

# Antibiotics do not appear helpful in preventing fluid buildup in children with ear infections

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When prescribed to children with middle ear infections, antibiotics are not associated with a significant reduction in fluid buildup in the ear, according to a meta-analysis of previously published studies in the February issue of *Archives of Otolaryngology–Head & Neck Surgery*, one of the JAMA/Archives journals.

Ear infections are among the most common diseases in infants and children, according to background information in the article. Middle ear infections (acute otitis media) may lead to fluid buildup in the middle ear, a condition known as otitis media with effusion. “The effusion may lead to a conductive hearing loss of 15 decibels to 40 decibels, and this hearing loss could have an adverse effect on language development, cognitive development, behavior and quality of life,” the authors write.

Laura Koopman, M.Sc., of University Medical Center Utrecht, the Netherlands, and colleagues analyzed data from 1,328 children age 6 months to 12 years with acute middle ear infections who participated in five randomized controlled trials comparing antibiotics to placebo or to no treatment. A total of 660 children were assigned to not receive antibiotics.

Overall, 44 percent of the children were younger than age 2 and 51.8 percent had recurrent ear infections. The risk of developing middle ear effusion was highest for children in these groups. Children taking

antibiotics were 90 percent as likely to develop effusion as those who did not take antibiotics, but this difference was not statistically significant.

“Because of a marginal effect of antibiotic therapy on the development of asymptomatic middle ear effusion and the known negative effects of prescribing antibiotics, including the development of antibiotic resistance and adverse effects, we do not recommend prescribing antibiotics to prevent middle ear effusion,” the authors write. The results align with current treatment guidelines, which do not recommend prescribing antibiotics to prevent effusion.

“However, more research is needed to identify relevant subgroups of children who have middle ear effusion that might benefit from other treatments,” they conclude.

Source: JAMA and Archives Journals

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