



DRINK YOUR FIBRES

**TAKING STEPS TOWARDS ADDRESSING THE PERSISTENT FIBRE
GAP IN EUROPE AND THE UK THROUGH OATS AND OAT DRINKS.**

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The Gut Health Clinic

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Vice President Science and Technology
Oatly

BRIDGING THE FIBRE GAP: FROM FIBRE SCIENCE TO PRACTICAL APPLICATION

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WHAT WE WILL COVER

1. Fibre: types, functionalities and links to health
2. Fibre and the gut microbiome
3. The fibre gap
4. Clinic insights and practical applications

FIBRE: TYPES, FUNCTIONALITIES AND LINKS TO HEALTH

DEFINITIONS

- Dietary fibre should be defined as carbohydrates which are not digested or absorbed in the small intestine, and are made up of 3 or more monomers, plus lignin (SACN, 2015)
- Predominantly found in plants
- Previously defined as soluble and insoluble fibres
- In 1998, FAO/WHO proposed to move away from this oversimplification of the terminology around dietary fibres

FIBRE FUNCTIONALITIES AND LINKS TO HEALTH

Physicochemical property	Definition	Functional health impact
Solubility	The extent to which dietary fibres can dissolve in water	Impact on transit time and stool output. May activate Ileal brake – inhibition of motility and secretion (GLP1 and GLP2)
Viscosity	Gel forming ability; degree of resistance to flow	Slowing gastric emptying, decreasing postprandial glycaemia and lipaemia
Fermentability	Extent to which dietary fibres can be hydrolysed and metabolised by the gut microbiota	Leads to higher SCFA concentrations Other physicochemical such as solubility and viscosity characteristics influence fibre fermentability

FIBRE MECHANISMS

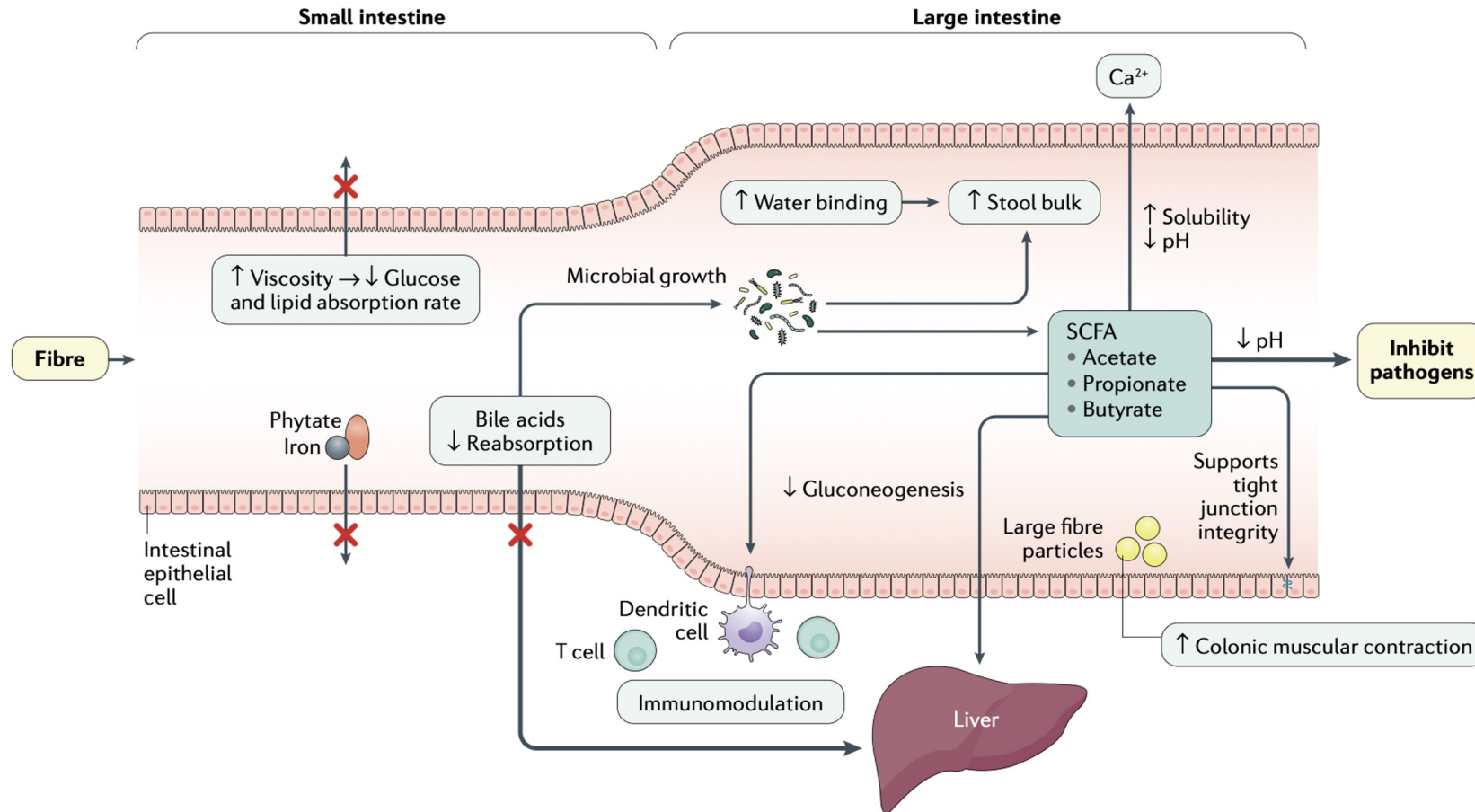


Fig. 2 | **Mechanisms by which different dietary fibres affect the gastrointestinal tract.** There are several mechanisms by which the physicochemical characteristics (solubility, viscosity and fermentability) of dietary fibre might affect its functional properties in the gastrointestinal tract including influencing glucose and lipid absorption, contributing to stool output (frequency, consistency and weight) and stimulating changes in microbial composition and metabolite production including the production of short-chain fatty acids (SCFAs).

CARDIOVASCULAR HEALTH

- Plasma cholesterol decreased through reduced bile salt resorption
- Increase 7g fibre/day associated with 6-9% lower risk of CVD, stroke (colorectal cancer, rectal cancer and T2DM)

METABOLIC HEALTH

- Improved glycaemic and lipaemic responses
- Appetite regulation and satiety

DIGESTION

- Gut transit, stool regulation and consistency
- Reduced risk of GI disease
- Influence on GM, including production of SCFAs

FIBRE BENEFITS TO HEALTH

CANCER RISK

- UK Biobank study >360,000 participants
- Higher fibre intake (>19g) associated with 10% lower risk all cancers combined and 17 specific cancers

COGNITION AND MOOD

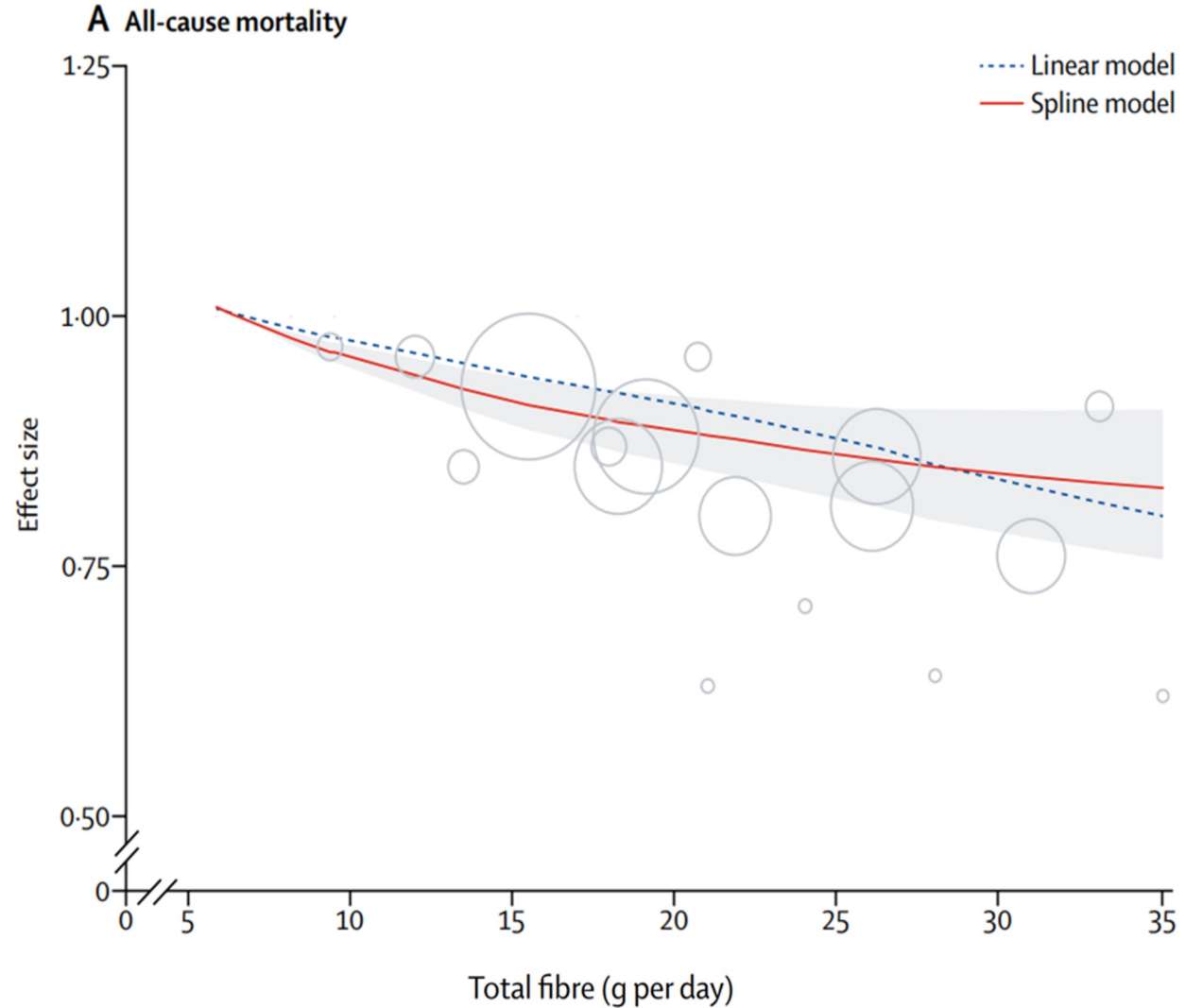
- 5g increase in fibre associated with 5% reduction in risk of depression
- Reduced risk neurodegenerative conditions, decreased neuroinflammation

EMERGING EVIDENCE

- Weight management via GLP-1 synergy eg IPE fibre supplementation
- Precision, personalised fibre intervention with microbiome selectivity

FIBRE

Higher intakes of total dietary fibre are associated with reduced incidence and mortality from several NCDs.

