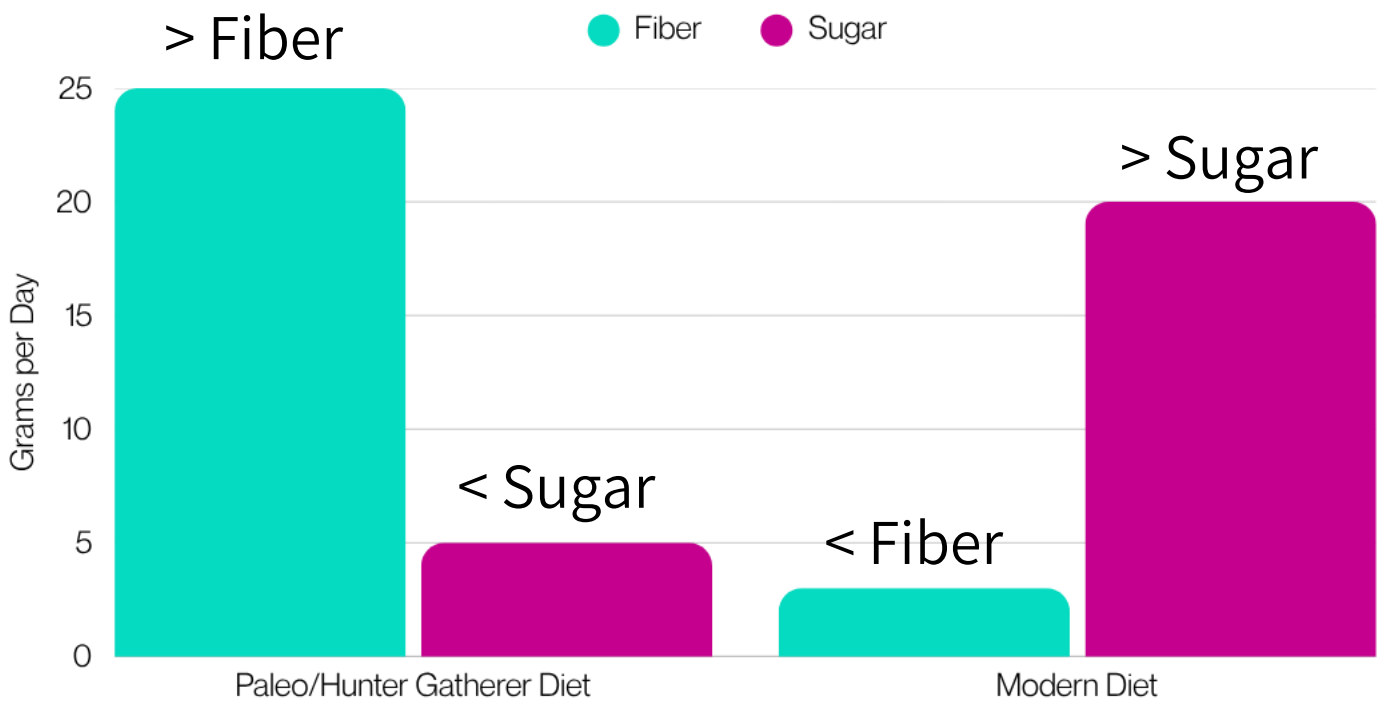
Fiber: the straight poop

Robert Lustig, MD, MSL
Emeritus Professor of Pediatrics
Institute for Health Policy Studies
UCSF

Co-Founder and Chief Medical Officer
Biolumen, Inc.

THE PROBLEM WITH ULTRA-PROCESSED FOOD TODAY



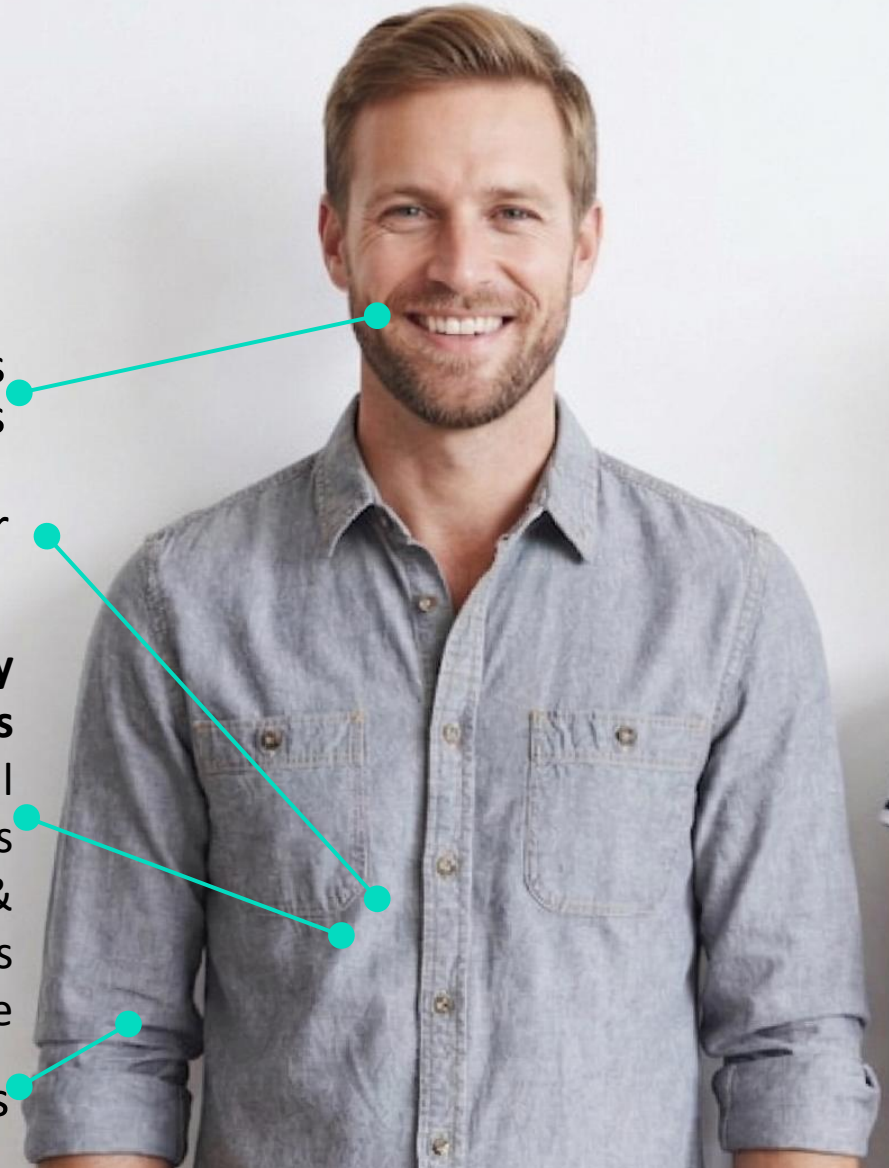
For millions of years, humans evolved on hearty, fiber-rich foods that were naturally low in sugar and digested slowly.

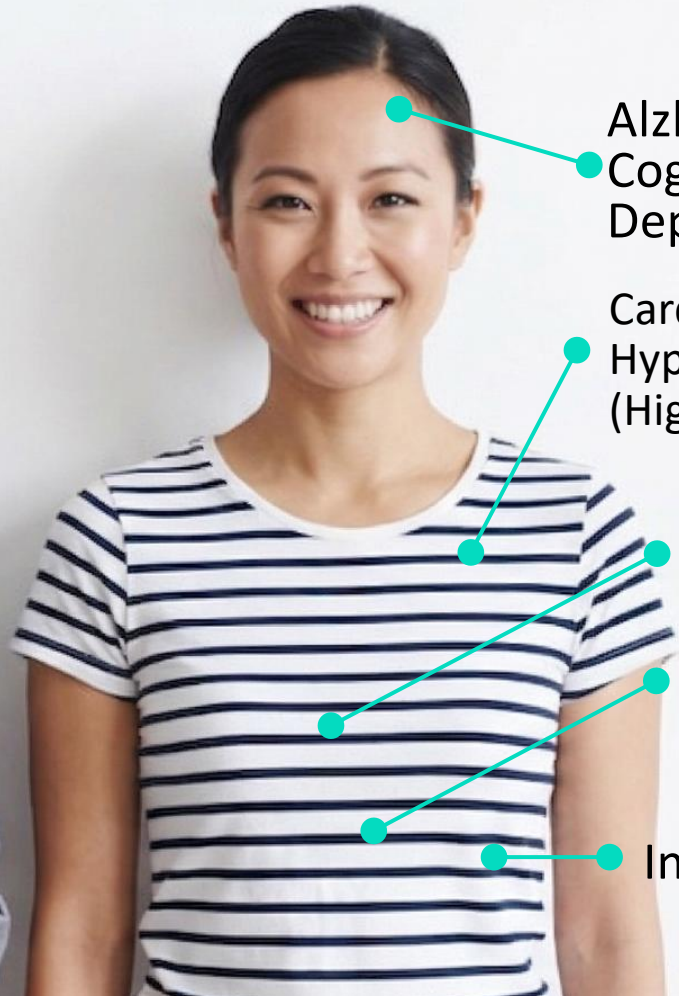
Today's Food Environment

Modern diets are dominated by calorie-dense, highly refined foods—designed for fast absorption, loaded with sugar for taste, and stripped of fiber for shelf life.

AND THE RESULTS ARE...

A Global Pandemic of Chronic Metabolic Disease





Dental Caries
& Periodontitis

Fatty Liver
Disease

Obesity

Type 2 Diabetes

Gastrointestinal
Disorders

Food Allergies &
Intolerances

Autoimmune Disease

Osteoporosis

Alzheimer's Disease &
Cognitive Decline
Depression & Anxiety

Cardiovascular Diseases (CVD)
Hypertension
(High Blood Pressure)

Cancer

Chronic Kidney
Disease (CKD)

Inflammatory Diseases

The Eight Subcellular Pathologies of Chronic Disease, Driven by Sugar and Lack of Fiber

- 1. Glycation
- 2. Oxidative Stress
- 3. Mitochondrial Dysfunction
- 4. Insulin Resistance
- 5. Membrane Instability
- 6. Inflammation
- 7. Epigenetics/Methylation
- 8. Autophagy

Lustig, METABOLICAL, Spring 2021

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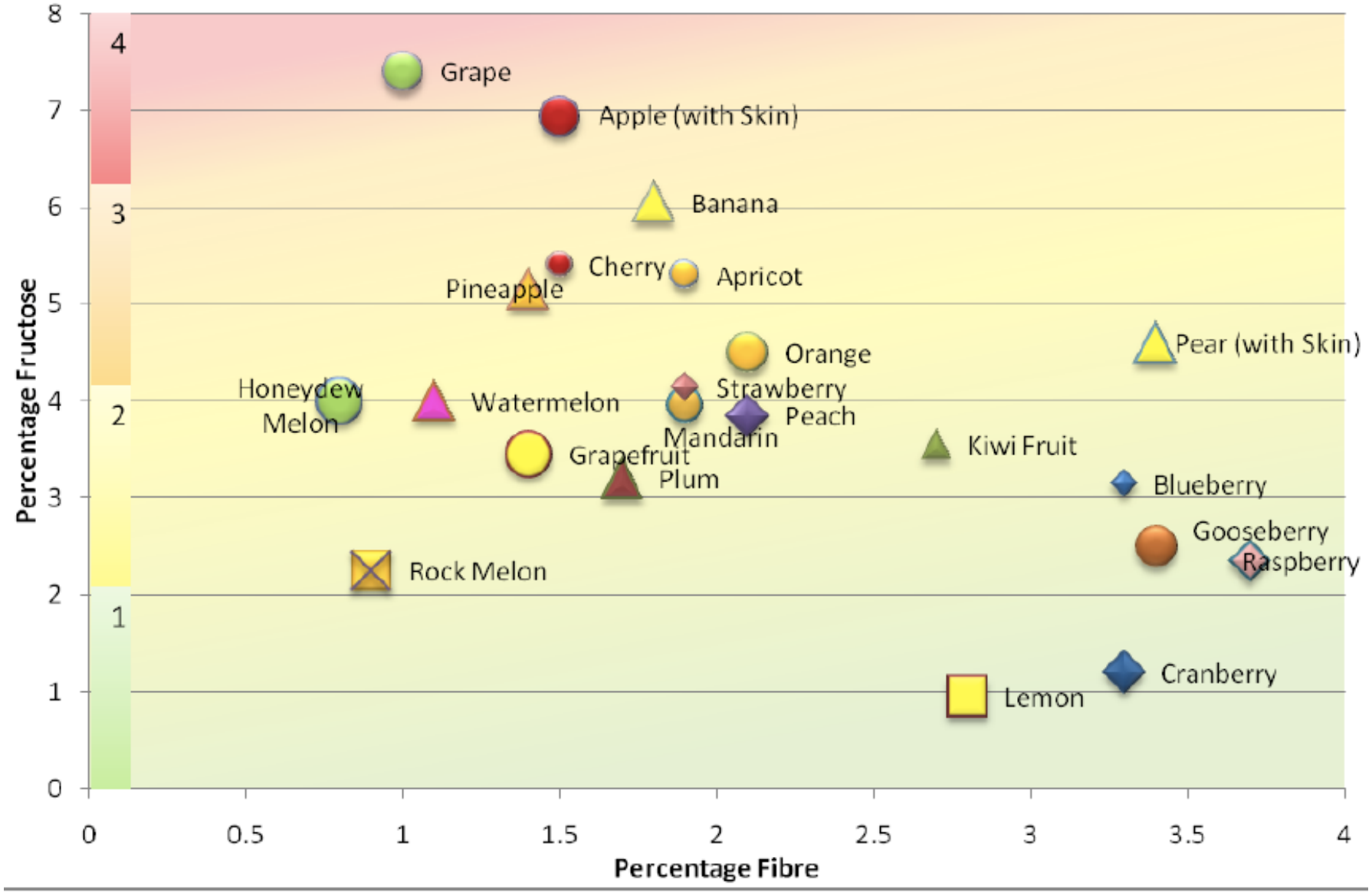
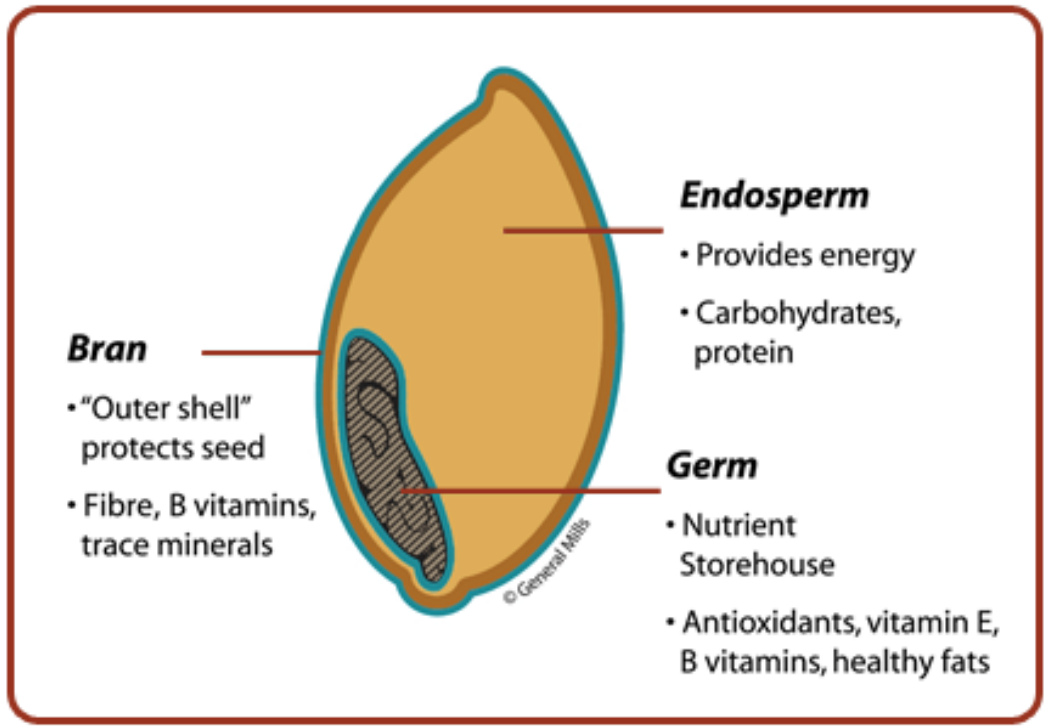

