2.
164. Seddik AH, Schiener C, Ostwald DA, Schramm S, Huels J, Katsarava Z (2021). Social Impact of Prophylactic Migraine Treatments in Germany: A State-Transition and Open Cohort Approach. *Value in Health*;24(10):1446-1453.
165. Seng EK, Lipton RB (2022). Do behavioral treatments work for migraine prevention? Headache: *The Journal of Head & Face Pain*. 62(4):402-404.
166. Shauly O, Gould DJ, Sahai-Srivastava S, Patel KM (2019). Greater Occipital Nerve Block for the Treatment of Chronic Migraine Headaches: A Systematic Review and Meta-Analysis. *Plastic and Reconstructive Surgery.* 144(4):943-952.
167. Shoeibi A, Olfati N, Soltani Sabi M, Salehi M, Mali S, Akbari Oryani M (2017). Effectiveness of coenzyme Q10 in prophylactic treatment of migraine headache: an open-label, add-on, controlled trial. *Acta Neurol Belg*;117(1):103-109.
168. Silva ML, Martins LB, dos Santos LC, et al (2023). Decreased plasma levels and dietary intake of minerals in women with migraine. *Nutritional Neuroscience*. 2023;26(7):629-636.
169. Simshäuser K, Pohl R, Behrens P, Schultz C, Lahmann C, Schmidt S (2022). Mindfulness-Based Cognitive Therapy as Migraine Intervention: a Randomized Waitlist Controlled Trial. *International Journal of Behavioral Medicine*;29(5):597-609.
170. Slomski A (2022). Monoclonal Antibody Overcomes Migraine Treatment Failure. *JAMA: Journal of the American Medical Association*;328(8):700.
171. Smith MS, Olivas J, Smith K (2019). Manipulative Therapies: What Works. *Am Fam Physician* ;99(4):248-252.
172. Smith MS, Olivas J, Smith K (2019). Manipulative Therapies: What Works. *American Family Physician* ;99(4):248-252. Accessed July 11, 2023.
173. Soleimanian-Boroujeni F, Badihian N, Badihian S, Shaygannejad V, Gorji Y (2023). The efficacy of transdiagnostic cognitive behavioral therapy on migraine headache: a pilot, feasibility study. *BMC Neurology* ;22(1):1-13.
174. Sorrel M (2010). Myofasical examination leads to diagnosis and successful treatment of migraine headache. *Journal of Musculoskeletal Pain.*18(1): 31-37.
175. Stern JI, Chiang C, Kissoon NR, Robertson CE (2022). Narrative review of peripheral nerve blocks for the management of headache. *Headache: The Journal of Head & Face Pain*;62(9):1077-1092.
176. Sun-Edelstein C, Mauskop A (2011).Alternative headache treatments: Nutraceuticals, behavioral and physical treatments. *Headache* ;51(3):469-483.
177. Sun-Edelstein C, Mauskop A (2009). Foods and supplements in the management of migraine headaches. *Clin J Pain* ;25(5):446-452.
178. Tepper SJ, Dodick DW, Schmidt PC, Kellerman DJ (2019). Efficacy of ADAM Zolmitriptan for the Acute Treatment of Difficult-to-Treat Migraine Headaches. Headache: *The Journal of Head & Face Pain*;59(4):509-517.
179. Tepper SJ, Grosberg B, Daniel O, et al (2022). Migraine treatment with external concurrent occipital and trigeminal neurostimulation—A randomized controlled trial. *Headache: The Journal of Head & Face Pain*. 2022;62(8):989-1001.
180. Tepper SJ, Lipton RB, Silberstein SD, et al (2023). Long-term efficacy and safety of erenumab in patients with chronic migraine and acute medication overuse: A subgroup analysis. *Headache*;63(6):730-742.
181. Tepper SJ, Rabany L, Cowan RP, et al (2023). Remote electrical neuromodulation for migraine prevention: A double-blind, randomized, placebo-controlled clinical trial. *Headache: The Journal of Head & Face Pain*;63(3):377-389.
182. Teubert JD, Courtney WD, Holeman RD, Kennedy CD (2020). Is osteopathic manipulative therapy as effective as medications for the treatment of headaches? *Evidence-Based Practice*;23(4):15-16.
183. Toprak Celenay S, Coban O, Mete O, Karahan N (2023). An investigation of the effects of connective tissue massage in women with migraine: A controlled clinical trial. *Journal of Bodywork & Movement Therapies* ;33:112-119.
184. Torabi R, Bourn L, Veith J, et al (2020). Population-Based Health Utility Assessment of Migraine Headache Symptoms before and after Surgical Intervention. *Plastic and Reconstructive Surgery*;145(1):210-217.
