



Eating Plants for Health

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About me/disclosures

Dietitian and Certified Lifestyle Medicine Professional

Education Lead of Plant-Based Health Professionals UK

Founder of plant:life nutrition

Vegan since 2018

<https://plantbasedhealthprofessionals.com>
<https://plantlifenutrition.co.uk/>
[@plantlifenutrition](#)





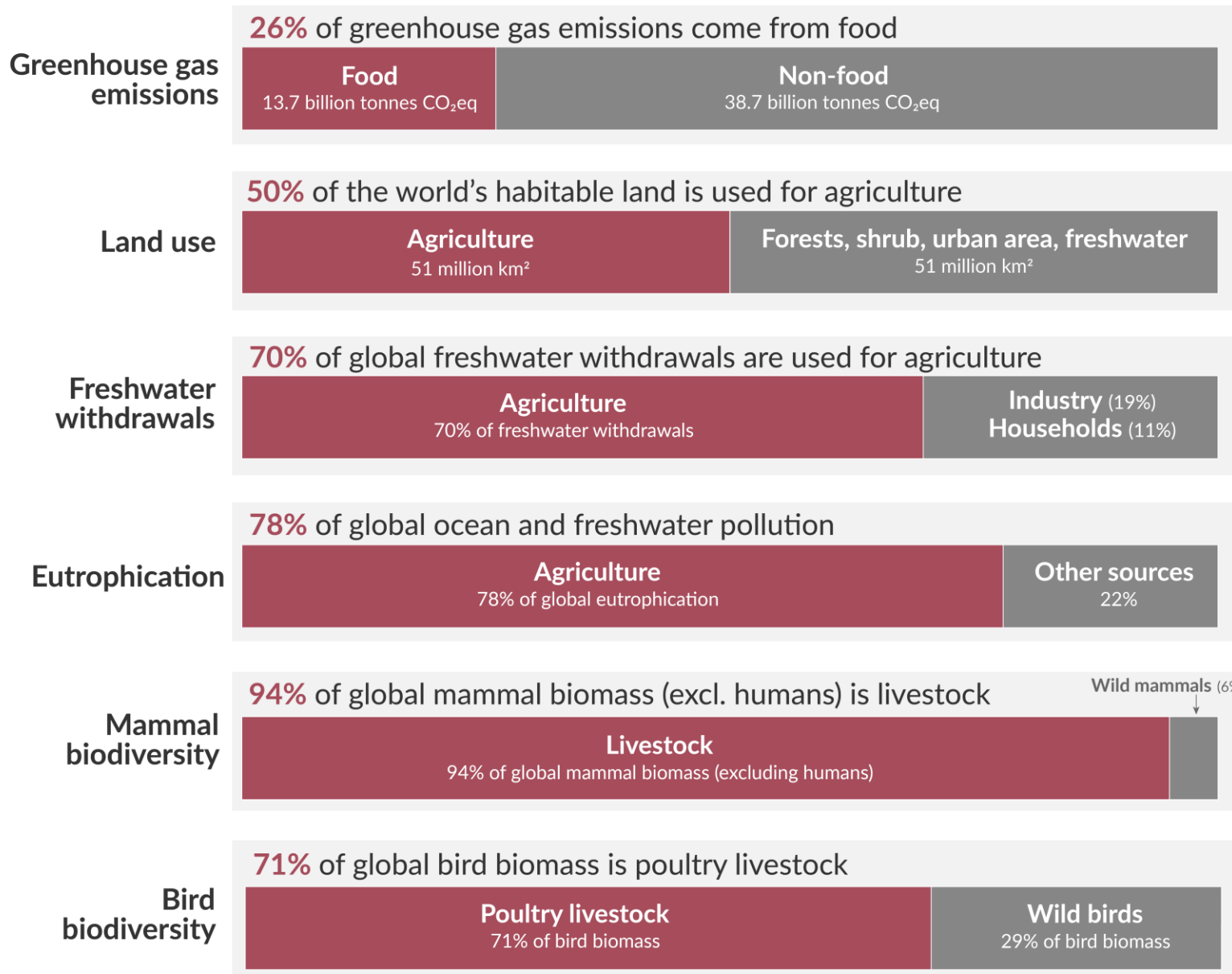
Outline

- Making a difference
- Whole food plant-based – what is it?
- Nutrition Essentials
- Supplements – what do I need?
- Type 2 diabetes and plant-based diets
- Take home tips

