

What Do We Really Know about Animal Source Foods & Chronic Disease?

Alice V. Stanton

Royal College of Surgeons in Ireland



Disclosures

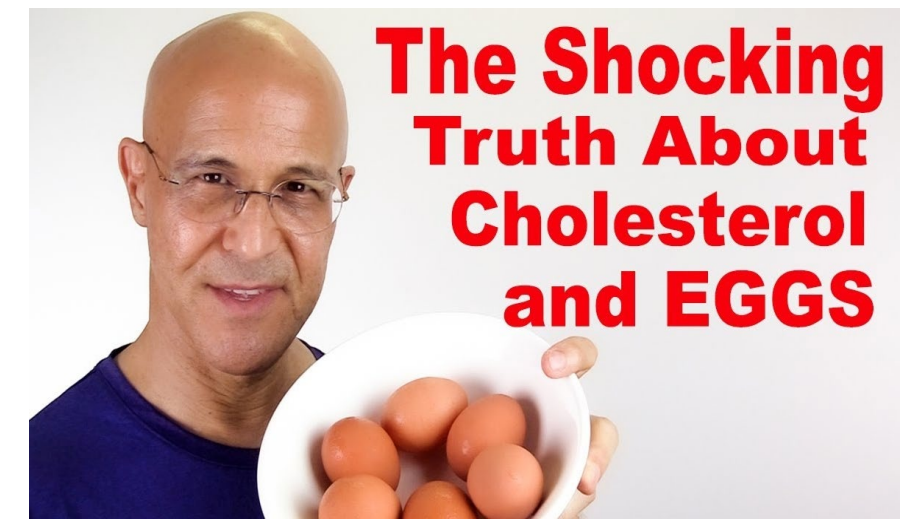
Consultant in the Past 5 Years for;

- Devenish Nutrition
- Humanitiv

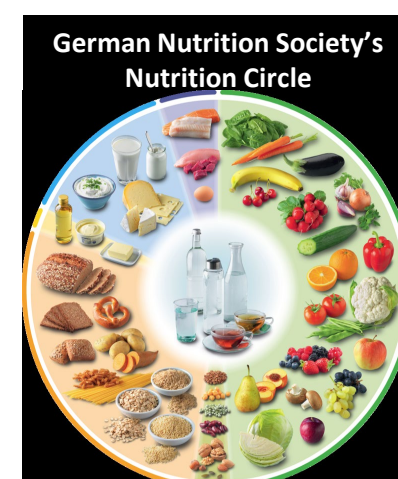
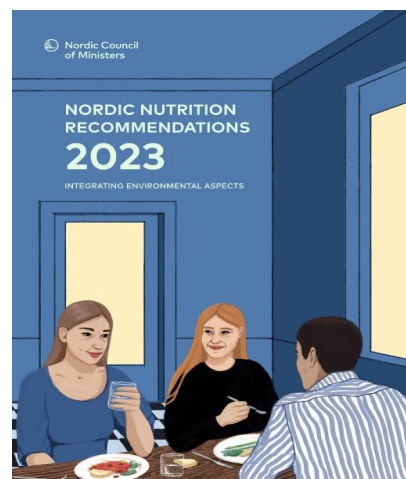
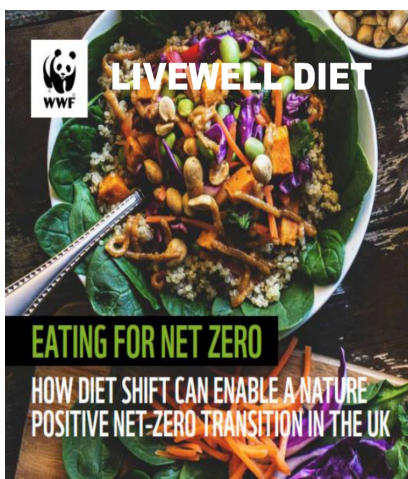
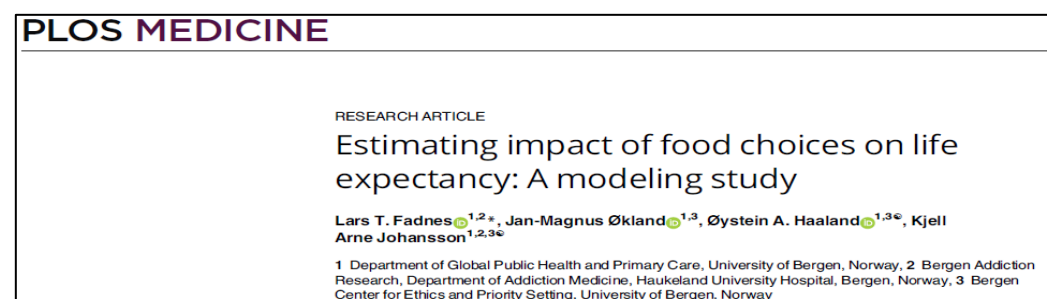
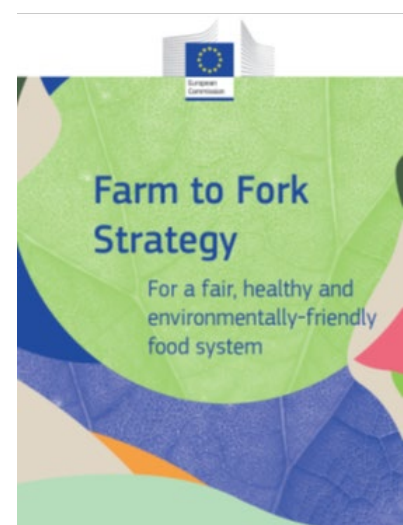
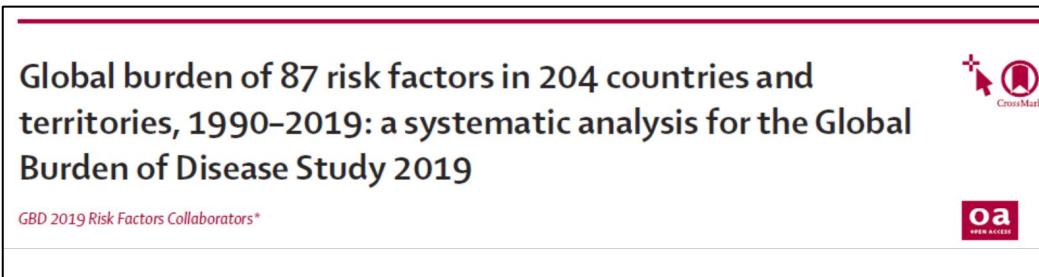
Current Non-Remunerated Member of;

