



Dr Megan Rossi, PhD BHSoc RD APD

Nutrition Strategies for Optimising Gut Health

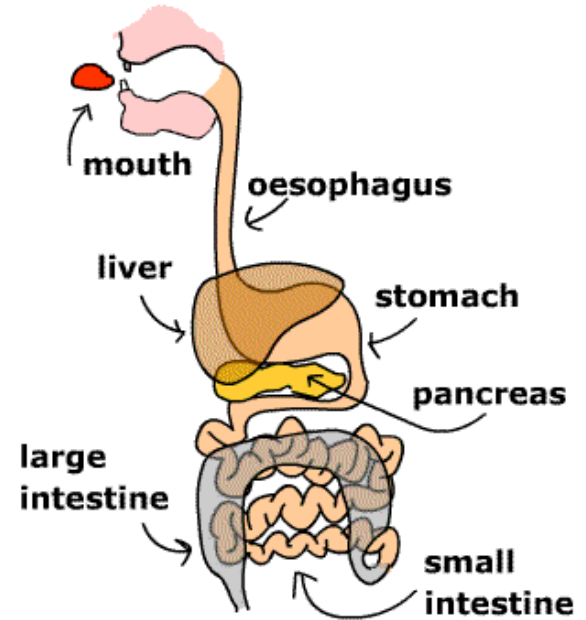


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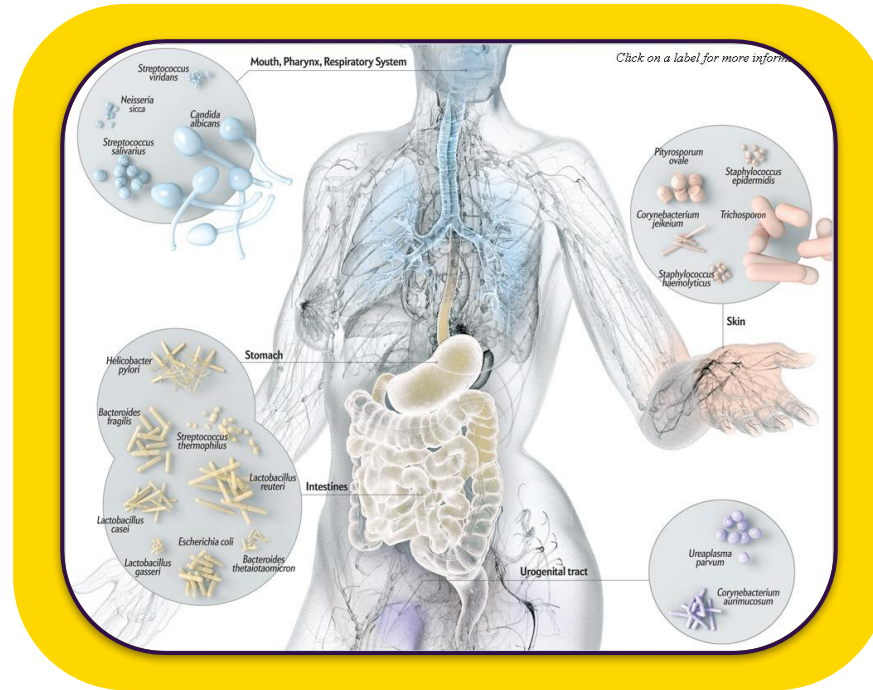
[@theguthealthdoctor](https://www.instagram.com/theguthealthdoctor)

What *actually* is gut health?

1. We are what we eat digest
2. 70% of our immune system
3. Gut microbiome (GM)



Microbiomes exist beyond the gut



The power of the microbiome



Invisible allies... or enemies



- > Not just bacteria
- > Thousands of functions
- > Linked 70+ chronic conditions
- > Dictate by you

The gut-everything axis



The gut-hormone
axis



The gut-muscle
axis



The gut-skin
axis



The gut-metabolism
axis

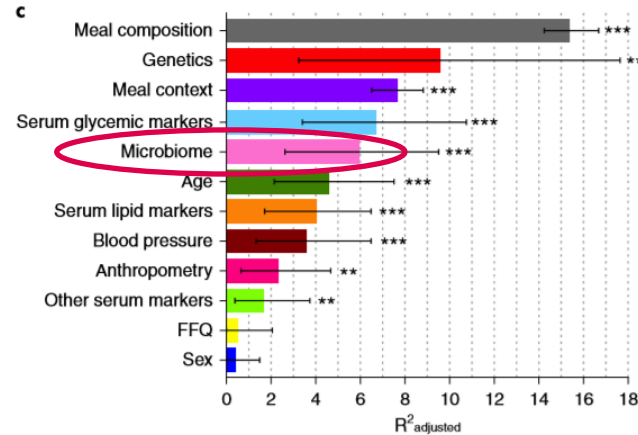
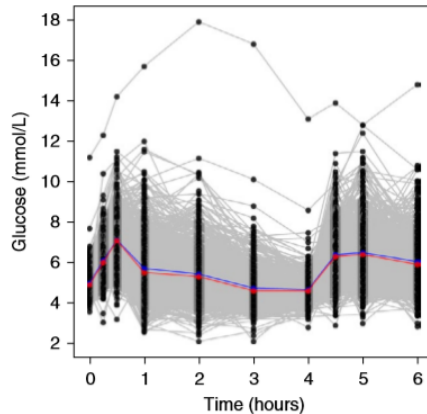


