

# Poo transplant effective treatment for chronic bowel condition

January 15 2019

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Endoscopic image of a bowel section known as the sigmoid colon afflicted with ulcerative colitis. The internal surface of the colon is blotchy and broken in places. Credit: Samir/Wikipedia

Poo transplant or "Faecal microbiota transplantation" (FMT) can successfully treat patients with ulcerative colitis, new research from the University of Adelaide shows.

The randomised, double-blind study—published in the journal *JAMA* - was a collaboration between the University of Adelaide, South Australian Health and Medical Research Institute (SAHMRI), CSIRO and CALHN (SA Health).

It involved 73 adults with mild to moderate active [ulcerative colitis](#), an [inflammatory bowel disease](#) which effects the lining of the large intestine and rectum causing symptoms including pain, bloody stools and an increased risk of colon cancer.

Patients received either pooled donor FMT that had been anaerobically processed or their own stool as placebo via colonoscopy followed by two enemas.

Researchers found a short duration of low intensity FMT using anaerobically (in an oxygen-free environment) prepared pooled donor FMT could induce remission in ulcerative colitis, with a 32% rate of remission compared to 9% with placebo. This is a similar treatment result to the best currently available therapies.

Many of the currently available therapies for ulcerative colitis improve the disease by suppressing the immune system which can lead to potential side effects like infection or malignancy.

"The most important difference in this trial compared to previous studies is the use of anaerobic (oxygen-free) stool processing," says study leader Dr. Sam Costello, Gastroenterologist, The Queen Elizabeth Hospital and Lecturer, University of Adelaide's Medical School.

"Many [gut bacteria](#) die with exposure to oxygen and we know that with anaerobic stool processing a large number of donor bacteria survive so that they can be administered to the patient.

"We believe that this may be the reason that we had a good therapeutic effect with only a small number of treatments."

An agreement has already been reached with UK company Microbiotica to commercialise the development of a microbial therapeutic from the study.

"Our long-term aim is to develop rationally designed microbial therapies that can replace FMT," says Dr. Costello.

"These will have bacteria in a pill that can carry out the therapeutic effect without the need to take whole faeces.

"This is obviously a better and less smelly option."

Further studies will investigate whether FMT can maintain remission in ulcerative colitis.

**More information:** Samuel P. Costello et al, Effect of Fecal Microbiota Transplantation on 8-Week Remission in Patients With Ulcerative Colitis, *JAMA* (2019). [DOI: 10.1001/jama.2018.20046](https://doi.org/10.1001/jama.2018.20046)

Provided by University of Adelaide

Citation: Poo transplant effective treatment for chronic bowel condition (2019, January 15) retrieved 18 April 2024 from <https://medicalxpress.com/news/2019-01-poo-transplant-effective-treatment-chronic.html>

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