

Promising modification of the intestinal flora in colon cancer

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Living lactic acid bacteria, probiotics, can change the intestinal flora of patients with cancer of the colon. These are the findings of a study published in the journal *BMJ Open Gastroenterology*.

"The probiotic strains used in this study are a promising positive factor for the continued development of treatments for colon cancer," confirms Yvonne Wettergren, Associate professor in Molecular Medicine at the Institute of Clinical Sciences, Sahlgrenska Academy.

The study shows that the intestinal microflora composition, studied in biopsies, was different in tumor tissue and the surrounding mucosa in patients with colon cancer compared with healthy individuals.

When the microflora among those with cancer was modified by treatment with probiotics in tablet form, the amount of [bacteria](#) that produced butyric acid increased. This acid has documented anti-inflammatory effects on the colon and also inhibits the growth of cancer cells in the intestines.

A component of the probiotic strains used in the study, *Lactobacillus acidophilus* NCFM, previously proved to reduce the growth of [colon tumors](#) in mice, and also reduced the amount of carcinogenic decomposition products, so-called metabolites, in the intestines of humans.

Through yet another component, *Bifidobacterium lactis* BI-04, the

preparation was given anti-inflammatory properties. The actual tablets were designed so that the bacteria would really be exposed in the colon, which is required for the clinical documentation.

The study builds on the principle that the human intestinal microflora affects the metabolism, interacts with the immune system and protects against pathogens, toxins and other factors that cause disease. It thereby has the potential to have a strong impact on general health and well-being.

What can be viewed as a healthy microflora can vary significantly from person to person, but more recent studies have shown that the [intestinal flora](#) often deviates from its normal stable state in diseases of the gastrointestinal tract, as well as in the development of the metabolic syndrome.

According to the current study, the microbiological imbalance seen in patients with [colon cancer](#) changes with the help of [probiotic bacteria](#), given that they are dosed and administered in the way done in the study.

"The study comprises a total of 15 patients who already had malignant cancer, and who were followed until operation. We are now going to continue with a larger study of [patients](#) who have premalignant stages of [cancer](#), intestinal polyps. We hope to be able to work more with prevention in this area," says Yvonne Wettergren.

Yvonne Wettergren is responsible for the study that has been done together with colleagues at the Institute of Medicine, Sahlgrenska Academy, and in Finland and the U.S., with DuPont Nutrition & Health and Wasa Medicals as sponsors and producers of bacteria and probiotic tablets.

More information: Ashley A Hibberd et al. Intestinal microbiota is

altered in patients with colon cancer and modified by probiotic intervention, *BMJ Open Gastroenterology* (2017). [DOI: 10.1136/bmjgast-2017-000145](https://doi.org/10.1136/bmjgast-2017-000145)

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