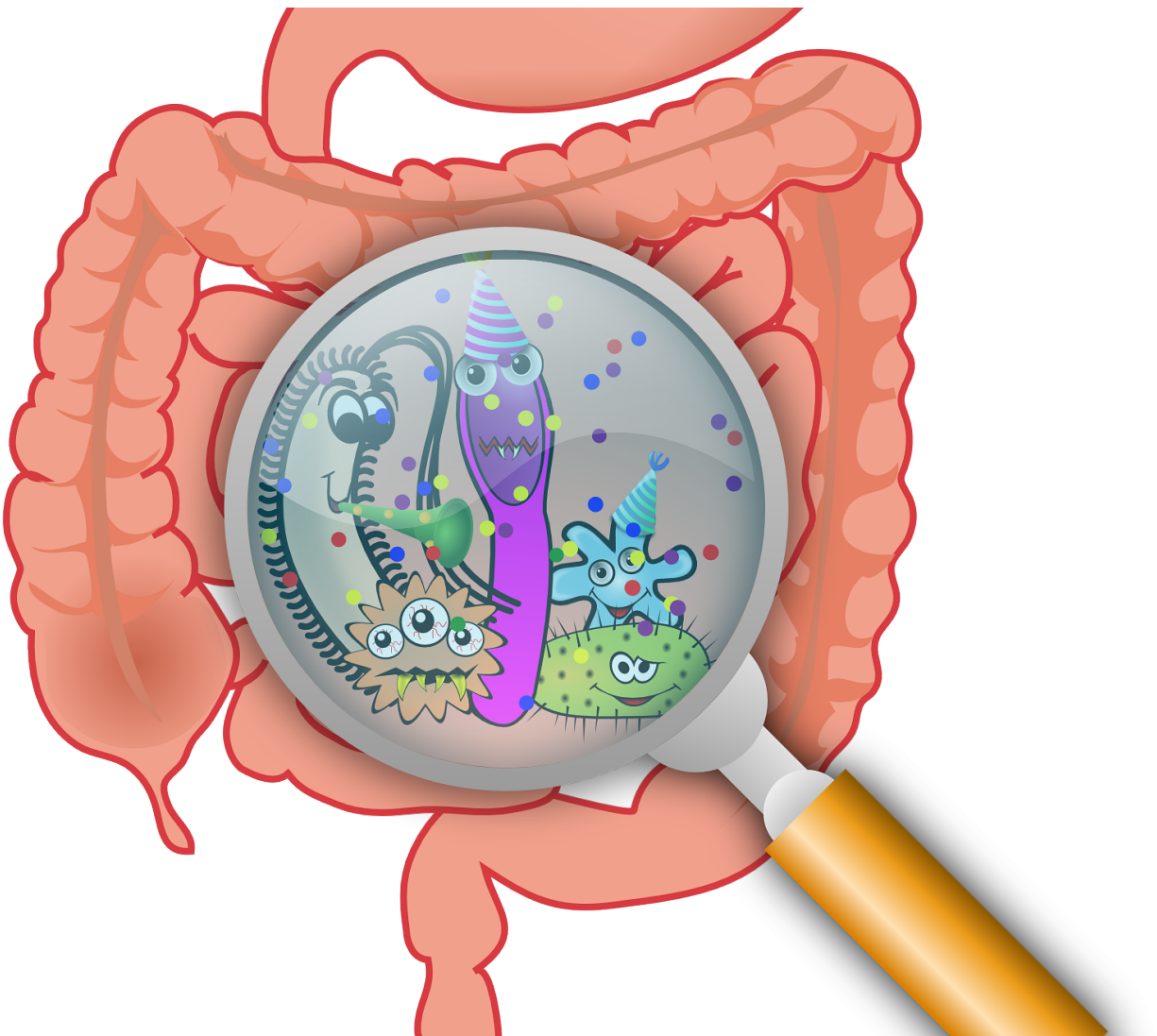


'Ridiculously healthy' elderly have the same gut microbiome as healthy 30 year-olds

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In one of the largest microbiota studies conducted in humans, researchers at Western University, Lawson Health Research Institute and Tianyi Health Science Institute in Zhenjiang, Jiangsu, China have shown a potential link between healthy aging and a healthy gut.

With the establishment of the China-Canada Institute, the researchers studied the [gut bacteria](#) in a cohort of more than 1,000 Chinese individuals in a variety of age-ranges from 3 to over 100 years-old who were self-selected to be extremely healthy with no known [health](#) issues and no family history of disease. The results showed a direct correlation between health and the microbes in the intestine.

"The aim is to bring novel microbiome diagnostic systems to populations, then use food and probiotics to try and improve biomarkers of health," said Gregor Reid, professor at Western's Schulich School of Medicine & Dentistry and Scientist at Lawson Health Research Institute. "It begs the question - if you can stay active and eat well, will you age better, or is healthy ageing predicated by the bacteria in your gut?"

The study, published this month in the journal *mSphere*, showed that the overall [microbiota](#) composition of the healthy elderly group was similar to that of people decades younger, and that the [gut microbiota](#) differed little between individuals from the ages of 30 to over 100.

"The main conclusion is that if you are ridiculously healthy and 90 years old, your gut microbiota is not that different from a healthy 30 year old in the same population," said Greg Gloor, the principal investigator on the study and also a professor at Western's Schulich School of Medicine & Dentistry and Scientist at Lawson Health Research Institute. Whether this is cause or effect is unknown, but the study authors point out that it is the diversity of the gut microbiota that remained the same through their study group.

"This demonstrates that maintaining diversity of your gut as you age is a biomarker of healthy aging, just like low-cholesterol is a biomarker of a healthy circulatory system," Gloor said. The researchers suggest that resetting an elderly microbiota to that of a 30-year-old might help promote health.

"By studying healthy people, we hope to know what we are striving for when people get sick," said Reid.

The study also found a distinct anomaly in the group aged 19 to 24 that has not been observed in large-scale analyses of other populations and they suspect may be unique to this healthy cohort in China. The distinct gut microbiota of this group was a surprising finding and requires further study.

More information: Gaorui Bian et al, The Gut Microbiota of Healthy Aged Chinese Is Similar to That of the Healthy Young, *mSphere* (2017). [DOI: 10.1128/mSphere.00327-17](https://doi.org/10.1128/mSphere.00327-17)

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