The gut-brain
axis

Personalised medicine and nutrition

Human postprandial responses to food and potential for precision nutrition

nature
medicine



25.112162. eCollection 2025 Apr 18.

Microbiome predict
antibiotic treatment
and various cancer types

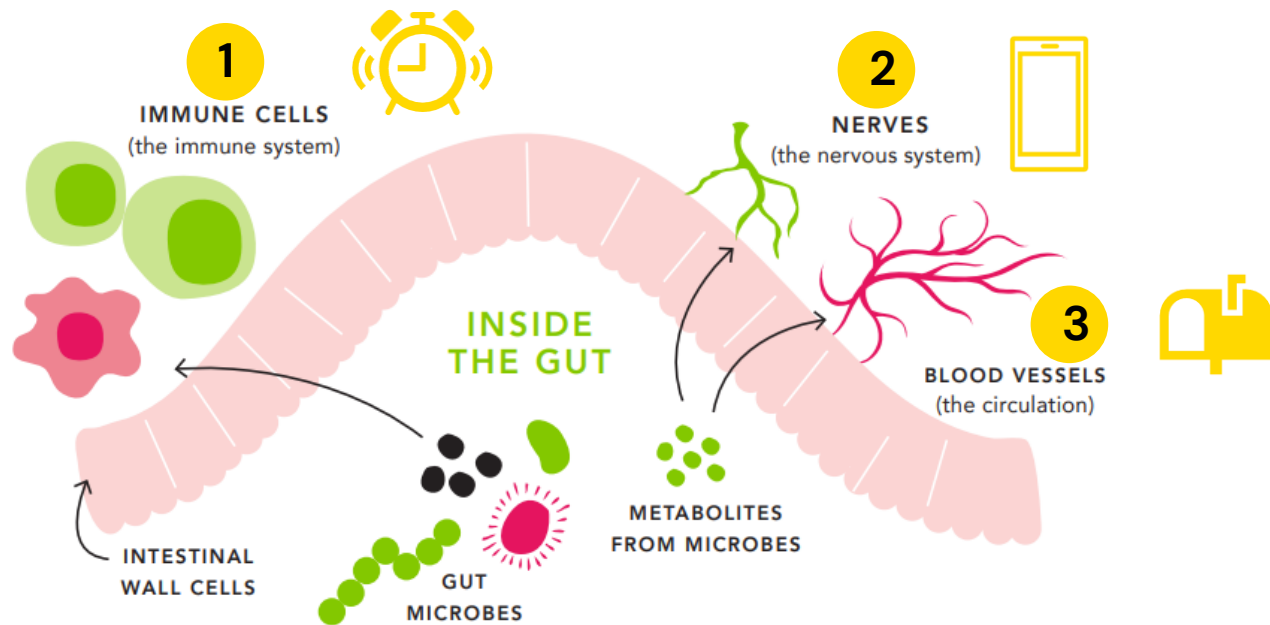
3.
Response to
Patients Without

Associate With Response
Irritable Bowel Syndrome

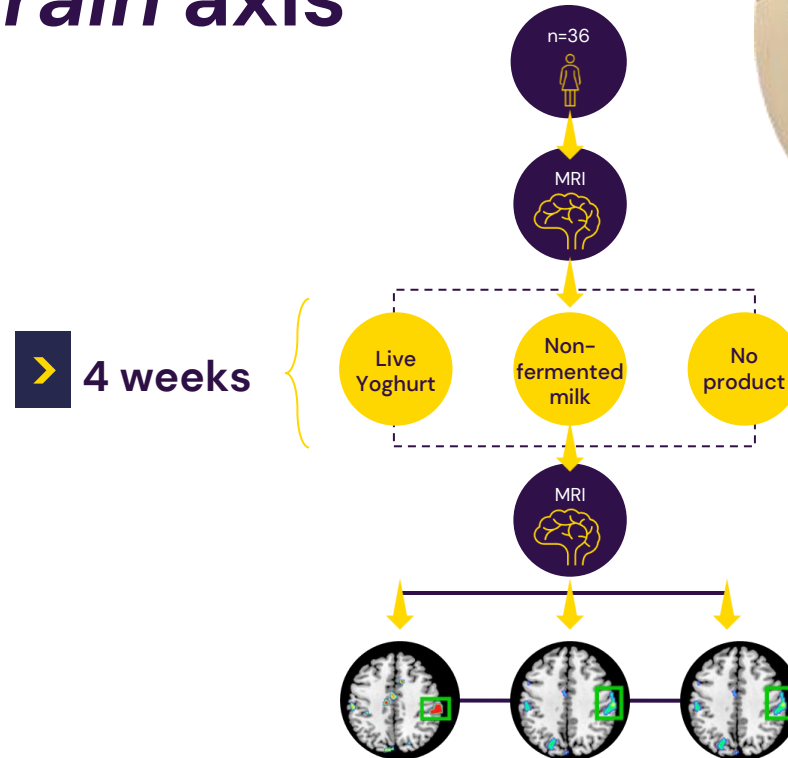
her,^{*,†} Miranda C. Lomer,^{*,†}
and Kevin Whelan^{*,‡}

Spanogiannopoulos et al. Nature Reviews Microbiology

