

Researchers document impact of coffee on bowels

May 20 2019



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Coffee drinkers know that coffee helps keep the bowels moving, but researchers in Texas are trying to find out exactly why this is true, and it doesn't seem to be about the caffeine, according to a study presented at

Digestive Disease Week (DDW) 2019. Researchers, feeding rats coffee and also mixing it with gut bacteria in petri dishes, found that coffee suppressed bacteria and increased muscle motility, regardless of caffeine content.

"When rats were treated with coffee for three days, the ability of the muscles in the small intestine to contract appeared to increase," said Xuan-Zheng Shi, Ph.D., lead author of the study and associate professor in internal medicine at the University of Texas Medical Branch, Galveston. "Interestingly, these effects are caffeine-independent, because caffeine-free coffee had similar effects as regular coffee."

Coffee has long been known to increase bowel movement, but researchers have not pinpointed the specific reason or mechanism. Researchers examined changes to bacteria when fecal matter was exposed to coffee in a petri dish, and by studying the composition of feces after rats ingested differing concentrations of coffee over three days. The study also documented changes to smooth muscles in the intestine and colon, and the response of those muscles when exposed directly to coffee.

The study found that growth of bacteria and other microbes in fecal matter in a [petri dish](#) was suppressed with a solution of 1.5 percent coffee, and growth of microbes was even lower with a 3 percent solution of coffee. Decaffeinated coffee had a similar effect on the microbiome.

After the rats were fed coffee for three days, the overall bacteria counts in their feces were decreased, but researchers said more research is needed to determine whether these changes favor firmicutes, considered "good" bacteria, or enterobacteria, which are regarded as negative.

Muscles in the lower intestines and colons of the rats showed increased ability to contract after a period of coffee ingestion, and coffee

stimulated contractions of the [small intestine](#) and colon when muscle tissues were exposed to coffee directly in the lab.

The results support the need for additional clinical research to determine whether coffee drinking might be an [effective treatment](#) for post-operative constipation, or ileus, in which the intestines quit working after abdominal surgery, the authors said.

Provided by Digestive Disease Week

Citation: Researchers document impact of coffee on bowels (2019, May 20) retrieved 2 May 2024 from <https://medicalxpress.com/news/2019-05-document-impact-coffee-bowels.html>

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