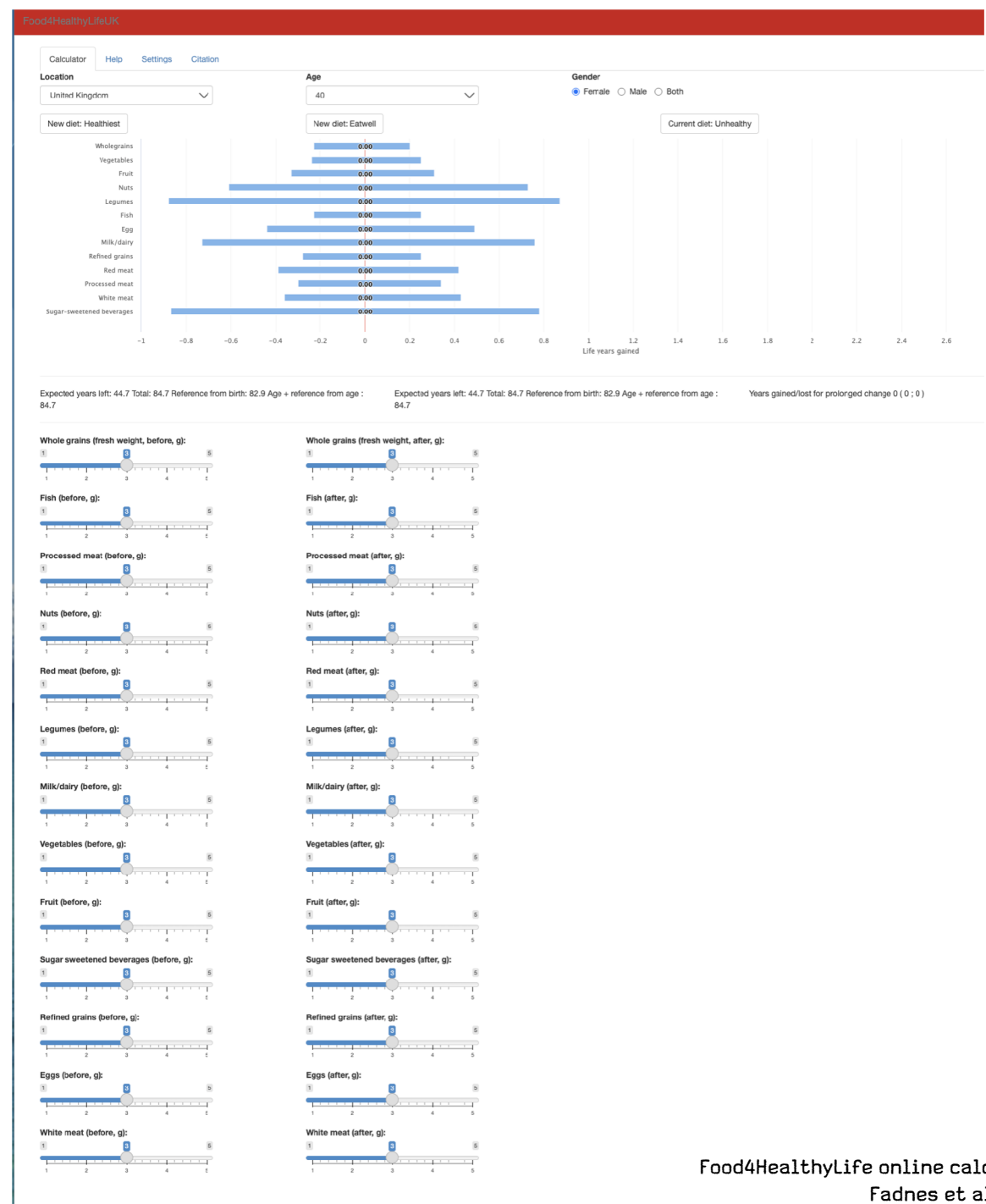


Reynolds A, et al. Lancet. 2019 Feb 2;393(10170):434-445

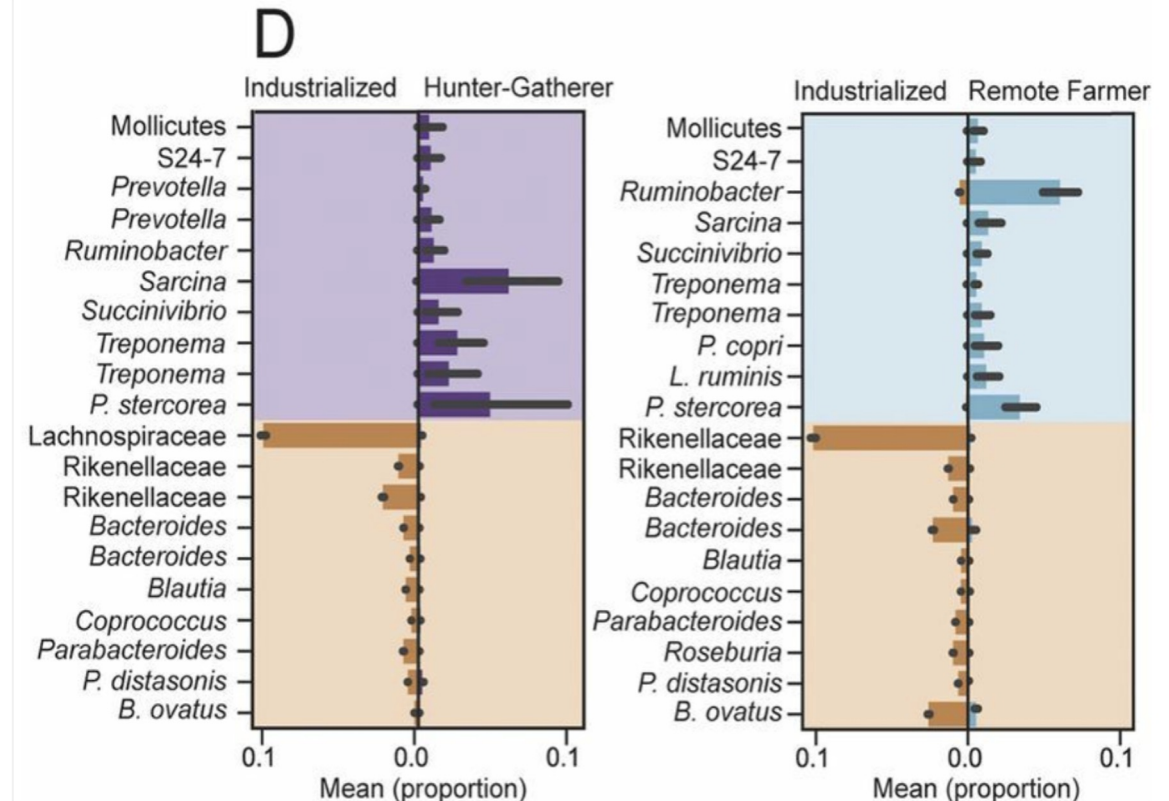
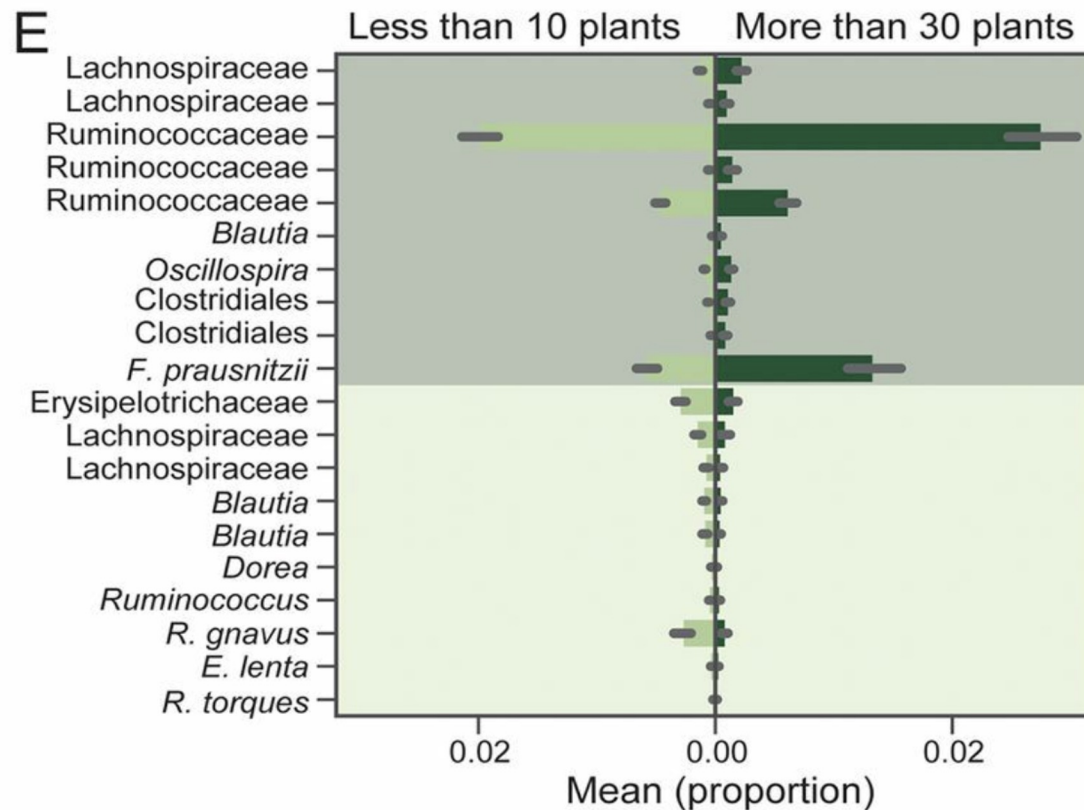
**DIETARY FIBRE HAS THE POTENTIAL TO BE
USED AS A THERAPEUTIC INTERVENTION,
AND DISEASE PREVENTION**

FIBRE & THE GUT MICROBIOME

A DIET RICH IN
PLANTS COULD ADD
UP TO A **DECADE** OF
HEALTHY YEARS TO
LIFE EXPECTANCY



MORE PLANT-BASED VARIETY = MORE DIVERSE MICROBIOME



MORE DIVERSE MICROBIOME & IMPROVED HEALTH OUTCOMES

Fig. 2: The 15 top and bottom health-ranked SGBs show consistent associations across the five PREDICT cohorts.