How do they *communicate*?



Intervening on the *gut-brain* axis



The SMILES trial

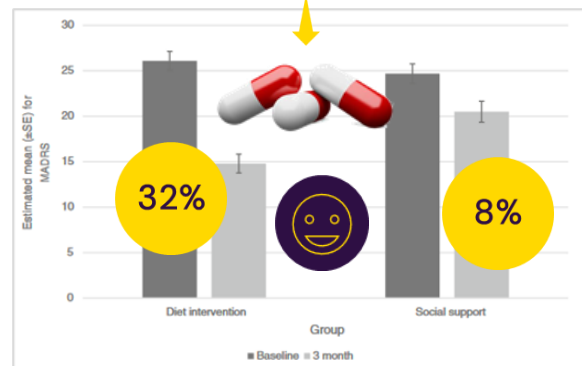
> 7 sessions, 12 weeks >



1

**Nutrition impacts
cognitive performance**

Those who eat poorly are **93% more likely** to have a higher loss in productivity



Jacka et al., BMC Medicine
Reward & Employee Benefits Assoc.



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Is your gut health?

theguthealthdoctor.com



Nutrition for the gut

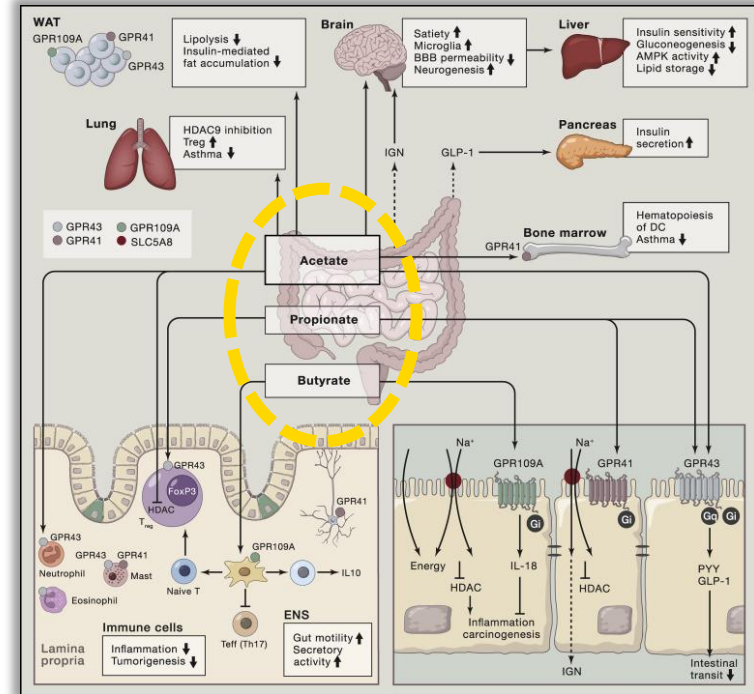
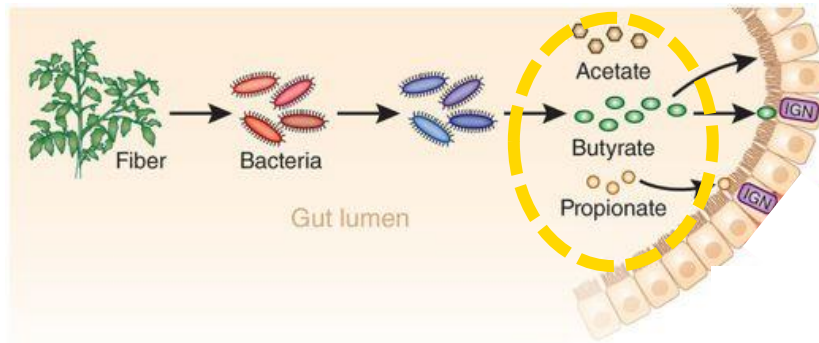


