



DOCTORS WITHOUT BORDERS
NATURAL DISASTERS We bring emergency medical care to people trapped in disaster areas.
LEARN MORE



sign in



search

jobs

US edition ▾

home > lifestyle > health & fitness

love & sex

family

women

home & garden

≡ all

Health & wellbeing

The truth about poo: we're doing it wrong

Who knew sitting on the toilet was bad for you? In her best-selling book *Charming Bowels*, microbiologist Giulia Enders explains how to go to the loo





📷 The gut is not designed to ‘open the hatch completely’ when we’re sitting. Photograph: Sciepro/Science Photo Library/Corbis

Annalisa Barbieri

Monday 18 May 2015
02.30 EDT



In my large Italian family, I grew up with the subject of poo, bottoms and constipation readily – and far too frequently – discussed at the dinner table. I’d be about to raise a raviolo to my mouth, only to hear how someone’s piles had popped, just that morning.

This doesn't mean I'm anal (sorry) about the subject. It's fascinating away from the lunch table. Late last year, I read that we are pooing all wrong: we should be squatting, not sitting, on a toilet bowl. Then a book called [Charming Bowels by Giulia Enders](#) caused something of a storm in its native Germany and I got fully immersed in the subject.

Enders is studying in Frankfurt for her medical doctorate in microbiology. She is utterly, charmingly obsessed with the gut, gut bacteria and poo. She writes and talks about her subject matter with such child-like enthusiasm, it's infectious. And, yes, we have been pooing all wrong. Enders tells me about various studies that show that we do it more efficiently if we squat. This is because the closure mechanism of the gut is not designed to "open the hatch completely" when we're sitting down or standing up: it's like a kinked hose. Squatting is far more natural and puts less pressure on our bottoms. She says: "1.2 billion people around the world who squat have almost no incidence of diverticulosis and fewer problems with piles. We in the west, on the other hand, squeeze our gut tissue until it comes out of our bottoms." Lovely.

But not to worry. Although you can climb on your toilet seat and squat ("It might be fun!"), we can iron out the kink by sitting with our feet on a little stool and leaning forward. The book even has a helpful drawing by Enders' sister.

Then there are the sphincters. One of them we probably all know about – the one we open consciously – but there is also another, inner one, which is operated unconsciously. This *ani internus* sends a sample into the chamber between the inner

and outer sphincter for the sensor cells to analyse and decide if it's "safe" to fart or poo: "Yes, you're at home. No, you're in the office." If it's not safe, the sensors send it back in. But, if the inner sphincter is ignored enough times – say, because we are too shy to go to the loo for fear of being overheard – it sulks and can switch off. That's one of the reasons constipation can occur.

Enders loves her inner sphincter. "Learning about those two sphincters really changed my perspective on life," she says. "Those inner nerves don't care for other people; they have no eyes or ears. Finally, something that only thinks of me! So, now I can go to the toilet anywhere. I worship that muscle!"

But the gut – and Enders' book – is about far more than poo (although there is plenty there, about consistency, frequency, buoyancy, colour and laxatives, to keep the most forensic of scatologists happy). Enders' big thing is bacteria. Our gut, which comprises two-thirds of our immune system, is full of the stuff. Two kilos' worth, in fact. Our bacteria fight pathogens, are involved in blood-group development, digest our food, extract energy, produce hormones and can affect our mood. This gut/brain connection is a fairly new area of medicine, which Enders is very excited about. And she's not alone: the American biochemist [Rob Knight](#) told [science journal Nature](#) that the field "offered at least as much promise as stem-cell research".

"There is an increasing interest in the gut microbiota and health and disease," confirms Dr Ayesha Akbar, consultant gastroenterologist at [St Mark's hospital in London](#). "There is a huge number of gut bacteria which, in health, maintain a balance. However, an

imbalance has been linked to many chronic disorders, including inflammatory bowel disease and obesity. There is a suggestion that they may also be linked to psychiatric disorders and mood, with the majority of evidence coming from animal studies. Further research needs to be performed in humans in this area.”

Enders’ own interest in this link started when she was a new student. She met a man at a party whose breath was “the worst I have ever smelled – almost faecal”. The next day, he killed himself. “Could a diseased gut,” she wonders, “also have affected his psychological state?” She is keen, though, to point out that depressive disorders are multifactorial and not always connected to the gut; much more research is needed. The first human study of the effect of intestinal bacteria on the brain was only conducted only two years ago.

Enders admits that writing about a possible connection between our psychological state and the gut was “the hardest part of the book for me. A professor would have been scared of putting it in the book, but I feel people are being robbed if they don’t know about this research.”

As well as some serious issues, there are plenty of entertaining nuggets in the book. Did you know that our spit contains a painkiller more powerful than morphine: [opiorphin](#)? We have it only in minute quantities, so that we’re not off our heads all the time. Eating, though, releases more of the chemical and Enders wonders if this is one factor in comfort eating. And guess what? Your appendix – that bit of people always say is of no use – is actually made entirely of immune tissue and is a veritable larder of the best,

most useful bacteria for the gut.

Enders' book is full of stuff like this. I hate to say it, but it is the perfect toilet book. Thankfully, it has also been translated into Italian, so that's Christmas sorted.

Gut: The Inside Story of Our Body's Most Under-rated Organ by Giulia Enders (Scribe, £14.99). To order a copy for £11.99, go to bookshop.theguardian.com or call the Guardian Bookshop on 0330 333 6846. Free UK p&p over £10, online orders only. Phone orders min. p&p of £1.99.

More features

Topics

...



[View all comments >](#)

popular

More stories from around the web Promoted content by Outbrain

The Surprising Benefits Of Playing The Violin.
Revelle Music Blog

Psoriasis: 8 Things I Wish I'd Known About
Psoriasis
Health Central

Manual Thrust Manipulation Boosts Short-term
Benefit in Lower Back Pain
HCPLive

Most Parents Don't Know These 9 Signs of
ADHD
LifeMix.today

The Common Causes of an Embarrassing
Condition for Men
HealthCentral

Video: Don't let MS hold you back. Learn how
others take charge
HealthiNation

Recommended by  **Outbrain**



back to top

theguardian



US world opinion sports soccer tech arts fashion business travel environmen  **all**

[jobs](#)

[subscribe](#)

[all topics](#)

[all contributors](#)

[report technical issue](#)

[about](#)

[us](#)

[contact](#)

[us](#)

[complaints &
corrections](#)

[terms & conditions](#)

[privacy policy](#)

[cookie policy](#)

[securedrop](#)

