Busting the
Myth that Red Meat is Risky for Health
The Importance of Transparent Evidence-Based Health Metrics for Food Policy Decisions

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&

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RCSI

DEVENISH™
Beyond Nutrition

Disclosures

Non-remunerated member of;
- The Irish 2030 Agri-Food Strategy Committee,
- Horizon Europe's Cancer Mission Assembly,
- The Irish Climate and Health Coalition,
- The Council on High Blood Pressure of the Irish Heart Foundation,
- The World Action against Salt, Sugar, and Health (WASSH).

Part-time employee and owner of stock of Devenish Nutrition.

Omnivore.

WHO Definition of Healthy Diet
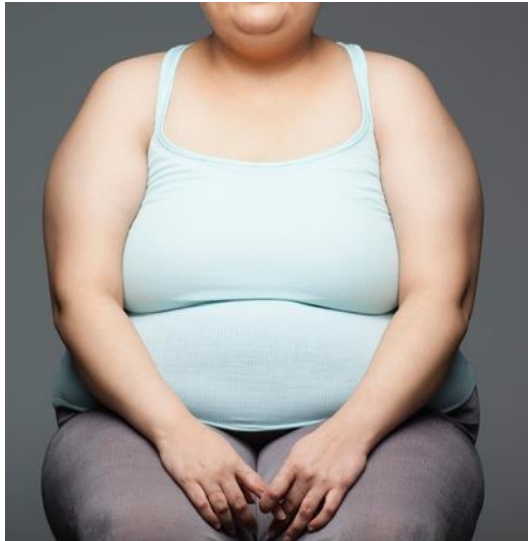
A healthy diet helps to protect against;
Malnutrition in all its forms,
as well as
Non-communicable diseases (NCDs),
such as diabetes, heart disease, stroke and cancer.

Current ~~Double~~ Health Burden of Malnutrition.
Triple

1.9 billion are
Overweight or **Obese**

850 million are
Chronically Undernourished

2 billion suffer from
Hidden Hunger

Sources: FAO, 2015 | WHO, 2017 | WHO, 2012

Animal-Source Foods Top Sources of Commonly Lacking Nutrients

	2+ nutrients	Iron	Zinc	Vitamin A	Calcium	Folate	Vitamin B₁₂
Liver	Very high	Very high	Very high	Very high	Low	Very high	Very high
Spleen	Very high	Very high	Very high	Low	Low	Low	Very high
Small dried fish	Very high	Very high	Very high	Very high	Very high	Low	Very high
Dark leafy greens	Very high	High	Low	Very high	Very high	Very high	Low
Bivalves	Very high	Very high	Very high	Very high	Very high	Moderate	Very high
Kidney	Very high	Very high	Very high	High	Low	High	Very high
Heart	Very high	Very high	Very high	Low	Low	Moderate	Very high
Crustaceans	Very high	Moderate	Very high	Low	Moderate	Low	Very high
Goat	Very high	Very high	Very high	Low	Low	Low	Very high
Beef	Very high	High	Very high	Low	Low	Low	Very high
Eggs	Very high	Moderate	Very high	Very high	Low	Very high	Very high
Cow milk	Very high	Low	High	Very high	Very high	Low	Very high
Canned fish w/ bones	Very high	Moderate	Very high	Low	Very high	Low	Very high
Lamb/mutton	Very high	High	Very high	Low	Low	Low	Very high
Cheese	Very high	Low	Very high	Very high	Very high	Low	Very high
Goat milk	High	Low	Moderate	High	Very high	Low	Low
Pork	High	Low	Very high	Low	Low	Low	Very high
Yoghurt	Moderate	Low	Low	Low	Very high	Low	Very high
Fresh fish	Moderate	Low	Moderate	Low	Low	Low	Very high
Pulses	Moderate	Moderate	Moderate	Low	Low	Very high	Low
Teff	Moderate	Very high	Moderate	Low	Low	High	Low
Vit A-rich fruit/veg	Low	Low	Low	Very high	Low	High	Low
Other vegetables	Low	Low	Low	Low	Low	Low	Low
Quinoa	Low	Moderate	Moderate	Low	Low	Very high	Low
Canned fish w/o bones	Low	Low	Moderate	Low	Low	Low	Very high
Seeds	Low	Low	High	Low	High	High	Low
Fonio	Low	Moderate	Moderate	Low	Low	Moderate	Low
Chicken	Low	Low	High	Low	Low	Low	High
Other fruits	Low	Low	Low	Low	Low	High	Low
Millet	Low	Moderate	Moderate	Low	Low	Moderate	Low
Unrefined grain prod	Low	Low	Moderate	Low	Low	Moderate	Low
Sorghum	Low	Moderate	Low	Low	Low	Low	Low
Roots/tubers/plantains	Low	Low	Low	Low	Low	Low	Low
Whole grains	Low	Low	Moderate	Low	Low	Low	Low
Nuts	Low	Low	Low	Low	Low	Low	Low
Refined grain products	Low	Low	Low	Low	Low	Low	Low
Refined grains	Low	Low	Moderate	Low	Low	Low	Low

Beal T & Ortenzi F. Priority micronutrient density in foods. Frontiers in Nutrition 2022

