

Super poo: Are faecal transplants the way of the future?

By Kate Midena
7-8 minutes

"It's already happening in America," Professor Thomas Borody, director of the [Centre for Digestive Diseases](#) told news.com.au.

"It's just waiting FDA approval there. Today in Australia stool donation is only done in one place, but in the future we envisage that there will be a select group of 'Super Donors' - people who did not have antibiotics as children, who are lean and healthy, who will be able to donate their stool.

"It's only a matter of time before donors are more common. And soon, we hope that all hospitals will have filtered, frozen stool which will be able to be used in emergencies," he said.

But what on earth is the kind of emergency another person's waste would be used for?

That would be anything requiring a stool transplant.

Faecal Microbiota Transplantations

It is *exactly* what it seems to be. Faecal Microbiota Transplantations, or FMT, occur when you take a healthy person's stool and transfer it into the bowels of a sick person.

To explain the process simply, stool is put in a blender with saline (salt water), and poured into a syringe. The sick patient is then given the freshly homogenised human stool via a colonoscopy, which is done through the rectum.

The transplants are currently used to treat gut bacterial conditions such as colitis, Irritable Bowel Syndrome and Clostridium difficile, or C. diff - an infection which causes diarrhoea so severe that it kills thousands of people every year.

Tests are also being done in Europe to look at what else FMT can be used for - it is thought to be effective in treating metabolic issues, obesity, type 2 diabetes, and neurological conditions including Multiple Sclerosis and Parkinsons.

"Contrary to popular belief, stool has no waste in it - it's a mass of good bacteria," says Prof Borody, who does one to six transplants a week in his Five Dock clinic.

"The incoming bacteria are capable of killing bad bacteria and recolonising your gut, restoring your body's balance and leading to a resolution of your symptoms."

While it might sound gross, the results speak for themselves. Prof Borody has had people flying in from as far afield as Paris to undergo stool transplants in his surgery.

Many of his patients are C. diff sufferers who have been plagued with recurrent diarrhoea for years, but are cured within days.

"I was diagnosed with C. diff about two months ago after a stay in hospital had me undergo two courses of antibiotics for a minor infection," a recent patient of Prof Borody, who flew to Sydney especially for FMT, told news.com.au.

"I was treated for C. diff overseas but relapsed very quickly after the first round of antibiotics. The toxins had passed into my bloodstream and I was getting worse by the day.

"I was desperate and so I started googling and came across the Centre for Digestive Diseases here in Australia. FMT isn't available where I'm from. I called up Prof. Borody last Monday and was able to get on a plane right away - the Monday and Tuesday just gone I underwent the transplant.

"I'm only on day two of my recovery, but I feel so much better already, it's remarkable," he said.

Prof Borody said there were "few medical therapies that work so dramatically".

"In my experience, with a single treatment there's a 95 per cent cure rate of C. diff. With a double treatment, the recovery comes so close to 100 per cent that you may as well call it 100 per cent."

So if FMT is so successful, why isn't it more widely available?

"Some people just can't get past the ick factor," says Prof Borody.

"It's similar to any new theory or practice when it's introduced - is very hard to get old dogs to learn new tricks. Little interest has been shown within the pharmaceutical industry. Young doctors are very much on board with FMT, it's the old farts who are holding us back.

"If you speak to the people who have been suffering from C. diff, they don't care about having someone else's stool in their body - they just want the treatment that works, whatever gets rid of their problems," he said.

"Once you relapse and you know antibiotics aren't going to control your C. diff, it's vicious," Prof Borody's patient agrees.

"It's a superbug, it takes over your life. It's of course a strain on your physical health, but your mental and emotional health are affected too - I am 35 and was a normal, fit and active guy before this. You just have to seek out the best solution to get you well again - and that's FMT.

"I just want people to know that FMT is available, that antibiotics don't always work and if they don't, it's OK - there is another option for you," he said.

Development of stool transplants so far has been driven by a few individual clinicians across the world, but more and more patients are requesting the procedure.

"FMT just begs further attention," says Prof Borody. "As doctors, it really lies within our duty of care to do so."

Douglas Samuel from the University of New South Wales is part of a research group looking at FMT.

"It seems a novel lifesaving treatment for some patients with C difficile colitis," he told news.com.au, "but it is still too early to know if it causes more harm than good for other patients."

Tell me more about C. diff

Clostridium difficile is an infection of the bowel which is associated with antibiotic use, and surfaces in your body as severe, life-threatening diarrhoea.

The bacteria has been around since the 1970's, but it wasn't until a highly toxic strain which is resistant to antibiotics appeared in the United States in 2002 that people realised how deadly it is.

The outbreak caused hundreds of thousands of deaths across the Northern Hemisphere and 15 to 20 thousand people die from it in the United States each year. In the UK more than 110,000 cases have been reported over the past five years, with an average of 2200 dying from it per annum.

"This epidemic strain is only just arriving to Australia on aircrafts from the States," said Prof Borody.

"We have had 15 recorded deaths in Sydney and 15 in Melbourne, but that's a huge underestimate, as it's often misdiagnosed or passed off as normal diarrhoea."

The Department of Health released figures in May this year confirming 1781 *C. diff* cases in Australia.

The epidemic strain of *C. diff* is contracted in similar ways to a virus - from not washing hands, being in contact with someone who is a carrier of the bacteria, and from eating cold meats and pork, which can also be carriers of the bacteria.

C. diff is more common in the elderly, among pregnant women, and in people who have recently been on antibiotics. However, not everyone who comes into contact with the bacteria gets sick from it.

C. diff only exists in those who have incomplete gut flora - usually thanks to antibiotics - which is why stool transplants can be so effective.