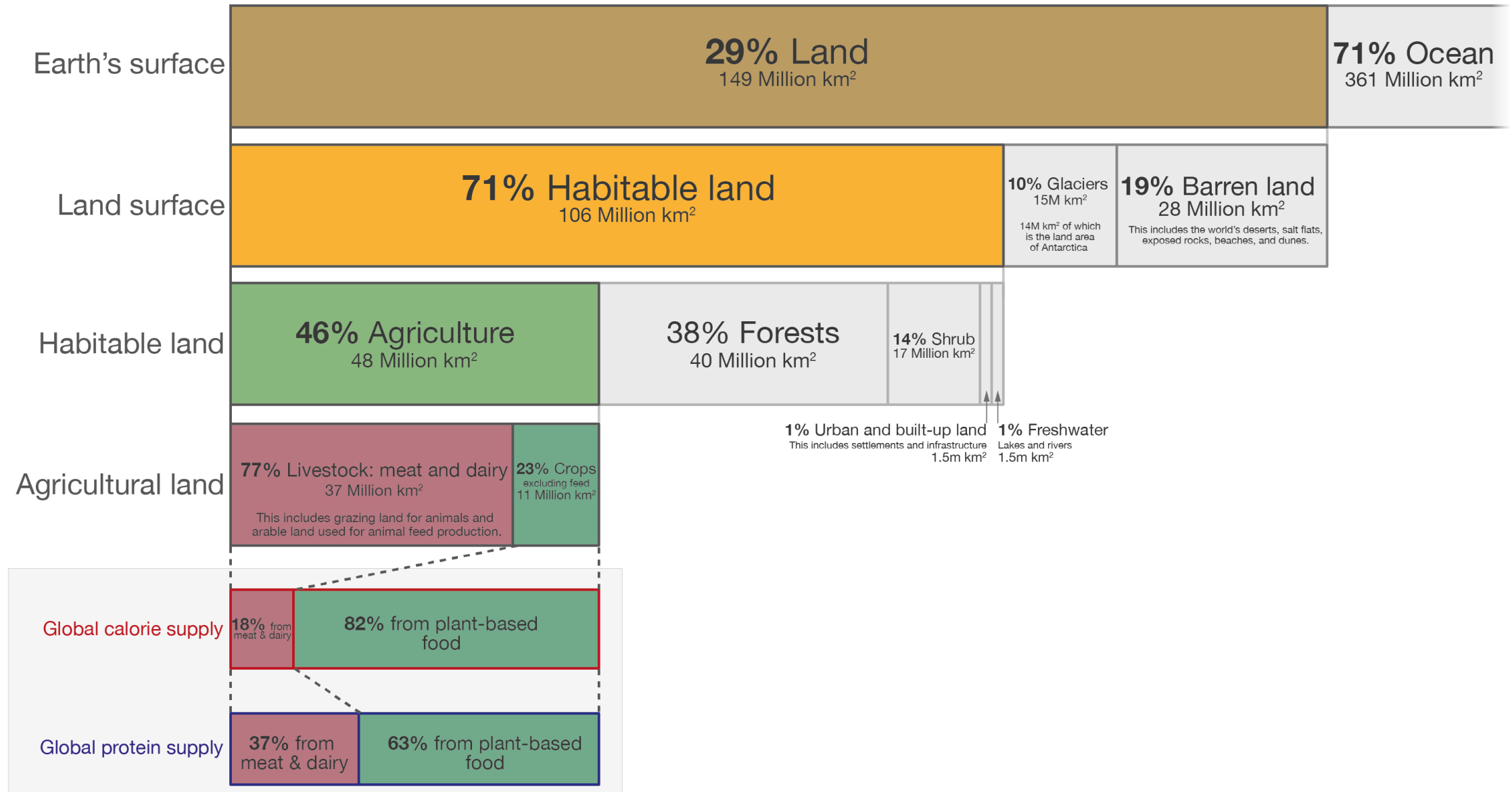
Your sphere
of influence



The environmental impacts of food and agriculture

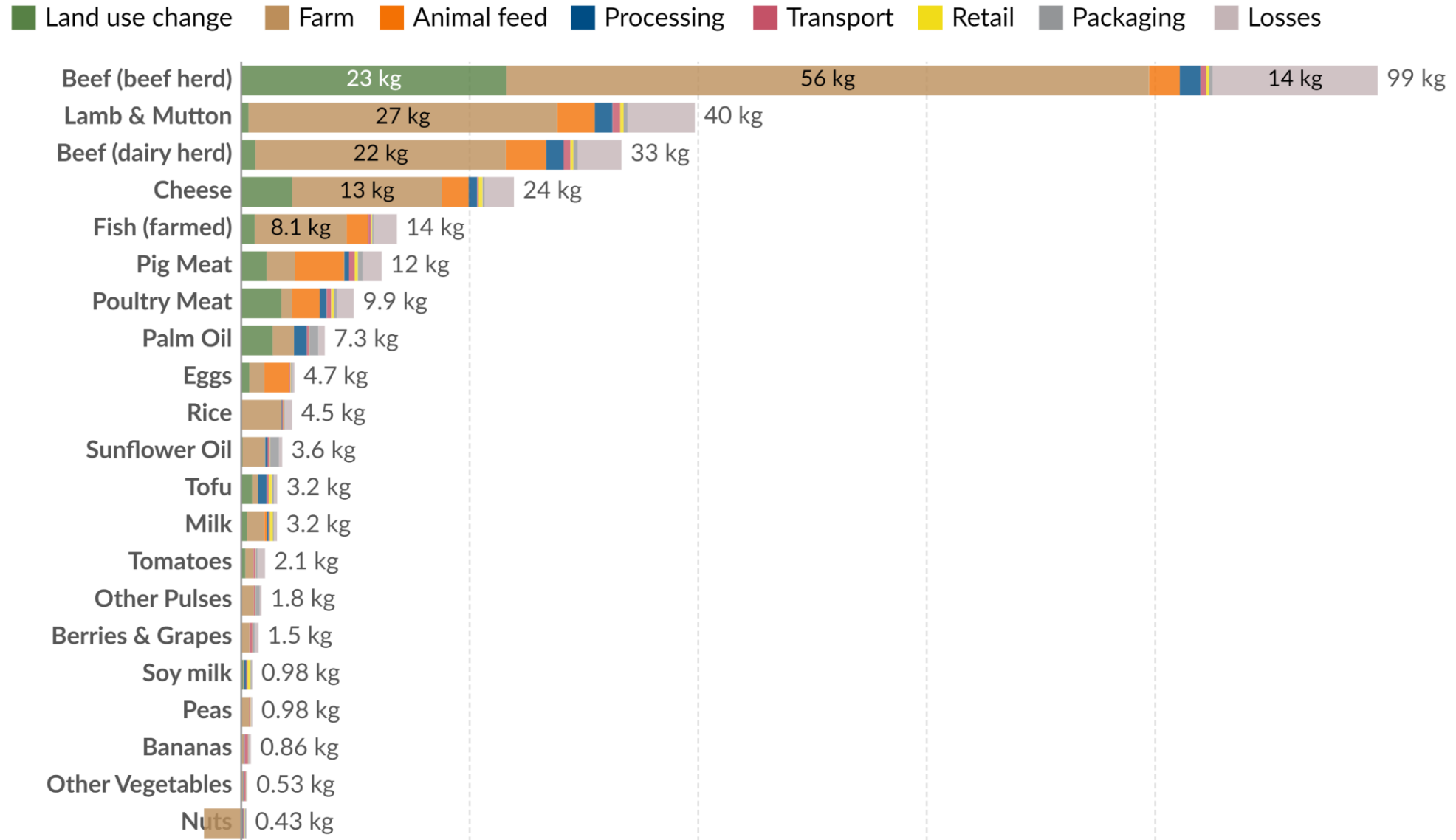


Global land use for food production



Food: greenhouse gas emissions across the supply chain

Greenhouse gas emissions¹ are measured in kilograms of carbon dioxide-equivalents (CO₂eq)² per kilogram of food.



Vegan vs. WFPB
– what's the
difference?

What are plant-based diets?

VEGAN EXCLUDES

Animal-derived products, such as:
Red and white meats, offal, fish, dairy, eggs, gelatine, and honey.
And non-food items such as fur, leather and wool.

WHOLE FOOD PLANT-BASED INCLUDES

Predominantly or exclusively minimally processed whole plant foods, such as:
Fruits, vegetables, legumes, wholegrains, nuts and seeds, herbs and spices.

Impact of eating a healthy PB diet



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Disease	PDI	Healthy (h) PDI	Unhealthy (u) PDI
Coronary heart disease ¹	8%↓	25%↓	32%↑
Type 2 diabetes ²	20%↓	34%↓	16%↑
Total cancer risk ³	15%↓		
Stroke ⁴	Neutra	10%↓	Neutral
Renal failure ⁵	6%↓	14%↓	11%↑
Fatty liver ⁶	21%↓	24%↓	34% ↑
Parkinson's Disease ⁷	18%↓	22%↓	38%↑
All-cause mortality ^{8,9}	5%↓	10-16%↓	12%↑

¹Journal of the American College of Cardiology. 2017;70(4):411-422. doi:10.1016/j.jacc.2017.05.047

²PLOS Medicine (2016) 13(6): e1002039. <https://doi.org/10.1371/journal.pmed.1002039>

³International Journal of Cancer, 2018, Volume 143, Issue 9 pages 2168–2176. <https://doi.org/10.1002/ijc.31593>