Average National Diets Low in Animal-source Foods Do Not Meet Needs for Essential Micronutrients
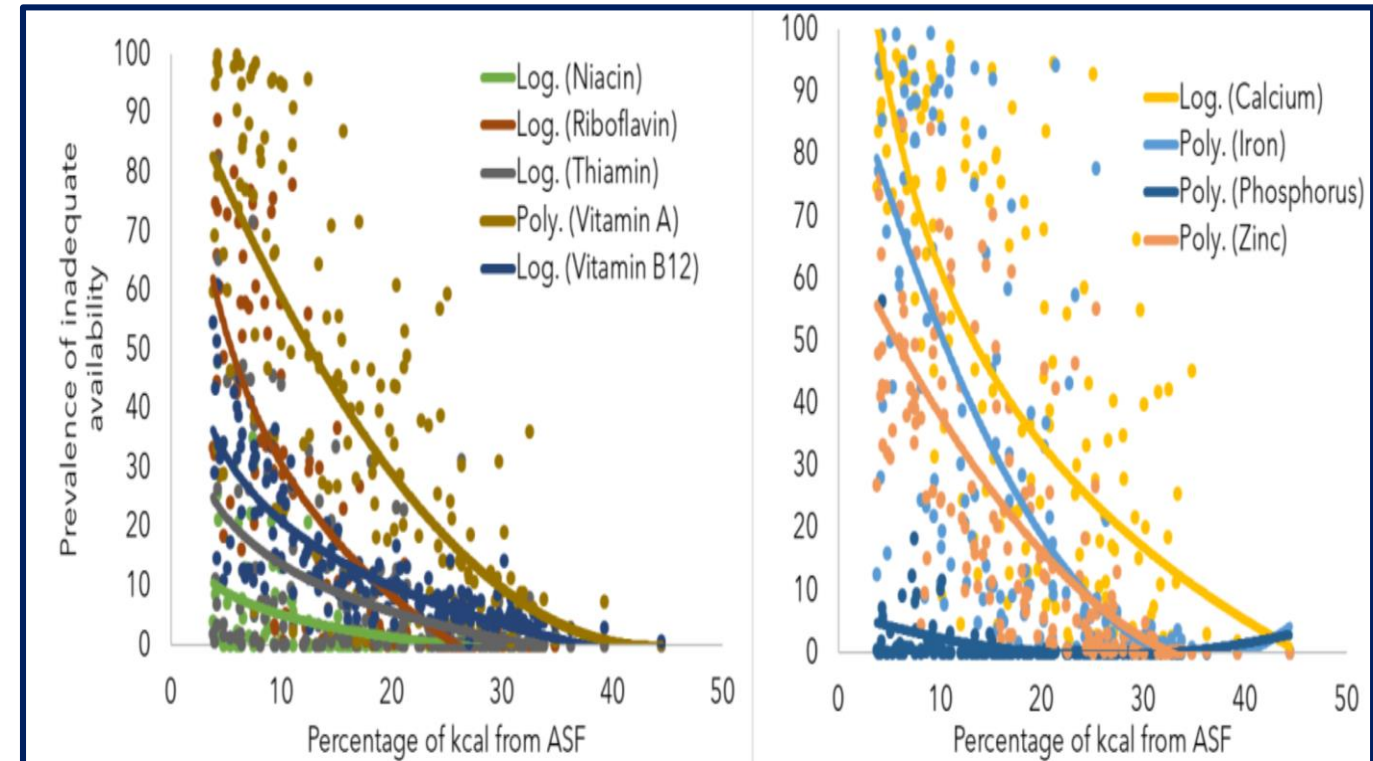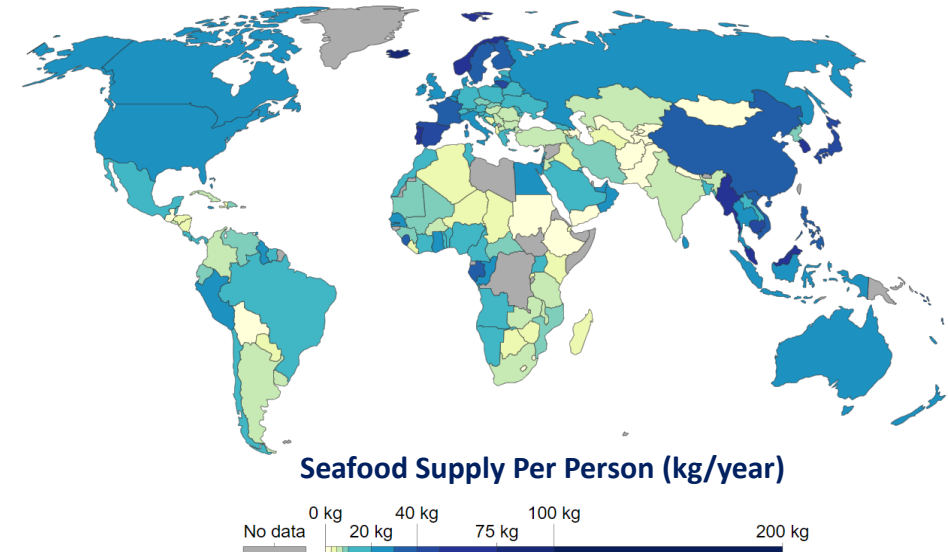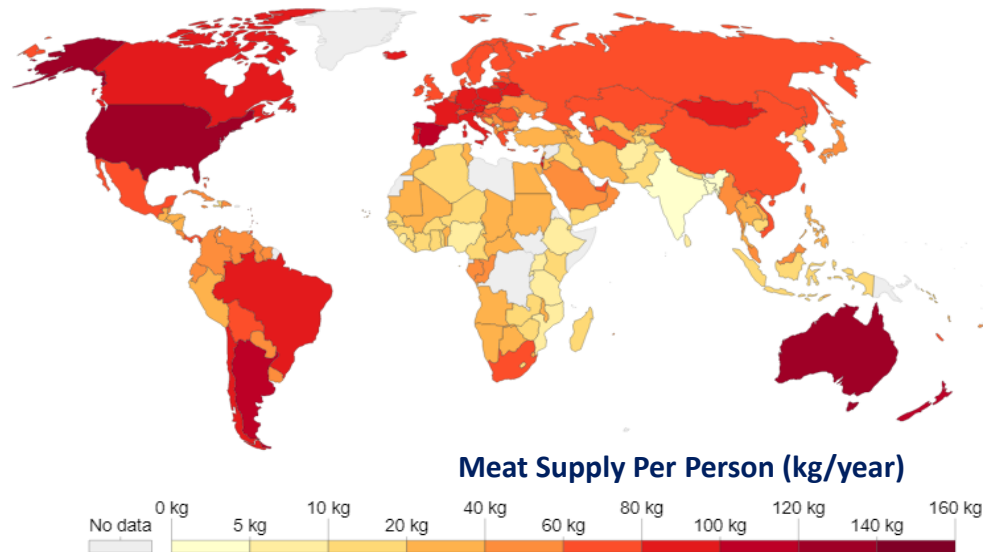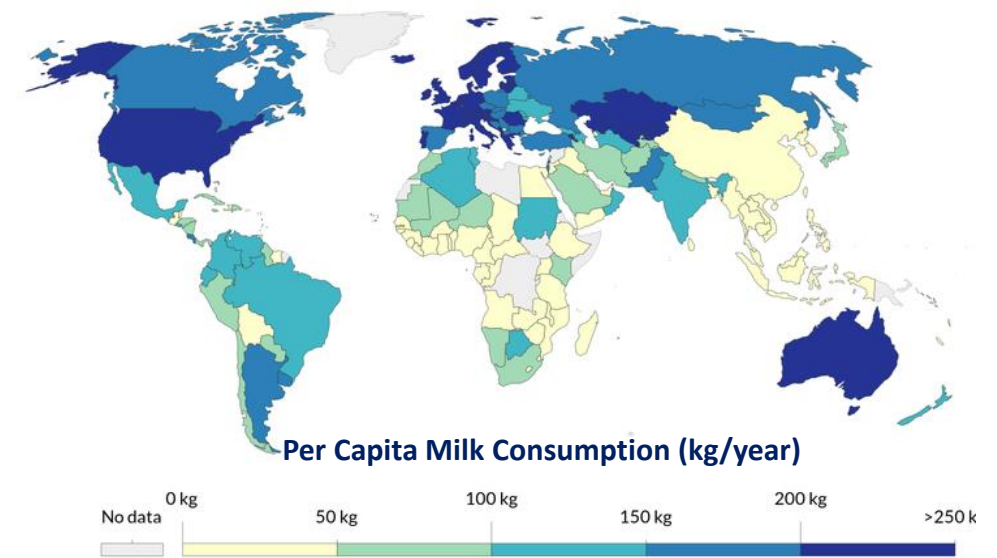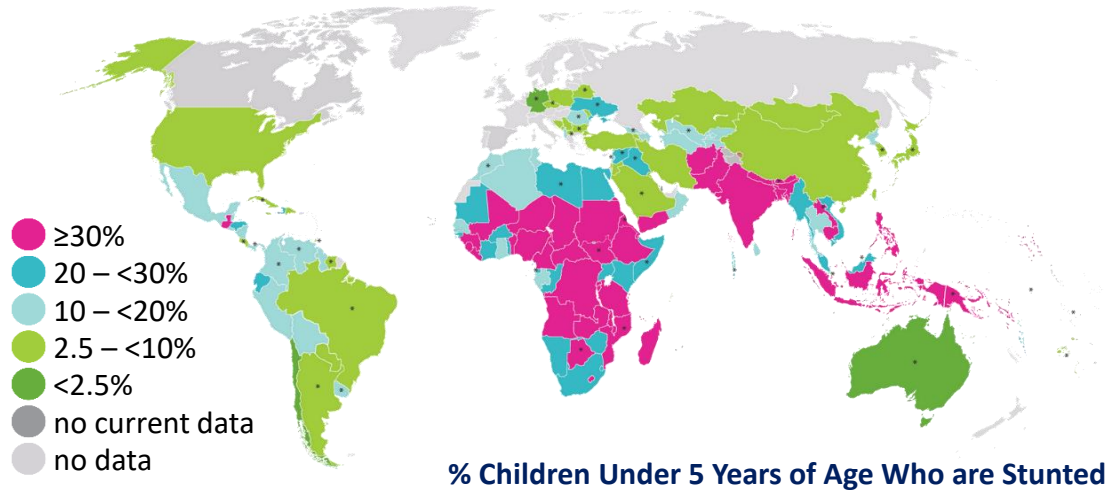

Nordhagen S, Beal T & Haddad L. The role of animal-source foods in healthy, sustainable, and equitable food systems. GAIN Discussion Paper 2020

Inverse Relationship between Childhood Stunting & Annual Meat, Milk & Seafood Consumption

% Children Under 5 Years of Age Who are Stunted

Legend:
- ≥30%
- 20 – <30%
- 10 – <20%
- 2.5 – <10%
- <2.5%
- no current data
- no data

Per Capita Milk Consumption (kg/year)

No data | 0 kg | 50 kg | 100 kg | 150 kg | 200 kg | >250 k

Meat Supply Per Person (kg/year)

No data | 0 kg | 5 kg | 10 kg | 20 kg | 40 kg | 60 kg | 80 kg | 100 kg | 120 kg | 140 kg | 160 kg

Seafood Supply Per Person (kg/year)

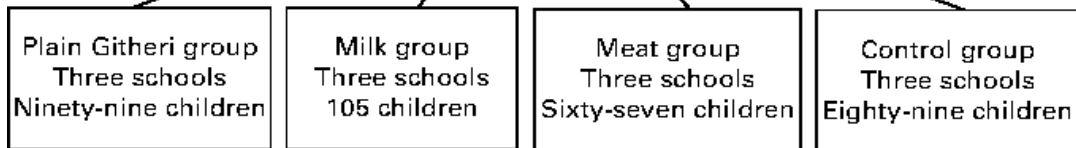No data | 0 kg | 20 kg | 40 kg | 75 kg | 100 kg | 200 kg

Primary school test scores of children after 5 semesters of receiving animal sourced foods (meat or dairy) were significantly greater than those of the control groups (plant-based foods or no additional nutrition).
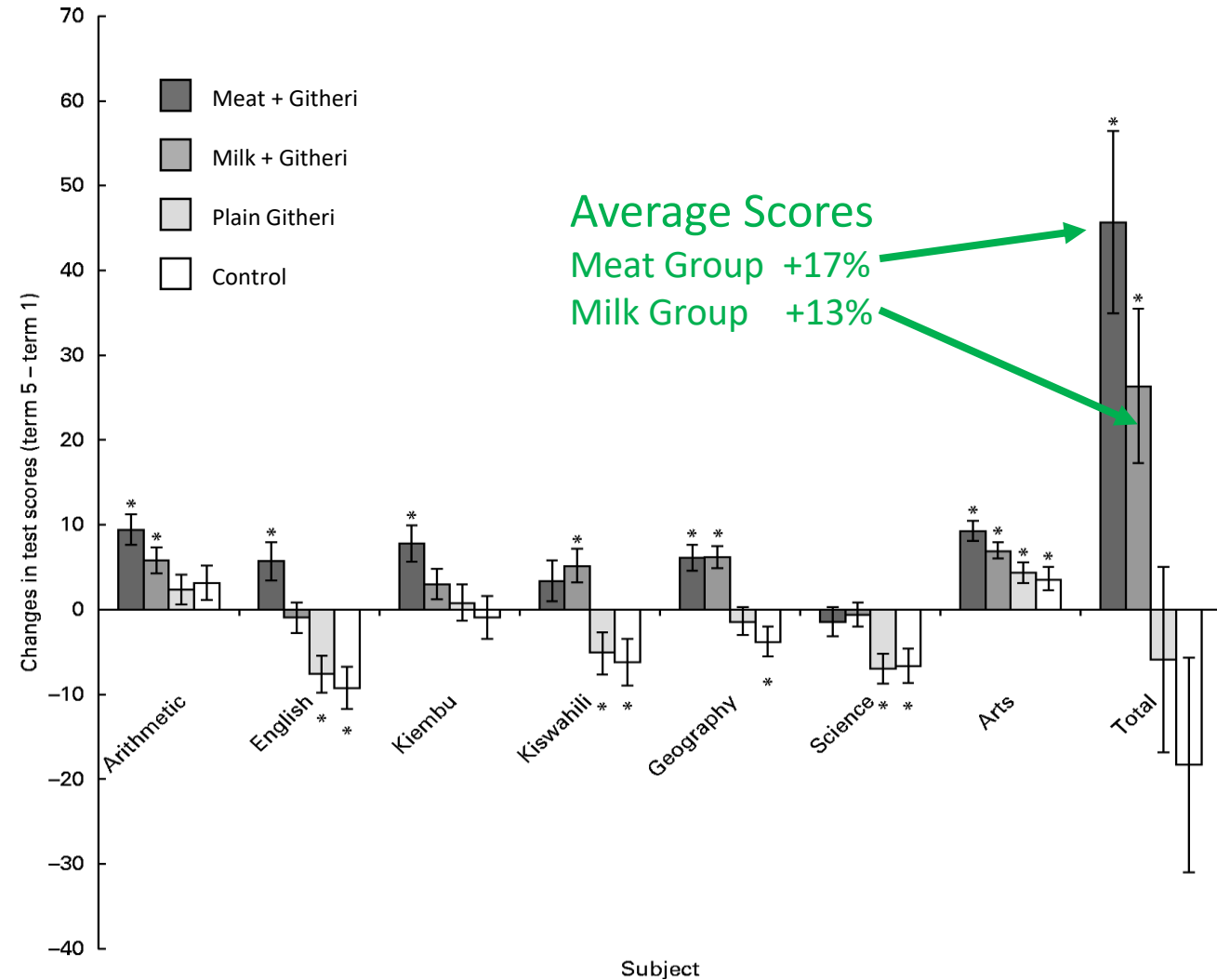