- Irish Climate and Health Coalition,
- Council on High Blood Pressure of the Irish Heart Foundation,
- World Action against Salt, Sugar, and Health,
- Meat Technology Ireland,
- Scientific Council of World Farmers Organisation.

Newspaper Headlines & Articles Are They Reliable???

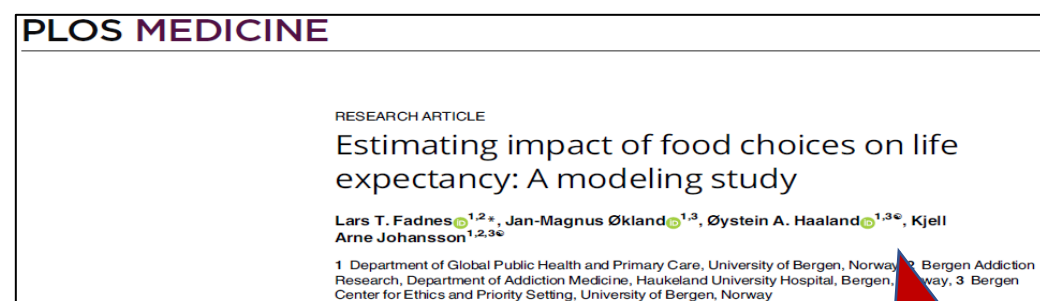
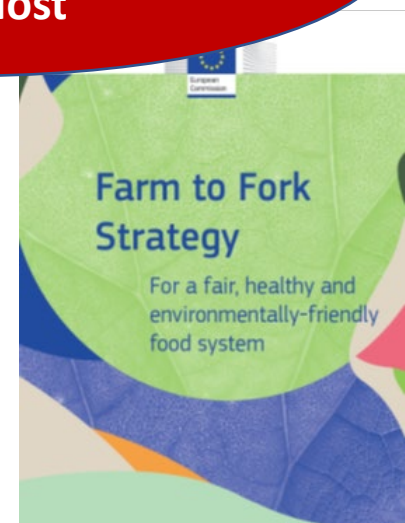
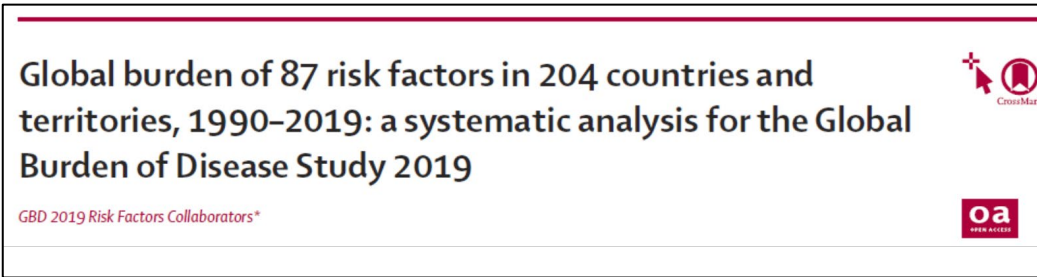


Many Scientific Publications, Policy Documents & Dietary Guidelines Also Recommend Dramatic Reductions or Total Exclusion of Animal-Sourced Foods from the Human Diet.

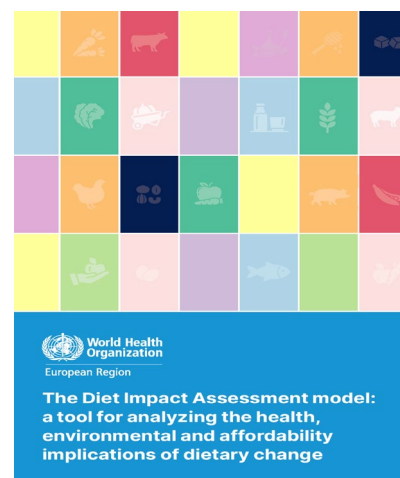


Many Scientific Publications, Policy Documents & Dietary Guidelines Also Recommend Dramatic Reductions or Total Elimination of Animal-Sourced Foods from the Human Diet

Each Frankfurter Sandwich eaten results in 35 minutes of life lost



"In 2020, 1.9 million deaths were associated with excessive consumption of dairy, and red & processed meat"



Reducing dairy intake from 800 to 200 mls/day increases life expectancy by one year.



