New Study Shows Gut Bacteria May Alter the Aging Process

A recent study done by an international research team led by Nanyang Technological University in Singapore finds that microorganisms in the gut may alter the aging process. With research like this, the goal is to eventually be leading to food-based treatment to slow it down. Over the last 20 years research has already shown the important role the microbial species are playing in our nutrition, physiology, metabolism, and behavior. The study was conducted using mice. The medical team transplanted gut microbes from 24-month-old mice to germ-free 6-week old mice. After just 8 weeks the young mice showed production of neurogenesis (Neurons in the brain) and increased intestinal growth.

> *Professor Brian Kennedy, director of the Centre for Healthy aging at the National University of Singapore, who provided an independent view, said, "It is intriguing that the microbiome of an aged animal can promote youthful phenotypes in a young recipient. This suggests that the microbiota with aging have been modified to compensate for the accumulating deficits of the host and leads to the question of whether the microbiome from a young animal would have greater or less effects on a young host. The findings move forward our understanding of the relationship between the microbiome and its host during aging and set the stage for the development of microbiome-related interventions to promote healthy longevity."*
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> *Bacteria in the gut may alter aging process*

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The increased neurogenesis was caused by an enrichment of gut microbes that produce a specific short-chain fatty acid

(Butyrate). Butyrate is produced through microbial fermentation of dietary fibers in the lower intestinal tract and stimulates the productivity of a pro-longevity hormone called FGF2, which contributes to regulating the body’s metabolism, While we age butyrate is decreased. It was found that microbes collected from old mice had the ability to support neural growth in younger mice. These results can lead to conducting research into rather or now Butyrate might be able to help repair and rebuild in case of stroke and spinal damage.