Hulett et al. Animal source foods have a positive impact on the primary school test scores of Kenyan schoolchildren in a cluster randomised, controlled feeding intervention trial. Brit J Nutrition 2014

Low Intake of Animal-Source Foods
Also Shown to be Non-Optimal for Longevity

International Journal of General Medicine

Dovepress
open access to scientific and medical research

Open Access Full Text Article

ORIGINAL RESEARCH

Total Meat Intake is Associated with Life Expectancy: A Cross-Sectional Data Analysis of 175 Contemporary Populations

Wenpeng You [1,2], Renata Henneberg[1], Arthur Saniotis[1,3], Yanfei Ge[4,5], Maciej Henneberg[1,6]

24-Feb-2022

THE GERONTOLOGICAL SOCIETY OF AMERICA

Journals of Gerontology: Medical Sciences
cite as: J Gerontol A Biol Sci Med Sci, 2022, Vol. XX, No. XX, 1–7
https://doi.org/10.1093/gerona/glab334
Advance Access publication November 27, 2021

OXFORD

Research Report

Animal Protein Intake Is Inversely Associated With Mortality in Older Adults: The InCHIANTI Study

Tomás Meroño, PhD,[1,2,] Raúl Zamora-Ros, PhD,[1,3,*] Nicole Hidalgo-Liberona, PhD,[1,2,] Montserrat Rabassa, PhD,[1] Stefania Bandinelli, MD,[4] Luigi Ferrucci, MD, PhD,[5,] Massimiliano Fedecostante, MD,[6] Antonio Cherubini, MD, PhD,[6,†,] and Cristina Andres-Lacueva, PhD[1,2,†]

Climate Change Poses
Potentially Catastrophic Threats to Human Health

Heat & Extreme Weather Events

Endangerment of
Global Food Supplies
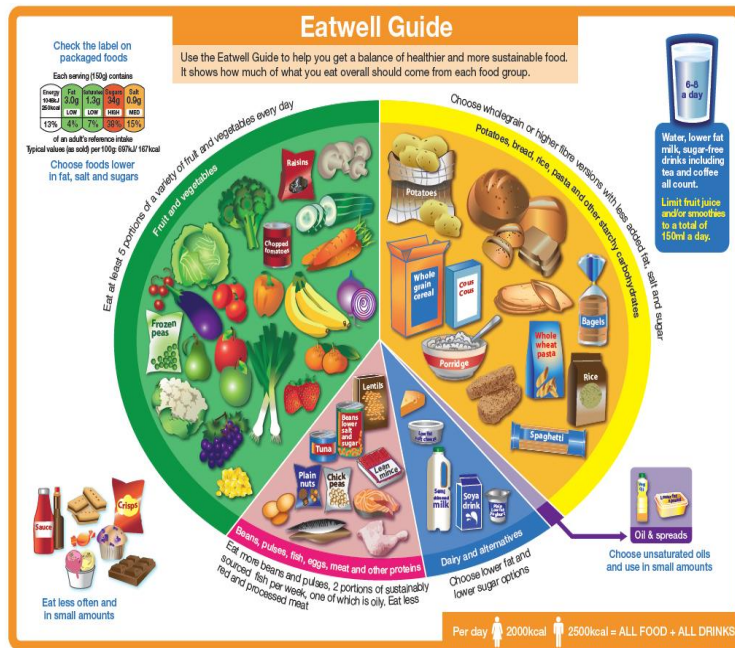Droughts & Desertification

Vector-borne Diseases

Increased Poverty, Inequalities and Migration

The EAT-Lancet Commission Reference Diet Recommended;
- **Doubling Intakes of Fruits, Vegetables, Legumes, Nuts & Seeds,**
- **Halving Meat & Dairy Intakes**

Willett W et al. Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems. Lancet January 2019.

BUT

- Predicted annual saving of 11 million NCD deaths
  - <u>due to</u> changed intakes of calories, salt, fruits, vegetables, whole grains & nuts,
  - <u>not due to</u> reduced meat & dairy intakes.
- Nutritional deficiencies caused by the halving of meat & dairy not considered.
- Impact of ultra-processed nature of alternative foods not considered.

Currently Available Plant-Based
Meat & Dairy Alternatives are Ultra-Processed Foods,
High in Added Sugars, Salt & Multiple Cosmetic Additives

Same Protein Content as Steak
but **5 times the Salt**

Jackfruit & Mushroom Products Typically Have
Even More Sugar & Salt, Multiple Additives, &
<20% of the Protein

Unsweetened Almond Milk
Twice the Salt
1/8 the Protein, & ¼ the Zinc

**Consumption of Ultra-processed Foods Strongly Associated with Obesity & Salt Excess
- 2 Leading Dietary Risk Factors for NCDs**

Cultured Meats and Precision-Fermented Animal-Free Dairy Products are also Ultra-Processed Foods

Further Recent Publications Recommending Dramatic Reductions and/or Exclusion of Animal-Sourced Foods From the Human Diet

Global burden of 87 risk factors in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019

GBD 2019 Risk Factors Collaborators*

ARTICLES
https://doi.org/10.1038/s43016-021-00343-4

nature food

Check for updates

Small targeted dietary changes can yield substantial gains for human health and the environment

Katerina S. Stylianou [1✉], Victor L. Fulgoni III[2] and Olivier Jolliet [1✉]

The 2020 report of The *Lancet* Countdown on health and climate change: responding to converging crises

Nick Watts, Markus Amann, Nigel Arnell, Sonja Ayeb-Karlsson, Jessica Beagley, Kristine Belesova, Maxwell Boykoff, Peter Byass, Wenjia Cai, Diarmid Campbell-Lendrum, Stuart Capstick, Jonathan Chambers, Samantha Coleman, Carole Dalin, Meaghan Daly, Niheer Dasandi, Shouro Dasgupta, Michael Davies, Claudia Di Napoli, Paula Dominguez-Salas, Paul Drummond, Robert Dubrow, Kristie L Ebi, Matthew Eckelman, Paul Ekins, Luis E Escobar, Lucien Georgeson, Su Golder, Delia Grace, Hilary Graham, Paul Haggar, Ian Hamilton, Stella Hartinger, Jeremy Hess, Shih-Che Hsu, Nick Hughes, Slava Jankin Mikhaylov, Marcia P Jimenez, Ilan Kelman, Harry Kennard, Gregor Kiesewetter, Patrick L Kinney, Tord Kjellstrom, Dominic Kniveton, Pete Lampard, Bruno Lemke, Yang Liu, Zhao Liu, Melissa Lott, Rachel Lowe, Jaime Martinez-Urtaza, Mark Maslin, Lucy McAllister, Alice McGushin, Celia McMichael, James Milner, Maziar Moradi-Lakeh, Karyn Morrissey, Simon Munzert, Kris A Murray, Tara Neville, Maria Nilsson, Maquins Odhiambo Sewe, Tadj Oreszczyn, Matthias Otto, Fereidoon Owfi, Olivia Pearman, David Pencheon, Ruth Quinn, Mahnaz Rabbaniha, Elizabeth Robinson, Joacim Rocklöv, Marina Romanello, Jan C Semenza, Jodi Sherman, Liuhua Shi, Marco Springmann, Meisam Tabatabaei, Jonathon Taylor, Joaquin Triñanes, Joy Shumake-Guillemot, Bryan Vu, Paul Wilkinson, Matthew Winning, Peng Gong*, Hugh Montgomery*, Anthony Costello*

Global, regional, and national burden of stroke and its risk factors, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019

Lancet Neurol 2021; 20: 795–820

GBD 2019 Stroke Collaborators*

PLOS MEDICINE

RESEARCH ARTICLE
Estimating impact of food choices on life expectancy: A modeling study

Lars T. Fadnes [1,2*], Jan-Magnus Økland [1,3], Øystein A. Haaland [1,3©], Kjell Arne Johansson [1,2,3©]

1 Department of Global Public Health and Primary Care, University of Bergen, Norway, 2 Bergen Addiction Research, Department of Addiction Medicine, Haukeland University Hospital, Bergen, Norway, 3 Bergen Center for Ethics and Priority Setting, University of Bergen, Norway

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BMJ Global Health

Global red and processed meat trade and non-communicable diseases

Min Gon Chung [1,2], Yingjie Li [1,3], Jianguo Liu [1]

Further Recent Publications Recommending Dramatic Reductions and/or Exclusion of Animal-Sourced Foods From the Human Diet

Global burden of 87 risk factors in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019

GBD 2019 Risk Factors Collaborators*

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1 Department of Global Public Health and Primary Care, University of Bergen, Norway, 2 Bergen Addiction Research, Department of Addiction Medicine, Haukeland University Hospital, Bergen, Norway, 3 Bergen Center for Ethics and Priority Setting, University of Bergen, Norway

The longevity diet: what to eat for a healthier life

If you were to start somewhere, there is a clear pecking order to dietary change. "Cutting out red and processed meats was one of the most important shifts, adding an average 1.6 years to a young woman's lifespan and 1.9 years to a man's," says Jan-Magnus Økland, a co-author on the paper.