⁴Neurology Publish Ahead of Print DOI: 10.1212/WNL.0000000000011713

⁵Clinical Journal of the American Society of Nephrology. May 2019, 14 (5) 682–691;

DOI: <https://doi.org/10.2215/CJN.12391018>

⁶Clinical nutrition VOLUME 38, ISSUE 4, P1672-1677, AUGUST 01, 2019 <https://doi.org/10.1016/j.clnu.2018.08.010>

⁷Mov Disord. <https://doi.org/10.1002/mds.29580>

⁸Circulation. 2016;140:979–991 <https://doi.org/10.1161/CIRCULATIONAHA.119.041014>

⁹JAMA Netw Open.2023;6(3):e234714. doi:10.1001/jamanetworkopen.2023.4714

What is a healthy 'balanced diet'?



Consider
the food
'package'

Whole plants:

- Unsaturated fat
- Complex carbs
- Plant protein
- Phytonutrients
- Antioxidants
- Vitamins
- Minerals
- Fibre

Ultra-processed plant foods:

- Sugary, refined carbs
- Saturated fat
- Emulsifiers
- Preservatives
- Artificial colours
- Sweeteners
- Salt

Animal products:

- Saturated fat
- Animal protein
- Haem iron
- AGEs & BCAAs
- Dietary cholesterol
- Toxins, bacteria & viruses
- Vitamins & minerals
- No fibre

Nutrition Essentials



Eating plants for optimal health

Whole fruit: especially berries

Vegetables: include dark leafy greens daily

Legumes: beans, lentils, peas and chickpeas

This includes minimally processed soya foods: tofu, tempeh, edamame beans, soya milk and yoghurts

Whole/ minimally processed grains (e.g. brown rice, barley, oats, quinoa)

Starchy vegetables: sweet potatoes, potatoes with skin

Nuts & seeds: especially omega-3 rich walnuts, ground flax, chia seeds

Herbs & spices: cinnamon, turmeric, ginger, coriander, parsley etc.

