

Capsule delivery of fecal microbiota transplant has similar effectiveness to transplant by colonoscopy

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FMT Capsules for Oral Delivery. Credit: University of Minnesota Microbiota Therapeutics Program

Recent work published in *Clinical Gastroenterology and Hepatology* by researchers from the University of Minnesota Medical School found that fecal microbiota transplant (FMT) using capsules containing freeze-dried microbes taken orally has similar safety and effectiveness to colonoscopic administration of liquid FMT for treating recurrent *Clostridioides difficile* infection (CDI).

Every year in the United States, approximately 500,000 people develop CDI—which is typically a complication of antibiotics. Antibiotics are also used to treat CDI, which further damage the intestinal microbiota. The U of M research team developed standardized FMT preparations—which are composed of intestinal microbes that can restore a healthy intestinal microbiota. This strategy repairs the damage caused by antibiotics and restores resistance against CDI.

"Capsule FMT can avoid complications of colonoscopy and facilitate access to this potentially life-saving therapy," said Byron Vaughn, MD, MS, associate professor in the Medical School and gastroenterologist at M Health Fairview.

In this multicentered, national prospective study, 301 FMTs were performed in 269 patients. Two-thirds of the procedures were capsule FMT. CDI cure rates were 86% at one month and 81% at two months. There was no difference in the one-month or two-month cure rate between capsule and colonoscopic FMT.

While highly effective overall, the research team says patient selection is a key factor to optimizing FMT success. Older age, hemodialysis and post-FMT antibiotics were associated with lower cure rates. Further research is suggested to identify patients that do not have a successful FMT and understand why they don't respond to the therapy.

More information: Byron P. Vaughn et al, Effectiveness and safety of colonic and capsule fecal microbiota transplantation for recurrent *Clostridioides difficile* infection, *Clinical Gastroenterology and Hepatology* (2022). [DOI: 10.1016/j.cgh.2022.09.008](https://doi.org/10.1016/j.cgh.2022.09.008)

Provided by University of Minnesota Medical School

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