

EAR INFECTIONS AND YOUR CHILD

The important role of chiropractic in the management of childhood ear infections is well documented. There are numerous published case studies as well as a number of published research studies that support the positive difference chiropractic care may have on a child with an acute ear infection or chronic ear infections.¹⁻⁶

HOW DOES CHIROPRACTIC INFLUENCE A CHILD'S EAR INFECTION?

Chiropractic may have a beneficial influence on a child's ear infection by improving their overall immunological capacity and by promoting improved drainage of the tube that drains the middle ear (the Eustachian tube):

- Misalignments of the spine (also called 'subluxations') often result during childbirth as well as from everyday tumbles or falls that a child may experience. Research has shown that, if left untreated, a misalignment in the upper cervical region (the upper neck) may irritate the nerves and eventually disrupt the ability of the child's body, including the inner ear, to function at its best. The purpose of a chiropractic adjustment is to help to restore the normal functioning of the nervous system, so that the immune system can work at optimal capacity.
- The positive effect on a child's ear infection that may result from a chiropractic adjustment is also related to the adjustment's effect on the drainage of the Eustachian tube. The younger the child, the more horizontal the tube is and the more hori-

zontal it is, the more difficult it is for it to drain. Research has shown that spinal dysfunction may affect the function of the muscle that plays an important role in the dilatation mechanism of this tube. Therefore, if the function of this muscle can be improved, this may have a positive influence on the ability of the tube to drain.

A study published in the *Journal of Clinical Chiropractic Pediatrics* reported that there is a strong correlation between chiropractic adjustments and the resolution of ear infections. In the study, 332 children with chronic ear infections participated.³ Each child, ranging in age from 27 days to 5 years old, was given a series of chiropractic adjustments. The results showed that nearly 80 per cent of the children did not experience another ear infection within the six-month period following their initial visit.



ANTIBIOTICS AND CHILDHOOD EAR INFECTIONS

The most common treatment for childhood ear infections is antibiotics, which are often administered for 10 days or longer. This is despite the fact that the use of antibiotics to treat ear infections is under serious question within the medical profession.^{4,7-13} Many studies show that antibiotics are *not effective* in treating many cases of ear infection:

- One study compared children treated with antibiotics alone, antibiotics with myringotomy (eardrum perforation) or no treatment.¹⁴ This study found that there was little difference between the groups in terms of pain, fever, hearing, healing time and infection recurrences.
- In a large study of 3,660 children, children treated with antibiotics recovered slightly slower than children who did not receive antibiotics.¹⁵ The researchers suggested that this might be because the antibiotics kill the body's good bacteria, which form part of the body's natural defence system.
- A study of 4,860 children with acute ear infection treated them with pain relievers and ear drops for four days.¹⁶ More than 90 per cent of these children recovered in a few days without needing further treatment. Only three per cent of the children required antibiotics.
- An article in the *Journal of the American Medical Association* reported that children with chronic ear infections who received amoxicillin, an antibiotic, suffered two to six times more recurrences than those not on the antibiotic.⁸ The researchers said that this may be due to the destruction of both good and bad bacteria, causing a bacterial imbalance that may result in problems with the body's immune system and further ear infections.

Research such as this seriously brings into question the fact that over 90 per cent of children who present to their medical doctor with an ear infection are prescribed an antibiotic.

A NATURAL APPROACH TO THE MANAGEMENT OF CHILDHOOD EAR INFECTIONS

My experience in the management of childhood ear infections has led me to an approach that I believe is rational, evidence based and, most importantly, very effective. In addition to the all-important *chiropractic management* of the child, my approach incorporates a combination of one or more of the following:

- Natural ear drops (however, ear drops should never be administered if there is a suspicion that the eardrum has been perforated).
- Breastfeeding: breastfeeding may play a significant role in decreasing the chances of a child developing an ear infection. Research clearly demonstrates the link between bottle-feeding and ear infections.
- Attention to diet: food allergies, particularly to wheat and cow's milk, often contribute to recurrent childhood ear infections. Other foods like eggs, peanuts, soy, chicken, beef and yeasts may also be involved. The research suggests the food needs to be eliminated from the diet for *at least four months* to determine whether it may be one of the reasons for ear infections. If you are a mother who is breastfeeding, it is important to restrict your diet similarly.
- Probiotics: there is an extensive volume of evidence supporting the fact that good bacteria in the digestive system are important for overall immune health and may help prevent childhood infections, including those of the ear.^{17,18}