Old concept in *new* light



MICROBE
METABOLISM

Your microbes favourite nutrient



Koh et al., Cell

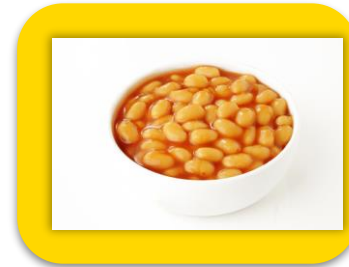
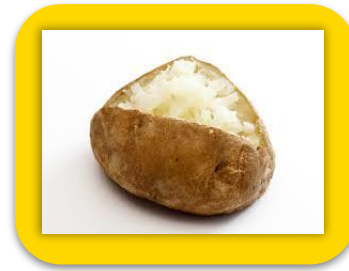
The *power* of fibre

> For every 8 grams/day of extra fibre...

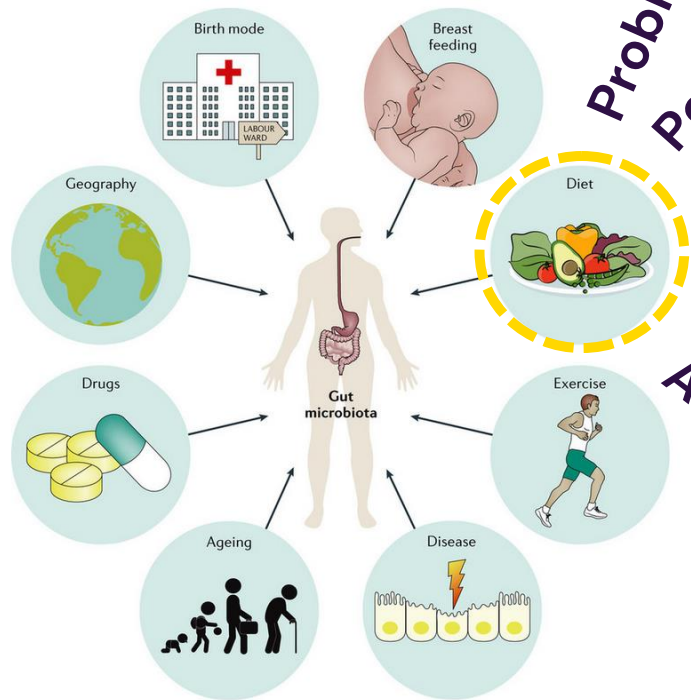
19% ↓ RISK OF HEART DISEASE

15% ↓ RISK OF TYPE 2 DIABETES

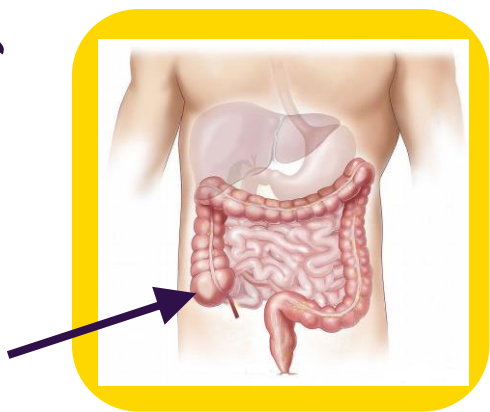
8% ↓ RISK OF COLON CANCER



Beyond fibre

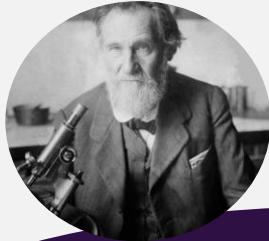


Probiotics
Polyphenols
Fermented food
Fat
Protein
Additives



Nature Reviews | Gastroenterology & Hepatology

The *history* of probiotics: from past to present



Elie Metchnikoff

*"Modify the flora in our bodies
and to replace the harmful
microbes by useful microbes."*