Peta Bee

Saturday July 09 2022, 12.01am BST, The Times

2021; 20: 795–820

eat trade eases

Further Recent Publications Recommending Dramatic Reductions and/or Exclusion of Animal-Sourced Foods From the Human Diet

ARTICLES
https://doi.org/10.1038/s43016-021-00343-4

nature food

Check for updates

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1 Department of Global Public Health and Primary Care, University of Bergen, Norway, 2 Bergen Addiction Research, Department of Addiction Medicine, Haukeland University Hospital, Bergen, Norway, 3 Bergen Center for Ethics and Priority Setting, University of Bergen, Norway

BMJ Global Health

Global red and processed meat trade and non-communicable diseases

Min Gon Chung[1,2], Yingjie Li[1,3], Jianguo Liu[1]

Global Burden of Disease (GBD) Data and Analyses are Quoted and Influence Policies of;

- **Food and Agriculture Organization** of the **United Nations**

- **World Health Organization**.

- **European Commission** - Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system.

- The **National Food Strategy** (England, but collaboration with Scotland, Wales & N. Ireland).

- Willett W et al. Food in the Anthropocene: the **EAT–Lancet Commission** on healthy diets from sustainable food systems. Lancet January 2019.

GBD studies are led by the Institute for

Health Metrics and Evaluation, University of Washington, Seattle,

who recently described the GBD studies as

"THE DE-FACTO SOURCE FOR GLOBAL HEALTH ACCOUNTING".

Dietary Risks and Deaths

GBD 2017 Analysis   *Versus*   *GBD* 2019 Analysis

2019/2017
Ratio of deaths

Dietary Risk	2019/2017 Ratio of deaths
High body-mass index / diets high in calories	1.1
Diets high in sodium	0.6
Diets high in trans fats	2.5
Diets high in sugar-sweetened beverages	1.8
Diets high in processed meats	2.3
Diets high in red meat	35.8
Child & maternal malnutrition	0.9
Diets low in whole grains	0.6
Diets low in fruits	0.4
Diets low in nuts & seeds	0.3
Diets low in vegetables	0.4
Diets low in seafood omega-3 fatty acids	0.2
Diets low in fibre	0.7
Diets low in polyunsaturated fatty acids	0.4
Diets low in legumes	2.1
Low bone mineral density / vitamin D & calcium deficiencies	1.3
Vitamin A deficiency	0.1
Diets low in calcium	0.8
Diets low in milk	1.3
Iron deficiency	0.7
Zinc deficiency	0.1

Excesses

Deficiencies

Benefits of Milk/Dairy Underestimated in both GBD 2017 & 2019 Analyses

■ 2017
■ 2019

Number of deaths (in thousands)

Two or more Full-Fat Dairy Servings/Day Associated With:

60% Reduced Overweight/Obesity

Feng et al, Adv Nutr 2022; 13 (6): 2165–2179.

Relative Risk of Colorectal Cancer

25% Reduced Colorectal Cancer

World Cancer Research Fund/ American Institute for Cancer Research. Continuous Update Project Expert Report 2018.

	n	Events	HR (95% CI)	P_{trend}
Total mortality				0·01
<0·5 servings per day	12399	547 (4·4%)		
0·5–1 servings per day	12023	374 (3·1%)	0·84 (0·71–0·98)	
1–2 servings per day	8853	317 (3·6%)	0·89 (0·74–1·06)	
>2 servings per day	7552	248 (3·3%)	0·75 (0·60–0·92)	
Major cardiovascular disease				0·0001
<0·5 servings per day	12399	624 (5·0%)		
0·5–1 servings per day	12023	538 (4·5%)	0·88 (0·76–1·06)	
1–2 servings per day	8853	308 (3·5%)	0·76 (0·64–0·90)	
>2 servings per day	7552	278 (3·7%)	0·68 (0·56–0·84)	

25% Reduced Total Mortality

32% Reduced Heart Attacks & Strokes

0·5   1   1·5

Dehghan M et al. Association of dairy intake with cardiovascular disease and mortality in 21 countries from five continents (PURE): a prospective cohort study. Lancet 2018

Dietary Risks and Deaths

GBD 2017 Analysis *Versus* *GBD* 2019 Analysis

Dietary Risk	2019/2017 Ratio of deaths
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Diets high in red meat	35.8
Child & maternal malnutrition	0.9
Diets low in whole grains	0.6
Diets low in fruits	0.4
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Diets low in seafood omega-3 fatty acids	0.2
Diets low in fibre	0.7
Diets low in polyunsaturated fatty acids	0.4
Diets low in legumes	2.1
Low bone mineral density / vitamin D & calcium deficiencies	1.3
Vitamin A deficiency	0.1
Diets low in calcium	0.8
Diets low in milk	1.3
Iron deficiency	0.7
Zinc deficiency	0.1

Excesses

Deficiencies

Dangers of Diets Low in Long-Chain Omega-3 PUFAs Further Underestimated in GBD 2019 Analysis

■ 2017
■ 2019

Number of deaths (in thousands)

Consumption of Long-chain Omega-3-Polyunsaturated Fatty Acids (EPA & DHA) Associated with Improved Human Health
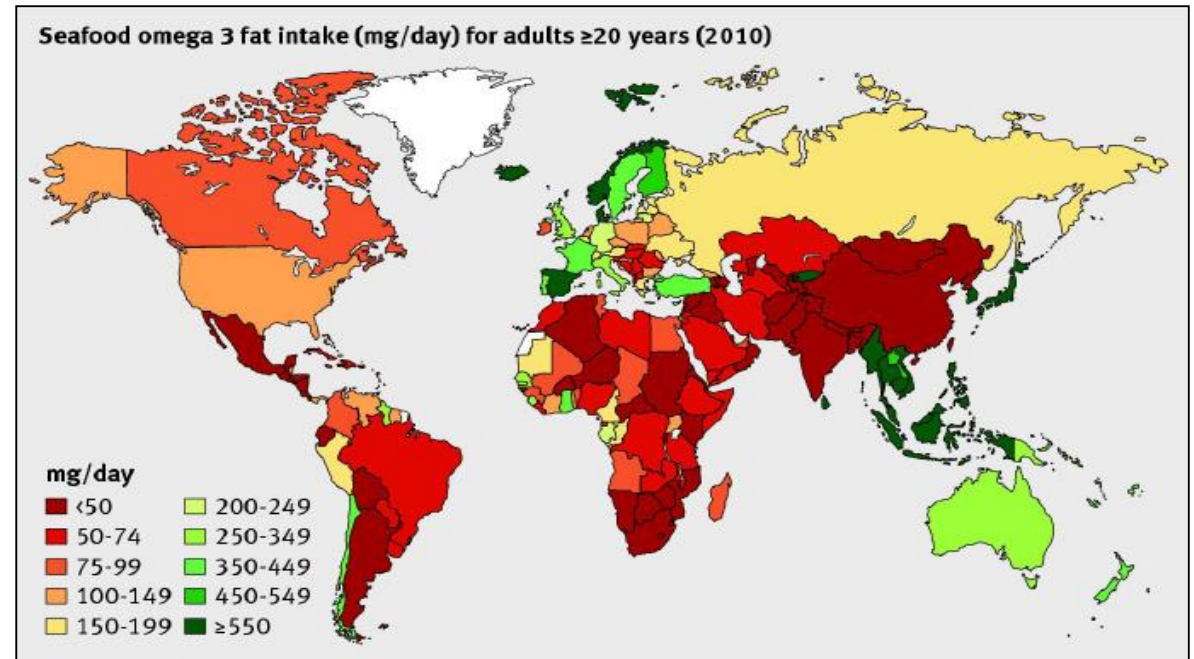
During Infancy & Childhood, Omega-3-PUFAs are Important for;

- Brain development & cognitive function
- Vision
- Muscle & joint health

In Later Life They Protect Against

- Alzheimer's disease
- Depression &
- Psychosis
- Heart attacks
- Strokes
- Cancer

Only 20% of world's populations consume the recommended intake of EPA + DHA (≥ 250 mg/day)

Seafood omega 3 fat intake (mg/day) for adults ≥20 years (2010)

mg/day
- <50
- 50-74
- 75-99
- 100-149
- 150-199
- 200-249
- 250-349
- 350-449
- 450-549
- ≥550

Reasons for this world-wide deficiency

- Insufficient global wild fish stocks.
- Levels of omega-3-PUFAs in farmed salmon & trout have more than halved over the past 20 years.
- Many (particularly children) do not like oily fish.