Protective elements of a whole food plant-based diet

Rich in vitamins and minerals

Lower in calories but nutrient dense

High in fibre

Rich in antioxidants and polyphenols

Free of cholesterol

Low in saturated fat

Low in advanced glycation end products (AGEs)

Nutrient intakes

'As plant-based diets are generally better for health and the environment, public health strategies should facilitate the transition to a balanced diet with more diverse nutrient-dense plant foods.'

Dietary Pattern	Risk of Inadequacy	Favourably High Intake
Vegans	EPA, DHA,	fibre, PUFA, ALA,
	vitamins B12, D,	vitamins B1, B6, C, E, folate,
	calcium, iodine, iron (in women), zinc	magnesium
Vegetarians	fibre, EPA, DHA,	PUFA, ALA,
	vitamins B12, D, E,	vitamin C, folate,
	calcium, iodine, iron (in women), zinc	magnesium
Meat-eaters	fibre, PUFA, ALA (in men),	protein,
	vitamins D, E, folate,	niacin, vitamin B12,
	calcium, magnesium	zinc

Protein

Include a **serving of plant protein** with every meal

- **Beans** - chickpeas, kidney, pinto,
- **Lentils** – red, yellow, puy
- **Peas** - split or green
- **Soya** - tofu, edamame beans, tempeh, soya milk
- **Seitan** - essentially wheat gluten
- **Whole grains** – oats, wholewheat pasta, legume pastas, quinoa, buckwheat
- **Nuts & seeds** - peanuts, almonds, cashews, chia seeds



Iron

- **Iron-deficiency** affects 1/3 of the world's population
- **Haem iron**, found in animal foods, may increase the risk of certain cancers, type 2 diabetes and cardiovascular disease
- Sources of non-haem iron include **tofu, lentils, beans, seeds, dark leafy greens (kale, broccoli), oats, dried fruit, nuts**
- **Avoid** red wine, coffee, tea with meals – ideally 2 hours before/after
- **Soaking, fermenting** and **sprouting** can aid absorption of iron and other micronutrients such as zinc
- **Pair Vitamin C rich foods** with iron-rich foods to ↑ iron uptake



Calcium

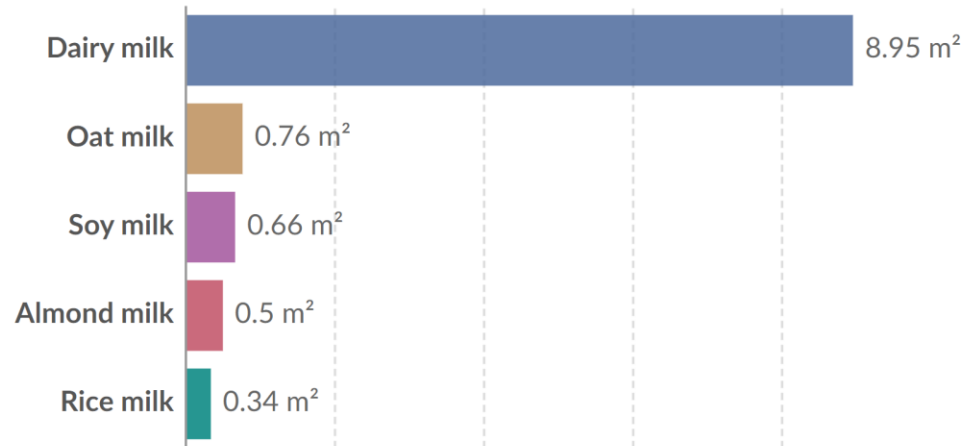
- Needed for **strong bones/ teeth** and healthy **muscle** and **nerve function**
- Many great vegan sources including:
 - **Fortified** plant-milks and yoghurts
 - **Calcium-set tofu**, beans
 - **Low oxalate green veg** such as rocket, broccoli, bok choy, kale
 - **Dried fruit** (e.g. figs) and **nuts and seeds (almonds, sesame)**
- Avoid "**calcium thieves**" - high intakes of sodium, caffeine and alcohol