From: Gut micro-organisms associated with health, nutrition and dietary interventions

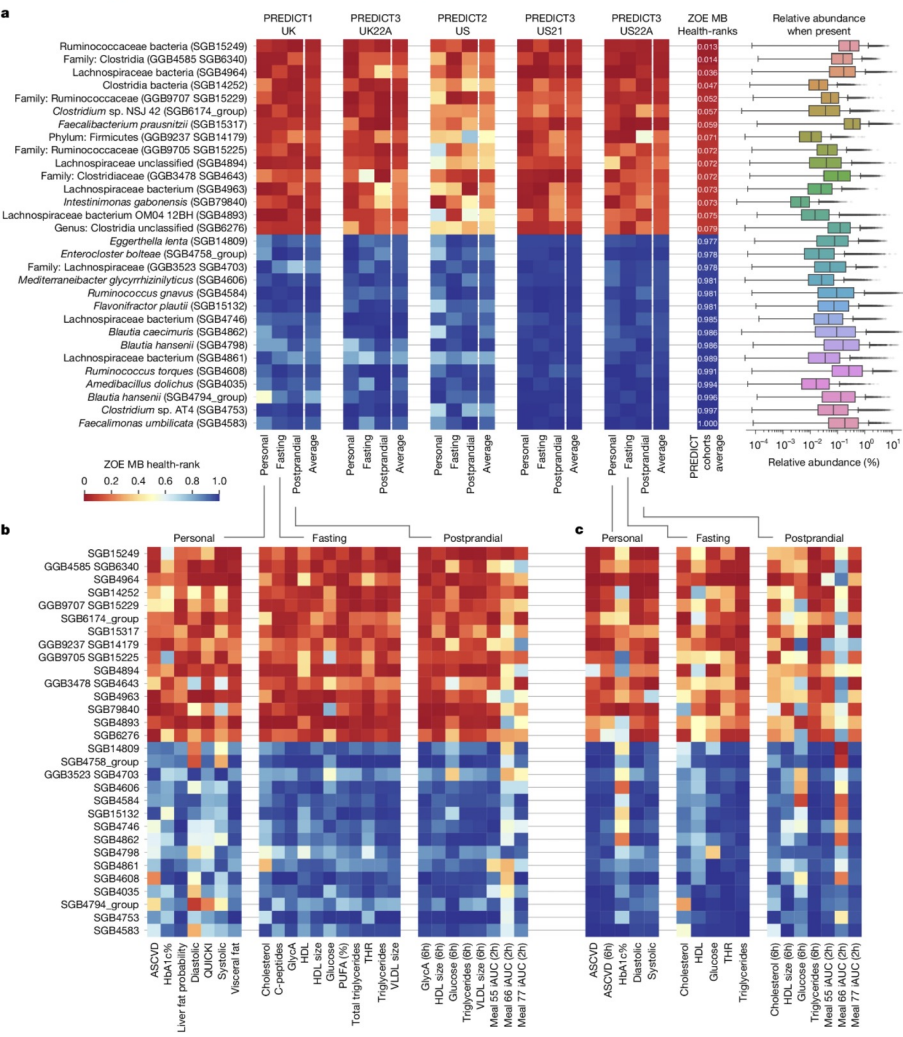
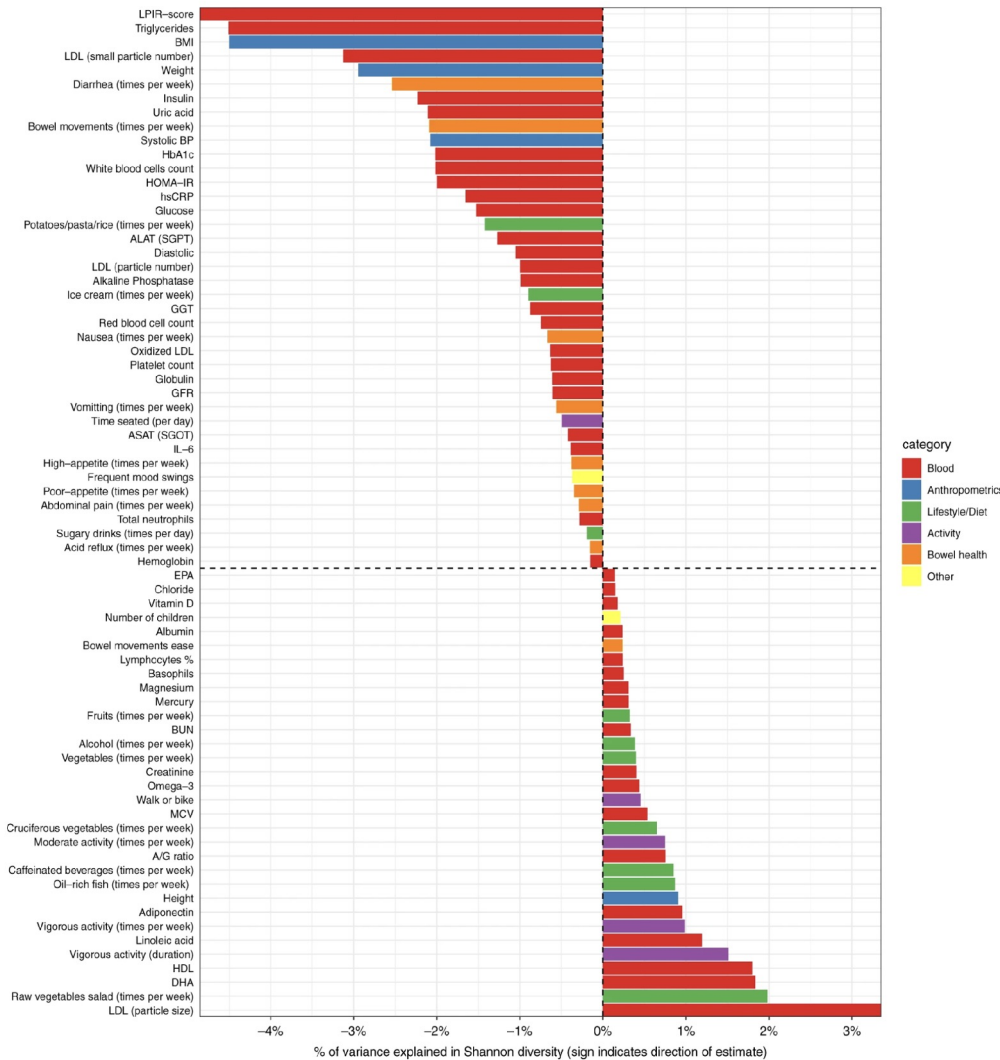


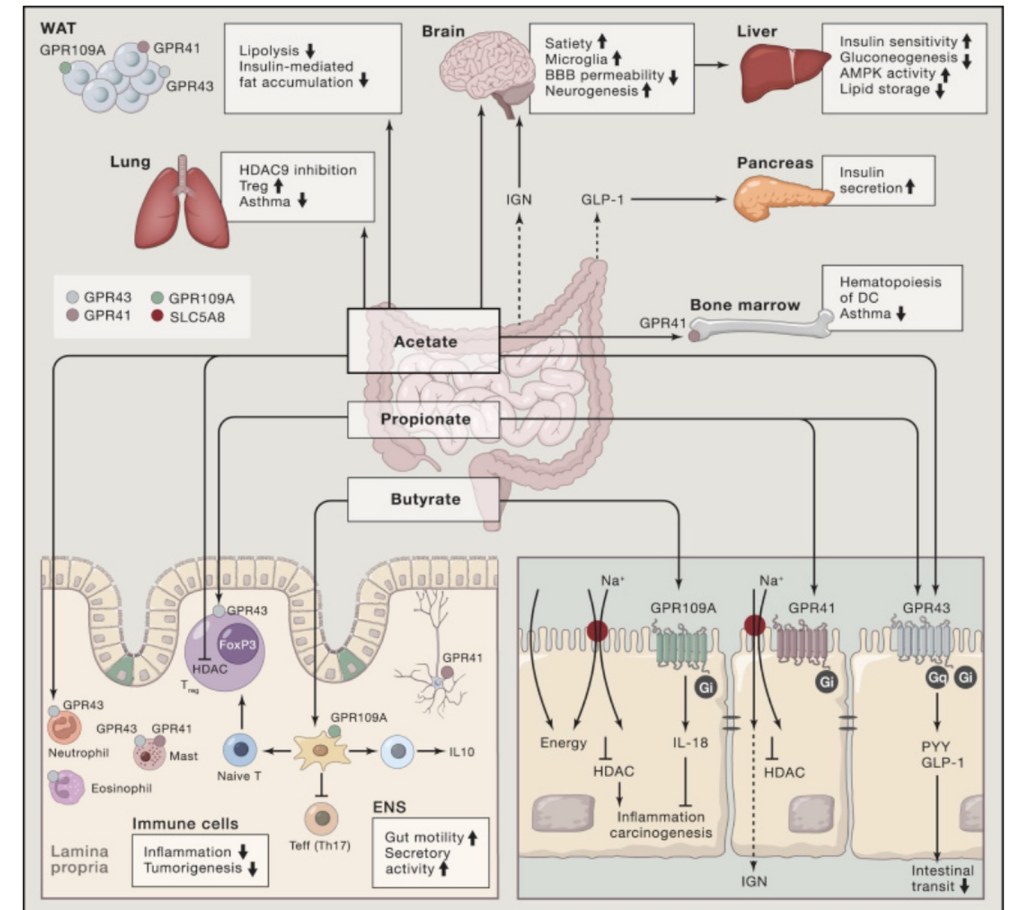
Fig. 3: Significant associations between microbiome diversity and multiple factors.

