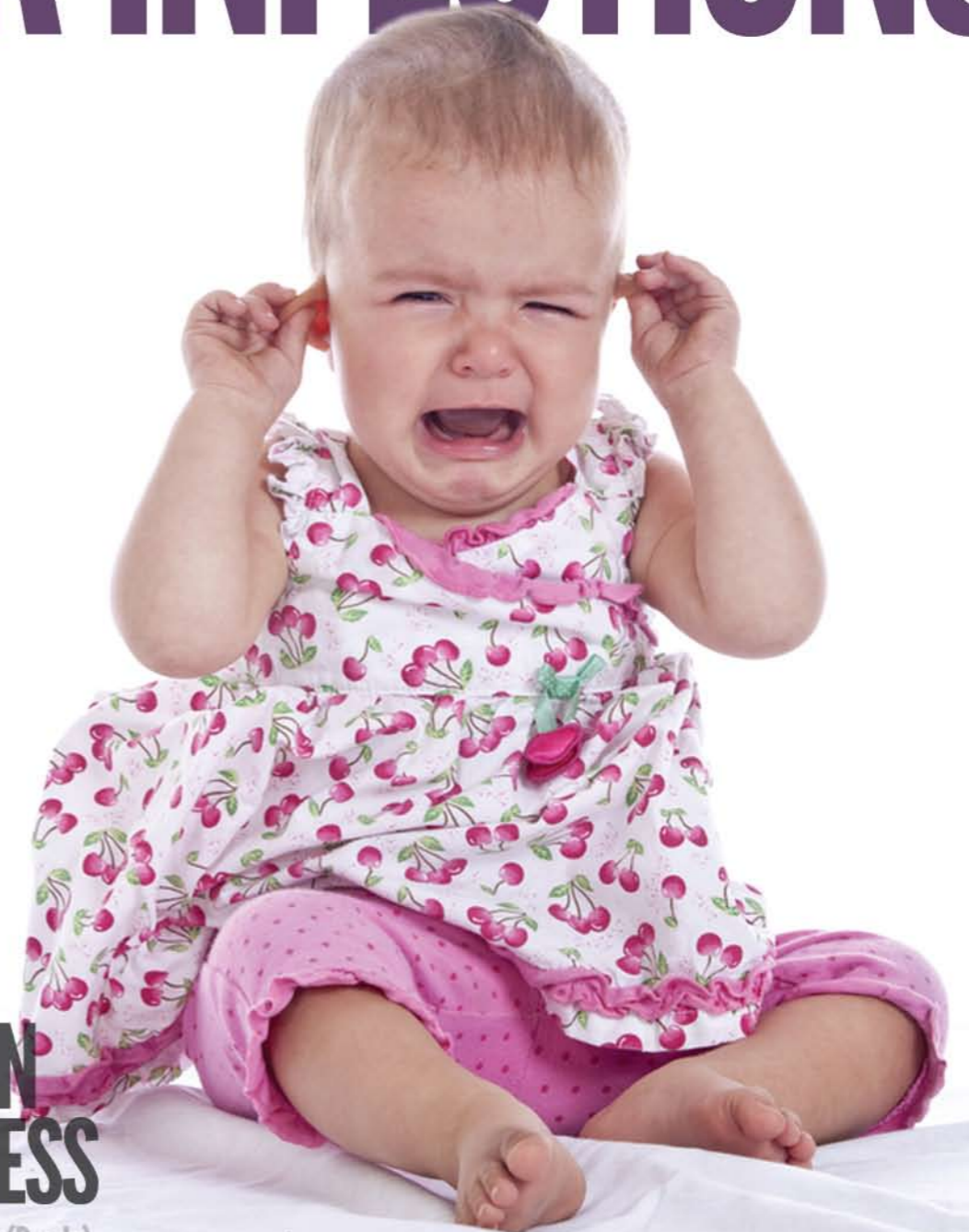




*Your guide to*

# MANAGING CHILDHOOD EAR INFECTIONS



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### **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 acute or chronic ear infections.<sup>1-6</sup> In this e-book, I present a brief discussion on what I believe is a balanced, common-sense approach to the management of childhood ear infections for the chiropractor in private practice.

Anecdotally, the chiropractic profession has claimed favourable clinical responses with otitis media for many years. As a family chiropractor, you will encounter this childhood condition frequently in practice. For this reason, I believe you need to have a sound knowledge of the aetiology of the condition, as well as an effective management strategy.