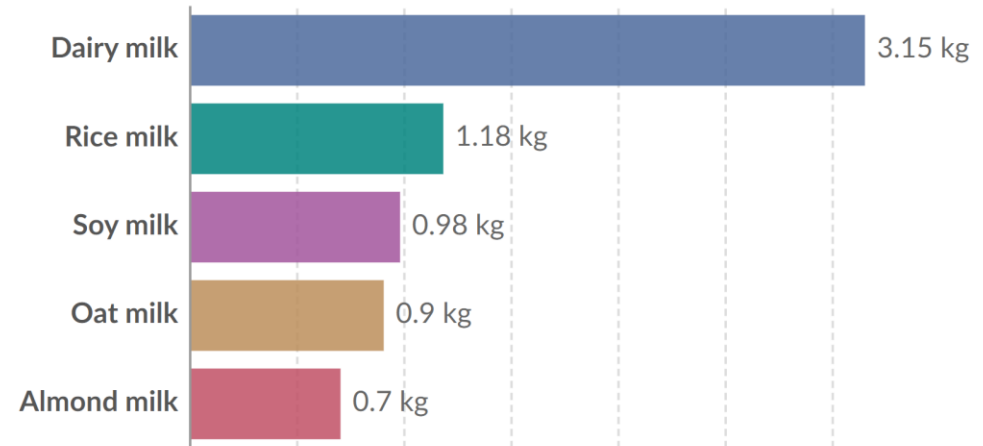
Environmental footprints of dairy and plant-based milks

Impacts are measured per liter of milk. These are based on a meta-analysis of food system impact studies across the supply chain which includes land use change, on-farm production, processing, transport, and packaging.

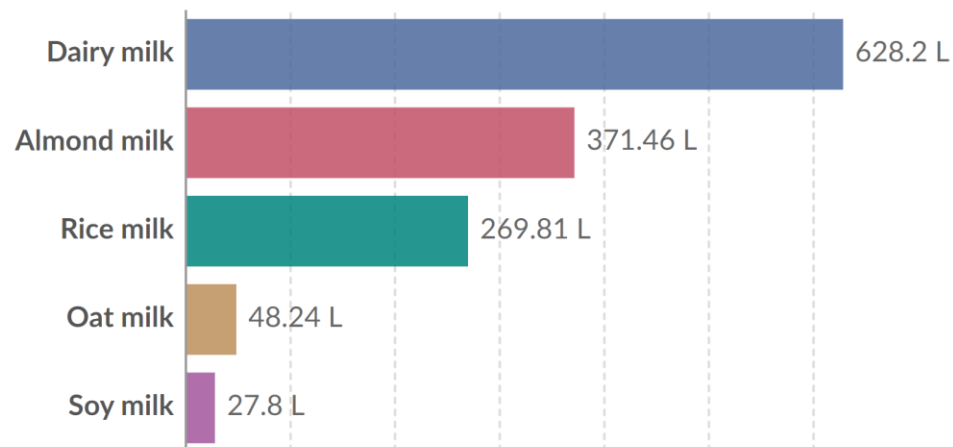
Land use



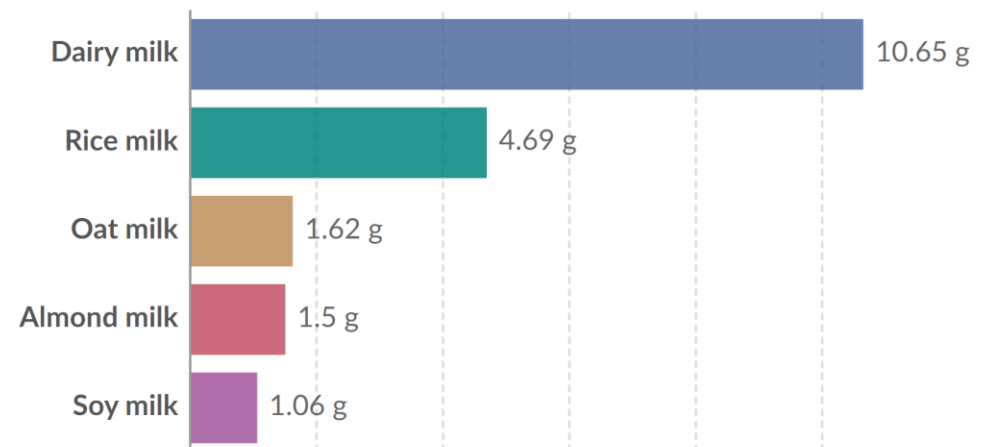
Greenhouse gas emissions



Freshwater use



Eutrophication



Supplements

B12 – essential on a PBD

- Made by **microorganisms** in the soil - not plants or animals!
- A supplement is the **safest, cheapest** and most **reliable** source
- Prevents **fatigue, anaemia** and **nervous system damage**
- Ability to absorb B12 varies, particularly with age, so taking a **25-100µg daily** or **2000µg weekly** is recommended
- **Higher doses** may be needed if you are over the age of **65 years**





Iodine

- Needed to make **thyroid hormones**; especially critical in preconception, pregnancy and breastfeeding
- Avoid some seaweeds e.g. **kelp** (too much iodine) & **hijiki** (high arsenic levels)
- Some **plant milks** have added iodine
- **140mcg** needed per day for adults – supplement may be most sensible

Vitamin D3

A sunlit meadow with white flowers and a tree trunk. The scene is bright and green, with sunlight filtering through the trees, creating a soft, glowing atmosphere. The foreground is filled with numerous small white flowers with yellow centers, growing in a lush green field. A large, dark tree trunk is visible on the right side of the frame. The background is a soft-focus green landscape under a bright sky.