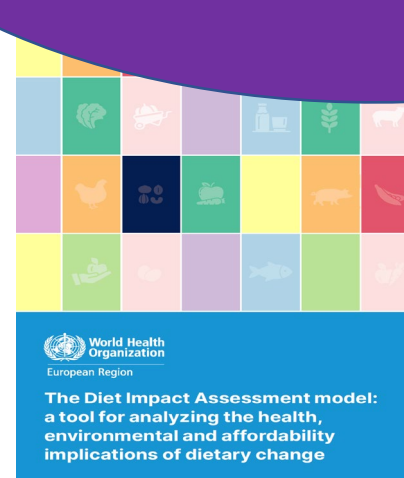
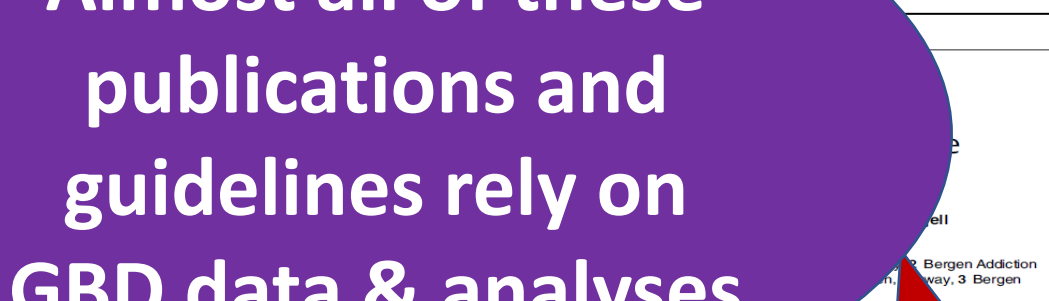
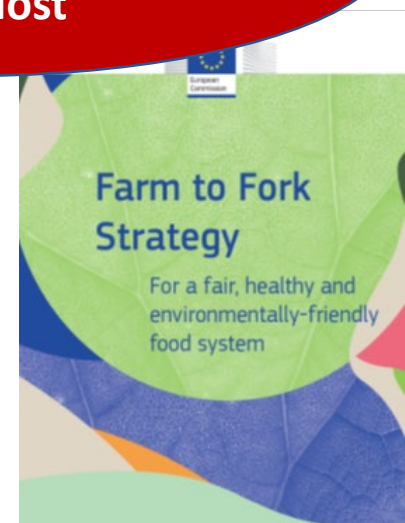
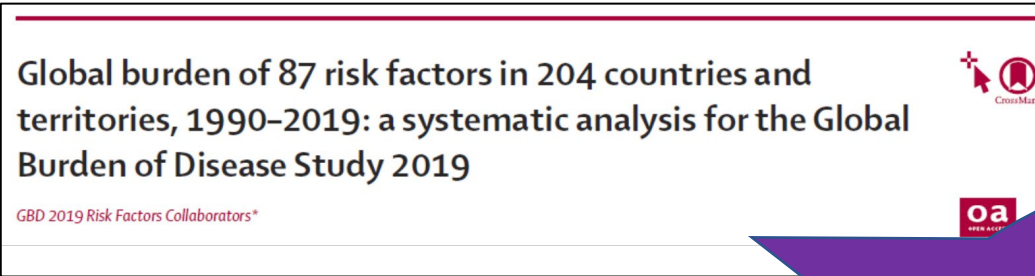
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Each Frankfurter Sandwich eaten results in 35 minutes of life lost

Almost all of these publications and guidelines rely on GBD data & analyses

"In 2020, 1.9 million deaths were associated with excessive consumption of dairy, and red & processed meat"

Reducing dairy intake from 800 to 200 mls/day increases life expectancy by one year.



Dietary Risks and Deaths

GBD 2017 Analysis

Versus

GBD 2019 Analysis

Christopher JL Murray & GBD 2017 Diet Collaborators. Lancet 2019

Institute for Health Metrics and Evaluation (2018) GBD Compare. Seattle, WA:

IHME, University of Washington. <http://vizhub.healthdata.org/gbd-compare>.

