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## **Routine Use of Antibiotics for Otitis Media Unproven, Concludes International Researchers**

### **Clinicians Should Immediately Reconsider Routine Use, Asserts BMJ Paper**

By Editorial Staff

A group of eight international researchers from Britain, the Netherlands and the United States reported their review of the scientific literature on the use of antimicrobials for the treatment of otitis media.<sup>1</sup> While the researchers were multinational, the study was funded by the Agency for Health Care Policy and Research (AHCPR) within the U.S. Department of Health and Human Services.

The paper compares the discriminating use of antimicrobials for acute ear infection in the Netherlands and Iceland, versus the abundant prescription policies of antibiotics in the U.S. and Britain.

According to the authors, otitis media is the "most common reason for outpatient antimicrobial use" in the U.S. Approximately 30 percent of children under age three receive microbial treatment for acute ear ache each year.

The Netherlands, by comparison does not include antimicrobial use in their initial routine treatment of otitis media symptoms. The authors report that "this policy is associated with decreased emergence of resistance among organisms commonly found in otitis media."

The paper asks and answers some important questions:

#### **"Does Treatment Improve Outcomes?"**

"Nevertheless, since results are mixed and no study found large differences between placebo and antimicrobial groups, we conclude that the benefit of routine antimicrobial use for otitis media, judged by either short or long-term outcomes, is unproved.

## **"Does Treatment Prevent Complications?"**

"Although preventing mastoiditis and meningitis is a rationale for antimicrobial treatment, little evidence exists that routine treatment is effective for this purpose.

## **"Do Children at High Risk Benefit from Antimicrobials?"**

"No study has addressed whether antimicrobial treatment decreases the frequency of these in all or some of those with known risk factors.

"What is the Optimal Type and Duration of Administration? "In the nine country study, antimicrobials did not improve outcome at two months, and no differences in rates of recovery were found for either antimicrobial type or duration.

## **"No Compelling Evidence**

"After addressing these four questions, we conclude that existing research offers no compelling evidence that children with acute otitis media routinely given antimicrobials have a shorter duration of symptoms, fewer recurrences, or better long-term outcomes than those who do not receive them.

## **"What Is the Effect on Antimicrobial Resistance?"**

"Antimicrobial use in children with otitis media results in the emergence of resistant organisms in those children and in the community. Although the organisms that cause otitis media are similar across countries, the Netherlands has a lower prevalence of resistant strains than other European countries.

## **"What Needs to Be Done?"**

"Research -- Placebo studies indicate that more than 80 percent of children with acute otitis media recover without antimicrobials.

"Prevention of acute otitis media -- Sufficient information exists to support aggressive encouragement of breast feeding and avoidance of tobacco smoke. There is insufficient evidence of effectiveness to recommend pneumococcal vaccine.

"Treatment of acute otitis media -- Clinicians should immediately reconsider the routine use of antimicrobials for children with otitis media and consider treating symptoms with analgesics and observation for lack of improvement."

It is hard to believe that these drugs have been prescribed for decades without needed supporting research. Even more concerning is the warning given by the authors in the first sentence of the paper:

"Increasing worldwide resistance of bacteria to antimicrobial drugs is causing a crises manifested by higher morbidity, mortality and costs.<sup>2</sup>"

While much of this will not be considered news to the chiropractic community, or to many medical doctors, one hopes the medical pediatric community will begin to reconsider the routine prescription of antibiotics for otitis media.

*Editor's note:* For additional information on this paper, please see "The Ammunition You've Always Wanted" on page three of this issue.

*References:*

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