- Essential for **healthy bones & teeth, immune function** etc.
- Vitamin D is mainly made by the **action of the sun on skin**
- **Food sources** are generally poor
- Recommend a **Vitamin D3 supplement** – at least **10mcg/day** around the year. Some people need more e.g. if you have coeliac disease, darker skin, cover up your skin outdoors etc.

Omega-3 fats

Essential nutrient for **brain, joint, reproductive** and **cardiovascular** health

3 main types of omega-3 fatty acids:

- **Docosahexaenoic acid (DHA)**
- **Eicosapentaenoic acid (EPA)**
- **Alpha-linolenic acid (ALA)** – our bodies convert into EPA/DHA but conversion is not efficient. EPA/DHA is mainly found in oily fish

Consume **at least ONE** of the following ever day:

- 1 tbsp of milled flax seed
- 1 tbsp of chia seeds
- ¼ cup walnut halves



Consider a daily **algae-derived omega-3 supplement** with **500mg DHA/EPA** especially if pregnant, breastfeeding, for small infants and for older adults



Soya

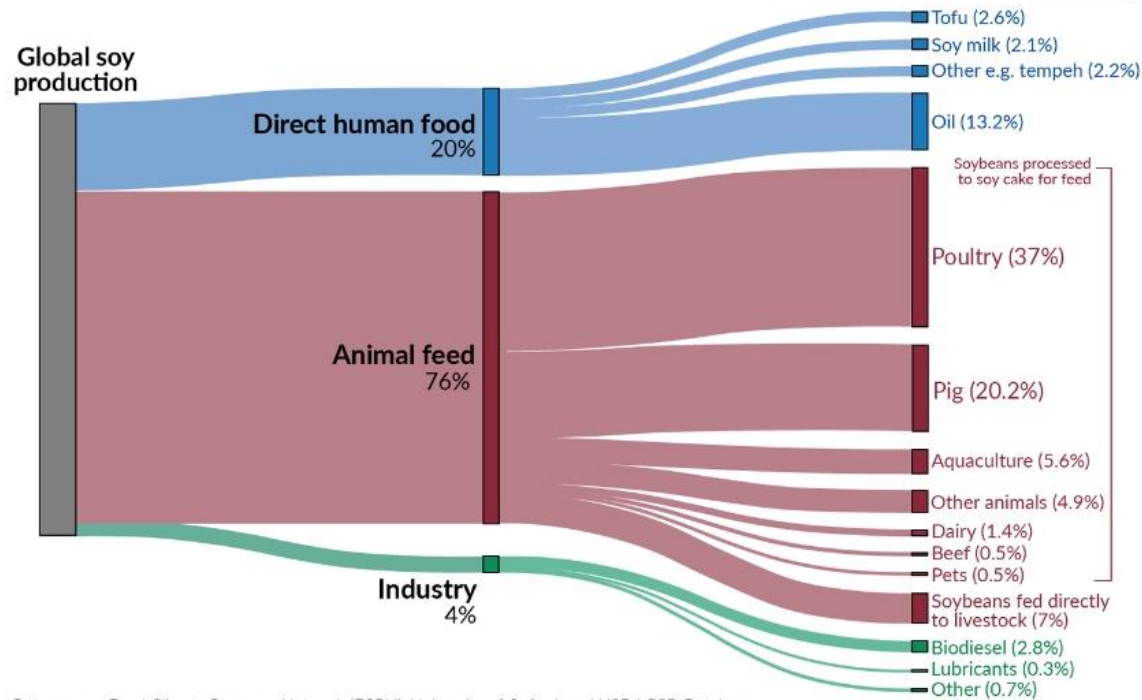
Is soya bad for you?

- Soya is rich in all 9 essential amino acids and rich in **vitamins, minerals, fibre**, healthy **polyunsaturated** fats and low in saturated fat.
- **Breast: Anti-oestrogenic effect.** Regular consumption of tofu can reduce breast cancer risk by around 22% when comparing those who eat the most versus those that eat the least. Swapping dairy for soya milk could reduce risk by up to 32%. In bones, it has a pro-oestrogenic effect, improving **bone strength**.
- **Phytoestrogens** reduces frequency of hot flushes in menopause, without side-effects
- Soya is **NOT an endocrine (hormone) disruptor**.

The World's Soy: is it used for Food, Fuel, or Animal Feed?

Shown is the allocation of global soy production to its end uses by weight. This is based on data from 2017 to 2019.

Our World
in Data



Data source: Food Climate Resource Network (FCRN), University of Oxford; and USDA PSD Database.
OurWorldinData.org - Research and data to make progress against the world's largest problems. Licensed under CC-BY by the author Hannah Ritchie.