References

1. Saunders, L 2004, 'Chiropractic treatment of otitis media with effusion: a case report and literature review of the epidemiological risk factors that predispose towards the condition and that influence the outcome of chiropractic treatment', *Clinical Chiropractic*, vol. 7, no. 4, pp. 168–173.
2. Sawyer, CE, Evans, RL, Boline, PD, Branson, R & Spicer, A 1999, 'A feasibility study of chiropractic spinal manipulation versus sham spinal manipulation for chronic otitis media with effusion in children', *Journal of Manipulative and Physiological Therapeutics*, vol. 22, no. 5, pp. 292–298.
3. Fallon, JM 1997, 'The role of the chiropractic adjustment in the care and treatment of 332 children with otitis media', *Journal of Clinical Chiropractic Pediatrics*, vol. 2, no. 2, pp. 167–183.
4. Froehle, RM 1996, 'Ear infection: a retrospective study examining improvement from chiropractic care and analyzing influencing factors', *Journal of Manipulative and Physiological Therapeutics*, vol. 19, no. 3, pp. 169–177.
5. Philips, NJ 1992, 'Vertebral subluxation and otitis media: a case study', *Chiropractic*, vol. 8, no. 2, pp. 38–40.
6. Hendricks, CL & Larkin-Their, SM 1989, 'Otitis media in young children', *Chiropractic*, vol. 2, no. 1, pp. 9–13.
7. Cantekin, EI, McGuire, TW & Griffith, TL 1991, 'Antimicrobial therapy for otitis media with effusion', *Journal of the American Medical Association*, vol. 266, no. 23, pp. 3309–3317.
8. Slack, RW, Maw, AR, Capper, JW & Kelly, S 1984, 'Prospective study of tympanosclerosis developing after grommet insertion', *Journal of Laryngology and Otology*, vol. 98, no. 8, pp. 771–774.
9. Boston, M, McCook, J, Burke, B & Derkay, C 2003, 'Incidence of and risk factors for additional tympanostomy tube insertion in children', *Archives of Otolaryngology—Head and Neck Surgery*, vol. 129, no. 3, pp. 293–296.
10. Damoiseaux, RA, van Balen, FA, Hoes, AW, Verheij, TJ & de Melker RA 2000, 'Primary care based randomised, double blind trial of amoxicillin versus placebo for acute otitis media in children aged under 2 years', *BMJ*, vol. 320, no. 7231, pp. 350–354.
11. Bauchner, H, Pelton, SI, Klein, JO 1999, 'Parents, physicians, and antibiotic use', *Pediatrics*, vol. 103, no. 2, pp. 395–401.
12. Berman, S 2007, 'The end of an era in otitis research', *New England Journal of Medicine*, vol. 356, no. 3, pp. 300–302.
13. Cantekin, EI 2000, 'Time to stop misuse of antibiotics', *BMJ*, vol. 321, no. 7263, p. 765.
14. Van Buchem, FL, Dunk, JHM & van't Hof, MA 1981, 'Therapy of acute otitis media: myringotomy antibiotics or neither?', *Lancet*, vol. 318, no. 8252, pp. 883–887.
15. Froom, J, Culpepper, L, Grob, P, Bartelds, A, Bowers, P, Bridges-Webb, C, Grava-Gubins, I, Green, L, Lion, J & Somaini, B 1990, 'Diagnosis and antibiotic treatment of acute otitis media: a report from the International Primary Care Network', *BMJ*, vol. 300, no. 6724, pp. 582–586.
16. Del Mar, C, Glasziou, P & Hayem, M 1997, 'Are antibiotics indicated as initial treatment for children with acute otitis media?', vol. 314, no. 7093, pp. 1526–1529.
17. Rautava, S, Salminen, S & Isolauri, E 2008, 'Specific probiotics in reducing the risk of acute infections in infancy—a randomised, double-blind, placebo-controlled study', *British Journal of Nutrition*, vol. 101, no. 11, pp. 1722–1725.
18. Kukkonen, K, Savilahti, E, Haahtela, T, Juntunen-Backman, K, Korpela, R, Poussa, T, Tuure, T & Kuitunen M 2008, 'Long-term safety and impact on infection rates of postnatal probiotic and prebiotic (synbiotic) treatment: randomized, double-blind, placebo-controlled trial', *Pediatrics*, vol. 122, no. 1, pp. 8–12.