From: Health and disease markers correlate with gut microbiome composition across thousands of people



THE 'GUT:EVERYTHING' AXIS

- Improved cardiometabolic health (Aniscar et al., 2025)
- Gut:skin axis; reductions in skin inflammation (Zanesco et al., 2025)
- Reduced digestive symptoms (Li et al., 2024)
- Gut:brain axis; improved cognition, mood and sleep (Ni Lochlainn et al., 2024; Kowal et al., 2025)
- Gut:hormone axis; oestrobolome, appetite regulating hormones, neurotransmitters (Kim et al., 2025)
- Reduced inflammatory responses; supports immune health (Bolte et al., 2018)



THE FIBRE GAP

THE FIBRE GAP

	Belgium	Denmark	Finland	France	Germany	Italy	Netherlands	Norway	Spain	Sweden	UK
Recommended intake	30	30	30	30	30	30	30	30	30	30	30
Average intake	19.5	22	20.7	15.9	25	19.6	22	26	19.2	21	20
"Fibre Gap"	10.5	8	9.3	14.1	5	10.4	8	4	10.8	9	10

The daily gap is 10g per day for most people

A MAJORITY OF THE POPULATION IS FIBRE-DEFICIENT

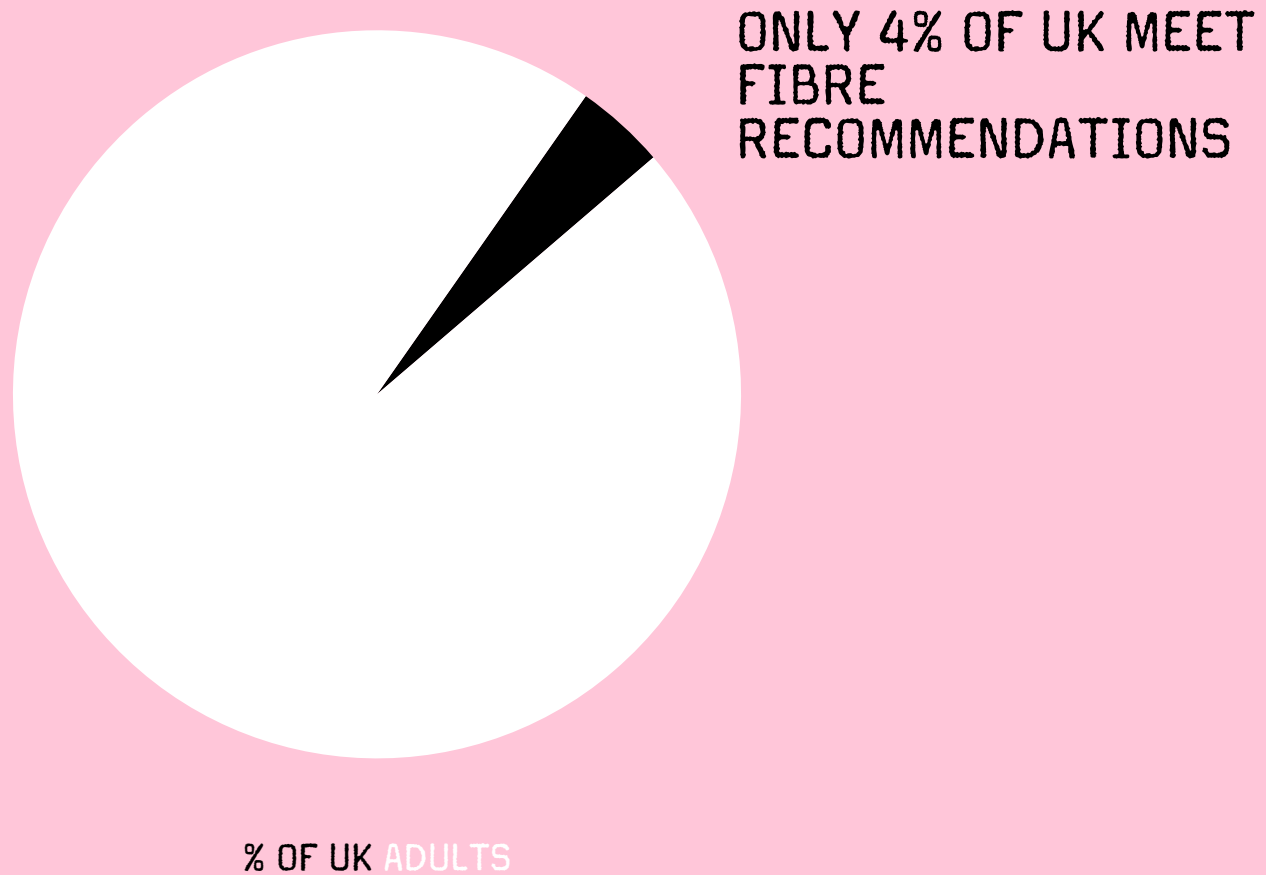
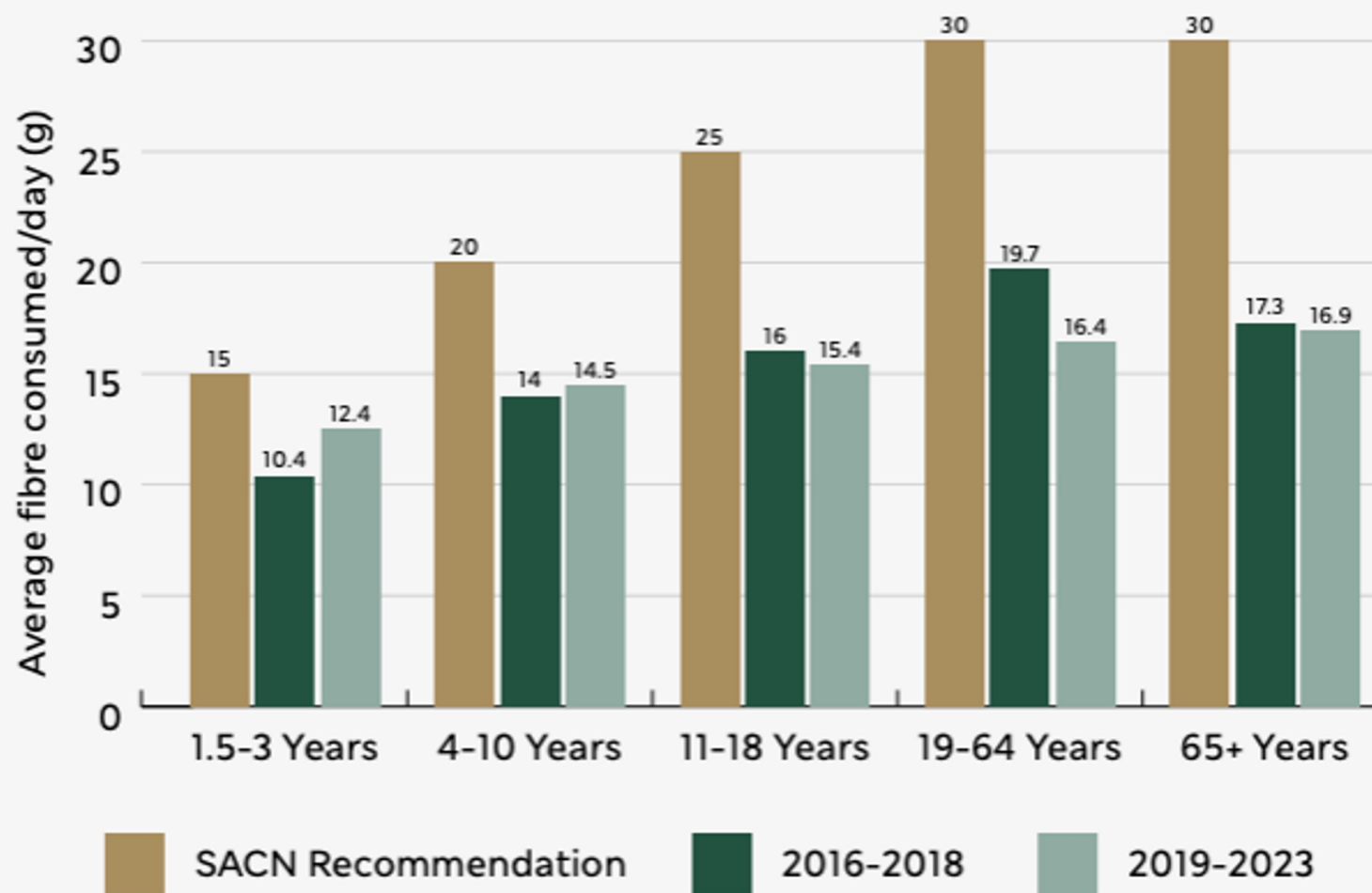
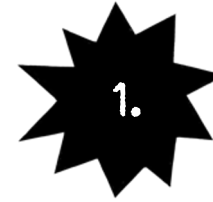


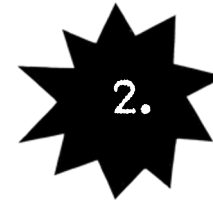
FIGURE 1: Comparison of dietary fibre from NDNS data sets 2016-2018, 2019-2023 and SACN recommendation (Source: National Diet and Nutrition Survey 2025)



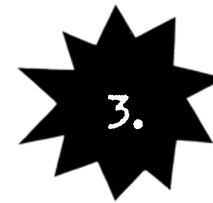
BARRIERS TO INCREASING FIBRE INTAKE: WHAT THE RESEARCH SHOWS



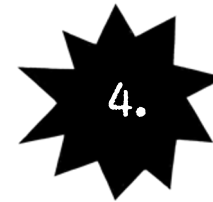
Sensory and taste preferences
i.e. 'healthy' higher fibre foods
expected to be less palatable