1907



**Over 50,000
publications**

NIH National Institutes of Health
Office of Dietary Supplements



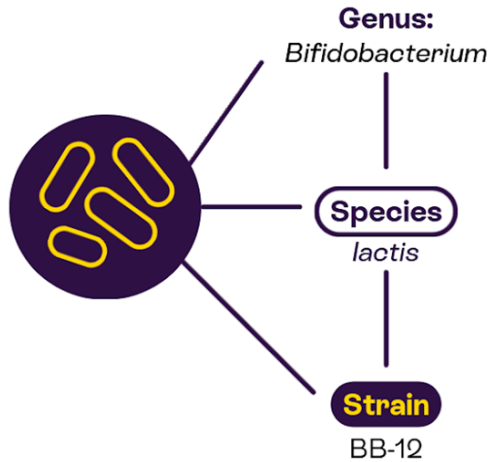
ESPGHAN
European Society for Paediatric
Gastroenterology, Hepatology and Nutrition

ISAPP
International Scientific Association
for PROBIOTICS and PREBIOTICS

*"The effects of
probiotics are strain-specific
and dose-specific."*

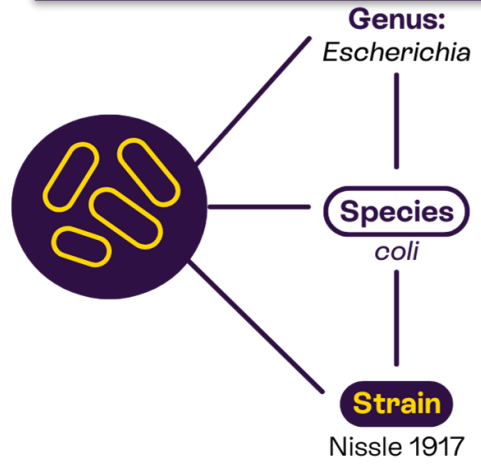
2020

Decoding bacteria: How naming works

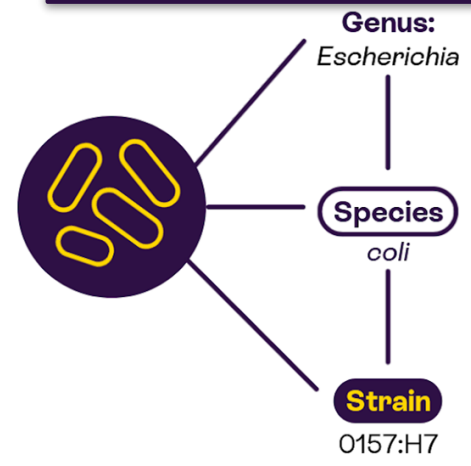


Decoding bacteria: How naming works

Clinical Trial > Gut. 2004 Nov;53(11):1617-23. doi: 10.1136/gut.2003.037747.
Maintaining remission of ulcerative colitis with the probiotic *Escherichia coli* Nissle 1917 is as effective as with standard mesalazine



Review > Can J Gastroenterol. 2013;27(5):281-5. doi: 10.1155/2013/138673.
Pathogenicity, host responses and implications for management of enterohemorrhagic *Escherichia coli* O157:H7 infection



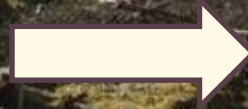
Antibiotic-associated diarrhoea (AAD)

~**36 million antibiotic** courses prescribed annually in the UK

Target bacterial cells **indiscriminately** – pathogenic & commensal species

Loss of microbiome diversity, pathogenic overgrowth, dysbiosis, diarrhoea, and GI symptoms

Up to **1 in 3 people** taking antibiotics are affected by AAD, impacting children and adults



- Reduced quality of life
- Work absenteeism
- Early discontinuation leading to poor treatment outcomes & antibiotic resistance

Antibiotic-associated diarrhoea (AAD)

~36 million antibiotic courses prescribed annually in the UK

Target by indiscriminate use of antibiotics
pathogenic species



Loss of microbiome diversity, pathogenic overgrowth, dysbiosis, diarrhoea, and GI symptoms

Up to 1 in 3 people are affected by AAD in children and adults

Practice Guideline > [J Clin Gastroenterol. 2024 Jul 1;58\(6\):533-553.](#)
doi: 10.1097/MCG.0000000000002002.

