Collected Scientific Research Relating to the Use of Osteopathy with Ear Infection (Otitis Media)

Important:

1) Osteopathy involves helping people's own self-healing abilities to work better, rather that focussing primarily on particular conditions.

2) Each person is different, and osteopathy treats them differently.

Therefore people respond to osteopathic treatment in different ways. Treatments that work for one person cannot be guaranteed to work for another person in the same way. The fact that there is scientific research supporting a treatment in a group of people does not mean that it will always work in the same way (which is probably true of all research).

A number of things make research into osteopathy challenging. These include the two aspects of osteopathy mentioned above, and also the lack of major commercial interests to provide funding in expectation of financial returns. At the same time, there is an emerging body of research demonstrating the usefulness of osteopathic treatment.

More research is being done all of the time. I am not aware of any research which shows that osteopathic treatment, delivered by a qualified osteopath, is ineffective in relation to this area. If you are aware of any studies that show that, please bring them to my attention.

Please note: there is room for debate about the classifications used for these studies. Please let John Smartt know if you believe that any of these classifications are incorrect.

About Otitis Media

The three randomised controlled trials listed here gave inconsistent results about whether osteopathy reduces the frequency of otitis media (Mills et al, 2003 and Steele et al, 2014) found that it did, while Wahl et al 2008 found that it did not. All three studies, though, found that there was a reduction in duration and severity as a result of osteopathic treatment.

This is in marked contrast to the effectiveness of other interventions for this condition. The BMJ's rating of evidence for different interventions for otitis media are: Antibiotics: likely to be ineffective or harmful; Corticosteroids (oral): unknown effectiveness; Corticosteroids (intranasal): unlikely to be beneficial; Auto-inflation using purpose-designed devices: likely to be beneficial; Auto-inflation using non-purpose-designed devices: unknown effectiveness; Ventilation tubes: trade-off between benefits and harms; Ventilation tubes plus adenoidectomy: trade off between benefits and harms http://www.clinicalevidence.com/x/systematic-review/0502/overview.html

These studies are from peer-reviewed journals

Number of studies: 7

Clinically and statistically significant results

Number of studies: 6

Other reviews

Number of studies: 1

Perez LL, A.Sneed J, Eland D, 2012 **Evidence-based osteopathic manipulative treatment for common conditions** Osteopathic Family Physician Volume 4, Issue 1, January–February, Pages 8-12 *https://www.sciencedirect.com/science/article/pii/S1877573X11002188*

> "Osteopathic manipulative treatment (OMT) is a unique aspect of osteopathic medicine that has served as a useful adjunct to traditional surgical and pharmacological treatment of medical conditions for more than 100 years. Using an approach based on five basic body functions, as well as traditional modern medical and surgical therapeutics, OMT enhances the body's innate ability to fight inflammation and other systemic results of disease states. OMT has been shown to be a safe and cost-effective treatment for back pain, in particular for patients who have continued pain despite standard treatments and for those who are unable or unwilling to take pain relievers. For patients with pneumonia, OMT can reduce the need for potentially dangerous antibiotics and reduce the length of a patient's hospital stay. In addition, in children with otitis media, OMT can be used as an adjunct to antibiotic and surgical treatment to decrease morbidity, reduce antibiotic usage, and decrease the discomfort associated with the symptoms of a middle ear infection."

Randomised controlled trials

Number of studies: 2

Steele KM, Carreiro JE, Viola JH, Conte JA, Ridpath LC. 2014 **Effect of osteopathic manipulative treatment on middle ear effusion following acute otitis media in young children: a pilot study.** J Am Osteopath Assoc Jun;114(6):436-47 *http://www.ncbi.nlm.nih.gov/pubmed/24917631*

> "Childhood acute otitis media (AOM) is highly prevalent. Its usual sequela of middle ear effusion (MEE) can lead to conductive hearing loss, for which surgery is commonly used."
> "Tympanogram data demonstrated a statistically significant improvement in MEE at visit 3 in patients in the SC+OMT group (odds ratio, 2.98; 95% confidence interval, 1.16, 7.62; χ(2) test for independence, P=.02). The AR data analysis showed statistically significant improvement at visit 3 for the SC+OMT group (z=2.05; P=.02). There was no statistically significant change in MEE before or immediately after the OMT protocol."
> "A standardized OMT protocol administered adjunctively with standard care for patients with AOM may result in faster resolution of MEE following AOM than standard treatment alone."