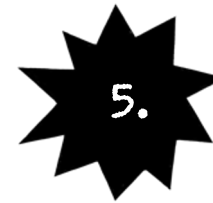
Low awareness of
recommendations and current
fibre intake



Convenience, cost, and lack of
familiarity with high fibre
foods



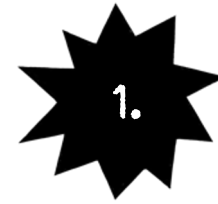
Concerns about digestive
discomfort



Confusion over food labelling

CLINIC INSIGHTS AND PRACTICAL APPLICATIONS

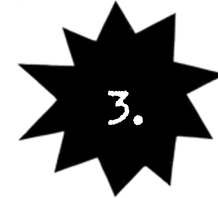
BARRIERS TO INCREASING FIBRE INTAKE: CLINIC INSIGHTS



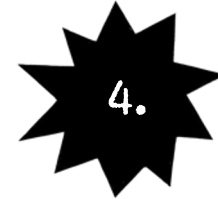
Fear of exacerbating gut symptoms



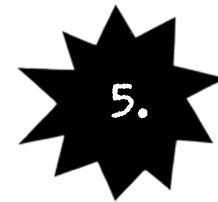
Hard to find high fibre options when eating out and on-the-go



Worry about food waste (especially fresh fruit and veg)



Overwhelm and confusion from multiple information sources and social media

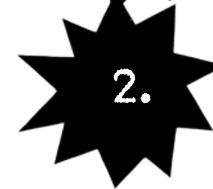


Food preferences

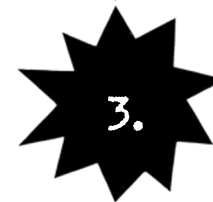
HOW WE ADDRESS THIS: CLINIC INSIGHTS



'Mixed' everything!



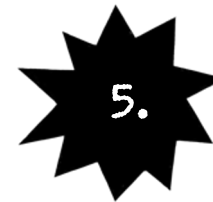
Eating seasonally to encourage variety and lower pricing



Becoming 'fibre-fit' through a personalised approach

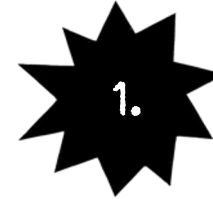


Convenient, practical swaps e.g. wholegrain alternatives, frozen products and smart snacking

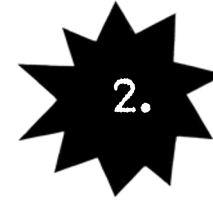


Science-based education and myth-busting

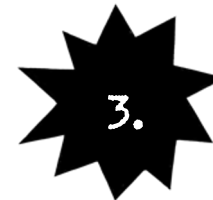
BARRIERS TO INCREASING FIBRE INTAKE: WIDER INITIATIVES



Consumer education, nudges
and empowerment



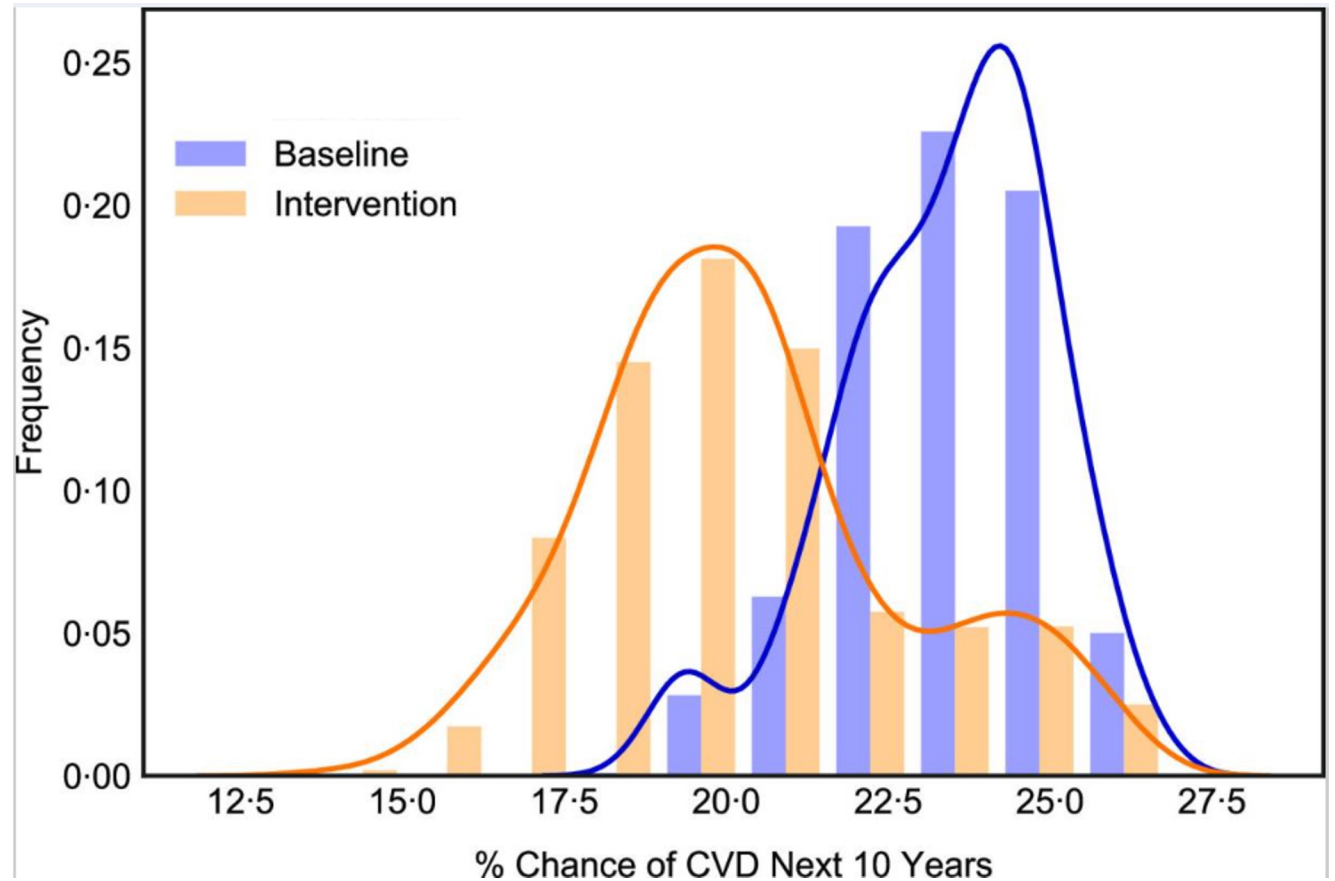
Campaigns with simple, honest
communication to increase
awareness and influence
perception



Product development and
innovation.
Reformulation of staple foods
'health by stealth'

FIBRE ENRICHMENT

A 10% boost in dietary fibre could potentially cut CVD risk by 13%.



Canene-Adams K, et al. Br J Nutr. 2022 Nov 14;128(9):1868-1874.

**COLLABORATIVE WORKING BETWEEN
INDUSTRY & GOVERNMENT NUTRITION
PROFESSIONALS IS KEY**



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and specialist teams,
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Thanks

DRINK YOUR FIBRES

**Addressing the Persistent Fibre Gap
in Europe and the UK Through Oats
and Oat-Based Drinks.**



Prof Caroline Orfila Jenkins (PhD, Rnutr)
VP Science and Technology



MAIN TAKE-AWAYS FROM OATLY SINCERELY

1. Oats and oat drinks contribute meaningfully to fibre intake as part of healthy sustainable diets.
2. The significant and persistent fibre gap in EU/UK could be addressed through oat drinks. Your morning latte matters!
3. Nutritionally, turning whole oats into oat drinks can be a good thing.



**WE EXIST TO MAKE
IT EASY FOR PEOPLE TO
LIVE HEALTHIER LIVES**

Without recklessly taxing
the planet's resources in the process

OATLY NAMED 1ST
CLIMATE SOLUTIONS
COMPANY IN FOOD
& BEVERAGE

By Exponential Roadmap Initiative



FROM SCIENCE PIONEERS TO LEADING A GLOBAL MOVEMENT

1994

'MILL MILK' IS INVENTED TO ADDRESS GLOBAL
CHALLENGE OF LACTOSE INTOLERANCE

FOUNDATION IN ACADEMIC RESEARCH
IN NUTRITION AND BIOCHEMISTRY
FROM LUND UNIVERSITY, SWEDEN

GLOBAL CHALLENGES

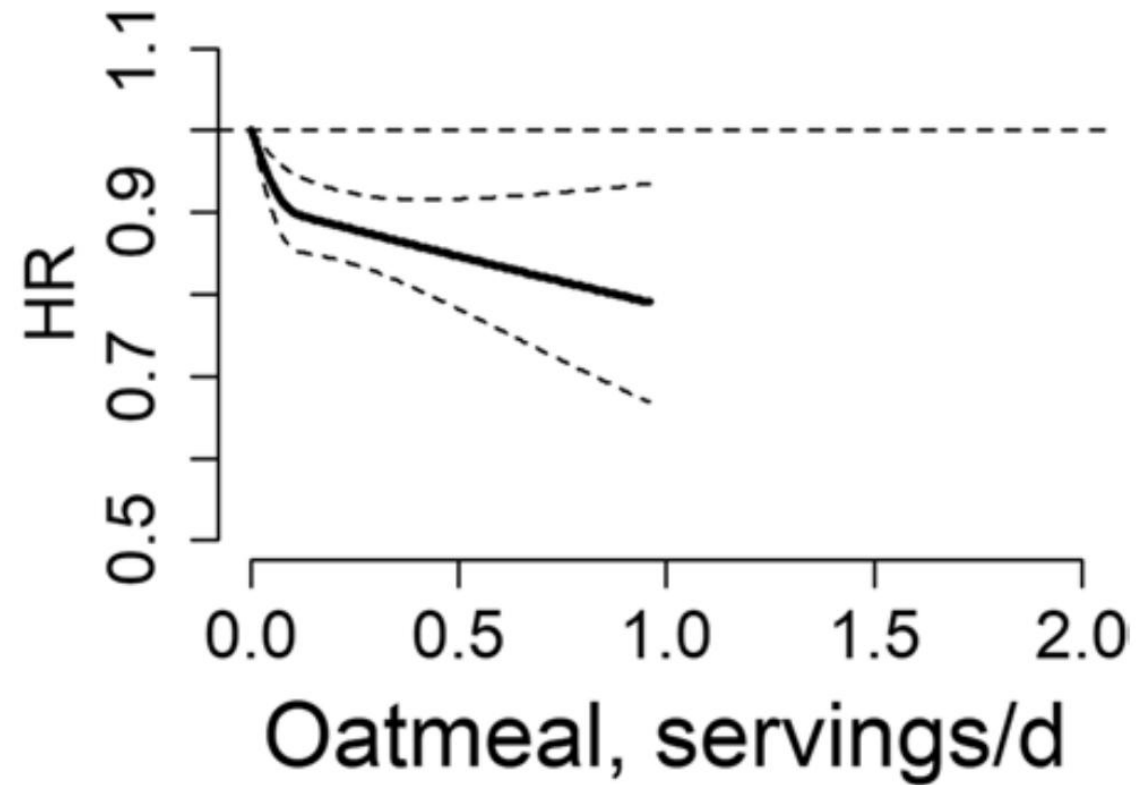


- 10-80% of humans on earth do not have a lactase persistence(LP) phenotype*
- Modern diets chronically lack fibre and some micronutrients
- People consume excessive amounts of saturated fat

* Misselwitz B, et al. (2013). Lactose malabsorption and intolerance: pathogenesis, diagnosis and treatment. United European Gastroenterology Journal. 1(3):151–159.