Percentage Fructose
Percentage Fibre
4
3
2
1
0
0.5
1
1.5
2
2.5
3
3.5
4
5
6
7
8
Grape
Apple (with Skin)
Banana
Cherry
Apricot
Pineapple
Orange
Pear (with Skin)
Honeydew Melon
Watermelon
Strawberry
Peach
Mandarin
Kiwi Fruit
Grapefruit
Plum
Blueberry
Gooseberry
Raspberry
Rock Melon
Cranberry
Lemon

Fiber is critical



Supports metabolic health

- Reduced intestinal carbohydrate absorption
- Helps regulate blood glucose (and insulin) levels
- Lowers LDL (bad cholesterol)
- Increases satiety

Supports gut health

- Bowel movements through Improved intestinal transit
- Increased microbial diversity
- Conversion to anti-inflammatory SCFA's
- Helps prevent colorectal cancer

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What is fiber anyway?

- Strings of (human) non-digestible carbohydrate molecules
- Soluble — grains, legumes, fruits, vegetables, seeds, nuts
  - inulin, pectin, psyllium, beta-glucan
- Insoluble — bran, rice, beans, leafy greens, berries, nuts
  - cellulose, chitin

Contents lists available at ScienceDirect

Clinical Nutrition

journal homepage: http://www.elsevier.com/locate/clnu

Meta-analyses

Dietary fiber intake and all-cause and cause-specific mortality: An updated systematic review and meta-analysis of prospective cohort studies

Fatemeh Ramezani [a], Farzad Pourghazi [a], Maysa Eslami [a], Maryam Gholami [b], Nami Mohammadian Khonsari [c], Hanieh-Sadat Ejtahed [a, d, 1, *], Bagher Larijani [d], Mostafa Qorbani [e, 1, **]

Results: This systematic review included 64 eligible studies, with a total sample size of 3512828 subjects, that investigated the association between dietary fiber intake and mortality from all-cause, cardiovascular disease (CVD), and cancer. Random-effect meta-analysis shows that higher consumption of total dietary fiber, significantly decreased the risk of all-cause mortality, CVD-related mortality, and cancer-related mortality by 23, 26 and 22 % (HR:0.77; 95%CI (0.73,0.82), HR:0.74; 95%CI (0.71,0.77) and HR:0.78; 95%CI (0.68,0.87)), respectively. The consumption of insoluble fiber tended to be more effective than soluble fiber intake in reducing the risk of total mortality and mortality due to CVD and cancer. Additionally, dietary fiber from whole grains, cereals, and vegetables was associated with a reduced risk of all-cause mortality, while dietary fiber from nuts and seeds reduced the risk of CVD-related death by 43 % (HR:0.57; 95 % CI (0.38,0.77)).

Conclusion: This comprehensive meta-analysis provides additional evidence supporting the protective

Higher dietary fiber content correlates with reduction in chronic disease

Soluble + Insoluble Fiber together are SYNERGISTIC for metabolic and gut health

1. Acts as a barrier to sugar absorption
2. Reduces insulin response
3. Feeds the intestinal microbiome
4. Induces the satiety signal sooner
5. Colonic bacteria make short chain fatty acids
6. Removes cancer cells from colon

Soluble Fiber alone:
Feeds the intestinal microbiome
Colonic bacteria make short chain fatty acids

Insoluble Fiber alone:
Induces the satiety signal sooner
Removes cancer cells from colon

The food industry can't add insoluble fiber back

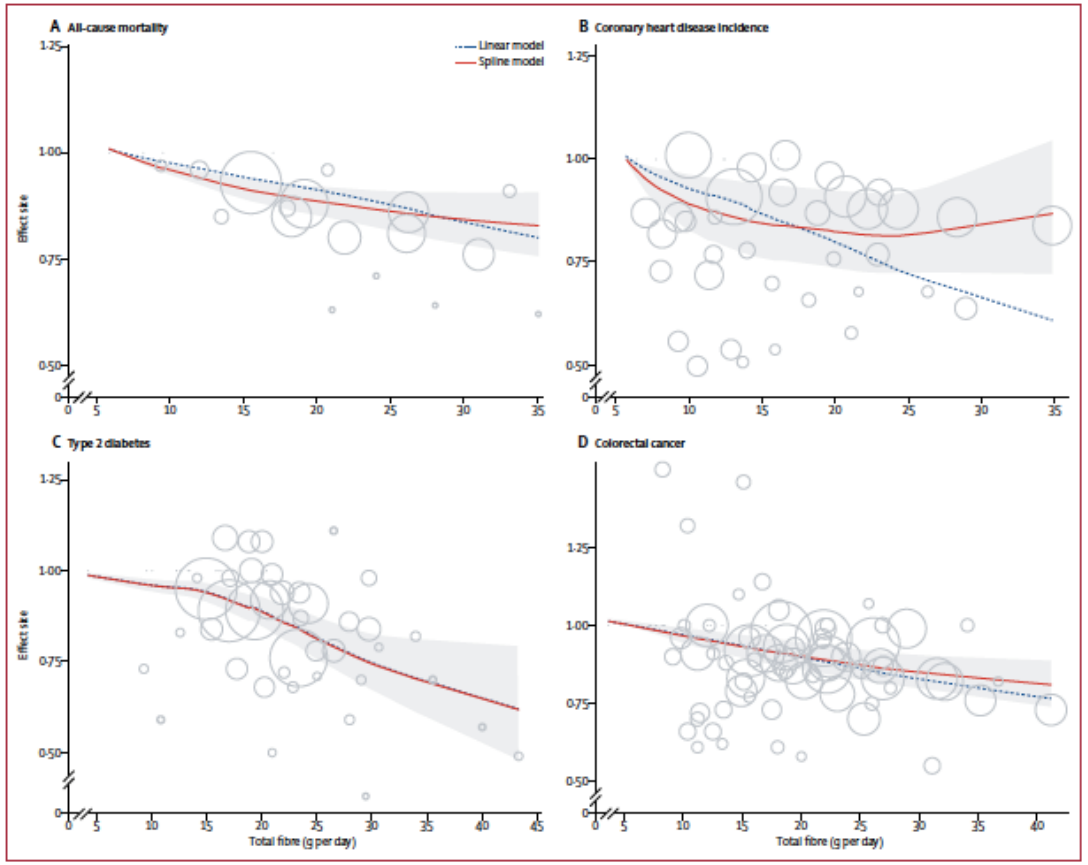


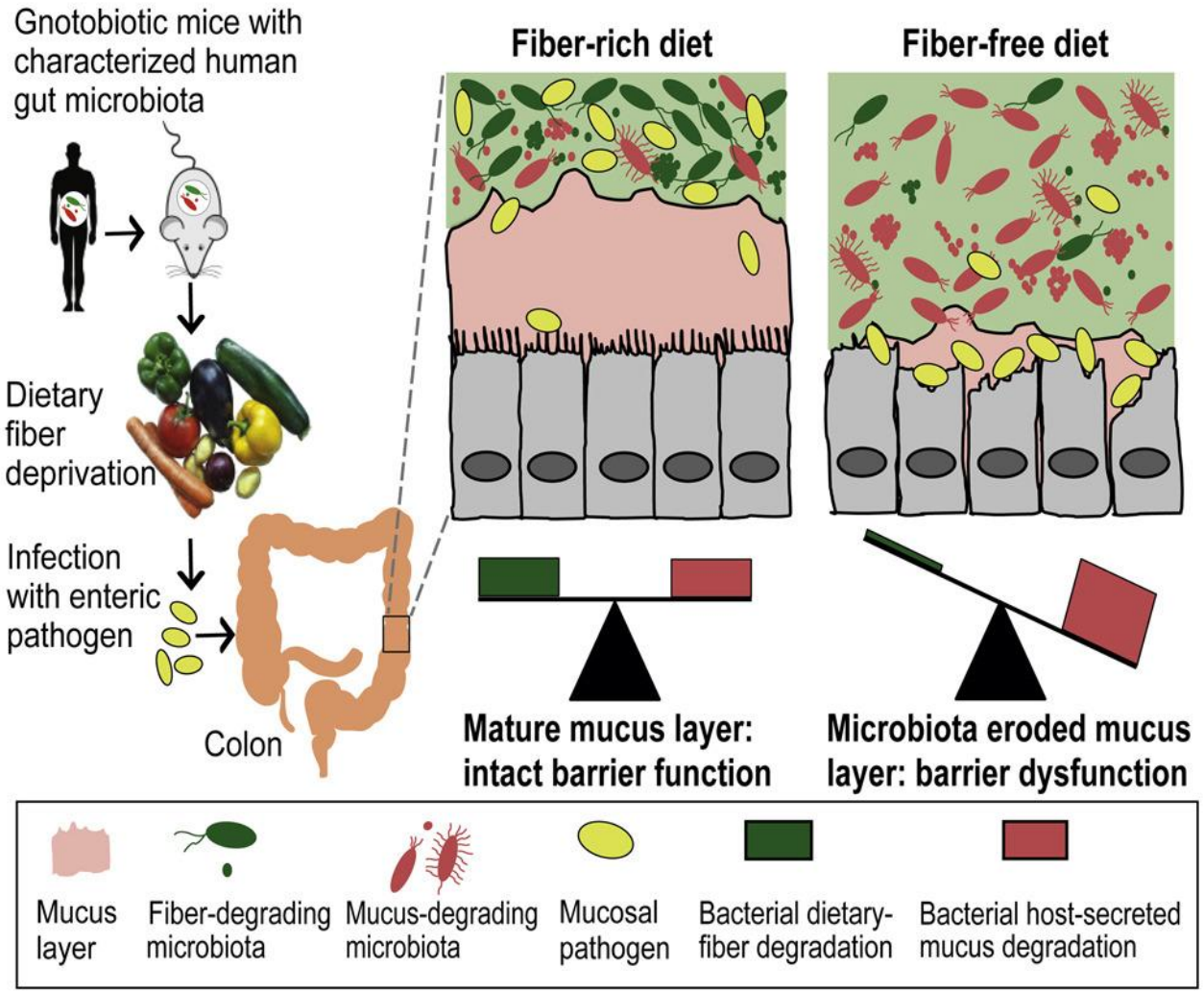
Figure 1: Dose-response relationships between total dietary fibre and critical clinical outcomes based on data from prospective studies
(A) Total fibre and all-cause mortality. 68 183 deaths over 11·3 million person-years. Assuming linearity a risk ratio of 0·93 (95% CI 0·90–0·95) was observed for every 8 g more fibre consumed per day. (B) Total fibre and incidence of coronary heart disease. 6449 deaths over 2·5 million person-years. Assuming linearity a risk ratio of 0·81 (0·73–0·90) was observed for every 8 g more fibre consumed per day. (C) Total fibre and incidence of type 2 diabetes. 22 450 cases over 3·2 million person-years. Assuming linearity a risk ratio of 0·85 (0·82–0·89) was observed for every 8 g more fibre consumed per day. (D) Total fibre and incidence of colorectal cancer. 20 009 cases over 20·9 million person-years. Assuming linearity a risk ratio of 0·92 (0·89–0·95) was observed for every 8 g more fibre consumed per day.

