

Allergies, day care linked to kids' ear infections

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Treatment of inner ear infections in Australia costs AUD\$100–400 million per annum. Credit: clappstar

Allergies and day care attendance increase the risk of severe, recurrent middle-ear infections in toddlers living in Australian cities, according to new research.

The research also identifies the presence of older siblings and less than four months of exclusive breastfeeding as specific risk factors for recurrent middle-ear infection—known as otitis media (OM).

Adjunct research fellow at the Ear Institute of Australia Chris Brennan-Jones says middle ear infections affect over 90 per cent of children before their second birthday, with some having 'recurrent' (more than three in a year) or 'severe' occurrences (more than seven in a year).

The disease occurs where upper [respiratory tract infections](#) shift to the ear, with a build-up of fluid behind the ear drum causing pain, fever and reduced hearing, which can subsequently lead to developmental problems or delays, especially with recurrent cases.

Mr Brennan-Jones says the estimated cost of treatment in Australia is AUD\$100–400 million per annum.

"It is therefore essential to have accurate estimates of disease prevalence, as well as knowledge of associated risk factors in order to guide local policy, future research and clinical management," he says.

The study examined records of 2280 individuals from the Raine study—a Western Australian Pregnancy Cohort born in 1989–1991.

Parental report questionnaires from three years of age were used for recurrent OM identification, with secondary confirmation by examination by a doctor at one, two or three years of age.

"This is the first urban population to be examined in depth for prevalence of the ear disease, and we found the prevalence of parent-reported recurrent OM was 26.8 per cent and 5.5 per cent for severe recurrent OM," Mr Brennan-Jones says.

"These four [risk factors](#) either lower the immune system response or bring children into contact with new germs, which may result in an episode of otitis media," he says.

The high rate of OM in Indigenous communities has been widely studied, but there was a lack of investigation of OM incidence in non-Indigenous children in Australian urban areas.

"We were basing our estimates on kids in the United States, and we were conscious that OM is a multi-factorial condition, where there can be lots of triggers for the disease that are very different depending on what region you are in."

Results showed prevalence of recurrent OM within Raine Study children is similar to a number of other known cohorts, including the British Columbia and Boston cohorts.

More information: Prevalence and risk factors for parent-reported recurrent otitis media during early childhood in the Western Australian Pregnancy Cohort (Raine) Study. *J Paediatr Child Health*. 2014 Oct 9. [DOI: 10.1111/jpc.12741](https://doi.org/10.1111/jpc.12741). [Epub ahead of print]

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