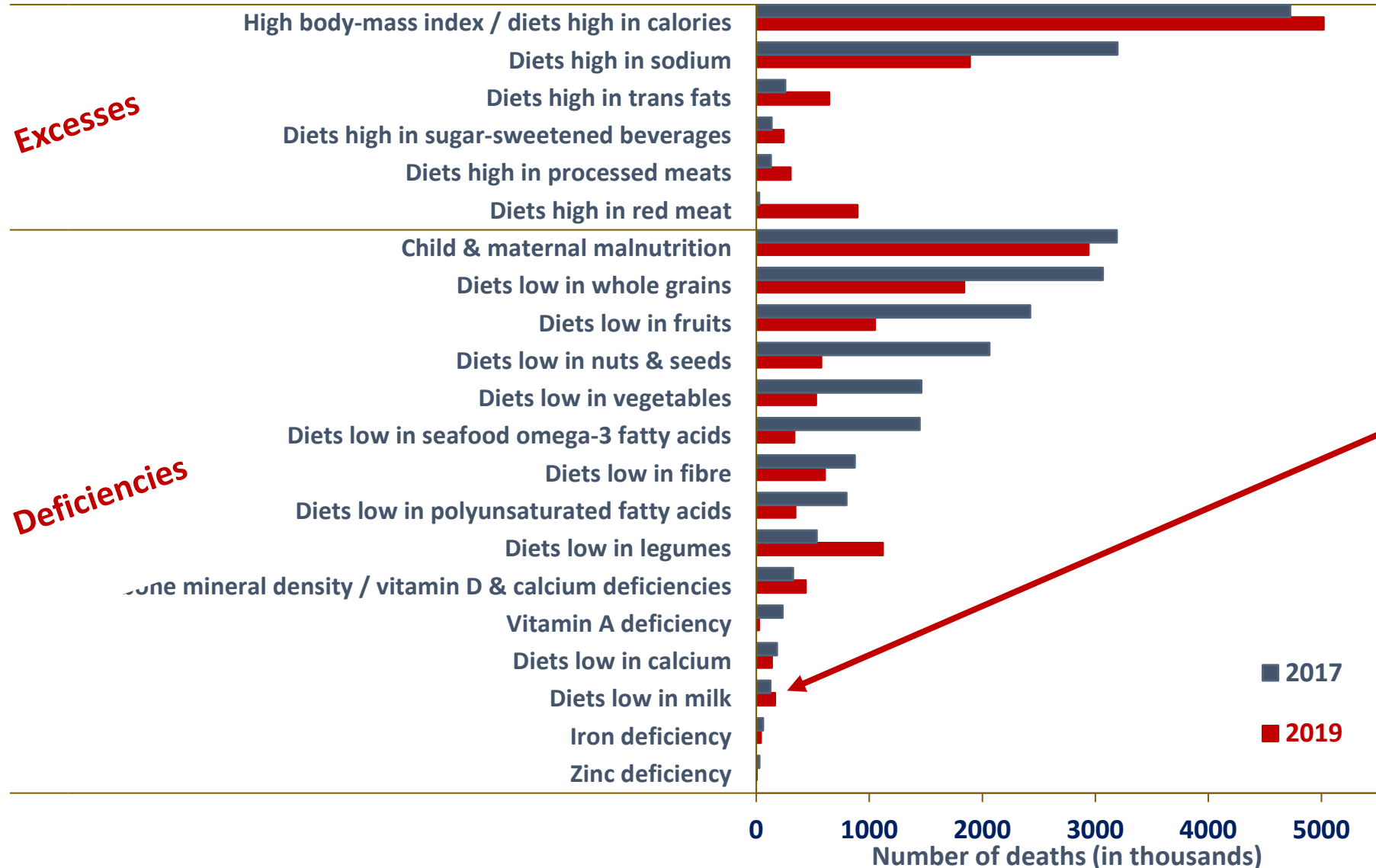
Christopher JL Murray et al. Global burden of risk factors in 204

