How gut bacteria negatively influences blood sugar levels
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Professor Damien Keating, Head of Molecular and Cellular Physiology at Flinders University and Deputy Director of the Flinders Health and Medical Research Institute, says this study sheds light on the unanswered question about exactly how bacteria in the microbiome communicate to control glucose levels in the metabolism.

"We found that the microbiome worsens our metabolism by signalling to cells in the gut that produce serotonin. They drive up serotonin levels, which we previously showed to be increased in obese humans, and this rise in blood serotonin causes significant metabolic problems."

"The next step will be to understand exactly which bacteria do this, and how, in the hope that this could lead to new approaches to regulating blood sugar levels in humans." says Professor Keating

This study is the first to show how the microbiome, the bacteria that lives in the gut, effectively communicate with an organism to impact the host's metabolism.

If researchers can better understand which bacteria cause the signals to produce serotonin in the gut, treatments could one day be developed to reduce blood sugar levels, and this is a first step towards better understanding this process.

"This is an exciting revelation that can one day have direct implications for human health disorders such as diabetes, but much more research like this is required in the years to come."


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