

Antibiotics May Boost Infant Asthma Risk, Study Suggests

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MONDAY, March 13 (HealthDay News) -- Children who are exposed to even one course of antibiotics during their first year of life may be at increased risk for developing childhood asthma, Canadian researchers report.

Exposure to a single course of antibiotics appeared to double the asthma risk, their study found. And, the risk seems to grow for every additional course of antibiotics taken within the first year of life, the report found.

However, the authors emphasized that while they observed an association between the use of antibiotics and the development of asthma, they did not establish a definitive, causal link between the two.

They also noted that the antibiotic-asthma connection did not appear to apply to infants born with a high risk for developing asthma -- such as those with either a family history of the condition or a genetic tendency to develop allergies.

"The fact that we found an association between antibiotic use and the subsequent development of asthma is in itself a fairly substantial message," said study lead author Carlo Marra, a professor of pharmaceutical sciences at the University of British Columbia, in Vancouver. "But I don't think it's by any means conclusive. It appears to be an association, but we need further study."

The potential link could affect millions of people, the researchers noted, given the fact that antibiotics are commonly used to treat infants and children for ear infections, upper respiratory tract infections, and bronchitis.

An estimated 18 million Americans of all ages have asthma.

The study findings appear in the March issue of the journal *Chest*.

Marra and his colleagues analyzed seven prior English-language studies conducted between 1999 and 2004.

The studies, which included a total of more than 12,000 children, compared exposure to antibiotics among infants under 1 year of age with non-exposure, while tracking the subsequent development of childhood asthma. More than 1,800 of the children went on to develop asthma.

The studies suggest that antibiotic exposure doubles the risk of asthma.

In addition, further analysis of five studies involving more than 27,000 children -- almost 3,400 of whom went on to develop asthma -- revealed a dosage association as well. Children who received a greater number of antibiotic courses in the first year of life appeared to be at greater risk for developing asthma.

Marra and his associates cautioned that the findings did not all point in the same direction. Those studies designed to look back at prior medical histories were more likely to indicate an antibiotic-asthma connection, than those designed to look at current cases.

The researchers noted that studies based on prior medical histories sometimes rely heavily on parent recall -- rather than patient records. That can lead to inaccurate and biased results, they said.

Also, most of the studies did not look at the possible presence of asthma among the children prior to antibiotic exposure, making it difficult to know whether the asthma pre-dated exposure to the medicines.

So, the authors conclude that while an association appears to exist, further large-scale analyses are needed to better understand the connection.

At least one expert is skeptical about the study's conclusion.

"There's no known pathological basis that would associate antibiotic use with childhood asthma," said Dr. Glenn Flores, an associate professor of pediatrics, epidemiology and health policy at the Medical College of Wisconsin, in Milwaukee.

"Antibiotic use itself could be a marker for a child who has more childhood illnesses in the first place, so it looks like the antibiotics have a link to asthma when [in fact] it's just a correlation with a greater incidence for disease with that particular child," he said.

"So, it's an interesting finding, but it requires much more intensive study," Flores added. "And in the meantime, as a pediatrician I'm really concerned about saying to parents that they should be careful about giving antibiotics because it may lead to asthma. Generally being careful with antibiotics is a good message, but there are a number of childhood diseases where antibiotics definitely have a role."

More information

For more on asthma, visit the [American Academy of Allergy, Asthma and Immunology](#).

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