

Exercise May Improve Gut Microbiome

Cancer patients who engaged in regular moderate exercise had a greater diversity of bacteria in their intestines and reduced inflammation.

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Physical activity may lead to a healthier gut microbiome, and the microbiome may in turn affect motivation to exercise. Analyzing stool samples collected before surgery, researchers found that colorectal cancer patients who engaged in regular moderate exercise had a greater diversity of bacteria in their intestines and reduced inflammation compared with those who were inactive. “Our study suggests that nobody needs to be an athlete to get the benefits,” says Caroline Himbert, PhD, of the University of Utah.

In a second study, researchers first measured how much mice voluntarily ran on a wheel and how long it took for them to become exhausted when running on a treadmill. The makeup of the mice’s gut microbiome predicted exercise capacity better than genetic, metabolic or behavioral factors. When the mice were given antibiotics to eliminate gut microbes, they ran less and became exhausted sooner. Fatty acid amides (FAAs) produced by gut microbes may stimulate sensory neurons that increase levels of dopamine—a neurotransmitter that provides a feeling of reward—and adding FAAs to the mice’s diet restored exercise capacity.

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