Dietary Risks and Deaths

GBD 2017 Analysis   *Versus*   *GBD* 2019 Analysis
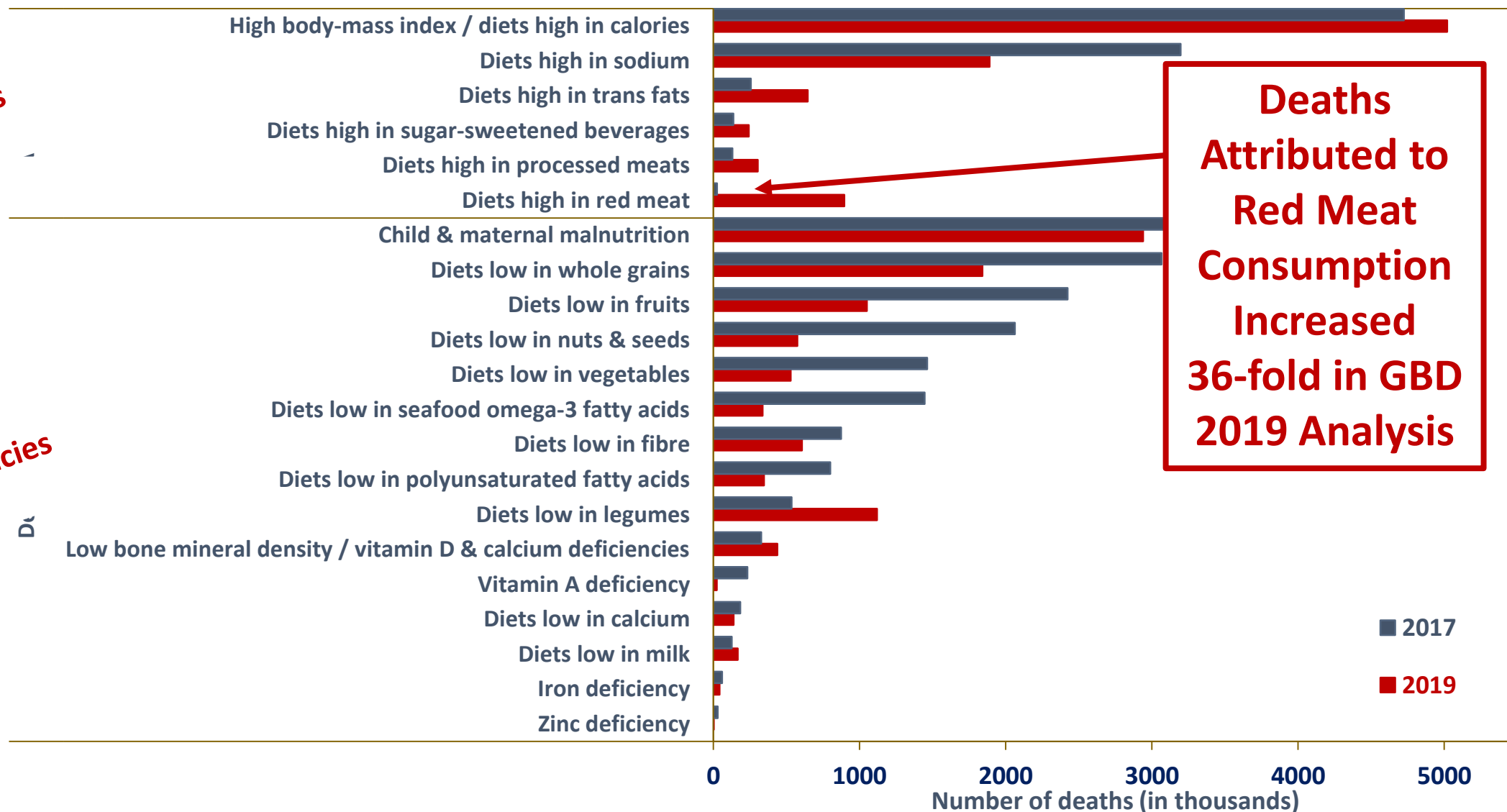
# Global Burden of Disease Study 2019

More empirical standardised methods for selecting the theoretical minimum risk exposure level (TMREL)

"Red meat TMREL changed from 22·5g/day to 0 g/day."

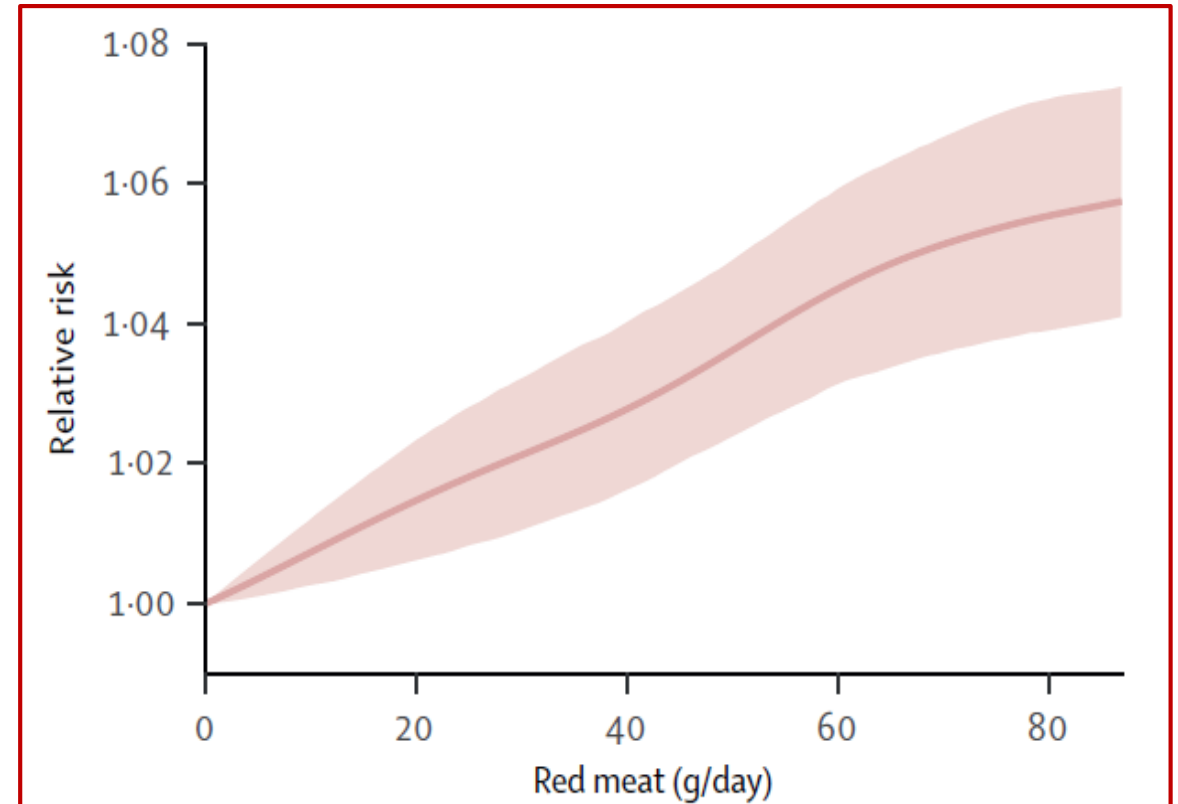Performed their own systematic reviews (not published) and found

"Sufficient evidence supporting the causal relationship of red meat intake with colon and breast cancer, diabetes, ischaemic heart disease, haemorrhagic and ischaemic stroke"
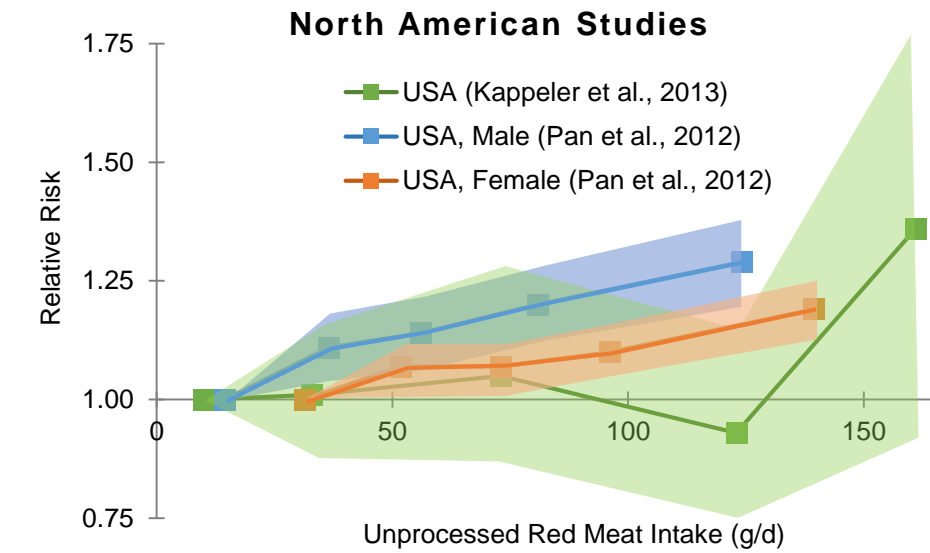
Estimation of Red Meat Consumption

Majority of World's Population Consume;
≤ 75g /day
≤ 500 g / week or
≤ 4 portions/week
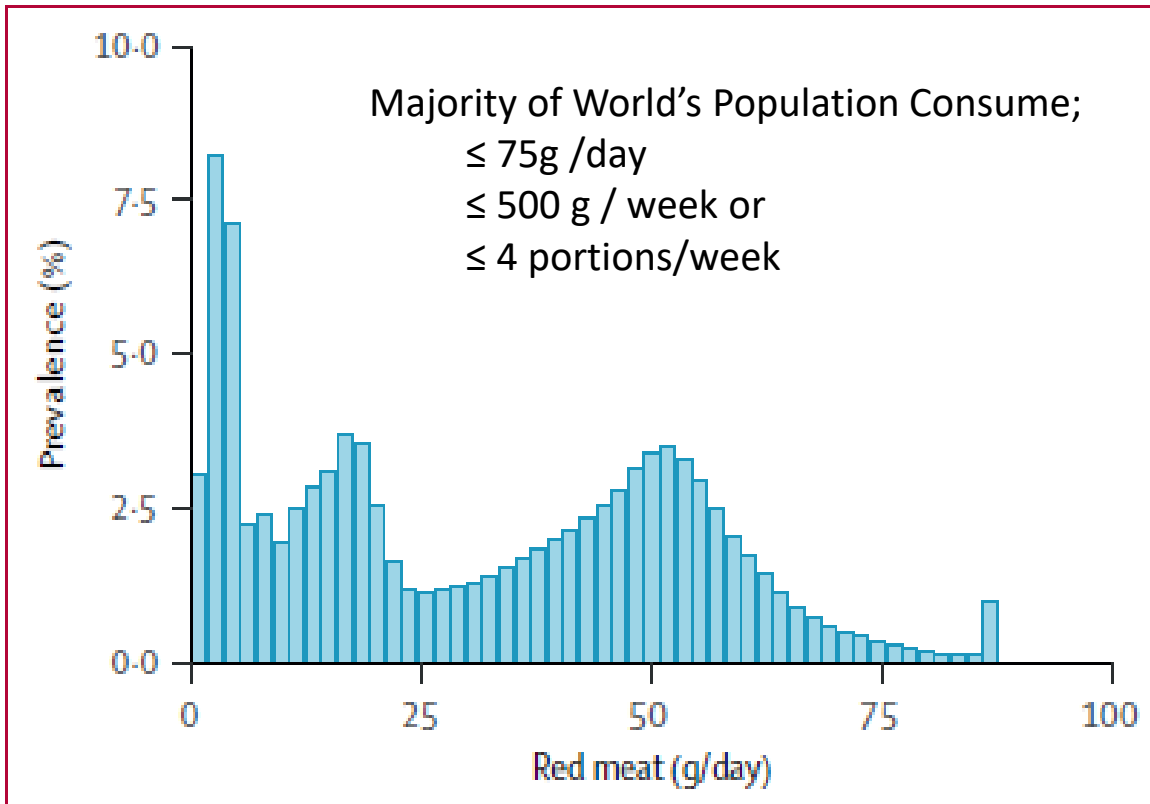
Red Meat Consumption & All-Cause Mortality Risk

