

Our gut microbes get fed, even when we do not

For bacteria, the mammalian gut is like Shangri-La. It's warm and consistently so, sheltered from the environment, and regularly flooded with a nutritious soup. But what happens when this all-you-can-eat buffet stops serving? What happens to microbes if their host stops eating?

When animals from mice to flies become sick, they often lose their appetite and temporarily stop eating. This makes sense: it takes a lot of energy to find or capture food, and for the moment, that energy is better spent on fighting off disease. But these short-term fasts harm the beneficial microbes that live in our guts. As we starve, so do they. Their absence makes us less efficient at digesting our food and creates vacancies that more harmful microbes could exploit.

A team of scientists, led by Alexander Chervonsky from the University of Chicago, has now found that mice deal with this problem by manufacturing molecules that feed their gut microbes during bouts of infection.

The cells of their intestines glom a sugar called fucose onto fats and proteins, which the bacteria can yank off and eat. The sugar is an emergency currency, used to pay off microbial employees when the usual coffers are empty, to keep them from quitting the firm.

Read full original article: [Gut Bacteria Still Get Fed When Hosts Are Too Sick to Eat](#)