

# Is living a cleaner lifestyle making us sicker? The amazing power of stool transplants



Number two's have suddenly become number one for treating disease.

**IF YOU think that it's better to be clean than dirty, you will arrive at the wrong destination as far as your health is concerned.**

The microbial communities established in our bodies at birth and in early childhood shape our health as we grow and are major players in determining whether or not we develop illness as adults.

Our super-sanitised lifestyle has threatened those essential communities and created health challenges we never anticipated, including a new breed of diseases, which have emerged in the last century.

In the late 1950s, Professor David Strachan, a lecturer at the London School of Hygiene

and Tropical Medicine, was tasked with figuring out why rates of auto-immune diseases, particularly hay fever and eczema, were skyrocketing in British children. The study followed seventeen thousand children from birth to adulthood, and the results revealed two startling and unexpected associations: both conditions were far less common in large families with lots of early childhood infections from exposure to siblings, and in less affluent households with lower standards of personal hygiene.

This finding was counter to everything we thought we knew about germs. Could exposure to more germs really be better for us? And could living a cleaner lifestyle be making us sicker?

If we look at a map of the world today, one of the striking observations is that auto-immune illnesses like Crohn's disease are common in more developed countries and rare in less developed ones.

Strachan's hygiene hypothesis accounts for this uneven distribution by suggesting that less childhood exposure to bacteria and parasites in affluent societies like Australia and the United States actually increases susceptibility to disease by suppressing the natural development of the immune system.

We spend a lot of time making sure we're clean — scrubbing ourselves with harsh soaps, sanitising our hands and environment with chemicals, and eliminating any trace of dirt from our homes and lives — but more and more, the evidence points to germs as being essential for our wellbeing, so it may be time to rethink our approach to health and disease.

*Clostridium difficile*, also known as *C. diff*, is a bacterium that can wreak serious havoc. It's the cause of one-third of all cases of antibiotic-associated diarrhoea.

In those who become infected, *C. diff* proliferates in the gut, releasing toxins that cause severe diarrhoea, cramping, bloating, and even death. Ironically, our main approach to *C. diff* has been to treat it with more antibiotics — and not surprisingly, we're seeing a

tremendous increase in the number of infections that are resistant, to standard treatment.

Resistant *C. diff* has led to a novel type of therapy: fecal microbiota transplant (FMT) that involves transferring stool (poo) from healthy donors into the digestive tract of the person infected with *C. diff*. A [study published in the New England Journal of Medicine](#) showed that fecal transplants are far more effective in clearing up recurrent *C. diff* infection than standard antibiotic therapy, reinforcing the notion of bugs over drugs for good digestive health.

But it's not just digestive health that seems to be improved by FMT; studies show promising benefits for a wide range of conditions, including auto-immune diseases like MS, Crohn's, and diabetes; obesity; allergies; and even neurological diseases like Parkinson's.



You could even say poo has become the gold standard treatment.*Source:Supplied*

Farmers have long known that feeding a sick cow the intestinal contents that have been

sucked out of a healthy cow's stomach can successfully treat illnesses in cattle. Coprophagia, or eating stool, is common in the animal kingdom: baby elephants, pandas, koalas, and hippos eat the faeces of their mother or other adults in their herd in order to acquire vital gut bacteria required for digestion. Consumption of fresh camel faeces has been observed among certain tribes, including the Bedouin, as a highly effective treatment for infectious diarrhoea, and in medieval times it was not uncommon for physicians to taste their patient's stool to aid in diagnosis — a practice I'm in no hurry to resurrect!

We've come a long way — from being grossed out by our own stool to contemplating consuming other people's. There's still a lot we don't know about FMT — including which conditions benefit the most; who makes an ideal donor; how many transplants we need to do; whether ingestible capsules work as well as fecal enemas — but the answers are coming at breakneck speed as clinicians, scientists, and patients embrace and explore the concept of stool as medicine.

One of my roles as a gastroenterologist is to educate people about what goes into their digestive tract and what comes out of it, so I spend a lot of time talking about food and stool.

I encourage my patients — and my family members — to evaluate things from both ends, and that often means taking a closer-than-comfortable look at what's in the toilet bowl.

Most of us have an aversion to stools from early childhood when we're discouraged from passing gas or making references to our 'poo'. Bowel movements are viewed as something dirty and furtive, best flushed away quickly and not discussed in polite company, despite the fact that every human being on the planet has them on a regular, if not daily, basis.

So you can imagine my joy when stories about stool started turning up on the front page of the *New York Times* and the *Wall Street Journal*, and everyone — from my most demure patients to my daughter's elementary school teachers — suddenly wanted to talk

about faecal transplants.

The fact that they work brilliantly for indications such as C. Diff makes it all the sweeter, but just the idea that people are having these conversations, seeing stool in a whole new light, and gaining a better understanding of how their bodies work is cause for celebration.

Faecal transplants, which I like to think of as the ultimate probiotic, represent a paradigm shift in medicine — from too clean to not dirty enough. FMT may well be the poster child for the Live Dirty Lifestyle — it doesn't get much dirtier than incorporating someone else's stool into your body — and the results speak for themselves.



Dr Robynne Chutkan.*Source:Supplied*

***Dr Robynne Chutkan is a gastroenterologist and the author of [The Microbiome Solution: a radical new way to heal your body from the inside out](#) (Scribe, \$29.99)***