World Gastroenterology Organisation Global Guidelines: Probiotics and Prebiotics

of life
sm
ation leading to
outcomes &
ance

Probiotics for *when you're on antibiotics*



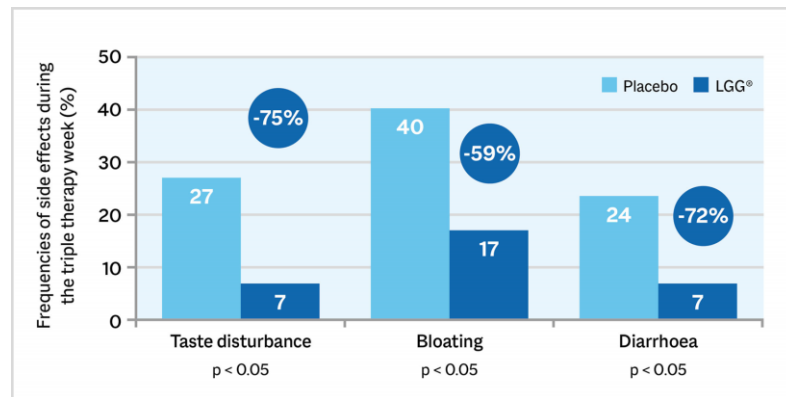
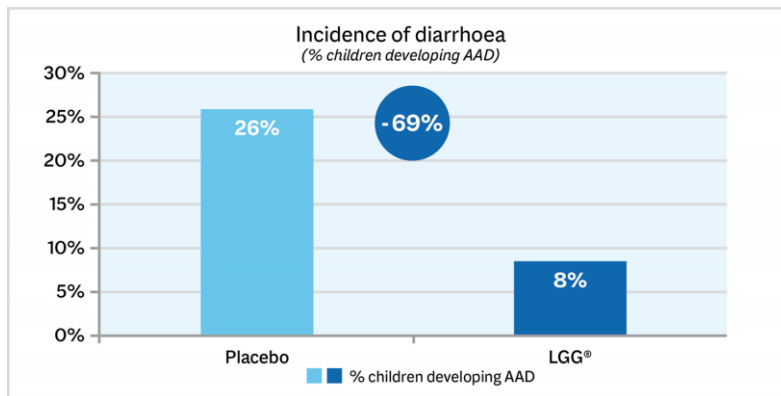
**Antibiotic-associated
digestive issues**

Right strain: LGG

Right time: during antibiotics & week after

Right way: 10 billion twice per day

Guarner et al. J Clin Gastroenterol. 2024
Szajewska et al. J Pediatr Gastro Nutr. 2023.
Armuzzi et al. Aliment Pharmacol Ther. 2001a.
Vanderhoof et al. J Pediatr. 1999.
Armuzzi et al. Digestion. 2001b.
Merenstein et al. J Family Practice. 2020.
Sanders et al. Nutrition Bulletin .2018.



Right strain, right time, right way



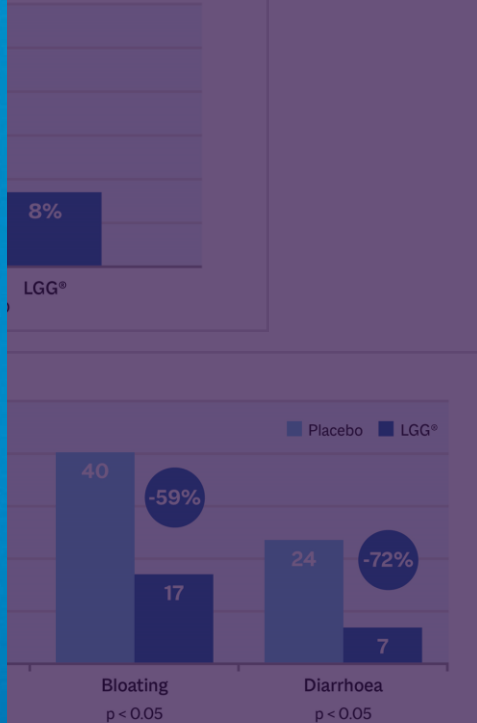
Antibiotic-associated
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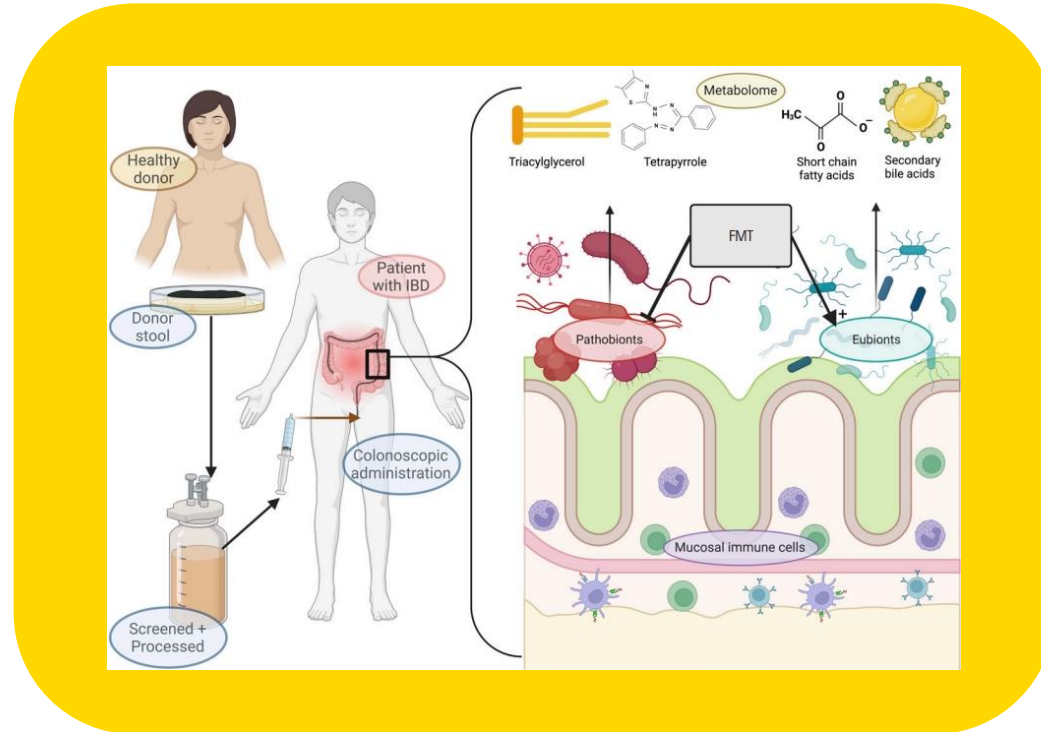
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Fecal microbiota *transplants*



