

Eradicating dangerous bacteria may cause permanent harm

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In the zeal to eliminate dangerous bacteria, it is possible that we are also permanently killing off beneficial bacteria as well, posits Martin Blaser, MD, Frederick H. King Professor of Medicine, professor of Microbiology and chair of the Department of Medicine at NYU Langone Medical Center. His commentary is published in the August 25 edition of the journal *Nature*.

Dr. Blaser sounded the alarm to the medical community and to the general public, that the widespread use of antibiotics may be having unintended consequences causing permanent changes in the body's protective, friendly flora and causing harm to the body's natural defense system. This may be even more dangerous to health than the creation of resistant "[superbugs](#)," which have garnered much attention over the last few years.

By the time a child in the US or other developed countries reaches the age of 18, s/he has already had on average 10-20 doses of antibiotics. These are in addition to the antibiotics that may be given to women while they are pregnant, and which may affect the normal bacteria that mothers transmit to their children.

The discovery and use of antibiotics has helped to increase life expectancy. However they are non-discriminatory and destroy even friendly bacteria, not just harmful ones. Scientists have found that some of the [beneficial bacteria](#) may never recover and that these extinctions may lead to increased susceptibility to infections and disease. As a result,

[antibiotic use](#) could be contributing to the increases in obesity, allergies and asthma, [inflammatory bowel disease](#), and [type 1 diabetes](#) that are occurring throughout the developed world.

Dr. Blaser urges physicians to curtail the use of these drugs immediately, and recommends that narrow spectrum, and more targeted drugs be used in their place. To be successful, this shift will require a significant effort to develop new antibacterials and new diagnostic tests that will permit the use of targeted agents.

"I believe that doctors of the future will be replacing "lost" members of our normal flora in young children to diminish the risk of development of these important and chronic diseases," said Dr. Blaser.

Provided by New York University School of Medicine

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