Relative Risk for All-Cause Mortality from Large Published Cohort Studies
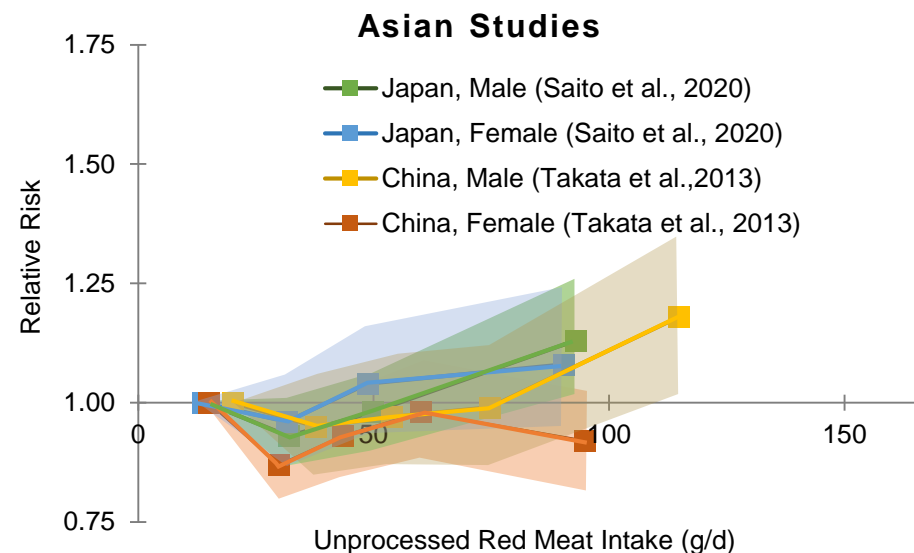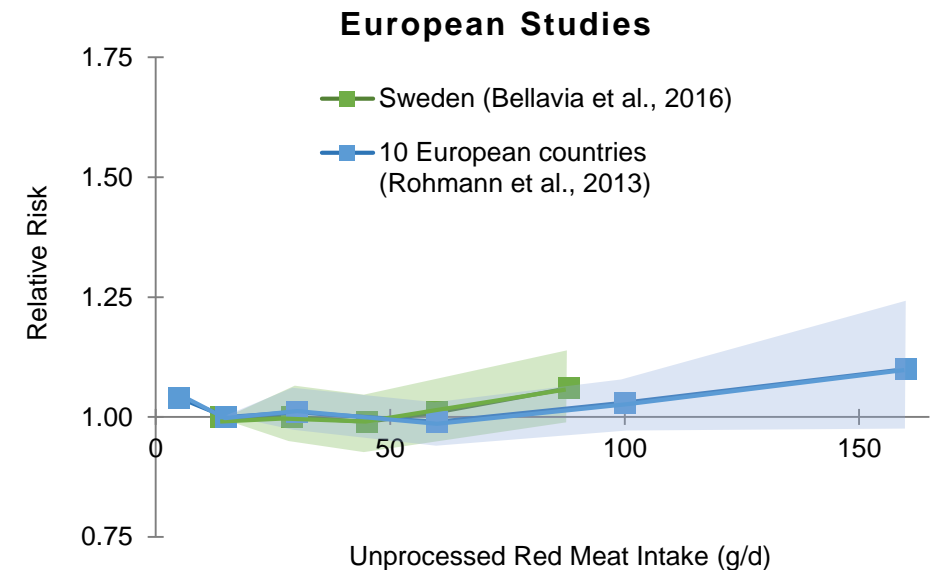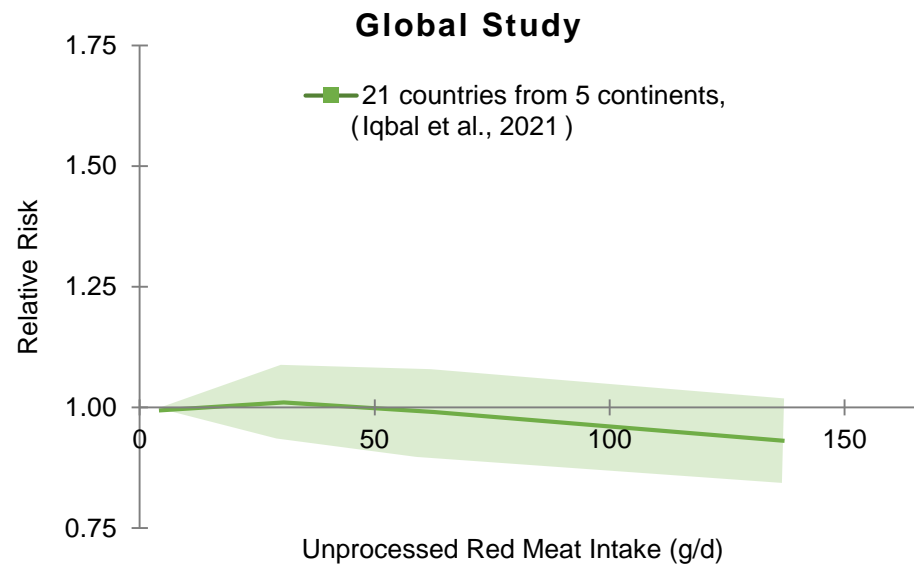
Global Study
- 21 countries from 5 continents, (Iqbal et al., 2021)

European Studies
- Sweden (Bellavia et al., 2016)
- 10 European countries (Rohmann et al., 2013)

Asian Studies
- Japan, Male (Saito et al., 2020)
- Japan, Female (Saito et al., 2020)
- China, Male (Takata et al.,2013)
- China, Female (Takata et al., 2013)

North American Studies
- USA (Kappeler et al., 2013)
- USA, Male (Pan et al., 2012)
- USA, Female (Pan et al., 2012)

Axes: Relative Risk (y) vs Unprocessed Red Meat Intake (g/d) (x)

THE LANCET

36-fold higher estimate of deaths attributable to red meat intake in GBD 2019: is this reliable?

Alice V Stanton, Frédéric Leroy, Christopher Elliott, Neil Mann, Patrick Wall, Stefaan De Smet

Key Questions

- **Where are the peer-reviewed publications of their updated or new systematic reviews**, which;
  - Address the 27 item PRISMA Statement and the 20 item GATHER Statement checklists?
  - Provide the evidence for the changing of the red meat TMREL from 22.5g/day to 0g/day?
- Have the **additional deaths and illnesses, from iron deficiency anaemia, elderly fragility, child and maternal malnutrition,** that would result from imposition of a red meat TMREL of zero been included in the GBD 2019 estimates?

THE LANCET

36-fold higher estimate of deaths attributable to red meat intake in GBD 2019: is this reliable? – Author's reply

Christopher J L Murray on behalf of the GBD Risk Factors Collaborators

Admission of Errors

- "Clear protective relationship between red meat intake and haemorrhagic stroke"
- *"No evidence supporting a relationship between red meat consumption & sub-arachnoid haemorrhage."*
- "The strength of evidence regarding the relationship between red meat and various outcomes - including ischaemic heart disease - is relatively weak."
- *"Setting of the red meat TMREL to zero in the GBD 2019 analysis is not correct."*
- "Estimates of attributable deaths for red meat will be reduced in all future GBD analyses."

Immediate correction of all errors of fact is mandatory according to Lancet's guidelines, Committee on Publication Ethics (COPE) & International Committee of Medical Journal Editors (ICMJE).

Key Questions Unanswered

- GBD Collaborators unable/unwilling to provide peer-reviewed published evidence to substantiate their new systematic reviews - *Professor Murray has since confirmed that GBD 2019 is not PRISMA compliant.*
- GBD Collaborators do not intend to include the totality of nutritional effects of red meat in their analyses

THE LANCET

Troubling assumptions behind GBD 2019 on the health risks of red meat

Vanessa L Z Gordon-Dseagu, Martin J Wiseman, Kate Allen, Judy Buttriss, Christine Williams

"We support Stanton and colleagues' call for **further clarification, justification, or reconsideration of the TMREL of zero for unprocessed red meat** selected by GBD in their latest estimates."

"The **increase in the estimated burden appears implausible**, and the **lack of transparency undermines the authority** of the GBD estimates."

"**Neither WCRF nor other international organisations recommend complete avoidance of meat**"

"The absence of an explicit rationale for the assumptions is **troublesome**, **unsupported by the evidence**, and **unrealistic**.

Academy of Nutrition Sciences & World Cancer Research Fund

Considerable Media & Scientific Interest

Irish Farmers Journal

Leading scientists challenge findings that red meat is harmful

Farming Independent

Scientists challenge data linking red meat to health risks

THE GROCER   MEAT
Growing concerns over widely-used Global Burden of Disease meat data
By Kevin White   4 March 2022

agriland.ie

IFA contacts international bodies on red meat data concerns

The Sunday Times

Valerie Flynn August 28th 2022

'Serious errors' in research linking deaths to red meat'

Scientists claim a study ignored nutritional benefits and have called on The Lancet to correct or retract the findings

The **World Cancer Research Fund** and the **Academy of Nutrition Sciences** have expressed their support for RCSI, UCD and QUB scientists who uncovered the serious errors in the Global Burden of Disease (GBD) study.

SOCIAL MEDIA   1,782
- Tweets   1,235
- Facebook   547

Gordon H. Guyatt

@GuyattGH

Latest estimates of deaths from #redmeat by Global Burden Disease Study 36 times greater than 2017. Red meat may not kill at all, but something seriously wrong in estimate.

