

Antibiotics may exert long-lasting effects on gut microbiome

Even short pulses of widely used antibiotics can lead to long-term development changes in mouse pups, including increased body mass and bone growth and changes to the gut microbiota, according to a study published June 30 in Nature Communications.

“While this is a correlative study, [the researchers] present a plausible case that antibiotics, by changing the gut microbiota, may affect host function,” said [Lee Kaplan](#), a gastroenterologist and molecular biologist at the Massachusetts General Hospital in Boston who was not involved in the work. “This suggests there may be correlates between the microbiota and changes in the host that can be identified in future experiments and exploited for therapeutic benefit.”

In prior studies, microbiologist Martin Blaser of the New York University Langone Medical Center and his colleagues showed that mice given low-doses of penicillin shortly after birth [became overweight in adulthood](#) if fed a high-fat diet, and that this effect was due to [changes in the gut microbiota](#) and metabolism. Seeing profound changes with even low-dose antibiotic exposure—similar to the [chronic antibiotic treatment of farm animals](#) to promote growth — Blaser wanted to understand the effects of therapeutic antibiotic doses in kids. “Children don’t get low-dose antibiotics every day, they get pulses of high doses of antibiotics for short time periods to treat infections,” he said.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: [Antibiotics and the Gut Microbiome](#)