

# Antibiotics block our immune system from fighting the bugs



Antibiotics can be life-saving drugs—but they also weaken our immune system and lower our defenses when we need to fight off infections.

The drugs interfere with 'first-line' immune cells—known as neutrophils—and they also weaken the intestinal barrier which stops invading bugs. As a result, we're much more susceptible to 'severe infection', said Koji Watanabe from the University of Virginia School of Medicine.

Watanabe and his research team wanted to understand the impact of antibiotics on amoebic colitis, a deadly parasitic infection that's common in developing countries where children are routinely given more than two dozen antibiotic courses before they are two.

They analyzed stool samples from children living in the slum districts of Dhaka, Bangladesh, and discovered that those with more severe infections also had less diversity in their gut microbiome.

Taking that observation further, they discovered in experiments on laboratory mice that antibiotics disrupted the mice's microbiome and reduced the activity of the neutrophils which, in turn, stopped the white blood cells from functioning properly. The intestinal barrier was also compromised.

Don't take antibiotics unless it's absolutely necessary, say the researchers.

References: (Source: PLOS Pathogens, 2017; 13: e1006513)

**Source:** What Doctors Don't Tell You Website; Author: Bryan Hubbard