Fecal microbiota transplants

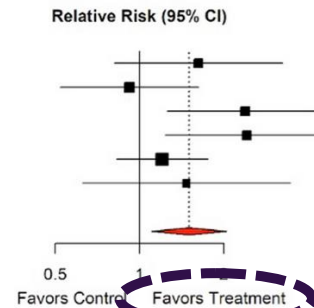
The Super-Donor Phenomenon in Fecal Microbiota Transplantation [Front Cell Infect Microbiol.](#)

> [Dig Dis Sci.](#) 2025 Mar 4. doi: 10.1007/s10620-025-08946-8. Online ahead of print.

Fecal Microbiota Transplantation (FMT) and Clinical Outcomes Among Inflammatory Bowel Disease (IBD) Patients: An Umbrella Review

Study	Treatment		Control		RR	95%-CI
	Events	Total	Events	Total		
Moayyedi et al	15	38	9	37	1.62	[0.81; 3.24]
Rossen et al	11	23	13	25	0.92	[0.52; 1.63]
Paramsothy et al	22	41	9	40	2.38	[1.26; 4.53]
Costello et al	21	38	8	35	2.42	[1.23; 4.74]
Ishikawa et al	14	17	13	19	1.20	[0.83; 1.75]
Kump et al	10	17	4	10	1.47	[0.62; 3.46]
Random effects model	93	174	56	166	1.50	[1.10; 2.04]

Heterogeneity: $I^2 = 38\%$, $\tau^2 = 0.0528$, $p = 0.15$



Four dietary principles



THE
GUT
HEALTH
DOCTOR

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Four dietary principles

Mostly plants

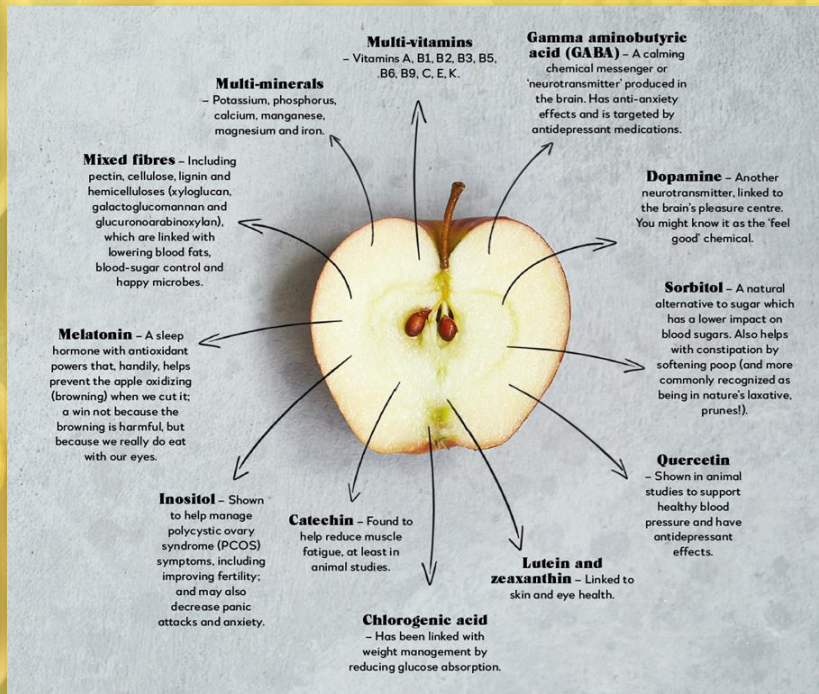


Effects of a diet based on inulin-rich vegetables on gut health and nutritional behavior in healthy humans