Soya

- Only a small percentage of global soya is used for products such as soya milk, tofu, tempeh or edamame beans. More than three-quarters (76%) of soya is used as feed for livestock.
- Only 6-7% is used for products such as tofu, soya milk, edamame beans and tempeh

A quick word on diabetes

Plant-Based Diets and Type 2 Diabetes

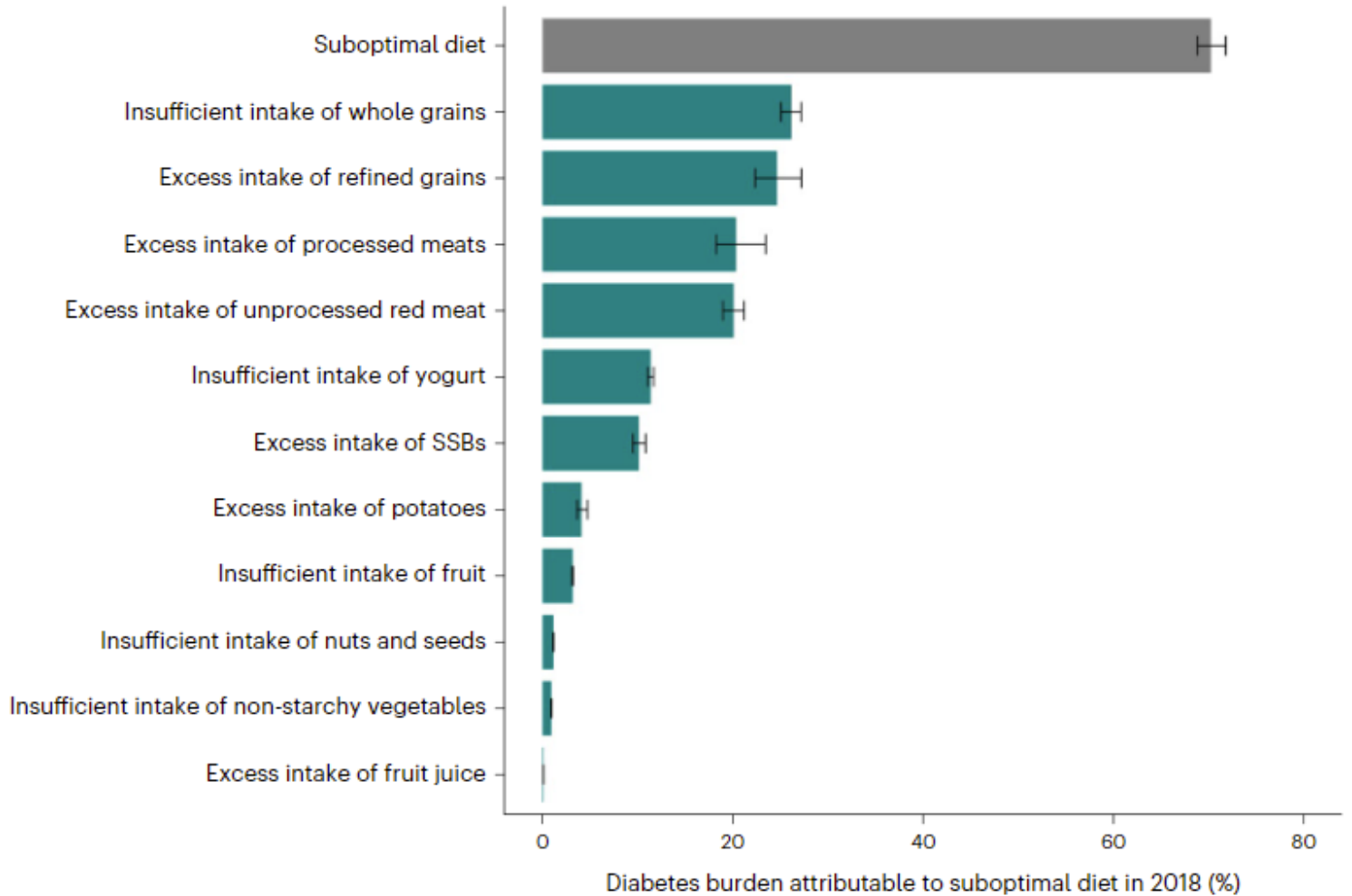
Thursday 21st March 2024, 7PM-8PM GMT
Zoom Webinar (Accredited for 1 CPD / 1 CME credit)