Reynolds et al. Lancet 393: 434, 2019

Requisites for gut health

- Prebiotic — food for the bacteria
- Probiotic — the bacteria themselves
- Postbiotic — what the bacteria make that’s good for you

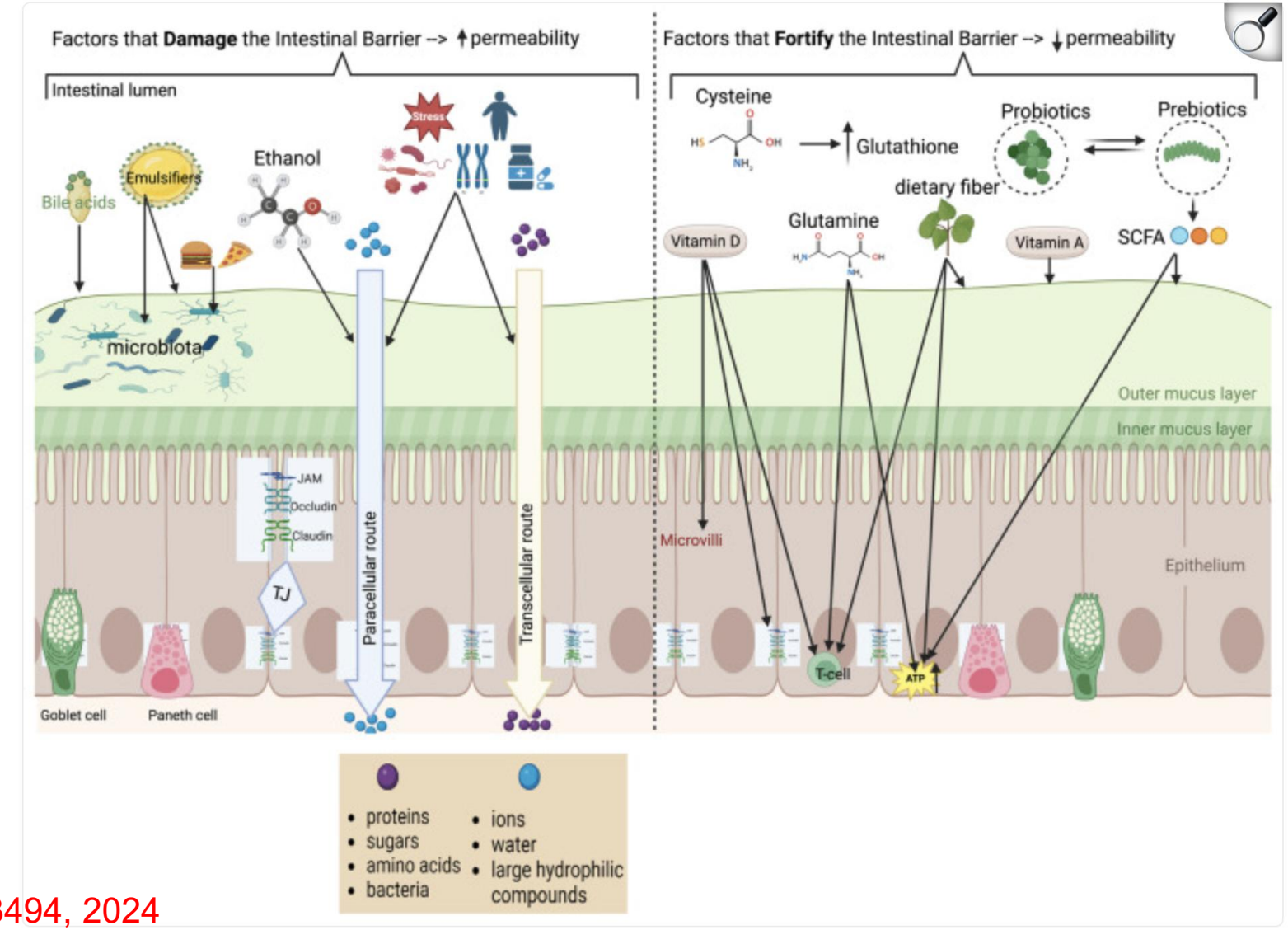
If you don't feed your gut, your gut will feed on you



also with emulsifiers!

Desai et al. Cell 167:1339, 2016

Fiber reduces intestinal permeability



Matar et al. Nutrients 16:3494, 2024

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Soluble fiber is metabolized into short-chain fatty acids which reduce gut inflammation, and reduce insulin

nature genetics

LETTERS

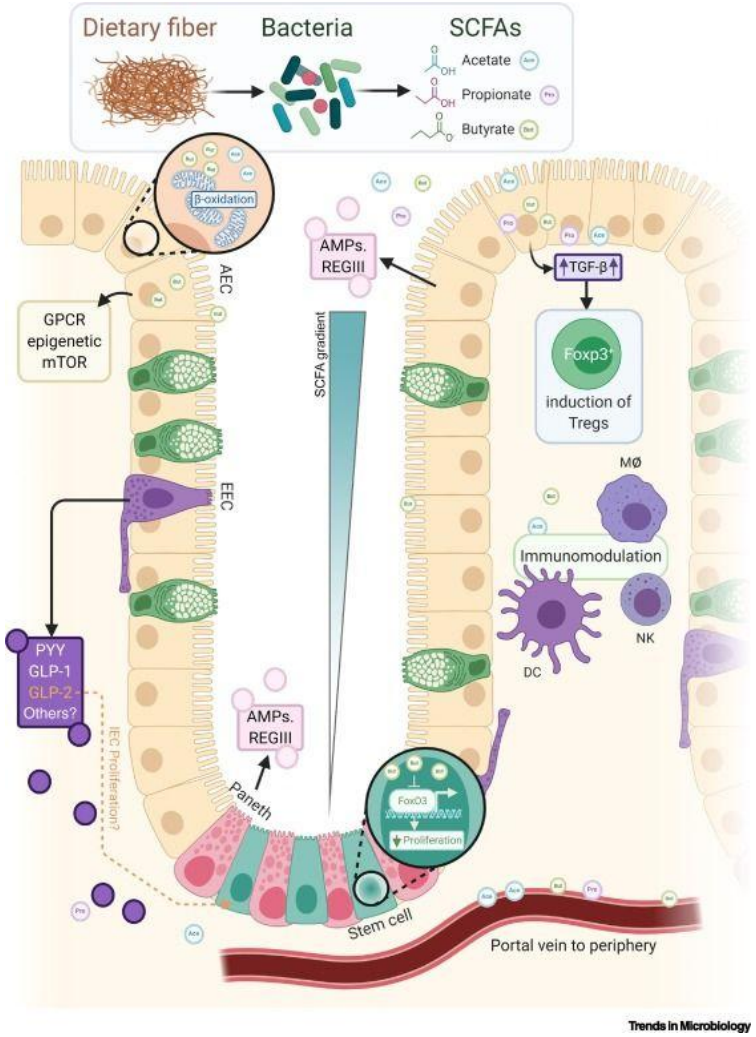
https://doi.org/10.1038/s41588-019-0350-x

Causal relationships among the gut microbiome, short-chain fatty acids and metabolic diseases

Serena Sanna[1,10*], Natalie R. van Zuydam[2,3,10], Anubha Mahajan[2,3,10], Alexander Kurilshikov[1], Arnau Vich Vila[1,4], Urmo Võsa[1], Zlatan Mujagic[5], Ad A. M. Masclee[5], Daisy M. A. E. Jonkers[5], Marije Oosting[6], Leo A. B. Joosten[6], Mihai G. Netea[6], Lude Franke[1], Alexandra Zhernakova[1], Jingyuan Fu[1,7], Cisca Wijmenga[1,8,11*] and Mark I. McCarthy[2,3,9,11*]

Sanna et al. Nature Genetics, 2019

Fiber is the source of SCFA's
SCFA's strengthen the intestinal barrier



Usuda et al. Int J Mol Sci 22:7613, 2021

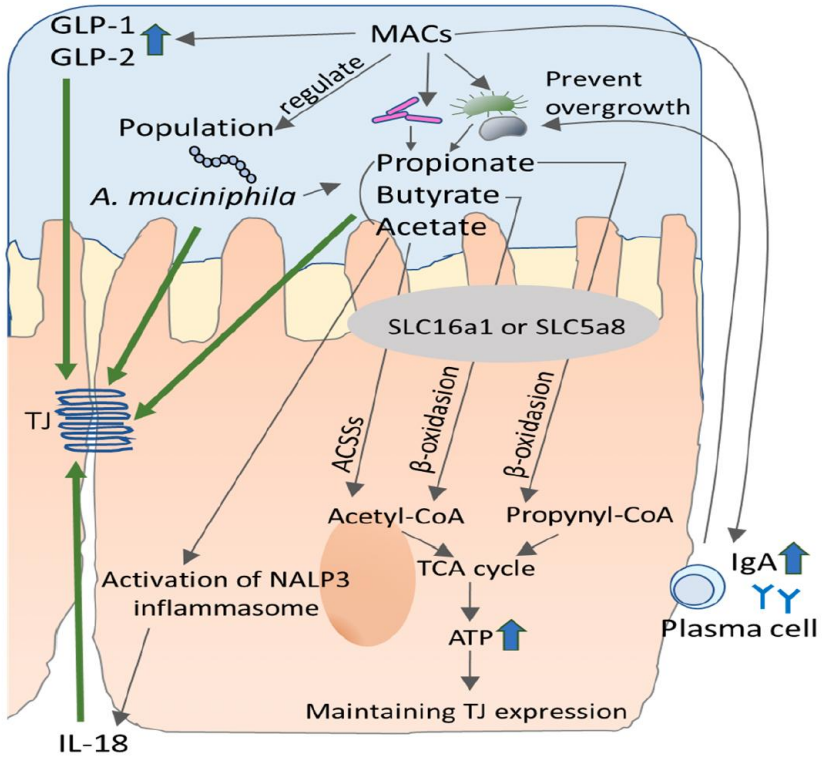
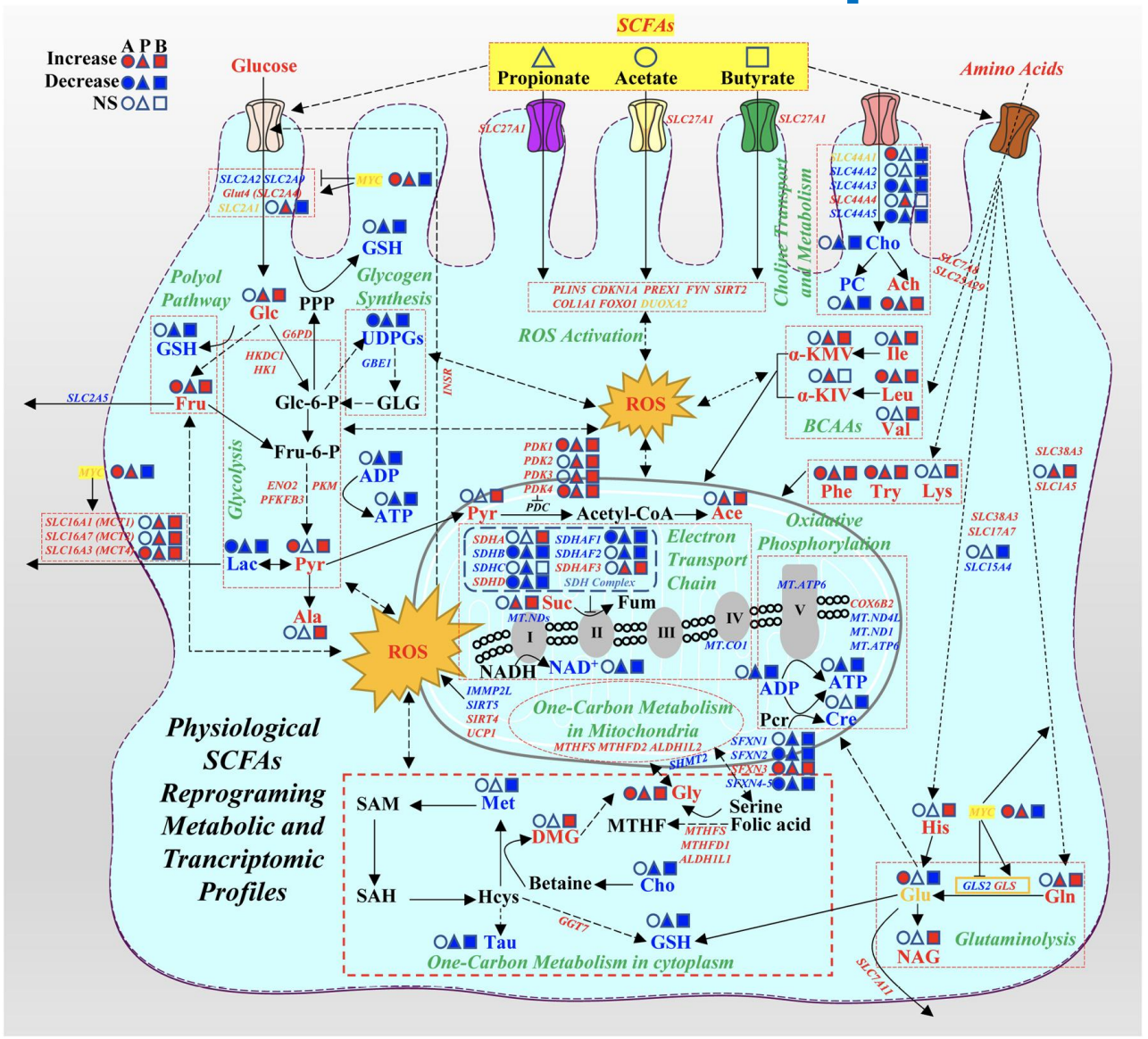