The American Journal of
CLINICAL NUTRITION

Four dietary principles

Diversity all the way



Eat More, Live Well



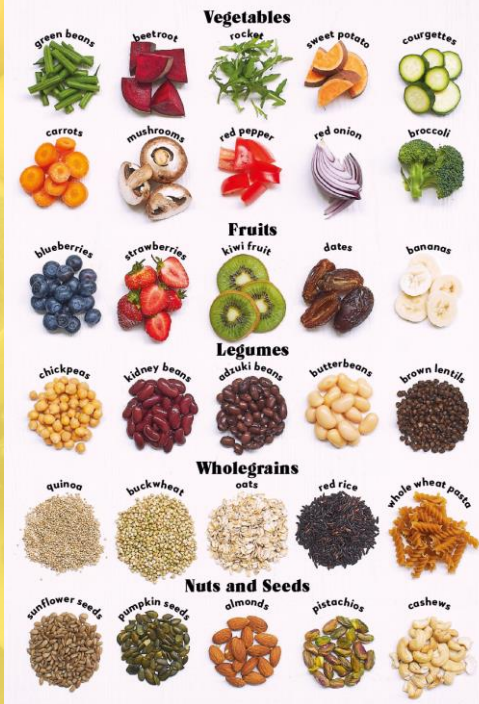
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Four dietary principles

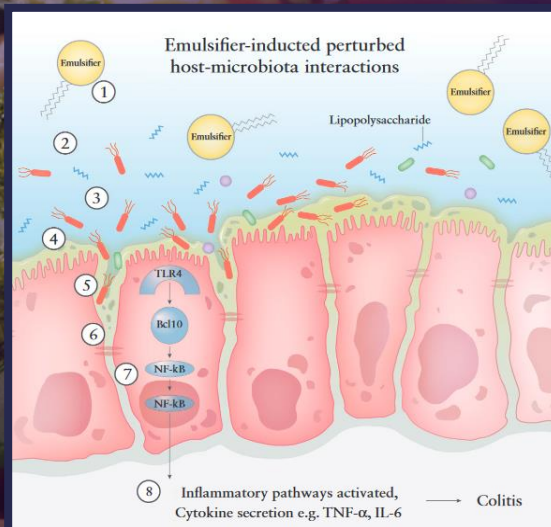
Diversity all the way

What 30 plant points actually looks like



Four dietary principles

Go for whole, not refined



JOURNAL ARTICLE

DOP097 Emulsifier restriction is an effective therapy for active Crohn's disease: the ADDapt trial - a multi-centre, randomised, double-blind, placebo-controlled, re-supplementation trial in 154 patients

A Bancil, M Rossi, A Sandall, S Cox, K Dalrymple, C Kelaiditis, A Buckley, S Burke, Y Xu, L Smith ... [Show more](#)

Journal of Crohn's and Colitis, Volume 19, Issue Supplement_1, January 2025, Page i262,

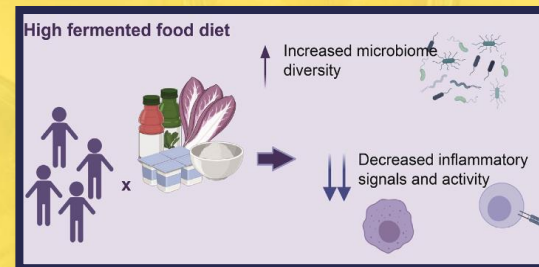
Ingredients

Medium Chain Triglyceride Oil (Plant Source), Live Cultures: Bifidobacterium Breve M-16V®, **Emulsifier: Mono and Diglycerides of Fatty Acids (Plant Source)**

Four dietary principles

Enjoy fermented foods

- Mechanism: microbes, active chemicals, added vitamins, digestibility



Four dietary principles

Gut-centric diet

1

Mostly plants (think Super Six)

2

Diversity all the way
(aim for 30+ plant points)

3

Go for whole, not refined
(watch the % UPF)

4

Enjoy fermented foods
(aim for 3+ serves per day)

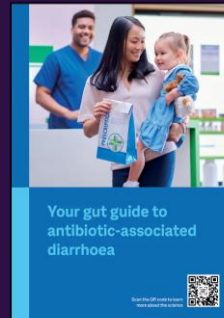
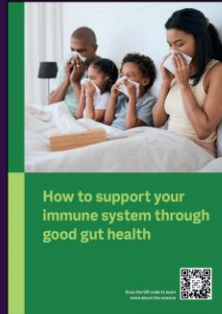


Dr Megan Rossi, PhD BHSc RD APD

Thankyou!



Stand B7



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