

Does our gut bacteria alter the effectiveness of drug treatments?

Prescribing the best medication may require going with a patient's gut — or at least, the bacteria that live there.

Anecdotal reports have revealed that some [gut-dwelling microbes chemically alter oral medications](#), affecting how well those drugs work. But the scope of this problem has remained unclear. Now, a sweeping survey of these interactions suggests that [gut bacteria can modify many drugs](#) and that the genetic makeup of a patient's microbiota may predict that person's response to medications.

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Researchers tested the ability of 76 types of bacteria — selected to represent the microbial diversity of the human gut — to alter the molecular structure of 271 oral drugs, from hormones to antiviral medications. The bacteria were incubated with nutrients and drug solutions in test tubes for 12 hours. In that time, 176, or about two-thirds, of the 271 drugs were modified by at least one bacterial strain, and each strain modified 11 to 95 different drugs.

“That is huge,” says Nichole Klatt, a microbiome researcher at the University of Miami not involved in the work. But knowing which microbes affect which drugs isn't enough. Future studies could investigate exactly how bacteria chemically modify medications and the consequences inside the human body, she says.

Read full, original post: [Gut bacteria may change the way many drugs work in the body](#)