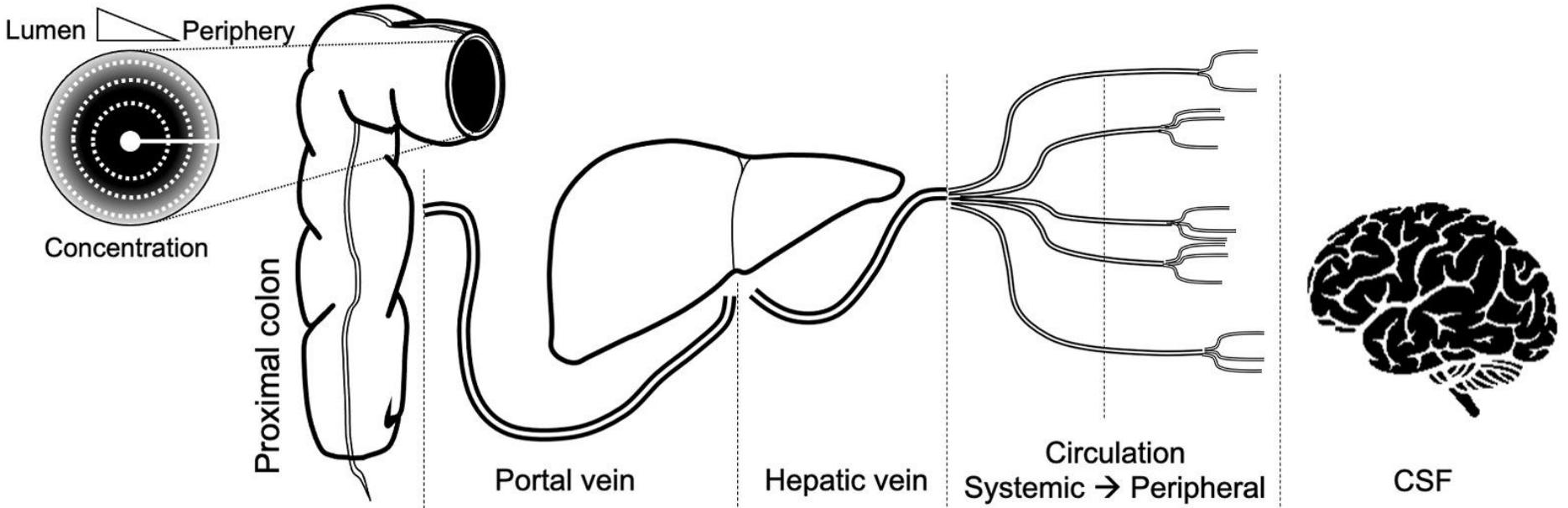
Figure 4. Effects of microbiota-accessible carbohydrates (MACs) on tight junction (TJ). Intestinal bacteria digest fermentable MACs and produce short-chain fatty acids (SFCA) which are absorbed into epithelial cells via solute carrier family (SLC) transporter or simple diffusion. Acetate, butyrate, and propionate are converted to acetyl-CoA or propynyl-CoA via acetyl-CoA carboxylases (ACSSs) or *β*-oxidation to produce ATP which maintain cell homeostasis including the function of TJ. Acetate activates nucleotide-binding oligomerization domain 3 (NLRP3) and promotes the secretion of IL-18 from epithelial cells, which contributes to TJ function. Other SCFA also have a protective effect on TJ. MACs also may contribute to TJ function via regulating the growth of *Akkermansia muciniphilla* (*A. muciniphilla*) or the production of Glucagon-Like Peptide (GLP) 1 and GLP-2.

SCFA's limit intestinal ROS production



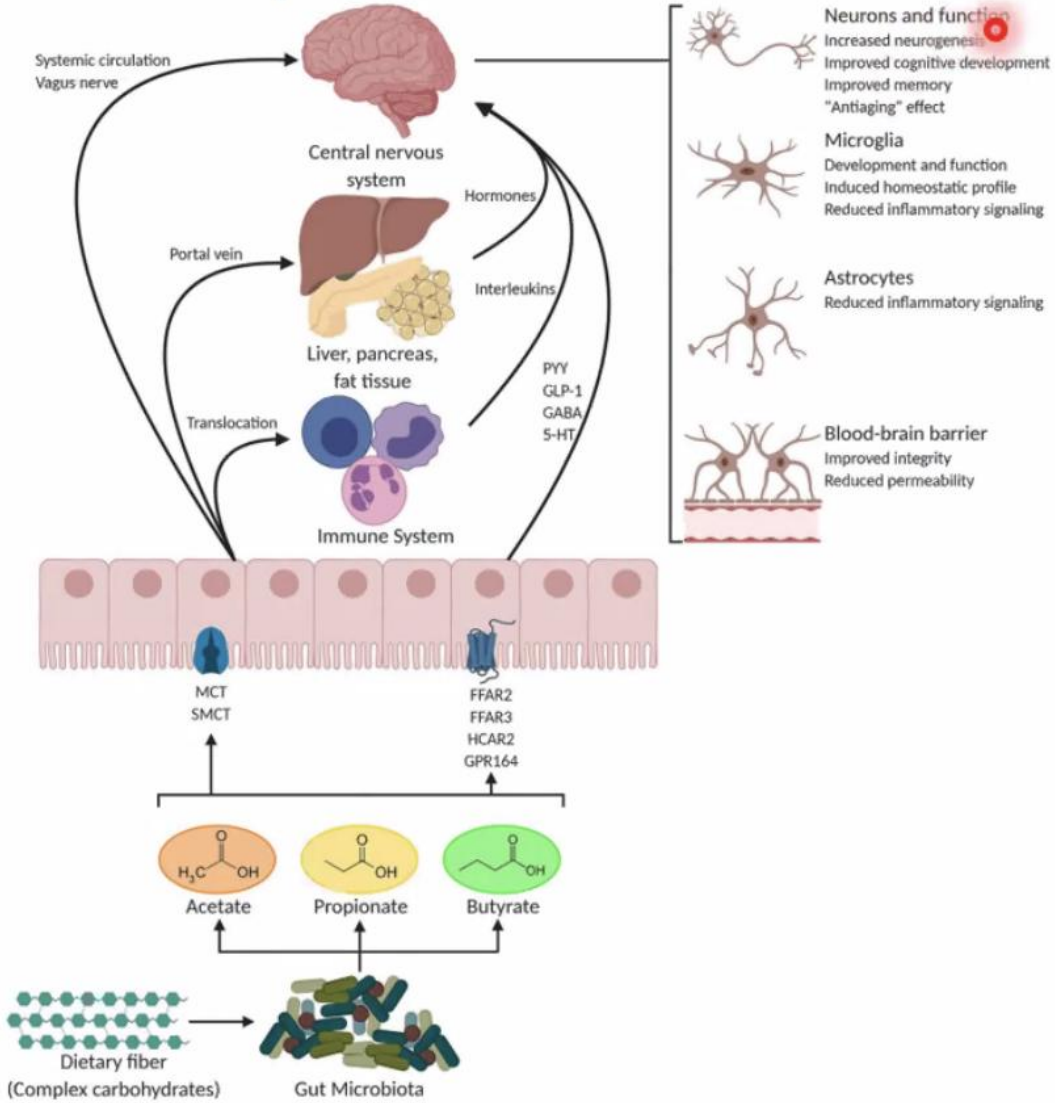
Huang et al. Comp Struct Biotech J 21:1606, 2023

SCFA's are absorbed and travel through the circulation to the CSF



Acetate	~ 42-84mM	375μM	148μM	100-200μM	79μM	35μM
Propionate	~ 14-28mM	—	—	1-5μM	—	—
Butyrate	~ 14-28mM	—	—	1-5μM	—	—

Short Chain Fatty Acids and Depression



Carbohydrate and mortality: is fiber a modulating factor?

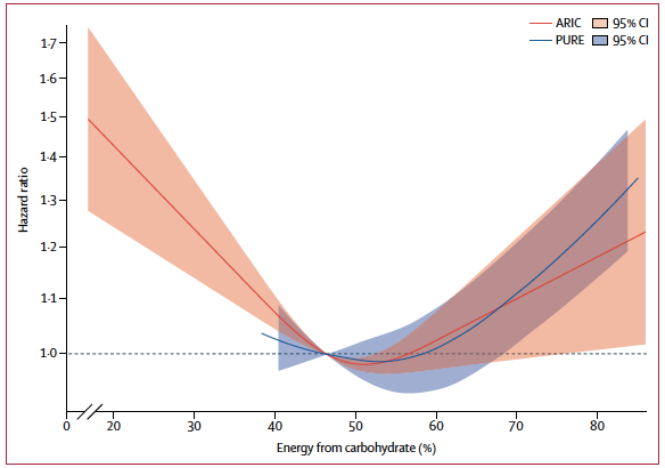


Figure 3: **U-shaped association between percentage of energy from carbohydrate and all-cause mortality in the ARIC and PURE cohort studies**
The reference level is 46·4% energy from carbohydrate. ARIC results are adjusted for age, sex, education, waist-to-hip ratio, smoking, physical activity, diabetes, ARIC test centre, and energy intake. PURE results are are adjusted for age, sex, education, waist-to-hip ratio, smoking, physical activity, diabetes, urban or rural location, centre, geographical regions, and energy intake.[13] The mean percentage of energy from carbohydrate in ARIC is 49%, and from PURE it is 61%. ARIC=Atherosclerosis Risk in Communities. PURE=Prospective Urban Rural Epidemiology.

	Study	HR (95% CI)
Substitution of carbohydrate for animal protein and fat		
Low-to-moderate carbohydrate consumption	Fung et al[9] (HPFS)	1·31 (1·19–1·44)
Low-to-moderate carbohydrate consumption	Fung et al[9] (NHS)	1·17 (1·08–1·26)
Low-to-moderate carbohydrate consumption	ARIC	1·20 (1·09–1·32)
Low-to-moderate carbohydrate consumption	Combined low-to-moderate cohorts	1·22 (1·14–1·31)
Moderate-to-high carbohydrate consumption	Nakamura et al[24]	1·00 (0·87–1·19)
Meta-analysis (pooled result)	..	1·18 (1·08–1·29); p<0·0001
Substitution of carbohydrate for plant protein and fat		
Low-to-moderate carbohydrate consumption	Fung et al[9] (HPFS)	0·81 (0·74–0·89)
Low-to-moderate carbohydrate consumption	Fung et al[9] (NHS)	0·79 (0·73–0·85)
Low-to-moderate carbohydrate consumption	ARIC	0·86 (0·75–0·99)
Low-to-moderate carbohydrate consumption	Combined low-to-moderate cohorts	0·81 (0·76–0·85)
Moderate-to-high carbohydrate consumption	Nakamura et al[24]	0·92 (0·80–1·09)
Meta-analysis (pooled result)	..	0·82 (0·78–0·87); p<0·0001

Data are for 154 344 participants and 30 959 deaths. HR=hazard ratio. HPFS=Health Professionals Follow-up Study. NHS=Nurses Health Study. ARIC=Atherosclerosis Risk in Communities.

Table 3: **Association between diets that substitute carbohydrates for animal-based or plant-based protein and fat with mortality in multiple cohort studies**

	Q1 (n=3086)	Q2 (n=3086)	Q3 (n=3085)	Q4 (n=3086)	Q5 (n=3085)	p_{trend}
Median % of energy from carbohydrate	37% (5·7)	44% (2·5)	49% (2·2)	53% (2·8)	61% (6·3)	NA
Mean total energy intake, kcal	1558 (11)	1655 (11)	1660 (11)	1646 (11)	1607 (11)	0·0092
Mean animal protein % of energy	16·9% (0·1)	14·8% (0·1)	13·5% (0·1)	12·3% (0·1)	10·1% (0·1)	<0·0001
Mean plant protein % of energy	3·9% (0·02)	4·3% (0·02)	4·5% (0·02)	4·6% (0·02)	4·8% (0·02)	<0·0001
Mean animal fat % of energy	26·3% (0·1)	22·4% (0·1)	19·9% (0·1)	17·6% (0·1)	13·6% (0·1)	<0·0001
Mean plant fat % of energy	12·5% (0·1)	13·6% (0·1)	13·6% (0·1)	13·2% (0·1)	11·5% (0·1)	<0·0001
Mean dietary fibre, g	13·5 (0·1)	16·5 (0·1)	17·7 (0·1)	18·7 (0·1)	19·8 (0·1)	<0·0001

Seidelman et al. Lancet Public Health 3:e419, 2019

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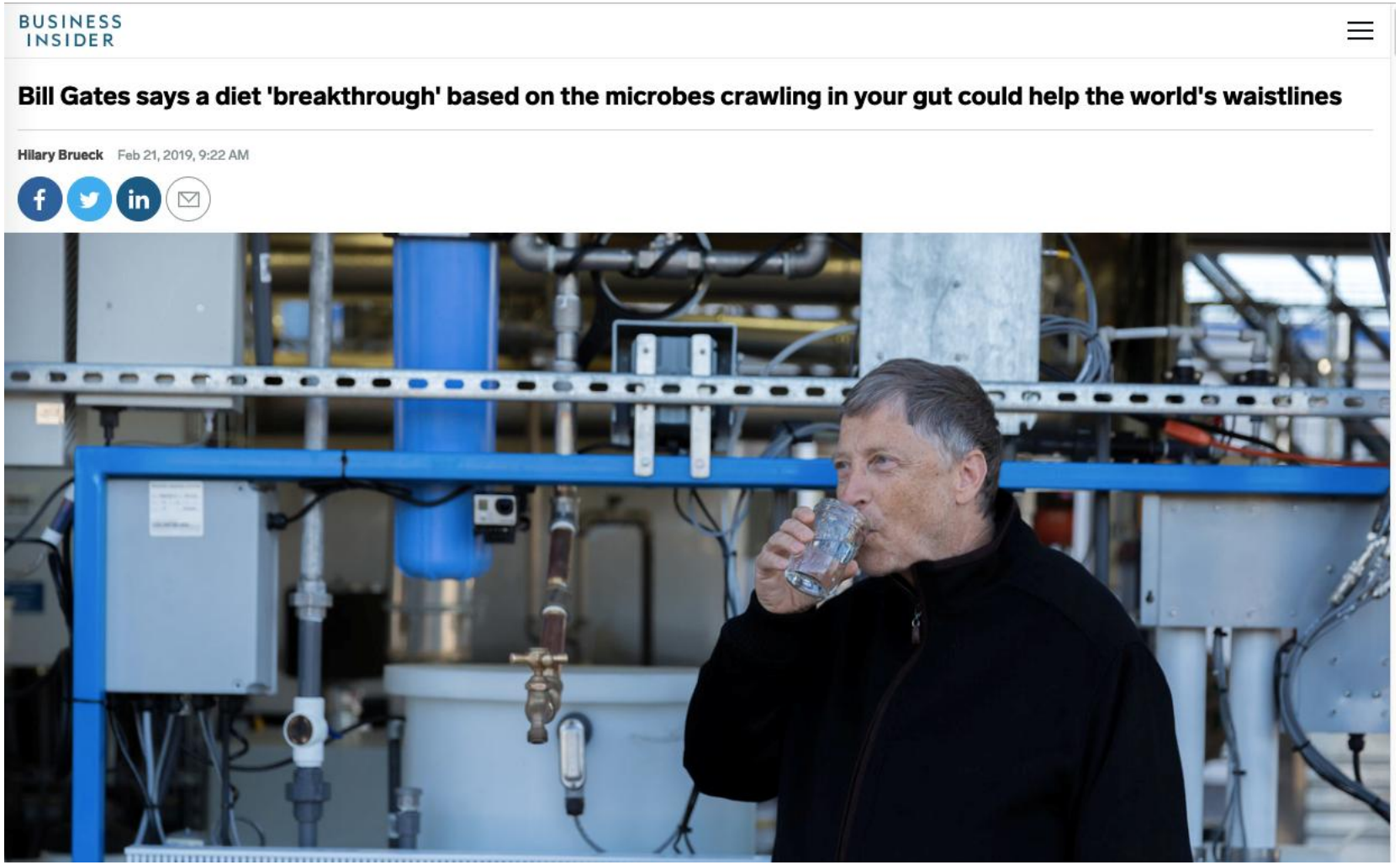