countries and territories, 1990–2019: a systematic analysis for the Global

Burden of Disease Study 2019 Lancet 2020

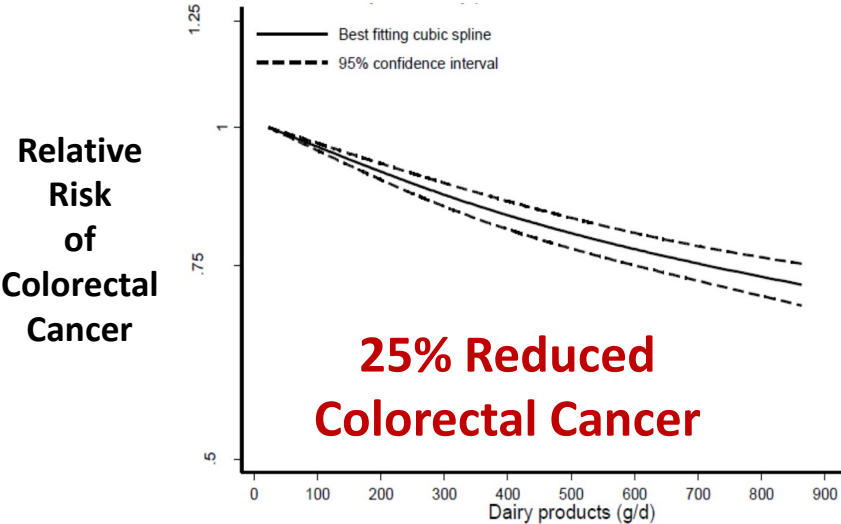
THE LANCET

October 2020

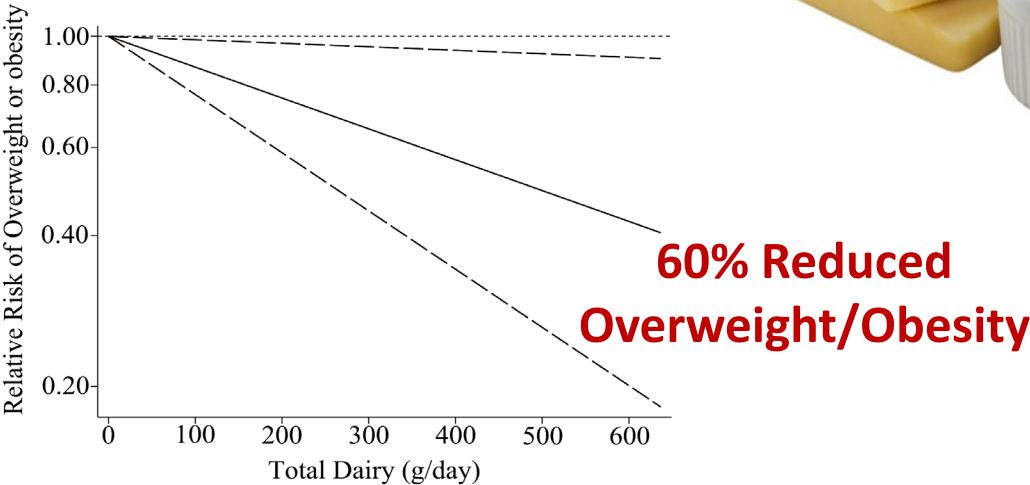


**Benefits of
Milk/Dairy
Underestimated in
both GBD 2017 &
2019 Analyses**

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



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



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

| | n | Events | | HR (95% CI) | P _{trend} |
|------------------------------|-------|------------|-------------------------------------|------------------|--------------------|
| Total mortality | | | | | 0.01 |
| | | | 25% Reduced Total Mortality | | |
| <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 |
| | | | 32% Reduced Heart Attacks & Strokes | | |
| <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) | |

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

THE LANCET

GBD 2017 Analysis

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Institute for Health Metrics and Evaluation (2018) GBD Compare. Seattle, WA:

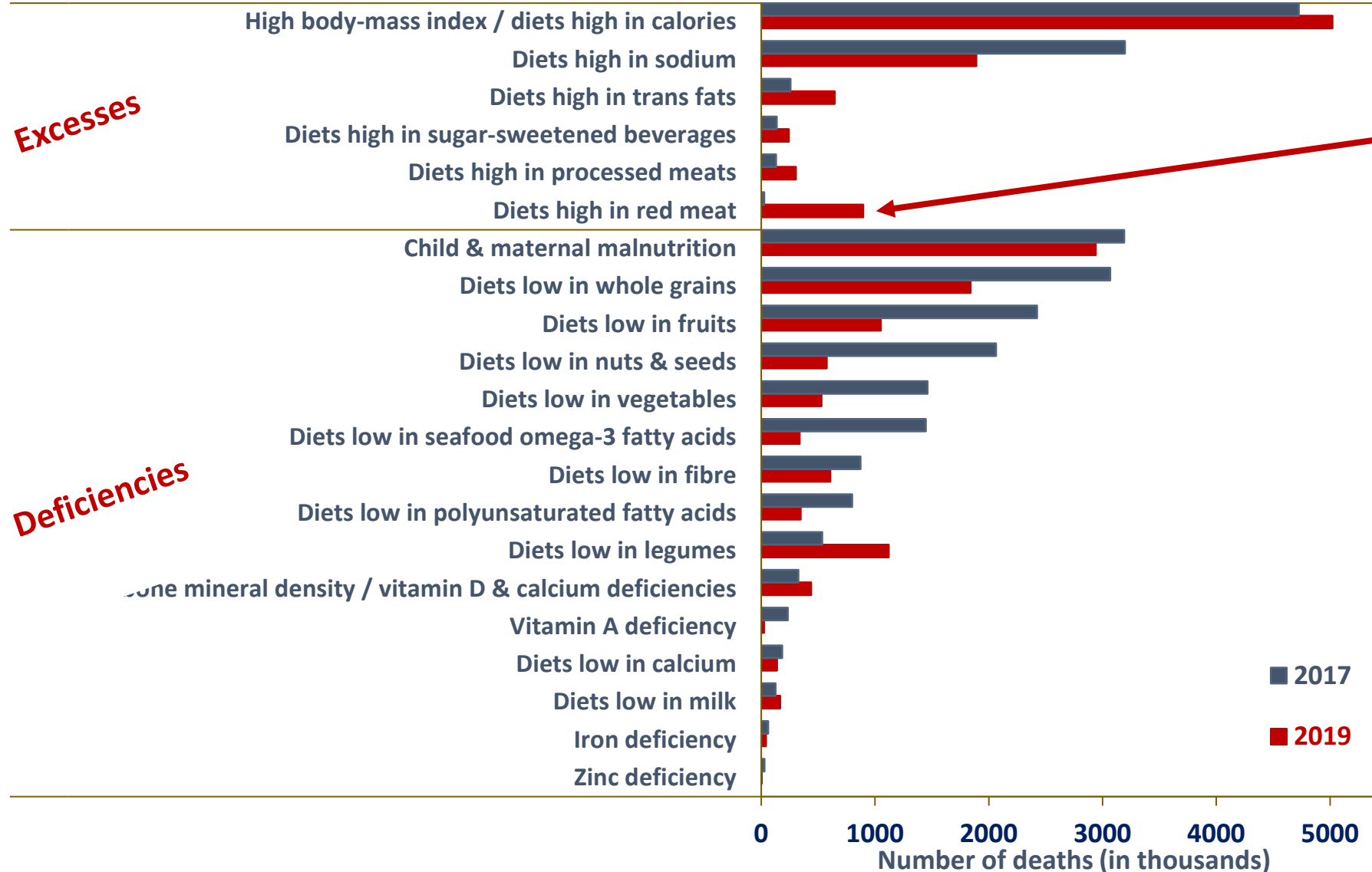
IHME, University of Washington. <http://vizhub.healthdata.org/gbd-compare>.