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# MANAGING CHILDHOOD EAR INFECTIONS

# The Allopathic Model Of Otitis Media

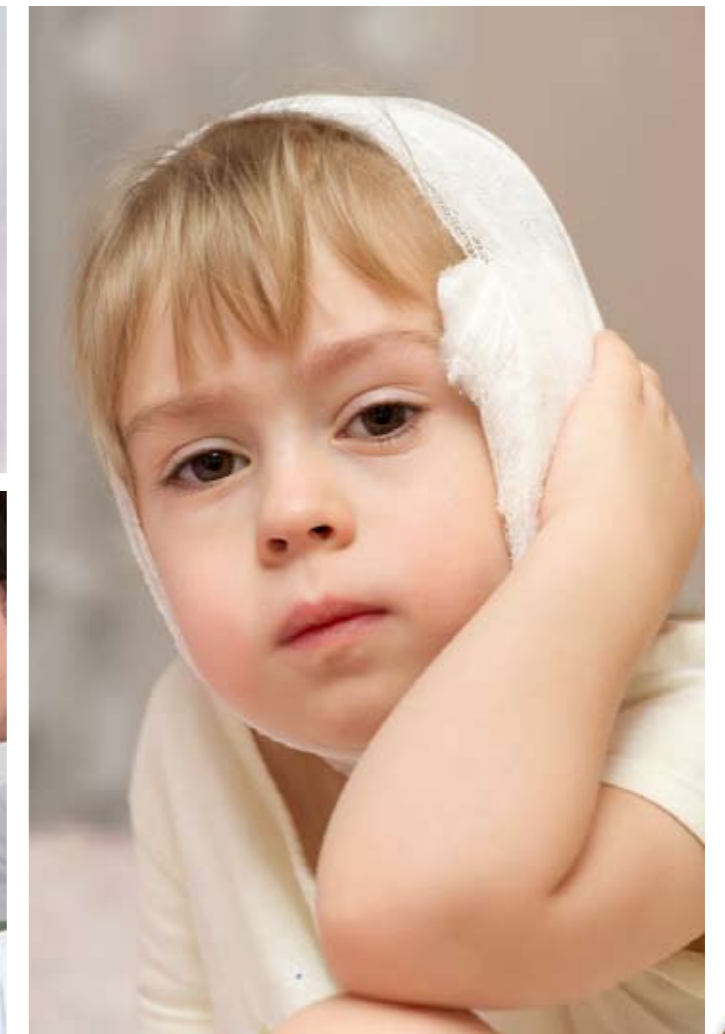
The classic allopathic model used to describe the pathogenesis of otitis media is an event (most commonly a viral upper-respiratory infection) that results in congestion in the respiratory tract including the Eustachian tube in the middle ear.

This congestion of the Eustachian tube may result in a blockage, and, with continual effusion, secretions build up in the middle ear producing a viral/serous otitis media. According to the *New England Journal of Medicine*, acute middle ear infections are most commonly caused by viruses.

Viruses have been found in middle ear fluid in up to 25 per cent of children with acute otitis media. The

fluid that builds up then has the potential to grow bacteria, which can subsequently produce an acute bacterial otitis media.

However, a soon-to-be-published large study at the University of Pittsburgh found that only about 22 per cent of middle ear fluid from patients with otitis media contained harmful bacteria. Of the cases with culture-positive middle ear fluid, only about 11 per cent contained enough bacteria to be considered infected. This means that of all fluid-filled middle ears, only two to three per cent have sufficient quantities of bacteria to be considered infected.



## HOW CAN CHIROPRACTIC HELP?

Chiropractic may have a beneficial influence on a child's ear infection, first, by improving the overall immunological capacity of the child and, second, by promoting improved drainage of the Eustachian tube.

The potential for spinal or cranial dysfunction (subluxation) as a result of the birth process is well documented. Add to this the potential for harm associated with the everyday tumbles or falls that a child may experience, and it is very likely that there are many children in your community, at this very moment, who are neurologically compromised.

The purpose of a chiropractic adjustment—indeed, the cornerstone aim of the chiropractic profession—is to help to restore the normal functioning of the nervous system so that the immune system may work at optimal capacity.

I believe the positive effects on a child's ear infection that often result from a chiropractic adjustment are also intimately related to the effect of the adjustment on the drainage of the Eustachian tube. The middle ear is continuous with the mastoid air cell system, which allows for a continuous system connecting the mastoid air system, the middle ear and the Eustachian tube.