THE POWER OF OATS

Higher intake of oatmeal is associated with reduced risk of coronary heart disease.



OATLY FORTIFIED DRINKS TICK **SIX OUT OF EIGHT** KEY NUTRIENTS OF INTEREST IN THE SHIFT TOWARD PLANETARY HEALTH DIETS*

- ✓ Fibre
- ✓ Unsaturated fats
- ✓ Calcium
- ✓ Iodine
- ✓ Vitamin B12
- ✓ Vitamin D



89% of volume sales* are fortified unsweetened oat drinks

Fortified PBD including oat drinks are recommended by dietary guidelines

*Rockström J et al. Lancet. 2025 Oct 11;406(10512):1625-1700

* 2025 Global Sales



LIQUID OAT TECHNOLOGY

- Enzymatic bioprocess that turns whole oat kernels into a liquid oat base that is used to formulate delicious and nutritious oat drinks
- Balanced macronutrient profile: soluble proteins, starchy carbs and fibres, including oat beta-glucans
- Complemented with unsaturated fats from rapeseed oil and micronutrients through responsible fortification
- No added sugar. No emulsifiers, stabilisers, or sweeteners, colours or flavours in our unflavoured range

SOURCE OF FIBRE



**2 GRAMS OF FIBRE
PER GLASS***
(SEMI & NO SUGARS)

**2.5 GRAMS OF FIBRE
PER GLASS***
(WHOLE)

* 290 mL

OATLY AS PART OF SWEDISH DIETARY GUIDELINES

RECOMMENDED fibre TARGET:
25-35g/day or more

+ Nuts and seeds: 20-30 g/day

+ Legumes: 80g, 2 days/week)

+ Whole-grain cereals: At least 90g /day
for adults

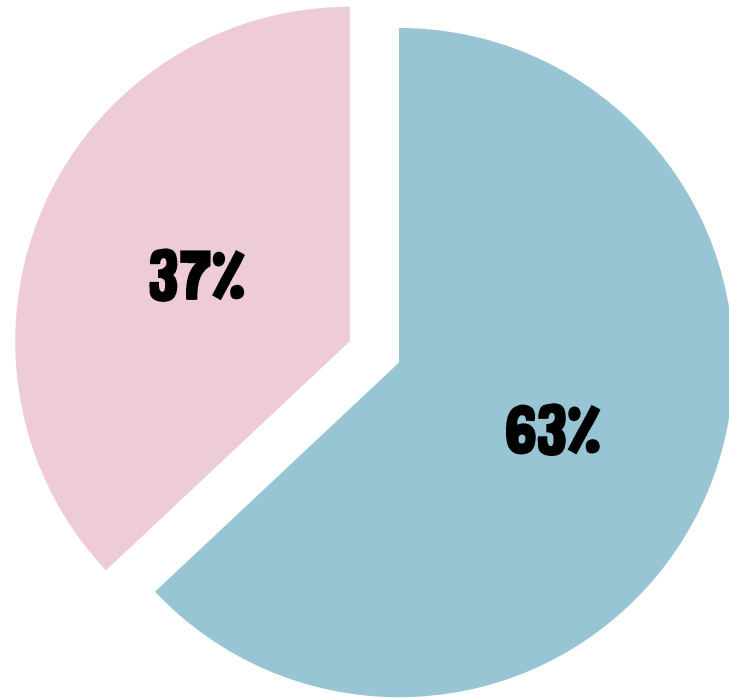
+ fruit, vegetables and berries: At least
500g/day

+ milk alternatives (350—500 mL /day)

* 100g broccoli, 100g cabbage, 100g banana,
100g carrots, 100g blueberries

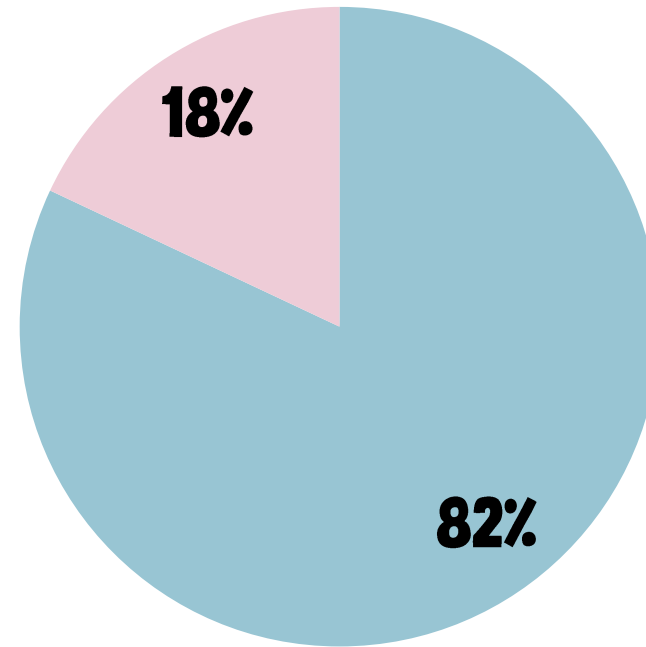
RECOMMENDED FOOD	DAILY INTAKE	FIBRE (APPROX.)	% FIBRE TARGET
Nuts and Seeds	25g	1.6g	5-6%
+ Oatly Semi	350ml	2.8g	9-10%
Legumes (Chickpeas, cooked)	50g	3g	9-2%
Wholegrains (Pasta, dry)	90g	7g	20-28%
Mixed fruit, veg and berries*	500g	12.4g	35-50%
TOTAL FIBRE		26g	77-106%

WHAT KIND OF FIBRES ARE IN OATS AND IN OATLY DRINKS?



■ Soluble ■ Insoluble

Oatmeal Porridge
4 grams/40 grams



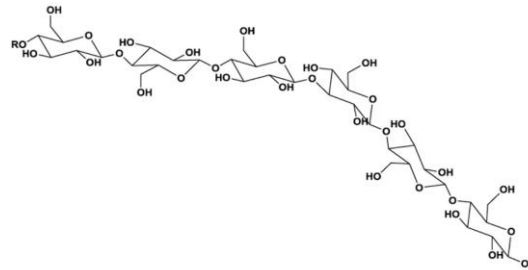
■ Soluble ■ Insoluble

Oat drink
2 grams/290 mL



A donut chart illustrating the composition of beta-glucan. The chart is divided into three segments: a large blue segment representing 50% Soluble beta-glucan, a pink segment representing 32% Soluble other, and a yellow segment representing 18% Insoluble. A legend at the bottom identifies these categories with colored squares.

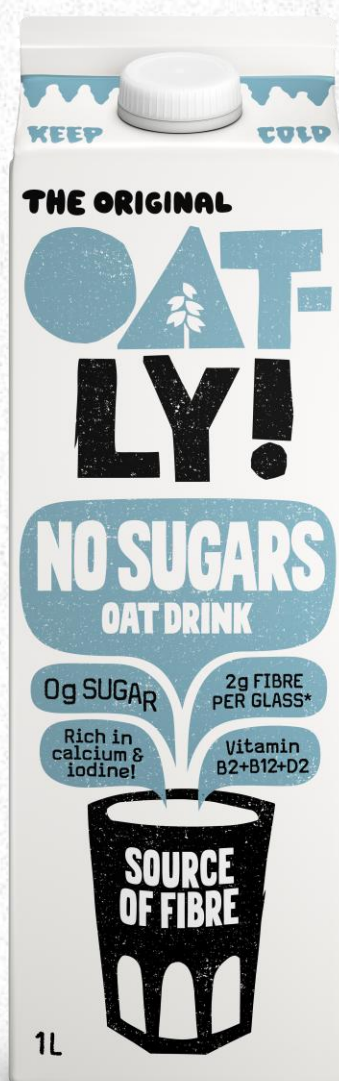
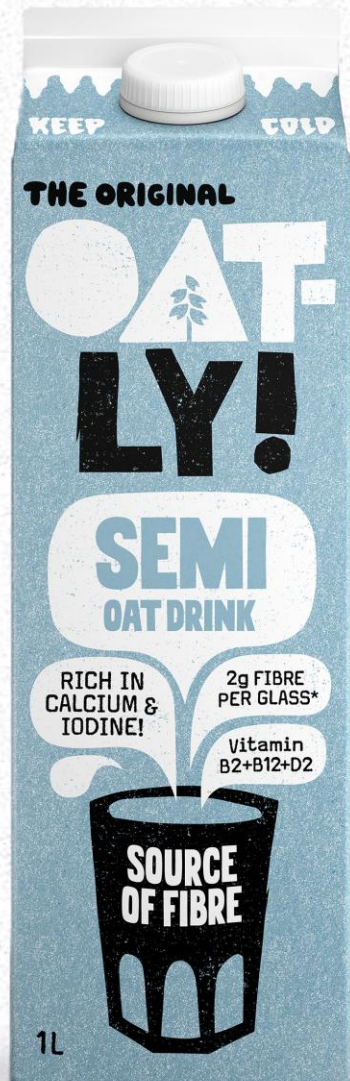
Category	Percentage
Soluble beta-glucan	50%
Soluble other	32%
Insoluble	18%



**DRINK
YOUR
FIBERS!**

> 1 g Oat beta-glucan/290 mL

EFSA opinion (2010) "Oat beta-glucan has been shown to lower blood cholesterol. Blood cholesterol lowering may reduce the risk of (coronary) heart disease".