90%

of the American population consumes less than the recommended daily intake of 25g (women), 38 g (men)/day

Median daily intake

12

grams/day

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The goal:

Metabolic Health

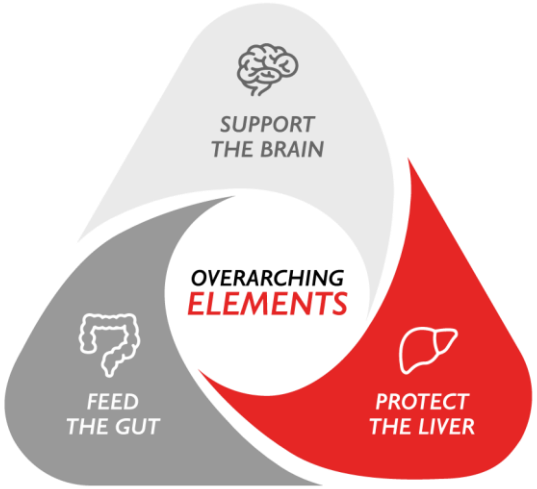
The Strategies:

Promote Metabolism

Inhibit Inflammation

Healthy essential fats
Plant based, short chain, polyunsaturated fatty acids
Omega 3s: pregnancy, lifespan, childhood, ADHD, depression
Brain selective nutrients

Unprocessed food feeds the gut
Ultraprocessed food causes “leaky gut”
Short chain fatty acids
Fiber contributes to microbiome health



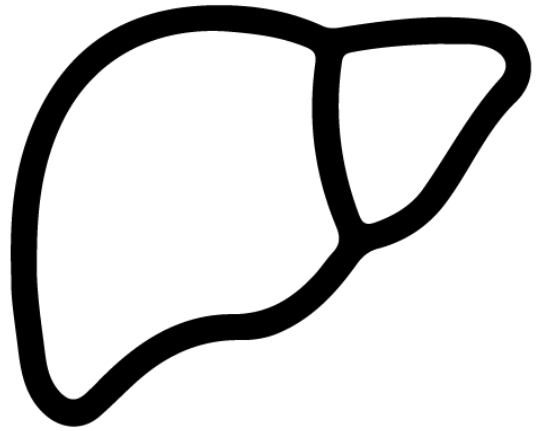
Fructose reduction
Reduce glycemic load
Appropriate hydration
Reduce environmental toxins

The Metabolic Matrix

Harlan et al. Front Nutr 30:10:1098453, 2023

The Metabolic Matrix: Liver Health

- **Fructose reduction**
- **Reduce total sugar, glycemic load**
- **Fiber**
- Appropriate hydration
- Reduce environmental toxins
- Intestinal barrier



PROTECT THE LIVER

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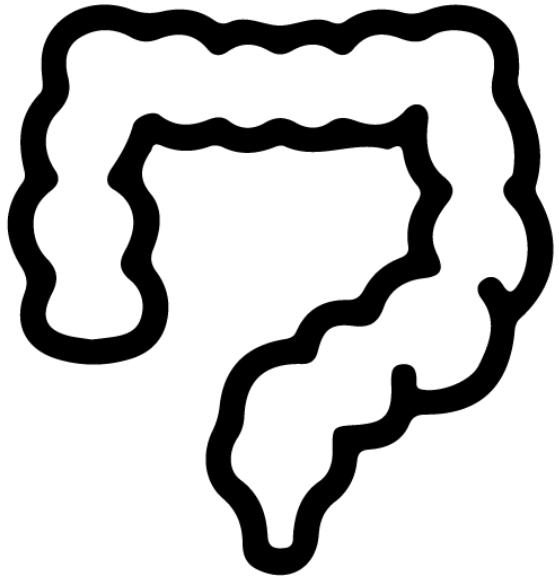
The Metabolic Matrix: Gut Health

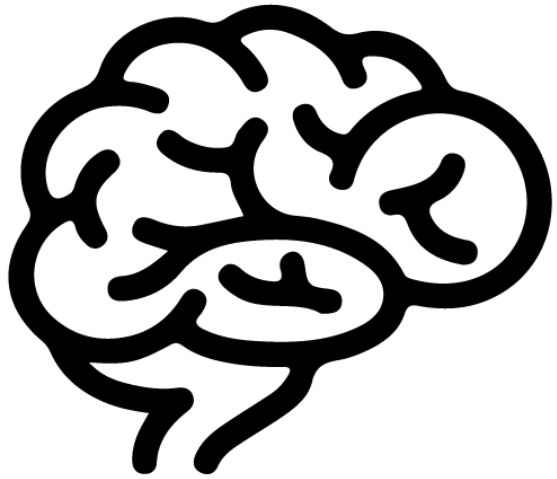
- Digestion, Absorption, Metabolism
- Gut is an organ
- Unprocessed food feeds the gut
- **Fructose reduction**
- **Fiber**
- Ultraprocessed food damages the gut
- Microbiome health



FEED
THE GUT

The Metabolic Matrix: Brain Health

- What is your brain made of?
- Healthy & essential fats
- Plant based, short chain, polyunsaturated fatty acids
- Balance of omega 3 & 6 in the brain
- Omega 6
- Omega 3s: pregnancy, lifespan, childhood
- **Fructose reduction**
- **Fiber – Short Chain Fatty Acids**
- Brain selective nutrients



SUPPORT THE BRAIN

Diets and dieting

Blow to low carb diet as landmark study finds high fibre cuts heart disease risk

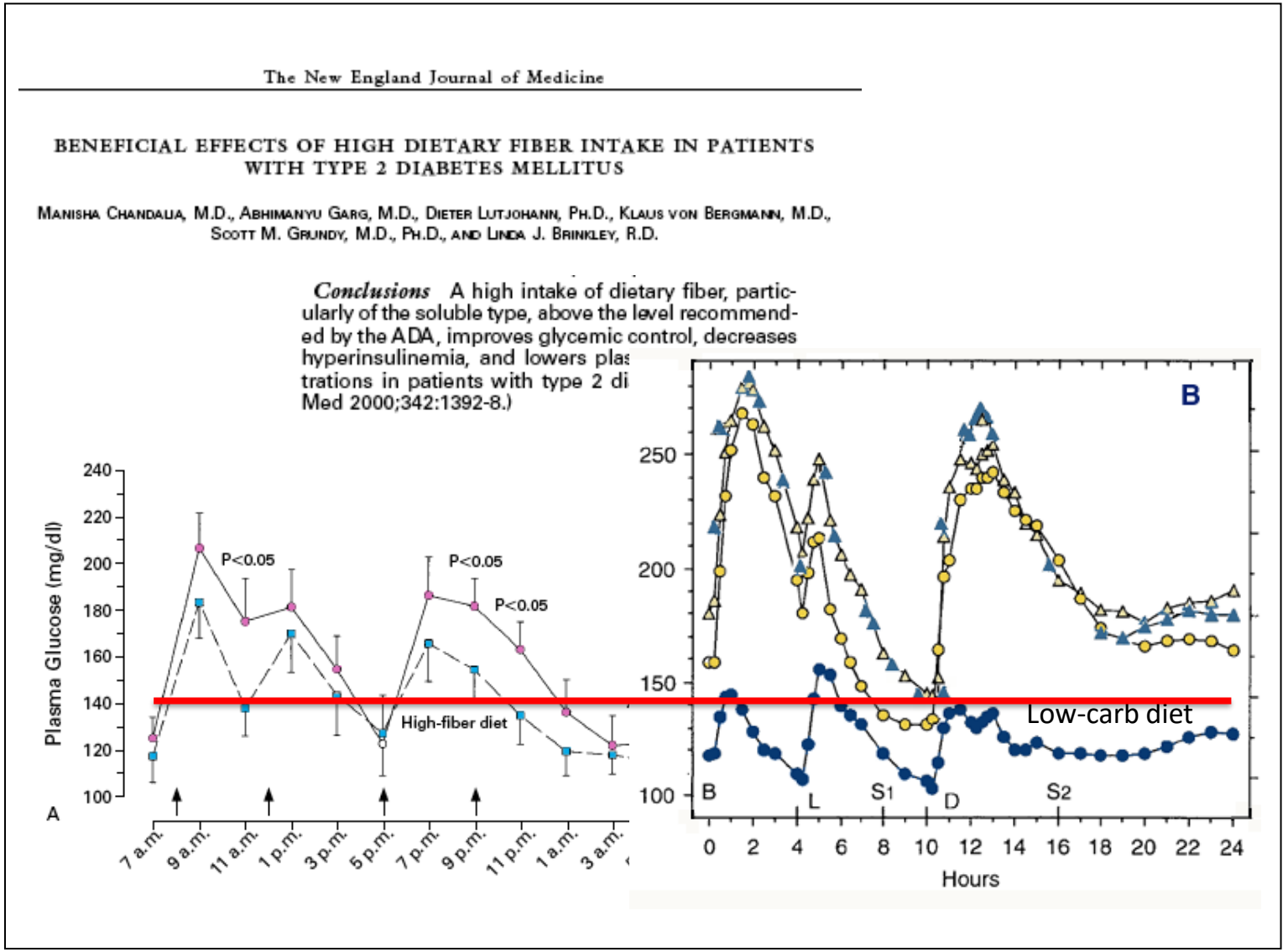
Review commissioned by WHO says fibre in 'good' carbohydrates such as wholegrain bread and oats has protective effect

Sarah Boseley *Health editor*

Thu 10 Jan 2019 18.30 EST

▲ Fibre is found in many 'good' carbohydrates such as oats and wholegrain bread, cereals and pasta. Photograph: ArxOnt/Getty Images

Glucose excursions in the presence or absence of fiber



The New England Journal of Medicine

BENEFICIAL EFFECTS OF HIGH DIETARY FIBER INTAKE IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

MANISHA CHANDALIA, M.D., ABHIMANYU GARG, M.D., DIETER LUTJOHANN, PH.D., KLAUS VON BERGMANN, M.D., SCOTT M. GRUNDY, M.D., PH.D., AND LINDA J. BRINKLEY, R.D.

Conclusions A high intake of dietary fiber, particularly of the soluble type, above the level recommended by the ADA, improves glycemic control, decreases hyperinsulinemia, and lowers plas
trations in patients with type 2 di
Med 2000;342:1392-8.)

Chandalia et al. N Engl J Med 342:1392, 2000

Prof Jim Mann Photo: Billy Wong/University of Auckland

"Fibre-rich whole foods that require chewing and retain much of their structure in the gut increase satiety and help weight control and can favourably influence lipid and glucose levels," said Mann.

It was very difficult to have high levels of fibre on a low-carbohydrate diet unless you took fibre supplements, said Mann. And "there isn't the huge body of evidence that we're talking about" for supplements being beneficial, he said, adding that "it's pretty well impossible" to get enough fibre from fruit and vegetables alone.

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Open Access Research

BMJ Open

Assessing the nutrient intake of a low-carbohydrate, high-fat (LCHF) diet: a hypothetical case study design

Caryn Zinn,[1] Amy Rush,[2] Rebecca Johnson[2]

Table 3 Nutrient analysis of LCHF meal plans

	Female meal plans			Male meal plans		
Nutrient	Meal plan 1	Meal plan 1 (saturated fat<10% TE)	NRV/goal	Meal plan 2	Meal plan 2 (saturated fat<10% TE)	NRV/goal
Fibre (g)	38	39	25†	45	44	30†

We also demonstrate that the AIs for fibre are surpassed in all of these meal plans, and while devoid of wholegrains, fibre, both soluble and insoluble, can be easily derived from vegetables, some fruit, nuts and seeds.

Zinn et al. BMJ Open 8:e018846, 2018

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VIEWPOINT

Processed Food—An Experiment That Failed

Robert H. Lustig, MD, MSL
Department of Pediatrics, University of California, San Francisco; and Philip R. Lee Institute for Health Policy Studies, University of California, San Francisco.

Corresponding Author: Robert H. Lustig, MD, MSL, Division of Pediatric Endocrinology, University of California, San Francisco, 550 16th St, PO Box 0434, San Francisco, CA 94143 (rlustig@ucsf.edu).

Those of us who have participated in science know that 9 of every 10 experiments are failures. Now imagine that the last 50 years has been a grand clinical research experiment, with the American population as unwitting participants, conducted by 10 principal investigators—Coca-Cola, Pepsico, Kraft, Unilever, General Mills, Nestlé, Mars, Kellogg, Proctor & Gamble, and Johnson & Johnson. In 1965, these corporations posed the hypothesis that processed food is better than real food. To determine if the experiment was a success or a failure, we have to examine the outcome variables. In this case, there are 4: food consumption, health/disease, environment, and cash flow, divided into companies, consumers, and society.