Calls for evidence remain unanswered even in latest author's response – big problem

OPEN
Health effects associated with consumption of unprocessed red meat: a Burden of Proof study

Haley Lescinsky[1], Ashkan Afshin[1,2], Charlie Ashbaugh[1], Catherine Bisignano[1], Michael Brauer[1,2,3], Giannina Ferrara[1], Simon I. Hay[1,2], Jiawei He[1,2], Vincent Iannucci[1], Laurie B. Marczak[1], Susan A. McLaughlin[1], Erin C. Mullany[1], Marie C. Parent[1], Audrey L. Serfes[1], Reed J. D. Sorensen[1], Aleksandr Y. Aravkin[1,2,4], Peng Zheng[1,2] and Christopher J. L. Murray[1,2]
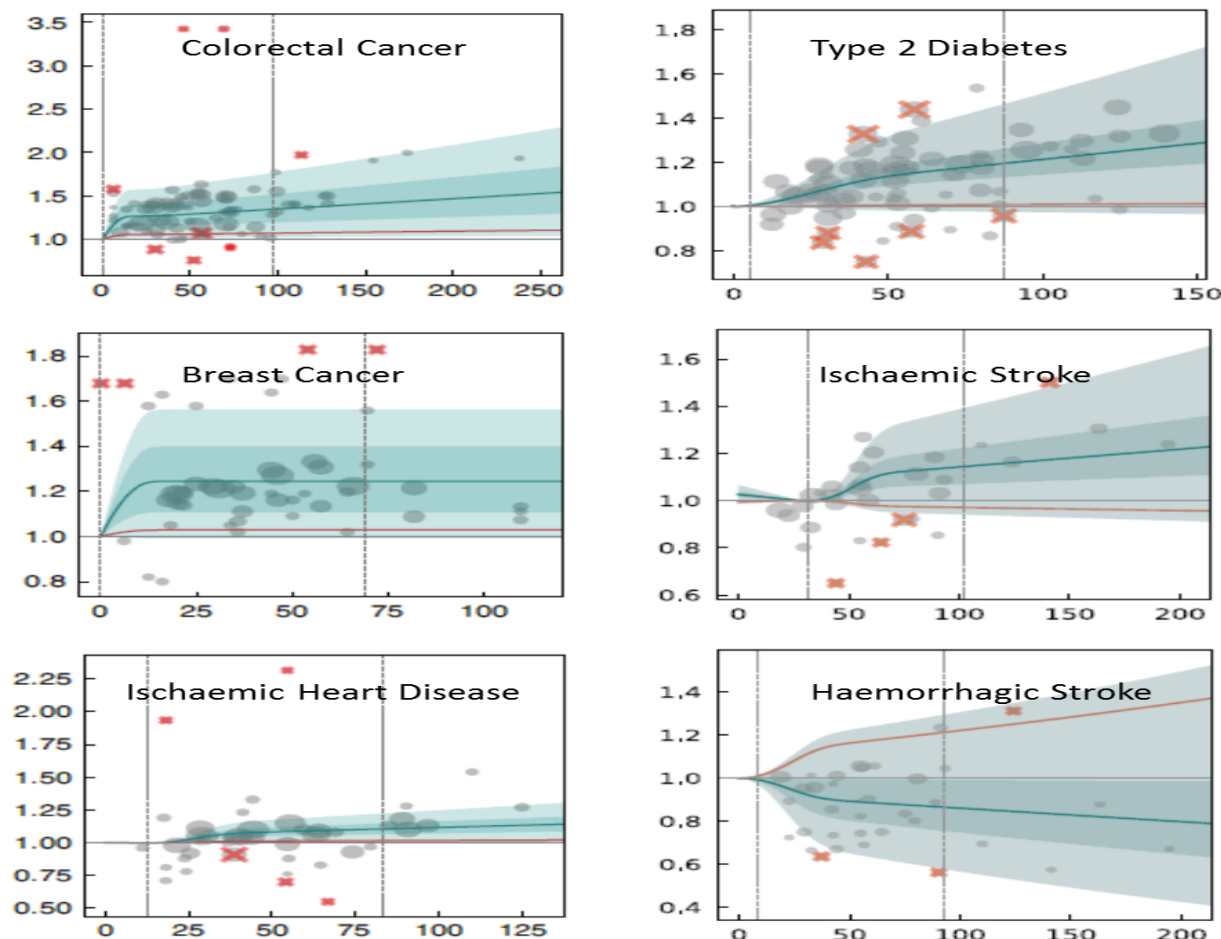
Very Different Conclusions from GBD Collaborators Concerning Risks of Red Meat

- "No or very weak evidence that unprocessed red meat is associated with any increased risk."

- "Evidence insufficient to make any strong or conclusive recommendations."

- "95% uncertainty interval for the TMREL for unprocessed red meat is very wide (0-200g/d)." – optimal intake could be as high as 200g per day.

Consequences of Non-Correction / Retraction of GBD Risk Factors Study 2019

January 2023
2,147 Scientific Paper Citations

The 2022 report of the *Lancet* Countdown on health and climate change: health at the mercy of fossil fuels
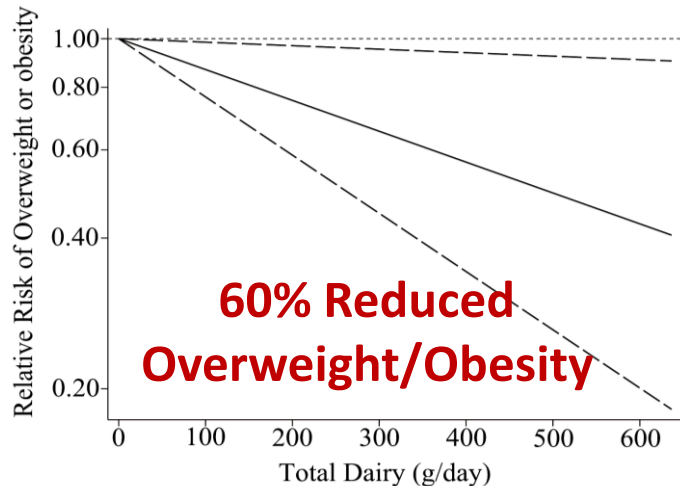
Co-chairs of the Lancet Countdown
Anthony Costello, Hugh Montgomery (University College London) & Peng Gong (University of Hong Kong)
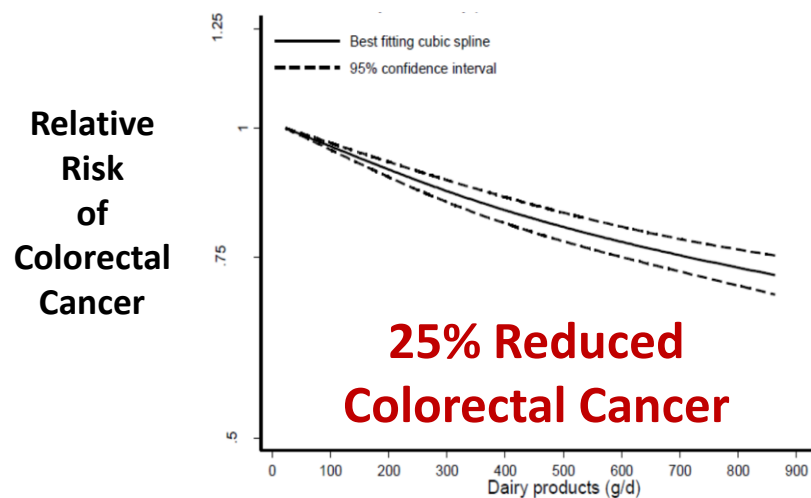
HEADLINE FINDING

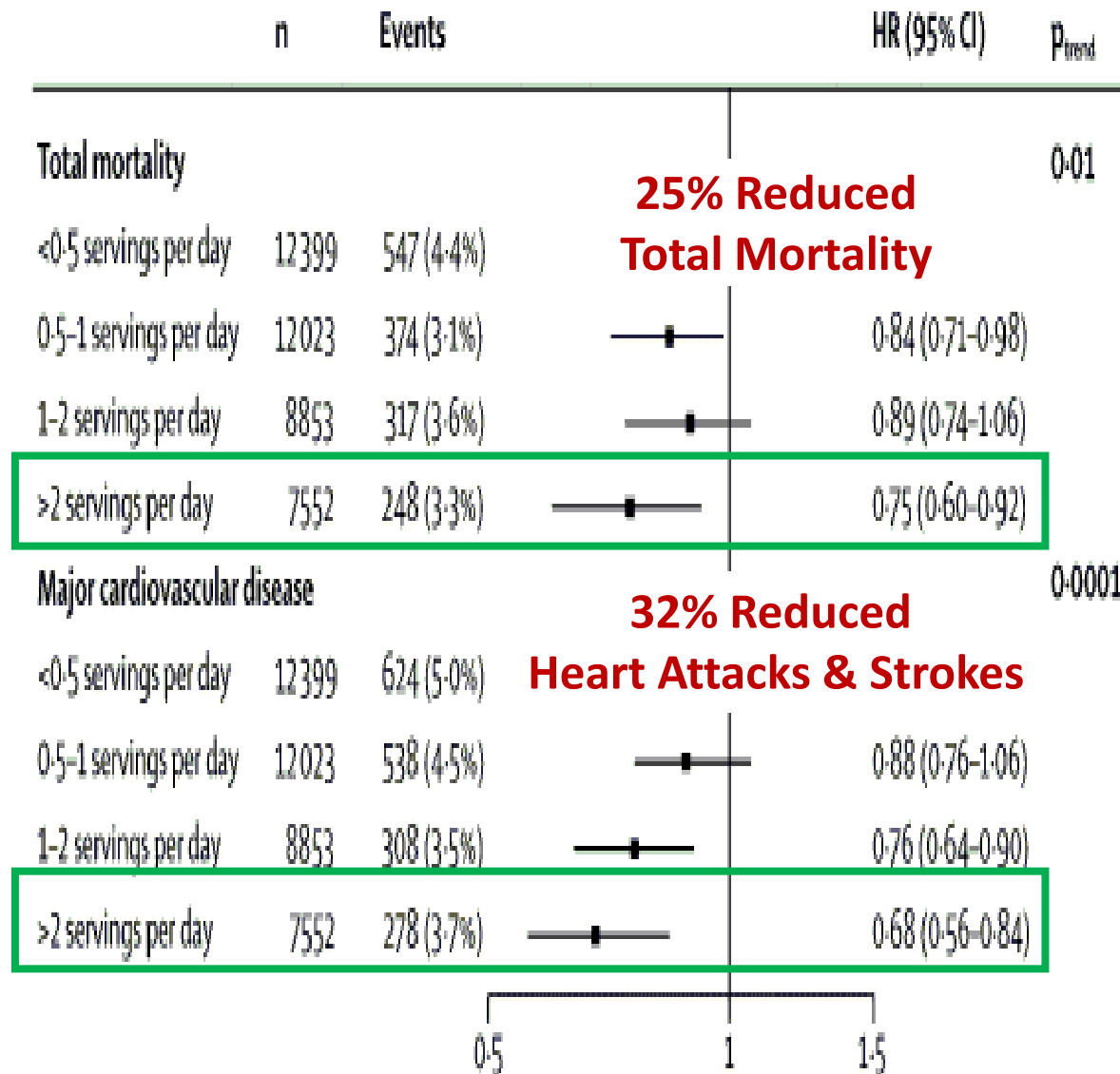In 2019 **two million deaths** were related to **red and processed meat and dairy** consumption.

