

## What if your microbiome turns against you?

It's an ugly fact of life that [getting old means getting infections](#). Old people get attacked more by pathogens, and the damage that these germs cause can speed up the aging process, leading to even more infections. The standard explanation for this vulnerability is that the immune system falters in old age, opening an opportunity for pathogens to invade. But in the journal *Biology Direct*, Viktor Muller of Eotvos University and his colleagues [propose](#) that something else is also going on in the aging body. Maybe the microbiome senses that its host is in bad shape and rises up in rebellion. The scientists call their idea “the Microbiome Mutiny Hypothesis.”

To understand this turn, we have to abandon any strict division between “good” germs and “bad” ones. For the germs themselves, these are just two ends of a seamless spectrum. Depending on how they use their host, microbes may cause no harm, a little, or a lot. And the virulence of a microbe—the amount of harm it causes—can itself evolve over time. Under some conditions, natural selection may favor gentle handling. But in other situations, causing deadly disease may be the winning strategy.

It would be interesting to see the Microbiome Mutiny hypothesis put to such a test. Conceivably, scientists could someday turn the test into a treatment. Rather than blasting the elderly with broad-spectrum antibiotics, doctors could just disarm the mutiny.

**Read full, original story:** [Can the Microbiome Mutiny?](#)