

Intestinal bacteria influence food transit through the gut

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Food transit through the small intestine affects the body's absorption of nutrients and, consequently, our health. The discovery that food transit time is regulated by a hormone indicates new ways to increase the intestinal absorption of nutrients, and thus potentially treat malnutrition.

One of the tasks of the [gut microbiota](#) is to break down [essential nutrients](#) from our diet to provide a usable energy source in the colon.

Researchers at the Sahlgrenska Academy, University of Gothenburg, have now shown that lack of energy in the colon leads to increased release of a hormone primarily associated with [appetite control](#) and [insulin secretion](#), GLP-1.

Importantly, they also showed that the released GLP-1 regulates how quickly food passes through the small intestine. These findings may open up new possibilities to treat malnutrition and malnutrition-related diseases.

"Food transit through the small intestine is a complex balancing act, in which the gut lining must be given time to absorb nutrients but without allowing pathogenic bacteria sufficient time to colonize the small intestine. We have discovered that food transit through the [small intestine](#) is regulated by a specific hormone called GLP-1, which is linked to our glucose metabolism and appetite," says Anita Wichmann, postdoctoral researcher at the Sahlgrenska Academy and the study's lead author.

The study, published in the prestigious journal *Cell Host & Microbe*, was led by Professor Fredrik Bäckhed, who heads an internationally recognized research group that investigates the links between the gut microbiota and regulation of the body's metabolism.

"We are continuously discovering new functions that are regulated by the gut microbiota, which

highlights its incredibly important function for health and development of diseases," he says.

More information: "Microbial Modulation of Energy Availability in the Colon Regulates Intestinal Transit." Anita Wichmann, Ava Allahyar, Thomas U. Greiner, Hubert Plovier, Gunnel Östergren Lundén, Thomas Larsson, Daniel J. Drucker, Nathalie M. Delzenne, Patrice D. Cani, Fredrik Bäckhed. *Cell Host & Microbe* - 13 November 2013 (Vol. 14, Issue 5, pp. 582-590) [DOI: 10.1016/j.chom.2013.09.012](https://doi.org/10.1016/j.chom.2013.09.012)

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