with Claire Lynch, Registered Dietitian

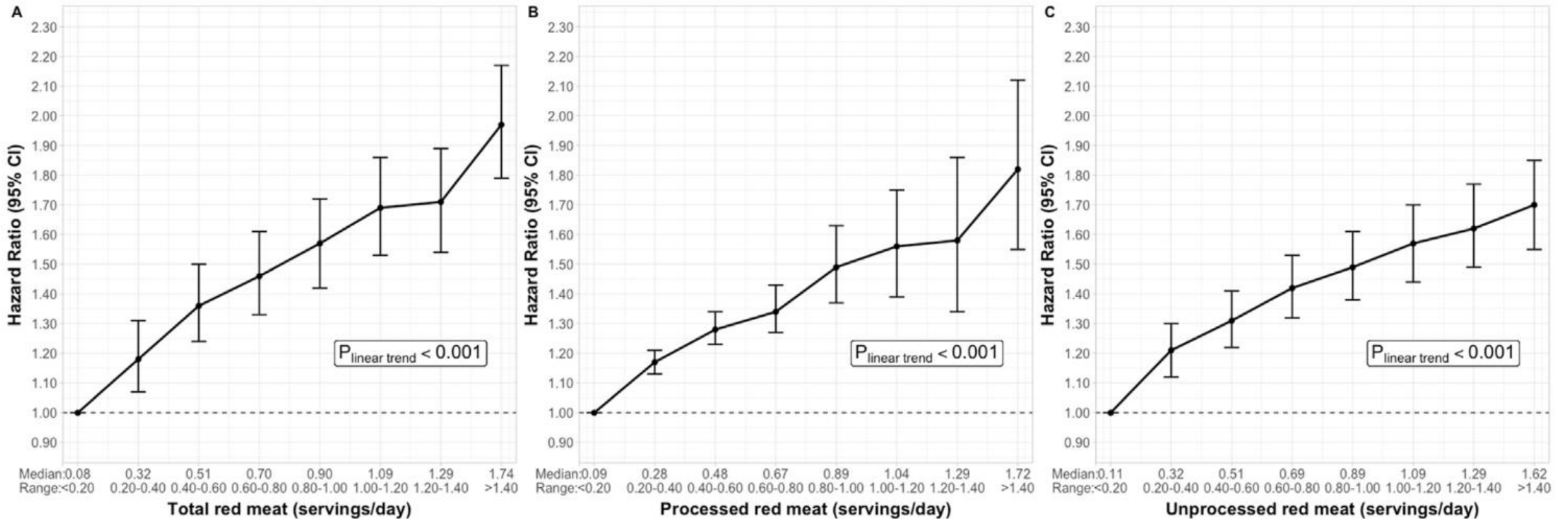


Do carbohydrates cause diabetes?

Incident type 2 diabetes attributable to suboptimal diet in 184 countries



Red meat and diabetes

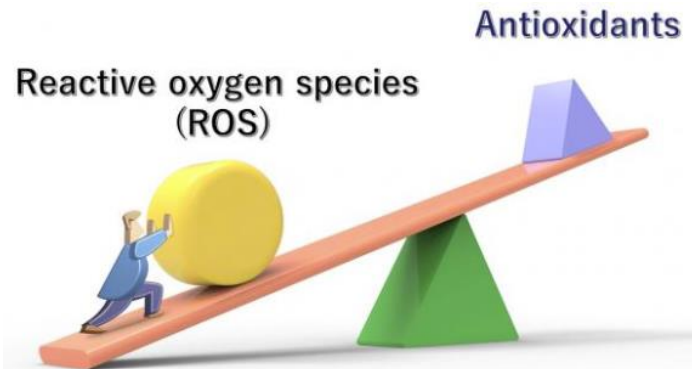


What's wrong with meat?



Nitrosamines

Haem iron



Animal protein

AGEs



TMAO

Saturated fat

The Benefits of Plants

Polyphenols:

- Stimulate insulin secretion, reduce glucose output from the liver, enhance insulin-dependent glucose uptake, modify the microbiome, and have anti-inflammatory effects

Fibre:

- Supports the expansion of beneficial bacteria, keeping opportunistic pathogens in control
- Associated with decreased inflammatory markers (CRP, IL6) which improves insulin sensitivity
- Reduces the energy density of foods, promotes satiety, associated with weight loss



Can I eat fruit?

**Some practical
advice**

How to eat plant-based

- Progress over perfection
- Build your meals around the basics – wholegrain or starchy veg + veg or salad + plant protein
- Easy swaps – beans over beef, chickpeas over chicken, tofu over eggs
- What can you add?
- Variety is key – can you eat 30 plants in a week?
- Gamify it





Eating with others

- Sharing food
- Making meat the side dish, not the centrepiece of family meals
- Be the organiser
- Asking for a vegan option ALWAYS

For more information, check out these resources



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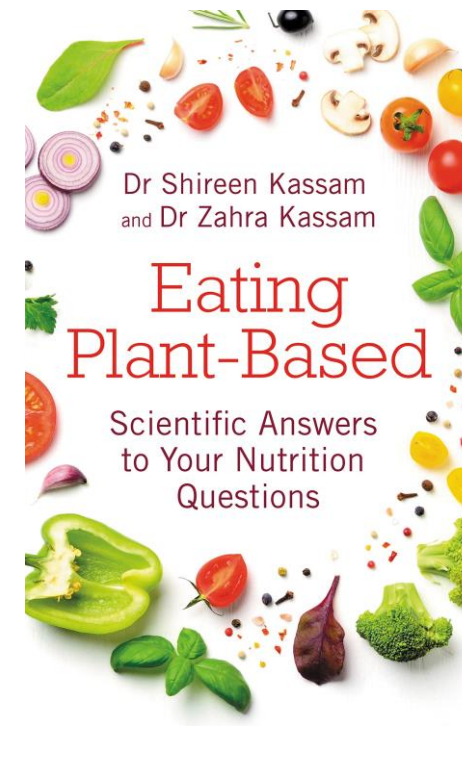
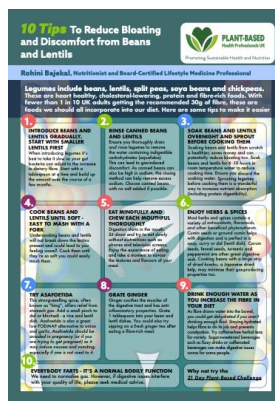
VEGANUARY 



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21 Day Plant-based health challenge



Daily emails – information and advice

Free recipe booklet

Daily recipe suggestions

Links to other resources