Two or more Full-Fat Dairy Servings/Day Associated With:

60% Reduced Overweight/Obesity

Feng et al, Adv Nutr 2022; 13 (6): 2165–2179.

Relative Risk of Colorectal Cancer

25% Reduced Colorectal Cancer

World Cancer Research Fund/ American Institute for Cancer Research. Continuous Update Project Expert Report 2018.

	n	Events		HR (95% CI)	P_trend
Total mortality					0·01
<0·5 servings per day	12399	547 (4·4%)			
0·5–1 servings per day	12023	374 (3·1%)		0·84 (0·71–0·98)	
1–2 servings per day	8853	317 (3·6%)		0·89 (0·74–1·06)	
>2 servings per day	7552	248 (3·3%)		0·75 (0·60–0·92)	
Major cardiovascular disease					0·0001
<0·5 servings per day	12399	624 (5·0%)			
0·5–1 servings per day	12023	538 (4·5%)		0·88 (0·76–1·06)	
1–2 servings per day	8853	308 (3·5%)		0·76 (0·64–0·90)	
>2 servings per day	7552	278 (3·7%)		0·68 (0·56–0·84)	

25% Reduced Total Mortality

32% Reduced Heart Attacks & Strokes

Dehghan M et al. Association of dairy intake with cardiovascular disease and mortality in 21 countries from five continents (PURE): a prospective cohort study. Lancet 2018

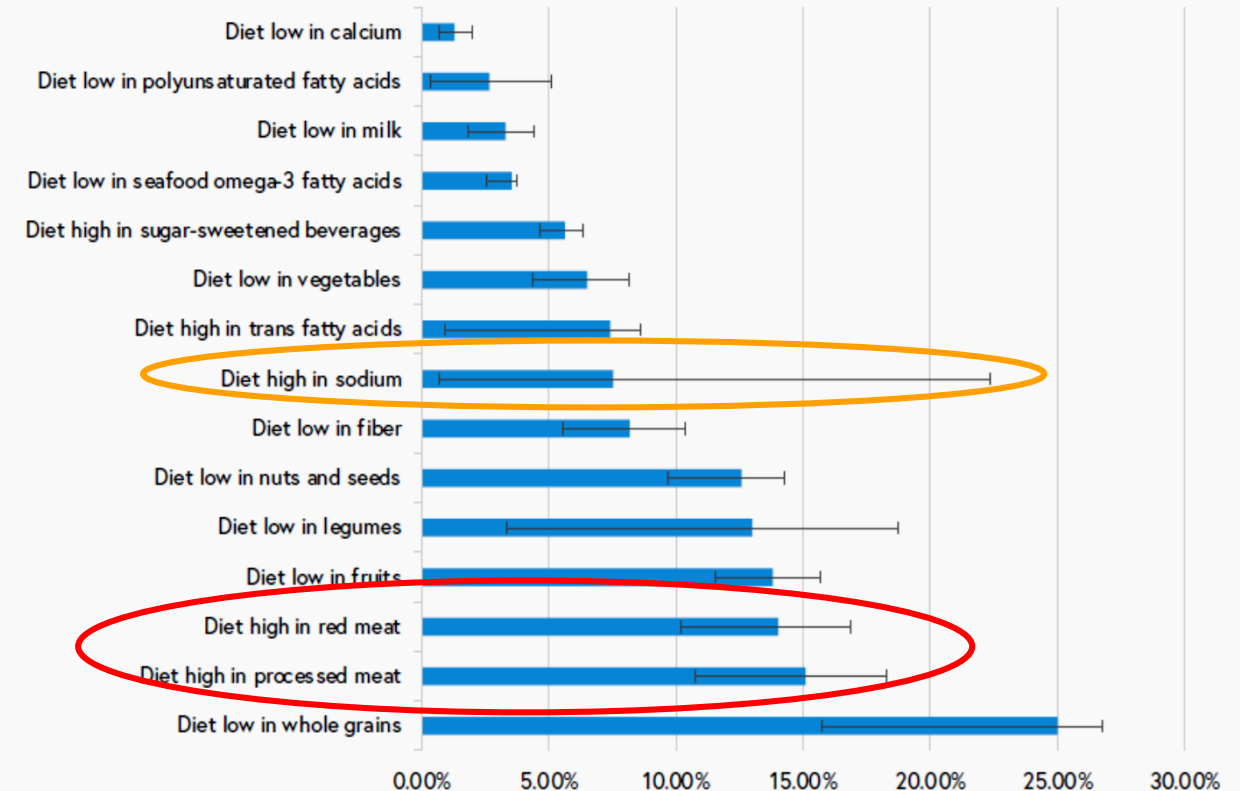# Consequences of Non-Correction/ Retraction of GBD Risk Factors Study 2019

January 2023
40 Policy Document Citations

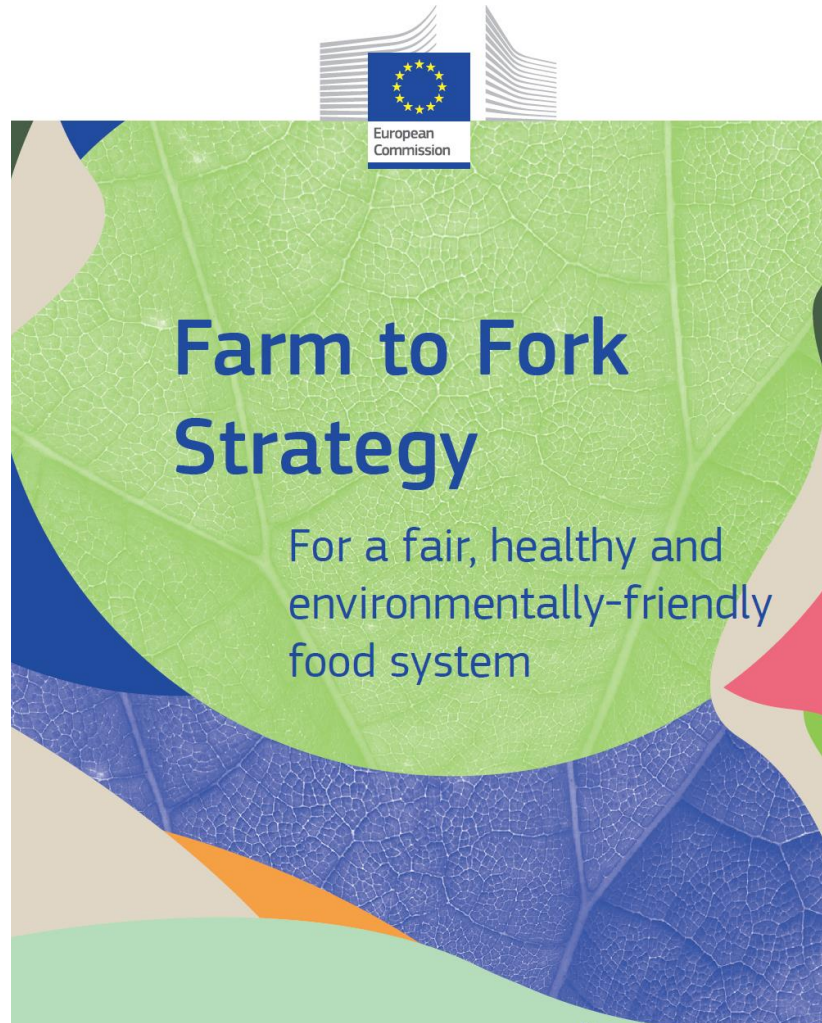## The National Food Strategy - The Evidence – July 2021.

The dietary risk factors for all-cause DALYs

PERCENTAGE DIETARY DALYs (ALL CAUSES)

SOURCE: Global Burden of disease, 2019 data. Accessed March 2021. GBD Results Tool | GHDx (healthdata.org)

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The National Food Strategy: The Evidence - July 2021

Will the Non-Correction/Retraction of the GBD Risk Factors Study 2019 Have Consequences for EU Policies?

Farm to Fork Strategy

For a fair, healthy and environmentally-friendly food system

Europe's Beating Cancer Plan

Communication from the commission to the European Parliament and the Council

Key Take Home Messages

- Scientists & policy-makers should be extremely wary of global health estimates that;
  - Are not rigorously & transparently evidence-based.
  - Ignore the protections against nutritional deficiencies & chronic diseases afforded by animal-source foods.
- The relationship between red meat & disease burden is mirror-image J-shaped;
  - Excess red meat consumption (>4 portions or 500g / week) may be associated with small (5-15%) increases in colon cancer.
  - Insufficient red meat consumption (<2 portions / week) is associated with very large (100-1000%) increasess in anaemia, stunted childhood growth and cognition, osteoporosis and sarcopenia.
- The majority of the world's population are not eating enough dairy nor omega-3-PUFA rich foods.
- Consumption of nutrient-rich animal-sourced foods, in appropriate evidence-based quantities, should continue to be included in national and international guidelines for a healthy, balanced diet.

RCSI UNIVERSITY OF MEDICINE AND HEALTH SCIENCES

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Beyond Nutrition

Disease Burden — Red Meat Intake

Disease Burden — Milk/Dairy Intake

Disease Burden — Long-Chain Omega-3-PUFA Intake

Current worldwide average intake