185. Torrisi M, Corallo F, Lo Buono V, et al (2023). Migraine Treatment Using Erenumab: Can Lead to a Cognitive and Psychological Qualitative Improvement?. *Medicina (Kaunas)*;59(5):936. Published 2023 May 12.
186. Tiwari R, Tiwari G, Mishra S, Ramachandran V (2023). Preventive and Therapeutic Aspects of Migraine for Patient Care: An Insight. *Curr Mol Pharmacol*;16(2):147-160.
187. Tsung-Hsing Lin, Cheng-Chia Yang, Shih-Yu Lee, et al (2023). The effect of bright light therapy in migraine patients with sleep disturbance: A prospective, observational cohort study protocol. *Frontiers in Aging Neuroscience*; 15:1-6.
188. Tzankova V, Becker WJ, Chan TLH (2023). Diagnosis and acute management of migraine. *Canadian Medical Association Journal* (CMAJ) ;195(4):E153-E158.
189. Using osteopathy to treat musculoskeletal headaches and migraine. *Indian Practitioner*. 75(5):50. Accessed July 11, 2023.
190. Velásquez RV, Chachaima MJ, Cárdenas BEC, et al (2022). Greater occipital nerve block for chronic migraine patients: A meta-analysis. *Acta Neurologica Scandinavica*. 146(2):101-114.
191. Visser EJ, Drummond PD, Lee-Visser JLA (2020). Reduction in Migraine and Headache Frequency and Intensity With Combined Antioxidant Prophylaxis (N-acetylcysteine, Vitamin E, and Vitamin C): A Randomized Sham-Controlled Pilot Study. *Pain Pract*. 20(7):737-747.
192. Voigt K, Liebnitzky J, Burmeister U, et al (2011). Efficacy of osteopathic manipulative treatment of female patients with migraine: results of a randomized controlled trial. *J Altern Complement Med*;17(3):225-230.
193. Walker D, Zhang N, Natbony LR (2023). Insomnia and Migraine: A Review of Evidence-Based, Biobehavioral Interventions. *Current Pain & Headache Reports*,*27*(2):19-25.
194. Whalen, J., Yao, S. & Leder, A (2018). A Short Review of the Treatment of Headaches Using Osteopathic Manipulative Treatment. *Curr Pain Headache Rep* 22, 82 (2018).
195. Winner PK, Blumenfeld AM, Eross EJ, et al (2019). Long-Term Safety and Tolerability of OnabotulinumtoxinA Treatment in Patients with Chronic Migraine: Results of the COMPEL Study. *Drug Saf* ;42(8):1013-1024.
196. Woldeamanuel YW, Oliveira ABD (2022). What is the efficacy of aerobic exercise versus strength training in the treatment of migraine? A systematic review and network meta-analysis of clinical trials. *Journal of Headache & Pain*.23(1):1-12.
197. Wu Q, Liu P, Liao C, Tan L (2022). Effectiveness of yoga therapy for migraine: A meta-analysis of randomized controlled studies. *Journal of clinical neuroscience: official journal of the Neurosurgical Society of Australasia* ;99:147-151.
198. Yan BM, Gibson Depoy EM, Ahmad A, Nahas SJ (2021). Biomarkers in Migraine. *Neurology India*;69(Supplement):S17-S24.

199. Yarnell E (2017). Herbal Medicine and Migraine. *Alternative & Complementary Therapies* ;23(5):192-201.
200. Yarnitsky D, Dodick DW, Grosberg BM, et al (2019). Remote Electrical Neuromodulation (REN) Relieves Acute Migraine: A Randomized, Double-Blind, Placebo-Controlled, Multicenter Trial. *Headache: The Journal of Head & Face Pain*;59(8):1240-1252. Accessed July 7, 2023.
201. Young N, Silverman D, Bradford H, Finkelstein J (2017). Multicenter prevalence of opioid medication use as abortive therapy in the ED treatment of migraine headaches. *American Journal of Emergency Medicine*.35(12):1845-1849.
202. Zhang Y, Dennis JA, Leach MJ, et al (2017). Complementary and Alternative Medicine Use Among US Adults With Headache or Migraine: Results from the 2012 National Health Interview Survey. *Headache*;57(8):1228-1242.
203. Zhao L, Chen J, Li Y, et al (2017). The Long-term Effect of Acupuncture for Migraine Prophylaxis: A Randomized Clinical Trial. *JAMA Intern Med*. 2017;177(4):508-515.
204. Zheng H, Fan S-Q, Shi Y-Z, Liang J-T, Xiao X-Y (2023). Matching adjusted indirect comparison of acupuncture versus fremanezumab in the preventive treatment of episodic migraine. *Current Medical Research & Opinion*. 2023;39(3):409-416.





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