Obviously, an important function of the Eustachian tube is to drain fluids from the middle ear. The younger the child, the more horizontal—and therefore more difficult to drain—this tube is. It has been shown that spinal or cranial dysfunction may affect the function of the tensor veli palatini muscle, which plays an important role in the dilatation mechanism of the Eustachian tube. Thus, it stands to reason that if the function of this muscle can be improved, this may have a positive influence on the ability of the

Eustachian tube to drain.

Lymphatics may also play a role in the ability of the Eustachian tube to drain effectively. One of the key components of a vertebral or cranial subluxation is restriction in movement. Since lymphatic flows are directly dependent on movement, restriction of this movement may result in lymphatic congestion. With an occipital subluxation, it has been demonstrated that post-auricular, pre-auricular and sub-occipital lymph swelling may be present.

In addition, lymphatic flow in the anterior and posterior cervical chain lymph nodes may also be slowed. I believe that this lymphatic congestion may play a significant role in the Eustachian tube's inability to drain middle ear fluid completely. As such, I always gently massage the areas around the ear as well as the sternocleidomastoid muscle bilaterally to promote lymphatic drainage.

## The Medical Approach



The most common form of treatment for childhood ear infections is an antibiotic, often for a period of 10 days or more. The Centers for Disease Control and Prevention in the United States estimates that over 90 per cent of children with middle ear infections receive antibiotics.

In addition, with repeated ear infections (more than three in six months, or four in a year), a medical doctor will often prescribe a low-dose preventative antibiotic to be taken for three to six months to discourage recurrence of the infection. This is despite the fact that the use of antibiotics in the treatment of ear infections is in serious question within the medical profession.<sup>4,7-13</sup>

Indeed, many studies show that antibiotics are actually *not effective* in treating many cases of otitis media:

- One study compared children treated with antibiotics alone, antibiotics with myringotomy (eardrum perforation) or no treatment.<sup>14</sup> The study found that there was little difference between the groups with regard to pain, fever, hearing, healing time and recurrences.
- A large study of 3,660 children found that antibiotic-treated children recovered at a slightly

slower rate than children who did not receive antibiotics.<sup>15</sup> The researchers postulated that this may be because the antibiotics kill the body's good bacteria that form a part of the body's natural defence system.

- A study of 4,860 children with acute otitis media, the children were treated with pain relievers and ear drops for four days.<sup>16</sup> More than 90 per cent of these children recovered in a few days without the need for further treatment. Only three per cent of these cases required antibiotics.
- Cantekin, McGuire and Griffith reported that children with chronic otitis media who received amoxicillin suffered two to six times more recurrences than those not on the antibiotic.<sup>7</sup> The researchers suggested that this may have been due to both good and bad bacteria being destroyed by the antibiotic, causing a bacterial imbalance that resulted in immune dysfunction and further ear infections in some cases.

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

### CHIROPRACTIC RESEARCH

In a study by Fallon published in the *Journal of Clinical Chiropractic Pediatrics*, a strong correlation between chiropractic adjustments and the resolution of ear infections was found.<sup>3</sup> The study examined 332 children ranging in age from 27 days to five years with chronic ear infections. Each child was given a series of chiropractic adjustments. It was found that nearly 80 per cent of the children did not experience another ear infection within the six-month period following their initial visits.

# My Chiropractic Approach

When the child *new patient* presents with an acute ear infection or chronic ear infections to my clinic for the first time, as with all child new patients, I take a comprehensive case history, then perform a thorough physical examination.

Obviously, this may provide essential information that will determine the specific management strategy to be implemented.

In the case of a *regular patient* who presents to my clinic with an acute ear infection or chronic ear infections, I will already know the child's history and be familiar with the chiropractic care that child has received in the past. In most cases, the management strategy, including the recommended frequency of adjustments, will be very similar.

## NEONATE OR BABY

In the neonate or baby, very importantly, my strategy is to balance the dura first, using the Dural Torsion Technique. Then I assess the cranial base using gentle

pressure on the hard palate then, with gentle pressure, I correct any movement restrictions in flexion or extension as well as any side bending or torsional distortions. The occiput may play an important role in childhood ear infections.

Thus, the next step is to examine the upper cervical region of the baby. If a subluxation is found in the upper cervical region, I address this using either spinal or cranial adjusting techniques, depending on the level of involvement.