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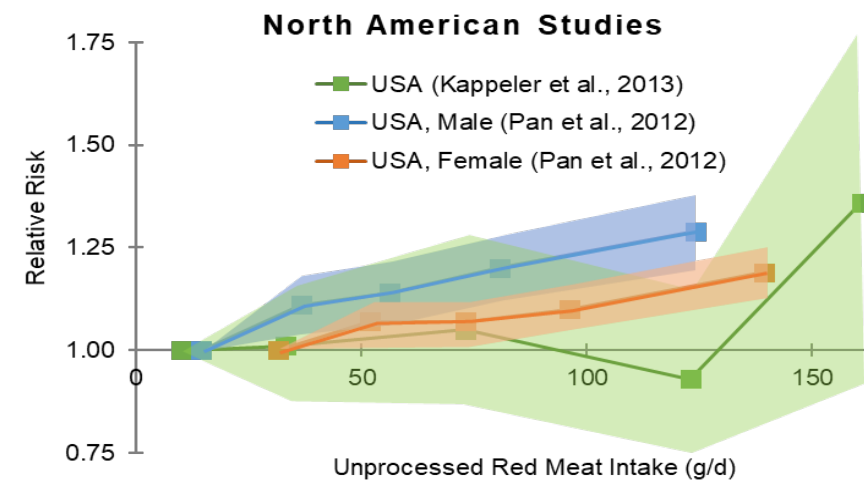
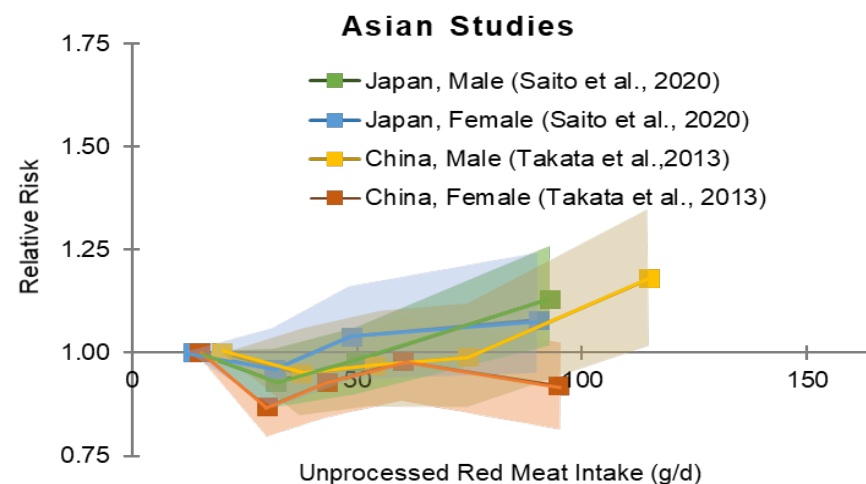
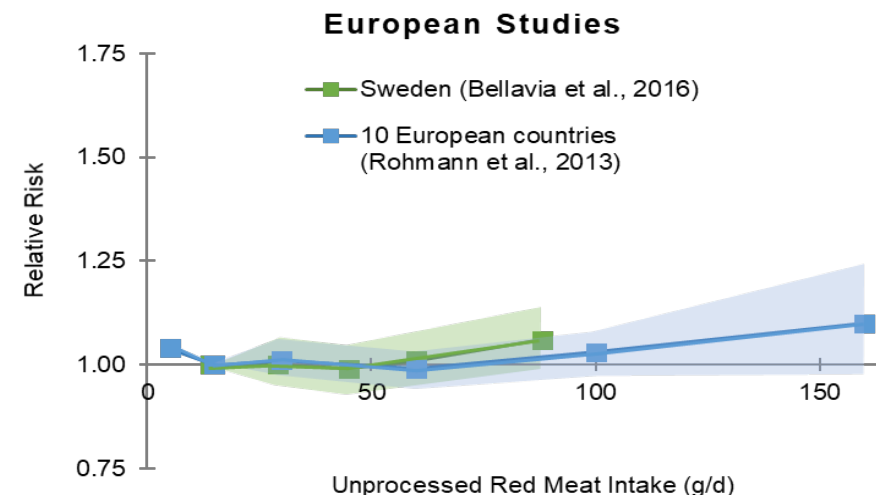
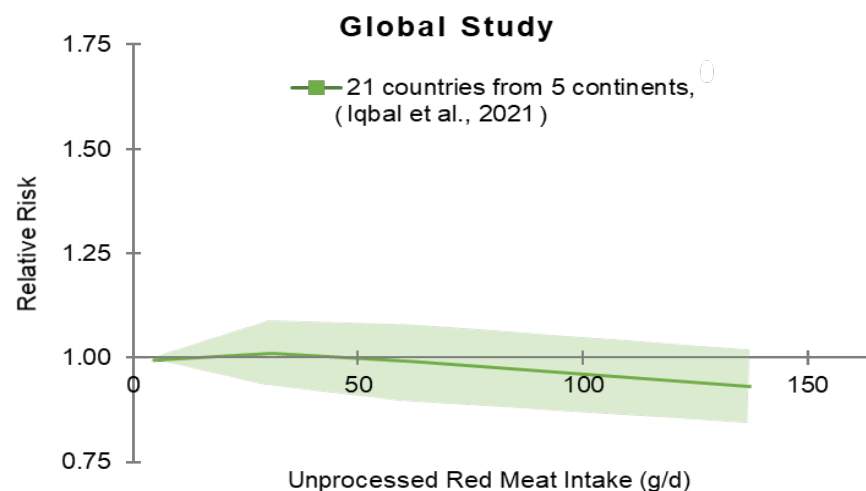
Burden of Disease Study 2019 Lancet 2020