Processed food is defined by 7 food engineering criteria; it is mass produced, is consistent batch to batch, is consistent country to country, uses specialized ingredients from specialized companies, consists of prefrozen macronutrients, stays emulsified, and has long shelf life or freezer life.[1]

Furthermore, 11 nutritional properties distinguish processed food.[2] (1) Too little fiber. When fiber (soluble and insoluble) is consumed within food, it forms a gelatinous barrier along the intestinal wall. This delays the intestine's ability to absorb nutrients, instead feeding the gut microbiome. Attenuation of the glucose rise results in insulin reduction. Attenuation of fructose absorption reduces liver fat accumulation. (2) and (3) Too few ω-3 and too many ω-6 fatty acids. ω-3s are precursors to docahexaenoic and eicosapentanoic acids (anti-inflammatory). Conversely, ω-6s are precursors of arachidonic acid (proinflammatory). Our ratio of ω-6 to ω-3 fatty acids should be approximately 1:1. Currently, our ratio is about 25:1, favoring a proinflammatory state, which can drive oxidative stress and cell damage. (4) Too few micronutrients. Antioxidants, such as vitamins C and E, quench oxygen radicals in peroxisomes to prevent cellular damage, while others, such as carotenoids and α-lipoic acid, prevent lipid peroxidation. (5) Too many

Yet. ultraprocessed food is not going away

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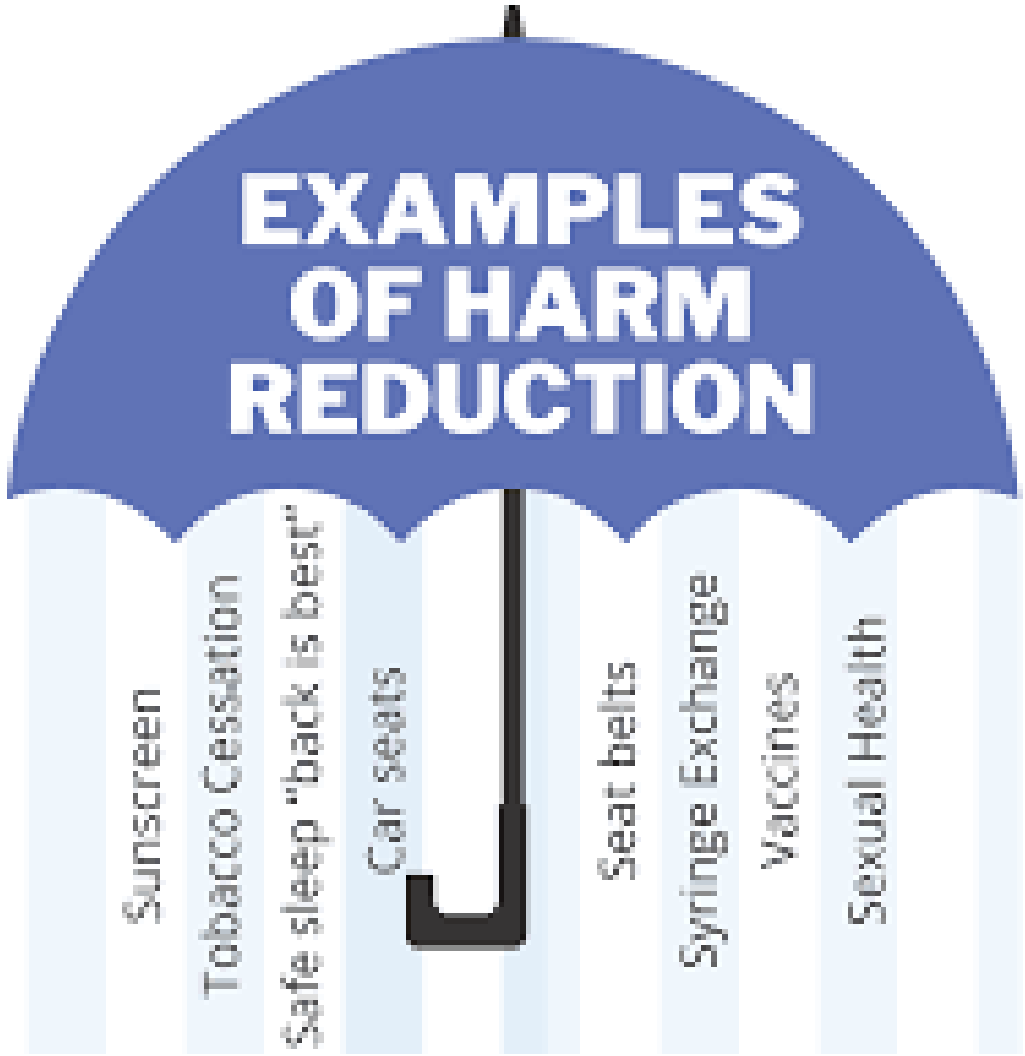
What is Harm Reduction?

Harm reduction is any behavior or strategy that helps reduce risk or harm to yourself or others.



WHAT IS MONCH MONCH?

Natural Fiber Sponge

- A revolutionary calorie-absorbing fiber matrix
- Acts as a natural fiber sponge to eliminate calorie absorption and significantly lower glucose spikes
- By wrapping processed foods in natural dietary fibers, it transforms modern indulgence into healthier, gut-friendly nutrition, inspired by ancient diets
- Enhancing overall gut health, Monch Monch offers a natural and more beneficial alternative to Ozempic for sustainable wellness

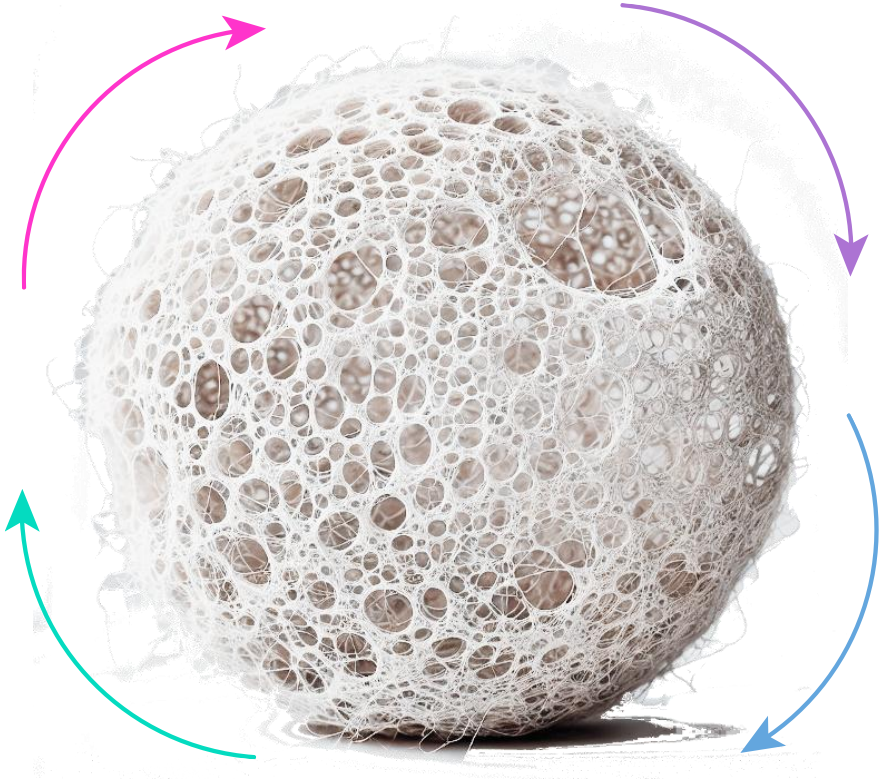
BIOLUMEN'S SOLUTION

Ultra-Absorbent Fiber Microsponges – Combining Soluble & Insoluble Power

Engineered as an ultra-fine powder for seamless integration into packaged foods

1. EXPANSION

Expands 70x in the stomach, like a sponge



2. DIGESTION

- 100% plant-based
- Made of 3D-structured cellulose

3. ABSORPTION

Absorbs 90 kcal per 1 gram

4. ELIMINATION

Feeds the microbiome, which breaks down fiber into short-chain fatty acids (butyrate)

All components are Generally Recognized as Safe (GRAS)

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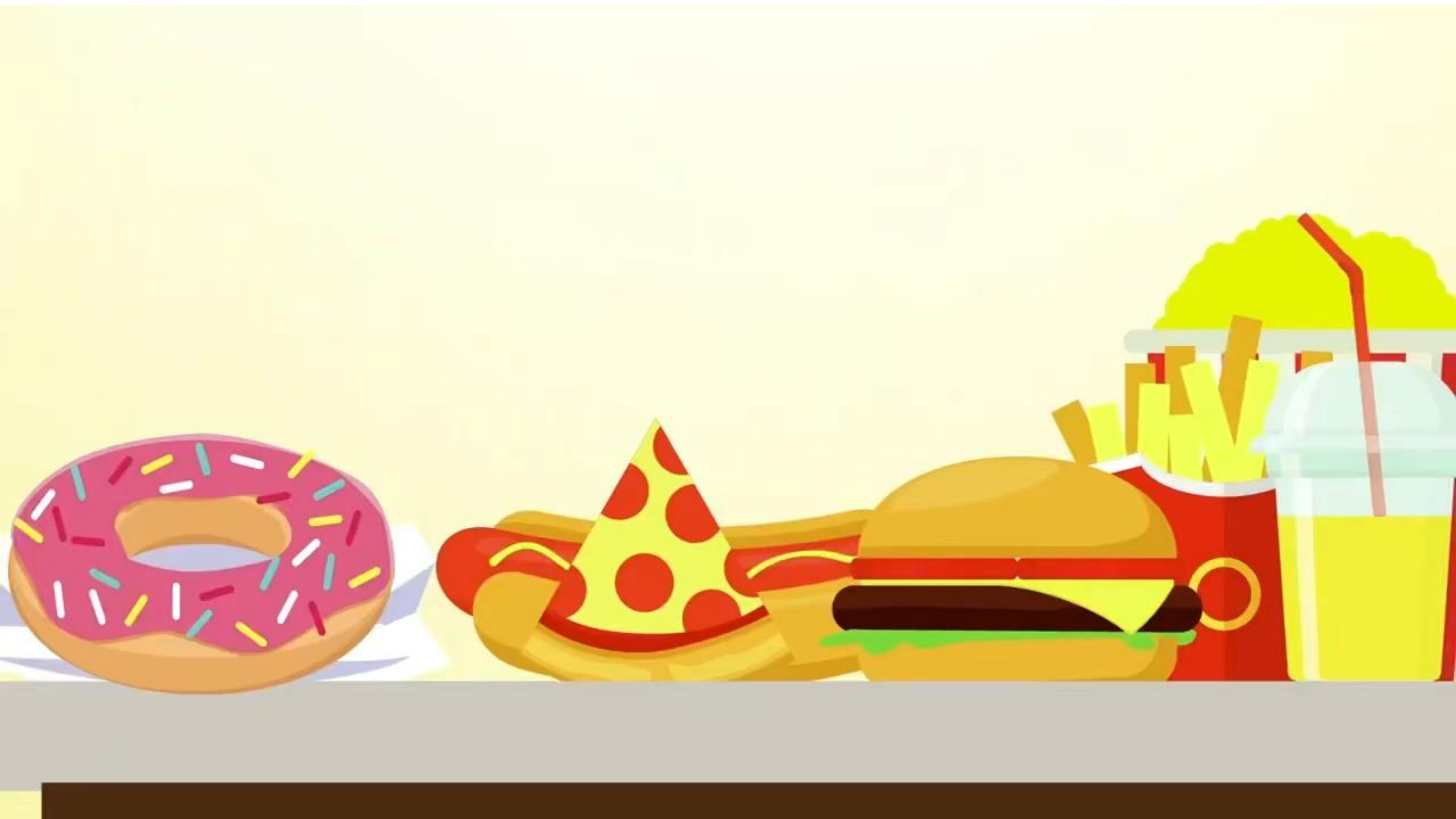
M8NCH

Engineered by BioLumen™

=



Mouth/Esophagus

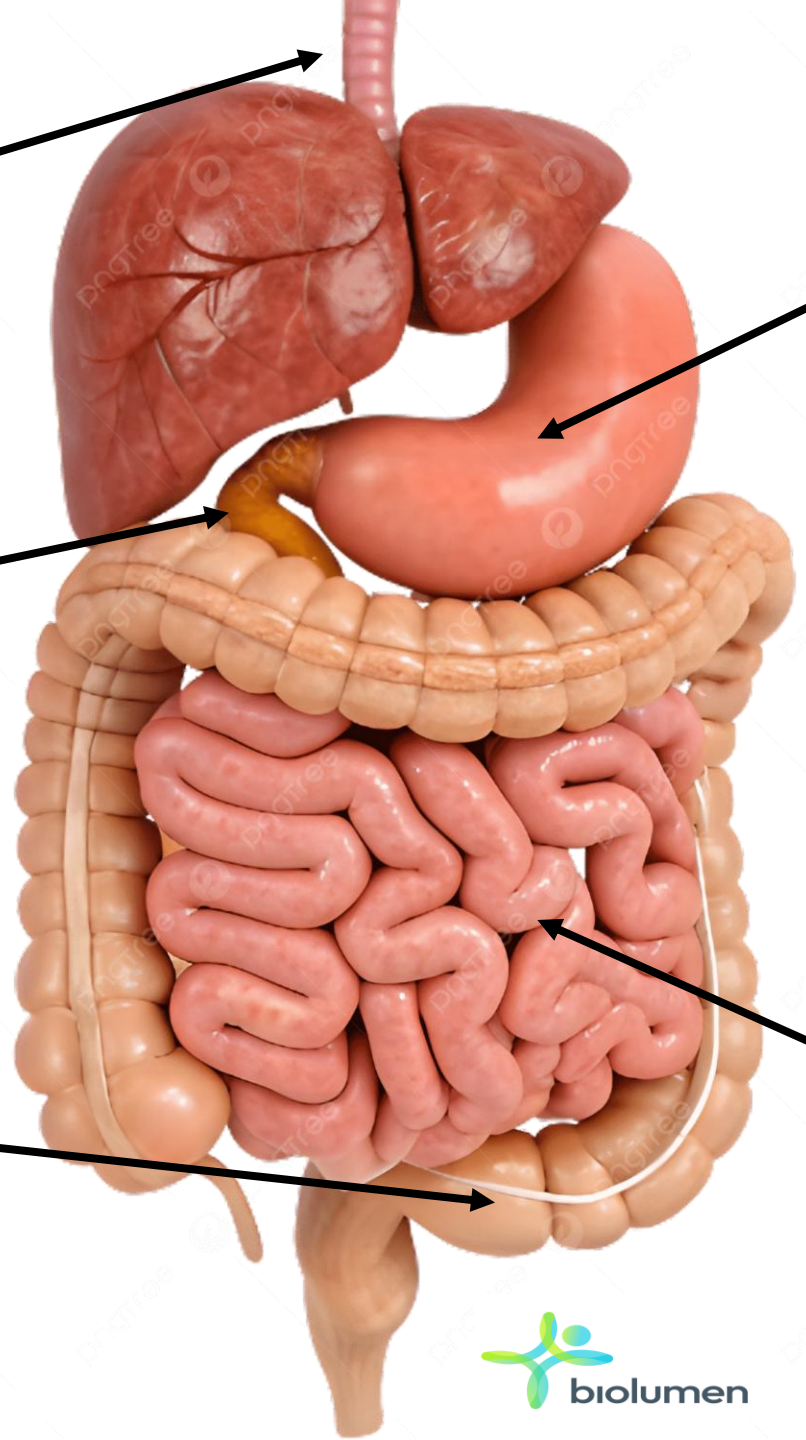
- Fiber hydration begins immediately with saliva
- Early swelling – increasing volume before entry into the stomach
- May pre-load satiety signals before digestion starts

