Antibiotics Linked to Obesity in Children

By: David Gutierrez, Natural News

Children who are exposed to more antibiotics before the age of two are also more likely to become obese, according to a study conducted by researchers from Children's Hospital of Philadelphia, the University of Pennsylvania and Johns Hopkins Bloomberg School of Public Health, and published in the journal *JAMA Pediatrics*.

The study is only the latest to show a potential connection between excessive antibiotic use early in life and the later development of chronic health conditions. Researchers believe that these links may stem from the fact that early antibiotic use hampers the development of a healthy community of beneficial bacteria in the body, known as the microbiome.

Obesity risk rises more than 10 percent

The researchers reviewed health records spanning the years 2001 to 2013 for nearly 65,000 children. They found that almost 70 percent of all children had received at least one course of antibiotics by the age of two; on average, each child received 2.3 courses of antibiotics by that age. The most common conditions treated with antibiotics at this age were bronchitis, ear infections and other common conditions of childhood.

By age two, 23 percent of the children in the study were already overweight. By ages three and four, the numbers had climbed to 30 percent and 33 percent, respectively. The rates of obesity at these ages were 10 percent, 14 percent and 15 percent, respectively.

Children who had received four or more courses of antibiotics by age two were 11 percent more likely to become obese by the study's end than children who had not received any antibiotics by age two. Children who had received even one course of broad-spectrum antibiotics (antibiotics that kill most bacterial species, rather than being targeted at a specific variety) were 16 percent more likely to become obese than children not given antibiotics.

These effects were seen after researchers adjusted for the influence of other risk factors, including health factors, race and income.

The findings are consistent with those of prior studies, which showed a connection between antibiotics and obesity. They suggest that, along with other factors such as diet and exercise, antibiotics may be a contributing factor to childhood weight gain.

"It may be a piece of the puzzle," researcher Charles Bailey, MD, PhD, said.

"Assault" on natural microbiome

While scientists have known for many years that overuse of antibiotics in both health and agriculture can accelerate the evolution of drug-resistant bacteria, it is only in recent years that researchers have begun to examine the effects of antibiotics on our body's

microbiome. This has coincided with increasing understanding of the way that our body's 100 trillion beneficial bacteria help regulate everything from digestion to mood to immune function.

Studies have shown that gut bacteria can affect the way that the body absorbs calories, which may partially explain the link between antibiotics and obesity.

According to Martin Blaser, director of the Human Microbiome Program at New York University, the degradation of our microbiomes may be responsible for the surging rates of many chronic health problems, from allergies and asthma to autism. And it's not just antibiotics -- other practices also degrade our microbiomes. For example, research shows that babies delivered via cesarean section have compositions of gut bacteria that are different from vaginally delivered babies. They also show abnormal immune function.

"It's coming in every direction," said Blaser, who was not involved in the obesity study. "We're really assaulting our microbiome."

Although research is increasingly highlighting the risks of prolific antibiotic use, very little change has taken place in prescribing practices, or in agricultural antibiotic use.

"Right now, everyone is giving antibiotics, thinking they are 'free,'" Blaser said. "Once there is evidence that they have costs, the calculation begins to change."

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