(To view a demonstration of an upper cervical specific adjusting technique in the baby, go to <http://youtu.be/DH7mtUhFh3I>).

If there is dysfunction at the occipital condyles, as is frequently the case in a child with ear infections, I

usually prefer to specifically adjust the occiput.

Following this, I palpate the cranial sutures in a structured and methodical manner. Sutural work in neonates and babies is designed to balance and align the sutures, which may influence the entire cranial system. After this, I then carefully assess the rest of the spine, including the sacrum.

My management of childhood ear infections always involves incorporating the temporal ear-pull technique, the ear-drain technique, the Eustachian-tube technique and the technique used to drain the maxillary sinus. The temporal ear-pull technique has been shown clinically very effective in almost all types of temporal bone dysfunction.

As such, in the case of a child with ear infections, it makes good sense to perform this very simple procedure to ensure the temporal bone is functioning normally. (For a detailed discussion on the specific techniques mentioned here, please refer to *The Online Paediatric CPD Program – www.cpd.c4k.com.au – Module 2, Craniosacral Therapy in the Paediatric Patient and Module 3, Spinal Adjustment of the Child*).

## TODDLER AND OLDER CHILD

In the toddler and older child, my management strategy begins with a cranial assessment, including the compression of the fourth ventricle (CV4) technique and the vault hold as well as an assessment of the movement at the sphenobasilar junction. (Again for a detailed discussion on the specific techniques mentioned here, please refer to *The Online Paediatric CPD Program, Module 2, Craniosacral Therapy in the Paediatric Patient*).

Following this, I examine the upper cervical area. As in the infant, I then examine the sutural system and address any dysfunctions present. Next, I examine the sacrum, followed by the rest of the child's spine.

Once I have adjusted the child, regardless of their age, I perform a gentle massage around the ears and bilaterally down the SCM muscles. As indicated previously, this is to promote lymphatic drainage, which may have a beneficial effect on Eustachian-tube drainage.

I then discuss with the parents any additional therapy (detailed below) that may help their child through this illness without the need for drugs or antibiotics.



## SCHEDULING

The next very important issue that needs to be discussed is the scheduling of a child with an acute ear infection. My approach when scheduling children is always to view the situation as if each child were my own. In *my practice*, when a child presents with an acute ear infection, standard scheduling procedure is to advise the parent to book the child in *every day until the crisis passes*. When chiropractors question me about this, I often answer their question with a question. I ask them, 'How frequently would you check your own child if they were suffering from an ear infection?' There answer is always *at least* on a daily basis.

The research on chiropractic and ear infections certainly suggests that the chiropractic adjustment

can have a profound effect on the child's clinical outcome. With this in mind, as a profession, how can we possibly justify adjusting a child patient who has an acute ear infection on a Monday, then not following-up the child until the following Thursday or Friday?

Nevertheless, this is how many chiropractors who care for children schedule their patients. This simply does not make sense. What is good enough for *your child* should be good enough for *your patients*. Parents always appreciate and welcome openness and honesty. I encourage you to tell the parents *what their child needs* rather than what is perhaps *easiest for them to hear*. Therefore, I always suggest to the parents that we see the child on a daily basis to give that child the best possible chance of getting through the crisis without antibiotics.



## THE QUESTION OF ANTIBIOTICS

It is always important to address the issue of antibiotics. Do not treat the subject like ‘the elephant in the room’. Certainly, always raise the point that one of the treatment options is antibiotics.

However, in the process of doing this, I believe it is your duty to discuss the research that indicates antibiotics should not be the first approach with childhood ear infections.

You should always have available the chiropractic research supporting the important potential role of chiropractic in the management of childhood ear infections. (Go to: <http://www.c4k.com.au/paediatric-research-cds.html> for more information on these research articles).

I suggest to the parents that we adjust the child on a *daily* basis, at the same time monitoring the ear infection to ensure no secondary complications are developing, and I always provide the parents with the research supporting this management approach. After the crisis, when the child has been returned to health through a purely natural management approach that includes chiropractic care and has not required antibiotics, your status as that family’s *family doctor* will be further strengthened.



## WHEN IN DOUBT

It is my clinical experience that an occipital subluxation will be present on the side of the ear infection in over 90 per cent of children.