October 2020



**Deaths Attributed
to Red Meat
Consumption
Increased 36-fold
in GBD 2019,
from
25,000
to
896,000.**

Relative Risk of Red Meat Consumption for All-Cause Mortality from Large Published Cohort Studies



Bradley Johnston, Stefaan De Smet, Frédéric Leroy, Andrew Mente, Alice Stanton.

Non-communicable disease risk associated with red and processed meat consumption—magnitude, certainty, and contextuality of risk?

Animal Frontiers 2023;13(2):19–27.

THE LANCET

February 2022

CORRESPONDENCE

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

*RCSI, Vrije Universiteit Brussel,
QUB, University of Melbourne,
UCD, Ghent University*

THE LANCET

April 2022

CORRESPONDENCE

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

*Institute for Health Metrics &
Evaluation, University
of Washington, Seattle*

Twitter

April 2022

[@GuyattGH](#)

[Professor Gordon Guyatt](#)
[McMaster University](#)



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

THE LANCET

August 2022

CORRESPONDENCE

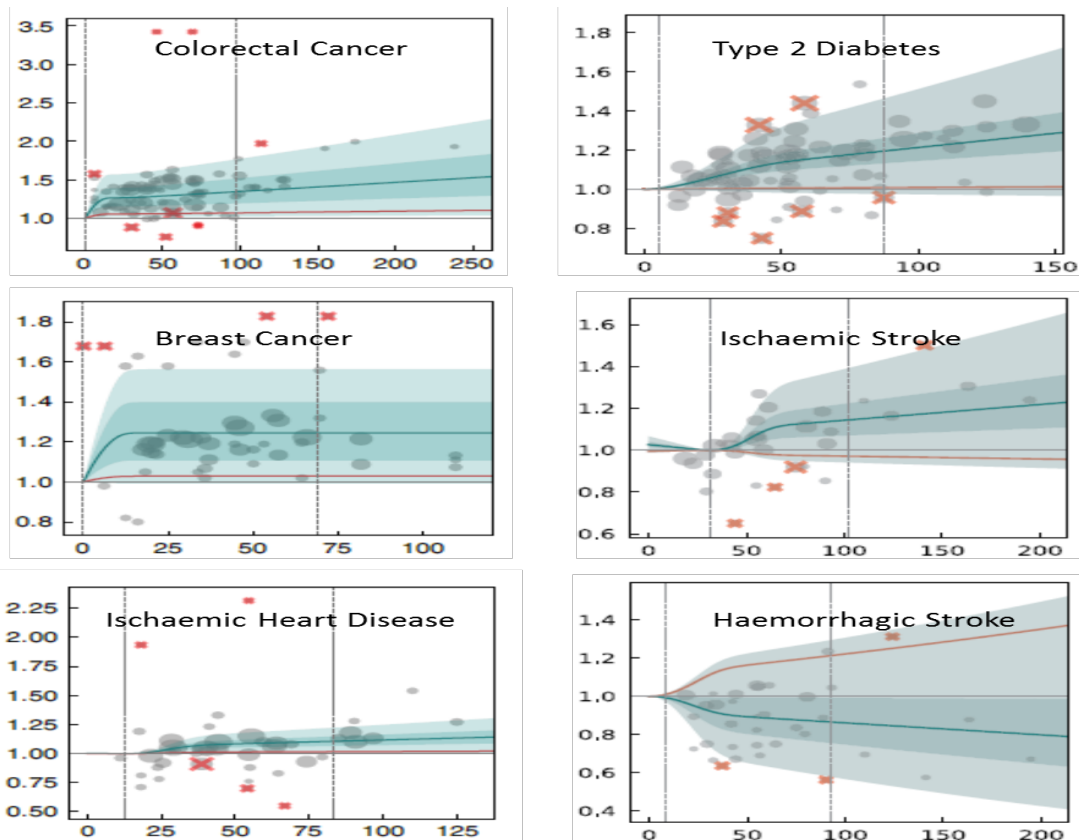
Troubling assumptions behind GBD 2019 on the health risks of red meat

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

*Academy of Nutrition Sciences &
World Cancer Research Fund*

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

Haley Lescinsky¹, Ashkan Afshin^{1,2}, Charlie Ashbaugh¹, Catherine Bisignano¹, Michael Brauer^{1,2,3}, Giannina Ferrara¹, Simon I. Hay^{1,2}, Jiawei He^{1,2}, Vincent Iannucci¹, Laurie B. Marczak¹, Susan A. McLaughlin¹, Erin C. Mullany¹, Marie C. Parent¹, Audrey L. Serfes¹, Reed J. D. Sorensen¹, 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.”