Duodenum: Carbohydrate sequestration and metabolic stability

- Attenuation of post-prandial glucose excursion
- Reduction of insulin response
- Reduction of fructose absorption – reduce liver fat production

Colon: SCFA's, gut health

- Soluble fiber converted to short chain fatty acids – reduced gut and systemic inflammation
- Improved mucosal barrier



Stomach: Gel formation and mechanical distention

- Glucomannan and carrageenan create viscous gel, cellulose adds 3-D structure
- Gastric stretch – vagal activation – distention, feeling fullness
- Suppression of ghrelin – reduced hunger
- Increased rate of gastric emptying – more rapid signal for satiety

Jejunum/Ileum: Satiety, microbiome

- Carbohydrates nourish microbiome – increased microbial diversity
- Reduced mucin breakdown – reduction in GI inflammation
- Increased intestinal transit rate – more rapid PYY_{3-36} rise, satiety, reduced caloric intake
- GLP-1 release – improved insulin secretion, sensitivity

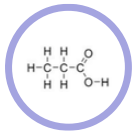
RESULTS FROM SHIME MODEL

Control: 10% sugar content based on a normal diet defined by WHO

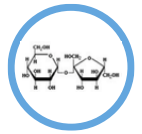
The **SHIME®** model (Simulated Human Intestinal Microbial Ecosystem) is a full gut simulation of colonic fermentation for preclinical and clinical studies, supporting long-term microbiome interaction studies

Reducing absorption of glucose by -33%

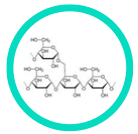
Reducing absorption of fructose by -36%



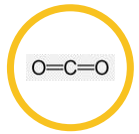
Increasing short chain fatty acid production by +60%



Reducing absorption of sucrose by -38%



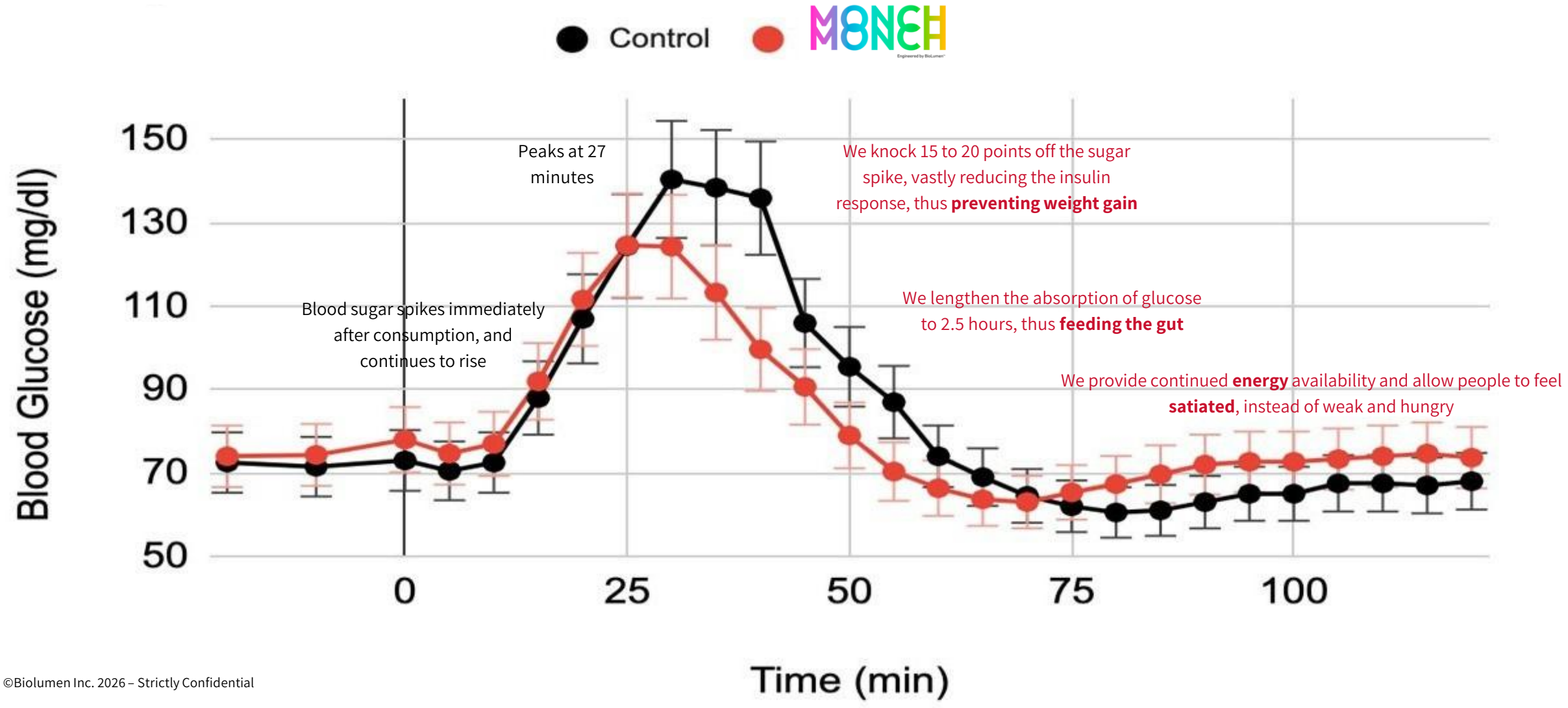
Reducing absorption of starch by -9%



Only +15% carbon dioxide production over control — no GI discomfort

THE BOUNTY CHALLENGE

with Continuous Glucose Monitoring



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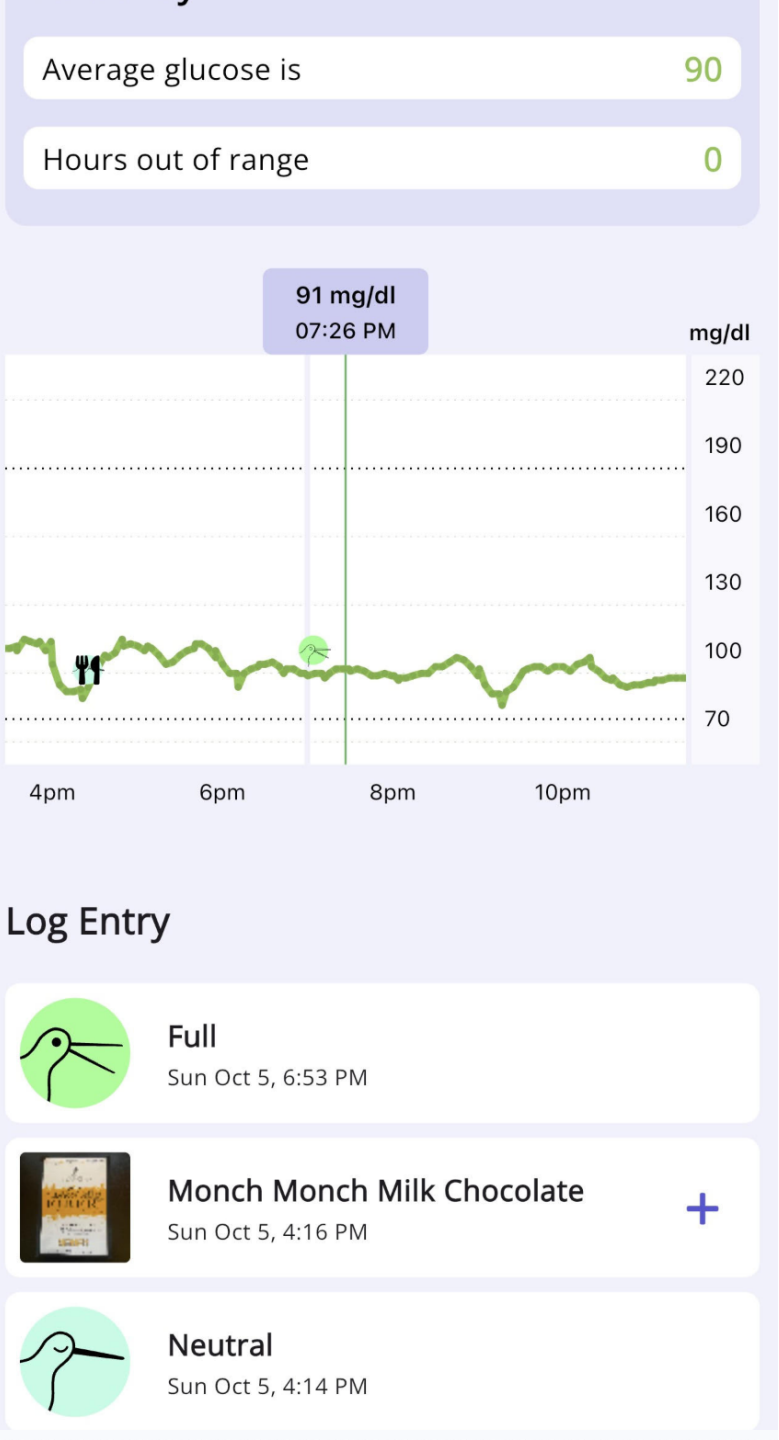
N of 1:

Dr. Celine Schiff-Deb of MISTA

Blood Glucose by CGM in Response to a chocolate bar with MonchMonch 1



CLINICAL TRIALS

Randomized, double-blind, placebo-controlled 3-week clinical trials demonstrated outstanding effectiveness with **NO** negative side-effects and **NO discontinuations**

Enhancing

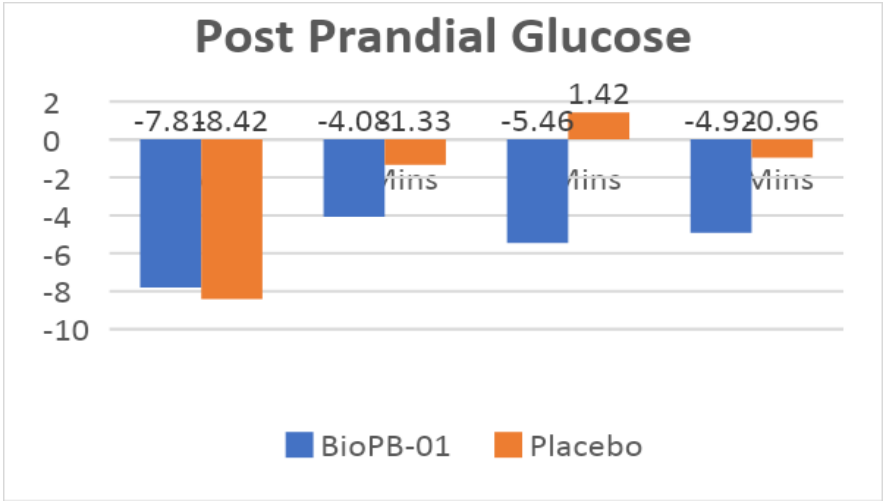
- Lean Body Mass
- Butyrate Secretion
- HDL
- Stool Consistency
- Healthy Gut Functions
- Satiety

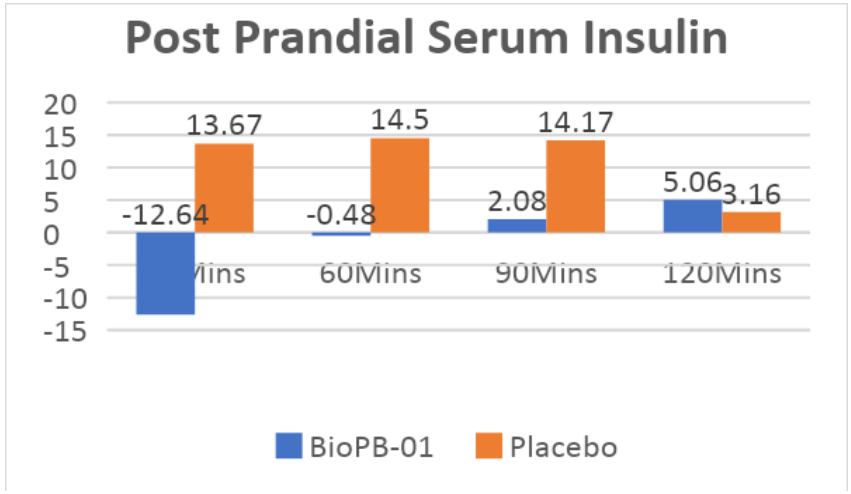
Reducing

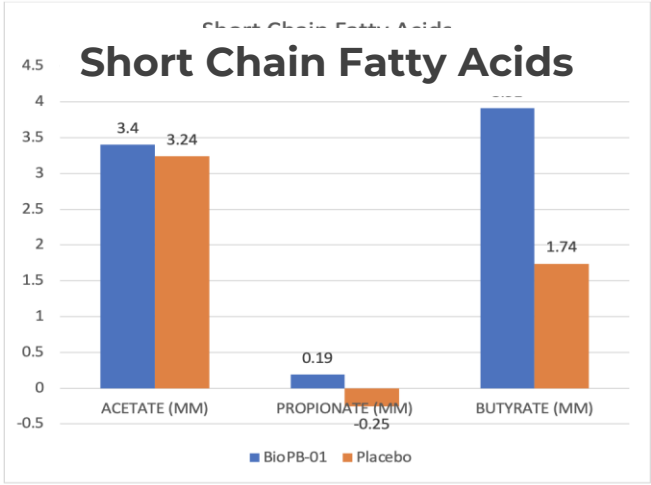
- Fasting Glucose
- Fasting Insulin
- Insulin Resistance
- Blood Pressure
- Body Fat

Clinical Trials: Metabolic Response

Biolumen's MonchMonch® vs Placebo







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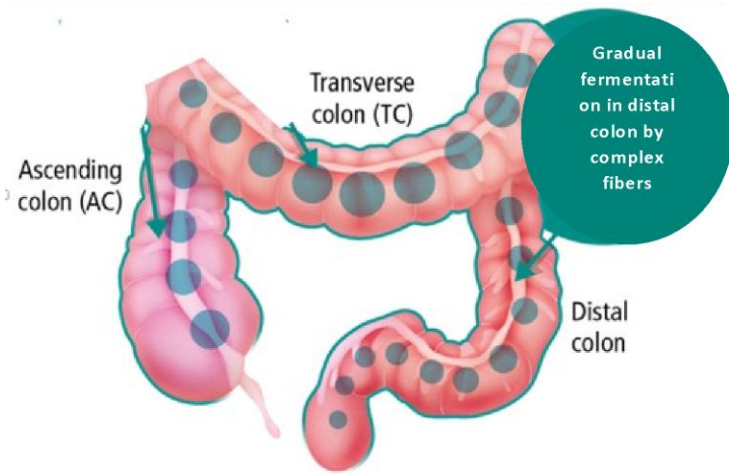
There are lots of fiber products out there —

WHY MONCH ?