For this reason, following your examination of the child, if you are unsure as to what you are feeling with your motion or static palpatory findings, or perhaps you are a new graduate, or someone who is not experienced with children or not skilled or comfortable with cranial adjusting, I would encourage you to *adjust the occiput on the side of the infection*.

Obviously, this is not an ideal approach from a clinical standpoint; it is far better for you to have a clear picture of the biomechanical and neurological dysfunction present prior to your adjustment.

However, as adjusting the occiput on the side of involvement can often make a huge difference to the overall symptomatic picture for that child, I believe you are clinically justified in this approach.

## Other things to consider...

I have helped many hundreds of children, including my own, through childhood ear infections without the need for drugs or antibiotics. This experience in the management of this illness, therefore, has led me to an approach that I believe is rational, *largely* evidence based, common-sense based and, most importantly, *often 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...

### 1 NATURAL GARLIC EAR DROPS

In my practice, we recommend homeopathic garlic oil drops (which we have available for purchase by parents) for those children who present with an ear infection. Garlic is a great natural antibacterial agent, so garlic oil drops may reduce the pain associated with ear infections.

We encourage our parents to have the garlic oil drops at home to use in the event of an ear infection, giving parents the option to administer the drops rather than rush to the medical doctor for antibiotics. (Note that ear drops should never be administered if there is a suspicion that the eardrum has been perforated.)

### 2 ELEVATION OF THE CHILD’S HEAD

An earache is normally worse when the child is lying down, since this prevents easy drainage of the Eustachian tubes. For this reason, I always advise the parent to elevate the child’s head when they are sleeping to help drain the Eu-

stachian tubes and hence relieve pain. This can be accomplished by using an extra pillow or by physically raising the head of the bed.

### 3 BREASTFEEDING

Breastfeeding may play a significant role in decreasing the chances of a child developing an ear infection. Research clearly demonstrates the link between a child who is bottle fed and ear infections— yet another reason a mother should be encouraged to breastfeed for as long as possible.

### 4 ATTENTION TO DIET

Food allergies, particularly to wheat and cow’s milk, are often a contributing factor in recurrent childhood ear infections. Other foods like eggs, peanuts, soy, chicken, beef and yeasts may also be implicated. The research suggests the food needs to be eliminated for *at least four months* to determine whether there has been a positive clinical outcome. However, often the link between the

child’s diet and ear infections can be established much earlier. In an infant who is being breastfed, it is important that the mother restrict her diet similarly.

### 5 THE USE OF PROBIOTICS

There is worthy evidence supporting the fact that good bacteria in the digestive system are important for overall immune health and may help prevent childhood infections, including ear infections.<sup>17,18</sup>

### 6 REFERRAL TO A HOMEOPATH

Homeopathy is a form of natural medicine that has been used safely for centuries and may certainly have a role to play in the management of both chronic and acute ear infections. Again, there is good research supporting the role of the homeopath in the management of this condition.

# Conclusion



When confronted with a child with an ear infection, I have learnt that it is *vital*ly important for parents to have *options* available to them. One of the reasons that parents choose to go to their medical doctor for antibiotics is because of *their perception* that there are no other options available.

Your role as a family wellness practitioner is to present to the parents a variety of management options, in a structured, rational and thought-provoking manner.

However, the different management strategies should always be presented in such a way that a natural approach, including chiropractic care, will be perceived as the most appropriate and logical choice.

## ABOUT THE AUTHOR

Dr Glenn Maginness, B. App. Sc. (Chiro) MSc. (Paeds), is a true paediatric chiropractor, as he sees only children as patients. He runs one of the largest family practices in Australia, where he works with six other chiropractors.

Glenn completed a Master's degree in Chiropractic Paediatrics in 1998 and has held over 40 of his paediatric and family wellness focussed seminars throughout Australia, New Zealand, South Africa and the United Kingdom since 2002. These seminars are specifically designed to teach other chiropractors how to build enormously successful family wellness practices.

With the recent launch of his *Online Paediatric CPD Program*, Glenn now addresses *all* aspects of the paediatric experience, including the assessment, adjustment and management of the paediatric patient. *He can be contacted at [chiro@netspace.net.au](mailto:chiro@netspace.net.au) and his new online program can be viewed at [www.cpd.c4k.com.au](http://www.cpd.c4k.com.au) \**



*\*Please note: For a more comprehensive dissertation on the management of childhood ear infections, please refer to Course 1, Module 4 of The Online Paediatric CPD Program, "Management of Common Childhood Conditions".*

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