Mills MV, Henley CE, Barnes LL, Carreiro JE, Degenhardt BF. 2003 **The use of osteopathic manipulative treatment as adjuvant therapy in children with recurrent acute otitis media.** Arch Pediatr Adolesc Med Sep;157(9):861-6. *http://archpedi.jamanetwork.com/article.aspx?*

> "The results of this study suggest a potential benefit of osteopathic manipulative treatment as adjuvant therapy in children with recurrent AOM [acute otitis media]; it may prevent or decrease surgical intervention or antibiotic overuse."
> "Treatments were gentle techniques on areas of restriction consisting of articulation, myofascial release, balanced membranous tension (according to teachings of William Garner Sutherland, DO, and others25), balanced ligamentous tension, facilitated positional release, and/or counterstrain treatments. "

Cohort studies

Number of studies: 1

Degenhardt BF, Kuchera ML. 2006 **Osteopathic evaluation and manipulative treatment in reducing the morbidity of otitis media: a pilot study.** J Am Osteopath Assoc Jun;106(6):327-34 *http://www.ncbi.nlm.nih.gov/pubmed/16790538*

This was a time-series study, with no independent control

> "Pilot cohort study with 1-year posttreatment follow-up. At follow-up, subjects' parents or legal guardians and their referring and/or family physicians were contacted to determine recurrence of otitis media since intervention."
> "Five (62.5%) subjects had no recurrence of symptoms. Of the three remaining subjects in this cohort, one had a bulging tympanic membrane, another had four episodes of otitis media, and the last underwent surgery after recurrence at 6 weeks posttreatment. Closer analysis of the posttreatment course of the last two subjects indicates that there may have been a clinically significant decrease in morbidity for a period of time after intervention."
> "The present study indicates that osteopathic manipulative treatment may change the progression of recurrent otitis media."

Case reports

Number of studies: 2

Channell MK 2008 **Modified Muncie technique: osteopathic manipulation for eustachian tube dysfunction and illustrative report of case.** J Am Osteopath Assoc May;108(5):260-3 *http://www.ncbi.nlm.nih.gov/pubmed/18519836*

> "In eustachian tube dysfunction, the eustachian tube fails to open sufficiently, resulting in a difference between the air pressure inside and outside the middle ear. This condition can cause pain and hearing loss and may lead to barotitis media, otitis media, tinnitus, and vertigo. Although several treatment options are available, from antibiotics to surgery, little documentation of osteopathic manipulative techniques exists. The current report discusses various treatment options, including the modified Muncie technique-a type of myofascial release administered inside the patient's mouth-for patients with eustachian tube dysfunction and its symptoms. An illustrative case of a 37-year-old woman who complained of intermittent vertigo and who was treated with this technique is included."

Pratt-Harrington D 2000 **Galbreath technique: a manipulative treatment for otitis media revisited.** J Am Osteopath Assoc Oct;100(10):635-9 *https://www.ncbi.nlm.nih.gov/pubmed/11105452*

> "Otitis media is a common disorder that results in numerous visits to the physician each year. Antimicrobials, antihistamines, steroids, and surgery have all been used to treat otitis media; however, the literature makes little mention of osteopathic manipulative treatment in this regard. This article describes a technique that was first described in 1929 by William Otis Galbreath, DO. By simple mandibular manipulation, the eustachian tube is made to open and close in a \"pumping action\" that allows the ear to drain accumulated fluid more effectively. Physicians

can easily teach this procedure to parents for use at home."

Mixed results (significant for some outcomes, not others)

Number of studies: 1

Randomised controlled trials

Number of studies: 1

Wahl RA, Aldous MB, Worden KA, Grant KL 2008 **Echinacea purpurea and osteopathic manipulative treatment in children with recurrent otitis media: a randomized controlled trial.** BMC Complement Altern Med Oct 2;8:56 *http://www.ncbi.nlm.nih.gov/pubmed*

"Children aged 12–60 months with recurrent otitis media"
"All children were scheduled for osteopathic sessions as soon as possible after entry, then 2, 4, 8, and 12 weeks later. "
"The first group received placebo extract orally and sham manipulation. The second group received Echinacea purpurea extract and sham manipulation. The third group received placebo extract and true OMT. The last group received Echinacea purpurea extract and true OMT. "
"In the same population of children, a preventive regimen of from one to five osteopathic manipulative treatments over three months did not significantly decrease their risk of acute otitis media."