“Optimal intake of unprocessed red meat could be as high as 200g per day.”

2 Large Cohort Studies have Specifically Examined the Impacts of Red/Processed Meat Consumption as Part of a Healthy Diet

European Prospective Investigation into Cancer and Nutrition (EPIC)

Norat T et al. J Natl Cancer Inst 2005.

“No excess colorectal cancer risk in participants with high intakes of red and processed meats who also had high intakes of fibre and/or fish.”

Alberta’s Tomorrow Study

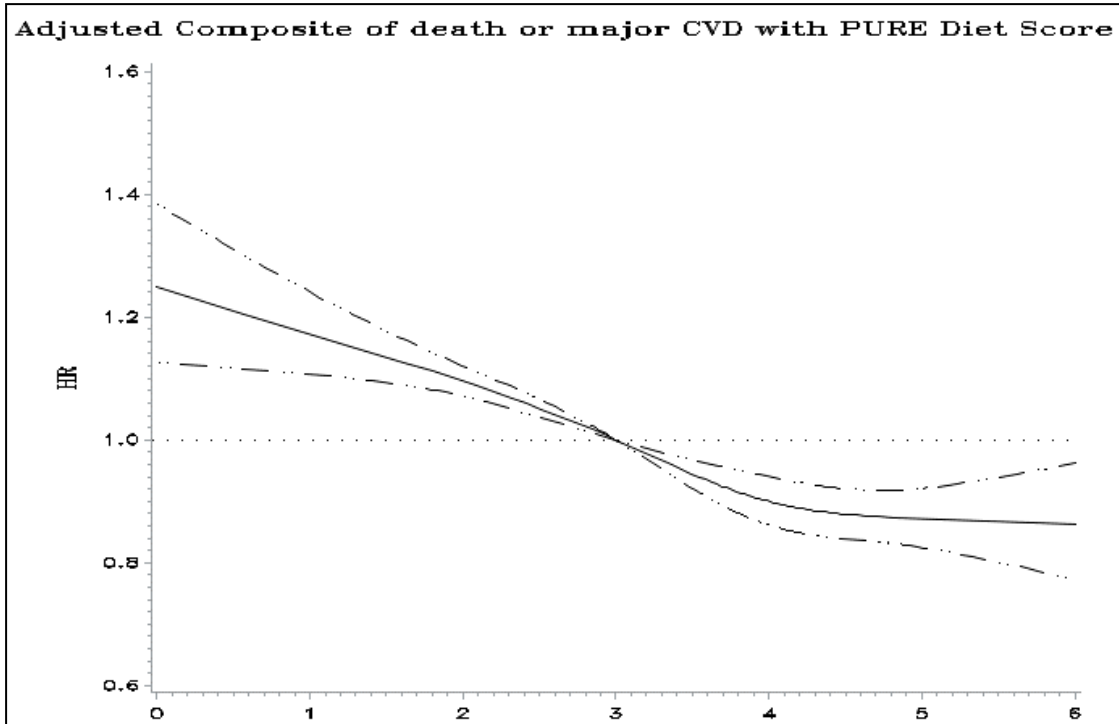
Maximova K et al. Nutrients 2020.

“Co-consumption of fruits, vegetables, whole grains and/or fibre reduces or eliminates any cancer risks associated with red and processed meat consumption”

Diet, Cardiovascular disease & mortality in 80 countries.

Mente A et al. Eur Heart J 2023.

Prospective Urban Rural Epidemiology (PURE) Study



- Each quintile higher PURE diet score associated with;
 - 8% lower risk of death,
 - 6% lower risk of major cardiovascular events.
- Each of the 6 foods made a similar protective contribution to the score.
- When unprocessed red meat was included in the PURE healthy diet score, the results were similar indicating that unprocessed red meat has a neutral effect on mortality and cardiovascular health.

Key Take Home Messages

- **WHO Definition of a Healthy Diet** - “A healthy diet helps to **protect** against **malnutrition** in all its forms, as well as against **non-communicable diseases**, including diabetes, heart disease, stroke and cancer.”
- **Dramatic reductions in Animal Source Foods**, as advised by many plant-based diets, will **worsen already prevalent micronutrient and protein deficiencies** worldwide.
- **Animal Source Foods and Chronic Diseases**
 - Any possible absolute adverse effects of red and processed meat consumption on non-communicable chronic diseases are very small and uncertain. Furthermore, they diminish greatly, or disappear completely, when consumed as part of a healthy diet.
 - Poultry meat and eggs appear to have no impact on non-communicable diseases.
 - Dairy and seafood are associated with protections against obesity, cardiovascular events, brain ill-health and some cancers.