There are many fibers on the market however, they are only SOLUBLE fibers

- Inulin
  Fructo-oligosaccharides (FOS)
  Resistant starch
- PH Guar Gum
  Galactooligosaccharides (GOS)
  Gum Acacia*
  Pectin*
  Xylooligosaccharides (XOS)
  Human milk sugars
  Arabino Xylooligosaccharides (AXOS)
- Bimuno® GOS
  By Bacteria For Bacteria



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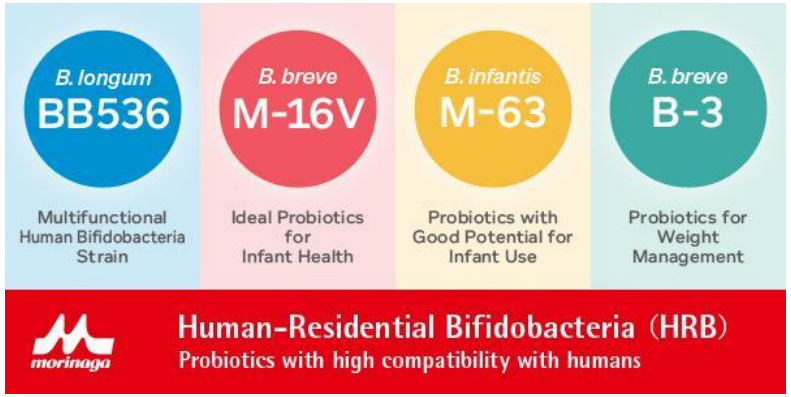
Human milk fibers (*human milk oligosaccharides)* and human milk bacteria are commercially available (e.g. One Bio) but they are <u>SHORT</u>



CHR HANSEN
Improving food & health

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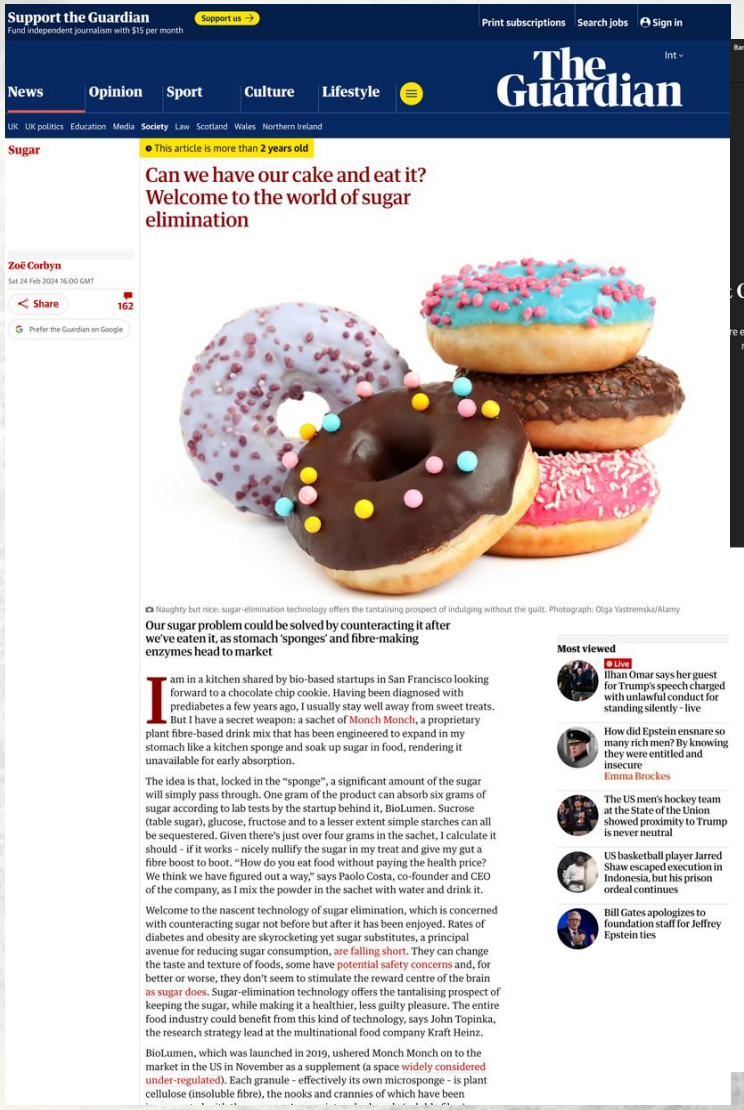
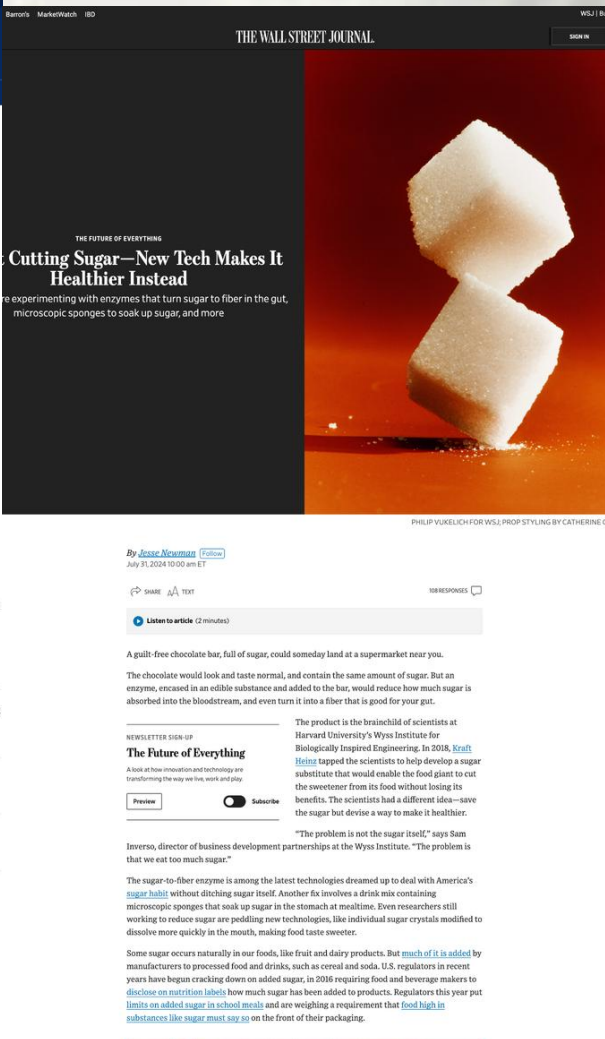
ENTER STAGE: BIOLUMEN'S SOLUTION





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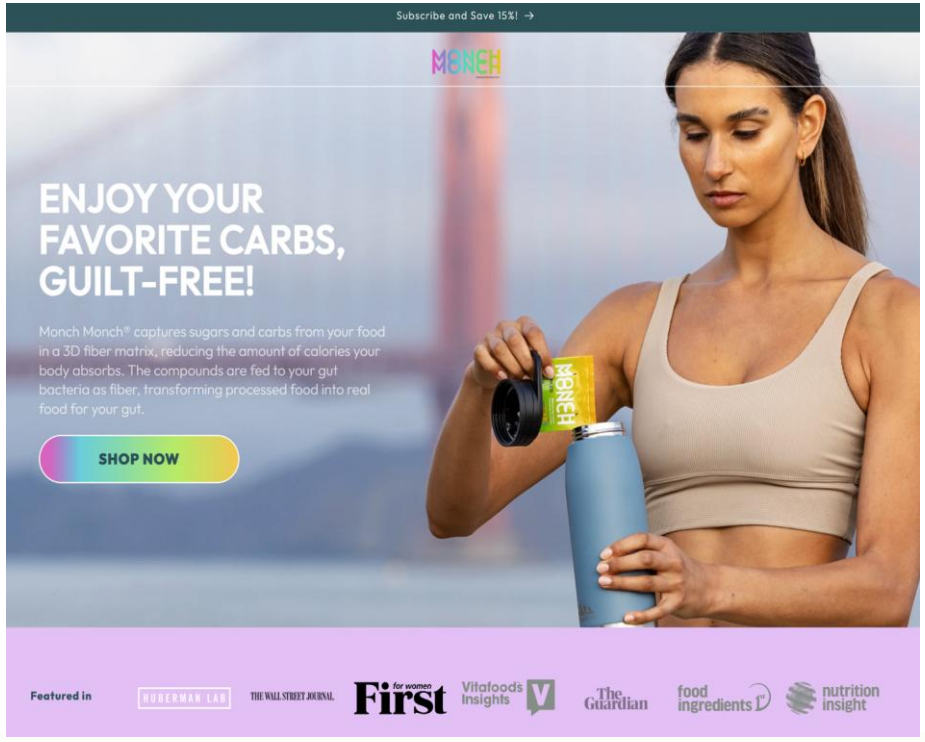
MONCH

D2C

On the US Market Now

	MONCH MONCH®	SUPERGUT	METAMUCIL	OZEMPIC WEGOVY
Caloric Elimination	✓	✗	✗	✓
Blood Sugar Control	✓	✓	✗	✓
Sugar Elimination	✓	✗	✗	✗
Fullness, Satiety	✓	✓	✗	✓
Prebiotic	✓	✓	✓	✗
No Negative Side Effects	✓	✗	✓	✗
Metabolic Health	✓	✗	✗	✓
Gut Health	✓	✓	✓	✗
Gluten Intolerance Amelioration	✓	✗	✗	✗
Increases Muscle Mass	✓	✗	✗	✗
Decreases Post-Prandial Insulin	✓	✗	✗	✗
All Natural Ingredients	✓	✓	✓	✗



I can eat bread again! I have had digestive issues for decades and now I can eat anything thanks to Monch Monch. Making up new drinks with both flavors is the most fun I've had in a long time. At the moment, my favorite is non-flavored Monch Monch in vanilla protein milk with eggnog flavoring! Gloriously delicious after dinner treat that's actually great for my digestion. Yay!

★★★★★

Sueellen S. ✓

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M8NCH

B2B Traction

- Chocolate, Confectionary
- Blended Sugars
- Nutritional Protein Bars
- Ice Creams

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

INGREDIENTS: 65% DARK CHOCOLATE - SEMISWEET (CACAO BEANS, CANE SUGAR, COCOA BUTTER, SOY LECITHIN, WHOLE VANILLA BEANS), BIOLUMEN FIBER (CELLULOSE, KONJAC GUM, CARRAGEENAN)

INGREDIENTS: 70% DARK CHOCOLATE - BITTERSWEET (CACAO BEANS, CANE SUGAR, COCOA BUTTER, SOY LECITHIN, WHOLE VANILLA BEANS), HAZELNUTS, PISTACHIOS, SALT, DRIED FRUIT (PEACH, PLUM, CRANBERRY, RAISINS), BIOLUMEN FIBER (CELLULOSE, KONJAC GUM, CARRAGEENAN), CHIA SEEDS

CONTAINS: HAZELNUT, PISTACHIO, SOY

TEAM

Paolo Costa
Co-Founder
Chief Executive Officer
Polymer Engineer | Serial Entrepreneur

Jiaxin Huai
Co-Founder
Chief Manufacturing Officer
Regulatory & Operations Strategist |
11+ years manufacturing experience

Robert Lustig, MD, MSL
Co-Founder
Chief Medical Officer
Childhood obesity, diabetes,
metabolism & nutrition expert | UCSF

Pablo Zamora, PhD
Co-Founder
Chief Strategic and M&A Advisor
Co-Founder NotCo (foodtech unicorn) |
Presidential Advisor | Deep-tech Strategist

Gio Shoushi
Growth & Operations Manager
B.S., Biochemistry |
M.B.S., Biotech Management

Amy O'Hora
Head of Finance & International Expansion
BSc. Hons. Economics & Finance (1.1) |
VU Venture Partners | CFA Candidate

Marlon Da Silva
Head of Research & Development
Biotechnology,
City College of San Francisco

Matias Wolff Holtz
Co-Chief Marketing Officer
Marketing & Branding Strategist, MIM |
MBA Professor | Mentor at Endeavor

Grant McGee
Marketing & Partnerships Manager
B.A Media Studies,
UC Santa Barbara

Daniella Santis
Co-Chief Marketing Officer
Brand & Marketing Strategist |
Publicist | Ex-EY

Joe Stein
Strategic Advisor
MBA, Saint Mary's College of
California

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thank you.