**1 GRAM OF BETA
GLUCANS PER GLASS***

**1/3 OF THE TOTAL NEEDED DAILY
FOR CHOLESTEROL LOWERING
CLAIM**

*290 mL

The oat drink that you pour on your breakfast cereals, or in your morning latte, matters!

Oat drink can be a convenient way to
add oat fibre in a way and fits into
a healthy plant-based diet.



OATLY AT THE RESEARCH FRONTIER

- Exploring oat diversity and its importance for people and planet
- New health claim for oat-beta glucan and reduction of post-prandial glucose peak
- Food matrix – Molecular understanding of oat components in the ‘oat drink matrix’
- Oat bioactives – Avenanthramides and avenacosides. From biomarkers to physiological impact

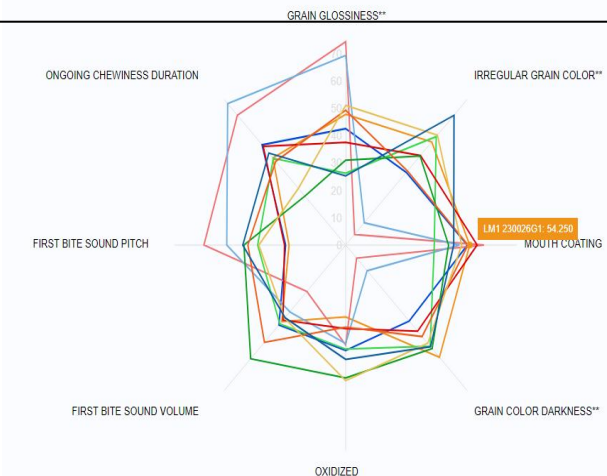




Sequencing and annotation of the oat genome, the genetic blueprint for oats. This is now used by scientists and breeders to accelerate the development of nutritious, climate resilient oats.

28,38	27,95	98%	15,1	2,8	6,9
28,24	27,61	98%	15,0	2,8	6,9
28,35	27,82	98%	15,1	2,8	6,9
27,52	27,01	98%	14,8	2,8	6,8
28,32	28,19	100%	14,9	2,8	6,9
28,32	28,23	100%	15,0	2,8	6,9
27,05	24,62	91%	14,4	2,7	6,9
29,86	28,79	96%	15,8	2,8	7,3
29,50	27,89	95%	15,3	2,8	7,0
28,18	25,95	92%	15,0	2,8	7,1
29,11	28,09	96%	15,6	2,8	7,4
29,32	24,97	85%	15,3	2,9	7,0
27,87	27,24	98%	14,9	2,7	7,1
28,12	27,29	97%	14,9	2,7	7,1
26,01	23,87	92%	14,0	2,6	6,9
27,82	26,78	96%	14,7	2,7	7,1
27,63	26,19	95%	14,8	2,8	7,0
28,35	27,54	97%	15,0	2,7	7,1
31,63	31,18	99%	16,2	2,9	7,2
32,15	31,71	99%	16,6	2,9	7,3
31,13	30,19	97%	16,2	2,8	7,3
30,86	30,00	97%	16,1	2,9	7,2
31,96	30,73	96%	16,4	2,9	7,2
32,02	31,42	98%	16,4	2,9	7,3
28,12	26,05	93%	14,4	2,7	6,9
29,32	28,14	96%	15,1	2,8	7,0
28,77	27,56	96%	14,9	2,8	6,9
29,16	26,36	90%	15,2	2,9	6,9
29,46	28,63	97%	15,7	3,0	6,8
30,53	30,07	98%	15,4	2,9	6,9
30,20	29,34	97%	15,7	3,0	6,9
30,03	28,38	94%	15,6	2,9	6,9

Nutritional profile: protein, fibre, fat, ash, moisture



Sensory profile



SCIENTIFIC OPINION

Open Access



Oat beta-glucans and reduction of postprandial glucose peak: Evaluation of a health claim pursuant to Article 13(5) of Regulation (EC) No 1924/2006

[EFSA Panel on Nutrition, Novel Foods and Food Allergens \(NDA\)](#), [Dominique Turck](#), [Torsten Bohn](#), [Montaña Cámara](#), [Jacqueline Castenmiller](#), [Stefaan de Henauw](#) ... [See all authors](#) ▾

First published: 20 February 2026 | <https://doi.org/10.2903/j.efsa.2026.9942> |

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Adopted: 28 January 2026

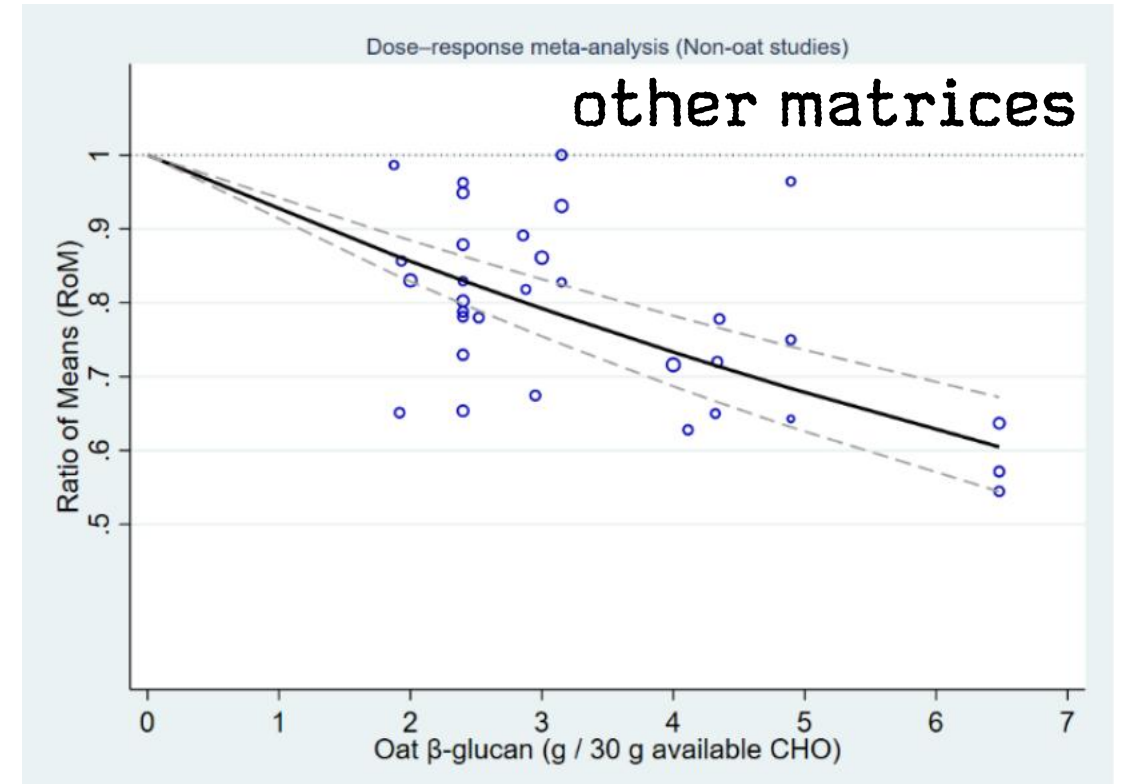
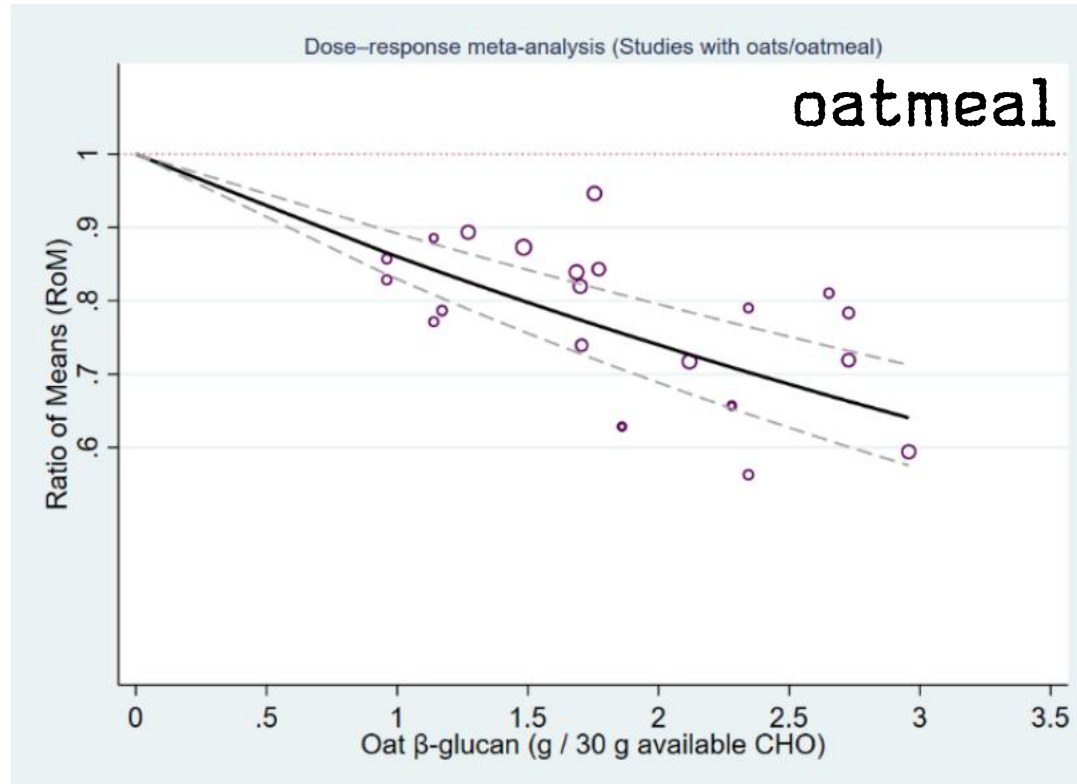
Correspondence: [Ask a Question](#)

The declarations of interest of all scientific experts active in EFSA's work are available at <https://open.efsa.europa.eu/experts>.

Evidence from human clinical trials was submitted to the European Food Safety Authority (EFSA).

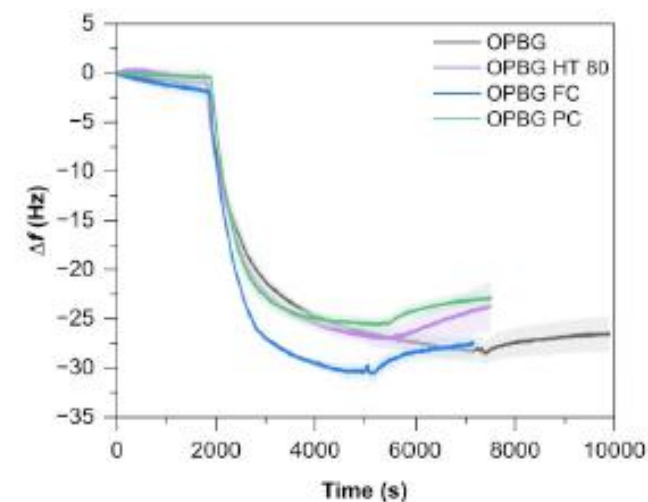
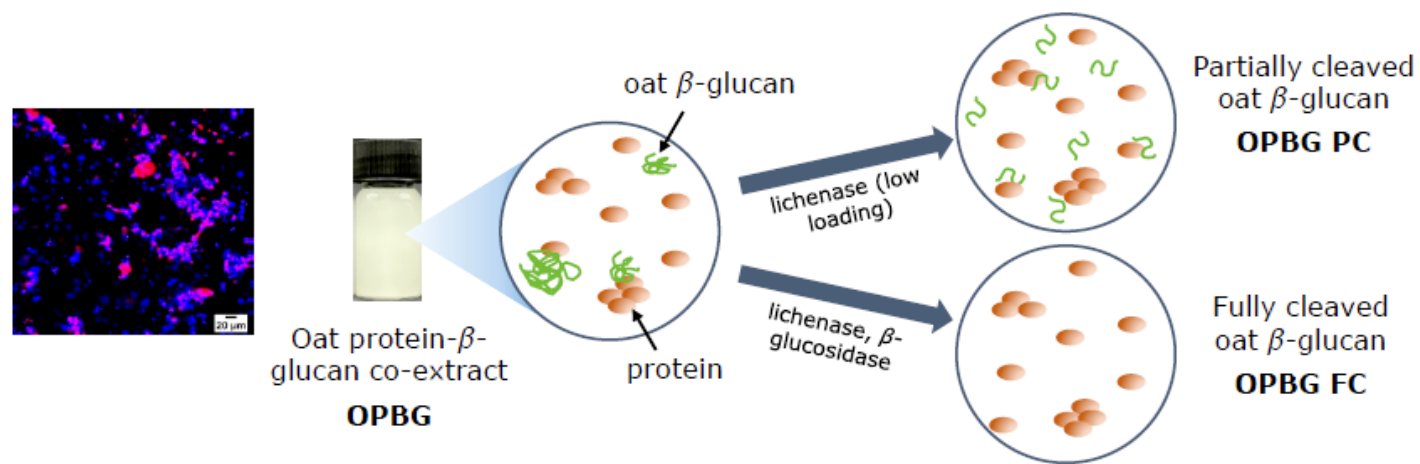
The European Food Safety Authority (EFSA) confirmed a cause-and-effect relationship between consuming oat beta-glucans and the reduction of post-meal blood glucose peaks, **at doses lower than previously approved, 3.0 OBG /30 g AvCHO vs 4.0 g OBG/ 30 g AvCHO**

DOSE RESPONSE TO OAT BETA GLUCAN



- Significant effects on post-prandial glucose peak observed from 1.2 g OBG per 30 g AvCHO
- Effects stronger for oatmeal, but also observed for other oat matrices including oat drinks
- This paves the way for a new health claim for beta-glucans and glucose modulation, to add to the existing claim on cholesterol lowering.

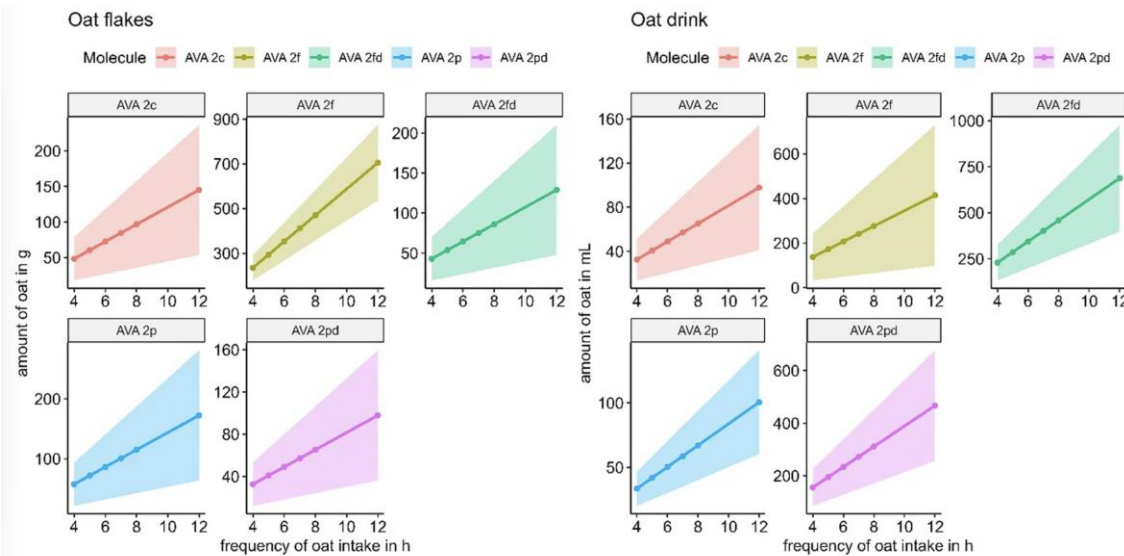
UNDERSTANDING THE OAT DRINK MATRIX



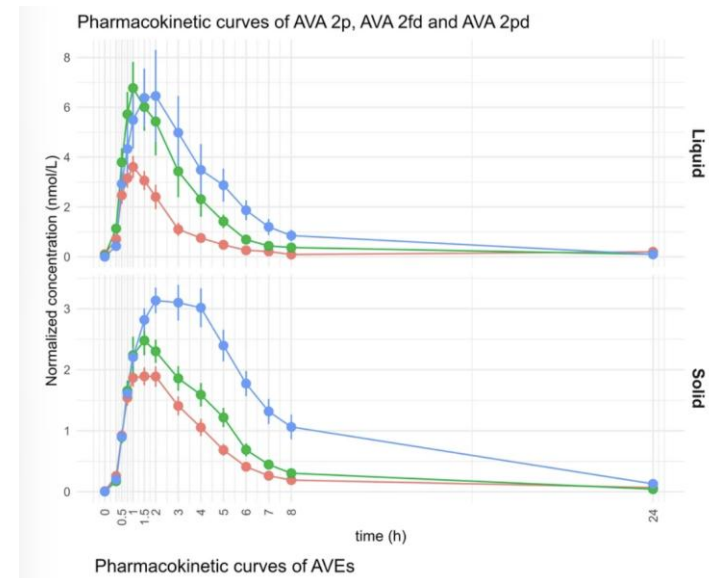
McLauchlan J. et al, unpublished

- Model systems
- Nutrient interactions
- Digestibility
- Surface behaviour (oral or gut surface)

UNDERSTANDING THE OAT DRINK MATRIX



Relationship between estimated consumed amount of oat flakes (left side) and oat drink (right side) and frequency of consumption



- Bioavailability
- Dose response
- Structure/function
- Local gut and systemic effects
- Microbiome interactions

Armeni M., Cardilin T., Fristedt R. [..] Landberg R. (2025) Avenanthramides and avenacosides as biomarkers of oat intake: a pharmacokinetic study of solid and liquid oat consumption under single and repeated dose conditions. *Nutr J* 24, 136 (2025)



NUTRITION CHAMPIONS

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Oatly drinks are dairy free.

All our products are 100% dairy free (and therefore, obviously lactose free too). It's not a small thing. There are literally billions of lactose intolerant people in the world¹¹ and, thanks to Oatly, they have an alternative.

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The Small Healthy Book

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The Glycaemic Load from Oatly is low.

Blood sugar levels vary throughout the day and after you eat or drink – it's a normal part of human physiology. Monitoring blood sugar levels is only really relevant for people who have

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insulin resistance or diabetes.

The Glycaemic Load (GL), which importantly looks at both sugar and the effect of serving sizes on blood glucose response, shows that a large glass of Oatly Barista Edition (250ml) or a dash in your coffee (100ml) are both considered in the 'low category' for GL (9 and 4 respectively). Equivalent cow's milk (full fat/whole) is also in the 'low category' (GL 4–5 for 250ml).³⁶⁻³⁸

As you'd expect, the blood glucose response to cow's milk and oat drinks isn't perfectly identical and that's be-

and is therefore recommended in dietary guidelines around the world.

Confusing huh? It's why we – and many others in the worlds of food and

we need to stick with e based on nutrition uch saturated fat, sugar r drink contains), rather duct is made.³⁶⁻³⁸ aid, if it's important to tle less going on, you for Oatly's Organic op- your own oat drink at obably only try doing



An oat proudly flying the U.P.F. flag.

that once). However, remember you won't be benefiting from the vitamins and minerals we add to our fortified drinks, so make sure you're getting those essential goodies from somewhere else.

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17 facts about
Oatly and nutrition

READ
ONLINE



Health professionals

professionals.oatly.com/health

