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100% plant-powered since 1985



Plant-based Nutrition
Professionals





Thank you for being here. We appreciate your willingness to consider “The Environmental & Health benefits of Humans Consuming plant-powered diets”. We totally understand how challenging it can be to consciously change one’s eating habits, so congratulations on doing exactly that.

In-light of 60 years of reports from Intergovernmental Panels on Climate Change (IPCC), the best time for humanity to take action on this information was 100 years ago; the second-best time is NOW. This event is a good first step, and we would be happy to email you with references from these slides so you can read the science for yourself. If you add your email to this sheet here, please also mention any points on which you would like information.

In return for your time this evening, we hope to give you “food for thought” and despite the intensely serious nature of this topic, we hope you have some laughs along the way. On that lighter note, this slide is a shout-out to the mainstream environmental groups who are finally talking about the impact of diet on the environment. Thankfully, over the past 20 years, international endorsement of eating a fully plant-powered diet has grown exponentially. Many of the agencies are also highlighting the health benefits of well-planned plant-powered diet, as

well as the environmental advantages of shifting away from animal products.

<https://www.ipcc.ch/2024/01/16/ipcc-chair-remarks-ipcc-60/>

<https://www.doctorsfornutrition.org/how-our-food-choices-affect-the-climate/>

<https://nutritionfacts.org/video/which-diets-have-the-lowest-carbon-footprint/>

<https://ivu.org/nutrition/global-endorsements-a-100-plant-based-diet-by-institutions.html>



One may reasonably ask, if animal agriculture is such a big deal, why have the high-profile environmental groups said so little about it?

It all comes down to money. Most of these groups are dependent on donations and have felt afraid of losing members if they said a lot of bad news about people's favourite bad habits.

The information has been available for decades. Numerous authors, high profile scientists & documentary film makers began spreading the word even while the environmental groups continued to ignore the issues due to fear of losing financial support from powerful meat & dairy producers.

The turning point may have occurred in 2014, with the documentary "Cowspiracy" in which they called out this financial connection. In Canada, the prestigious Suzuki Foundation is now finally suggesting the we at least consider cutting down on consumption of animal products.

Happily, the truth tellers are continuing to produce new educational materials, some of which are available online & streaming services.

<https://www.straight.com/news/1285106/david-suzuki-new-ipcc-report-flags-diet-and-land-use-changes-curb-climate-chaos>

http://www.ted.com/talks/jonathan_foley_the_other_inconvenient_truth/transcript?language=en

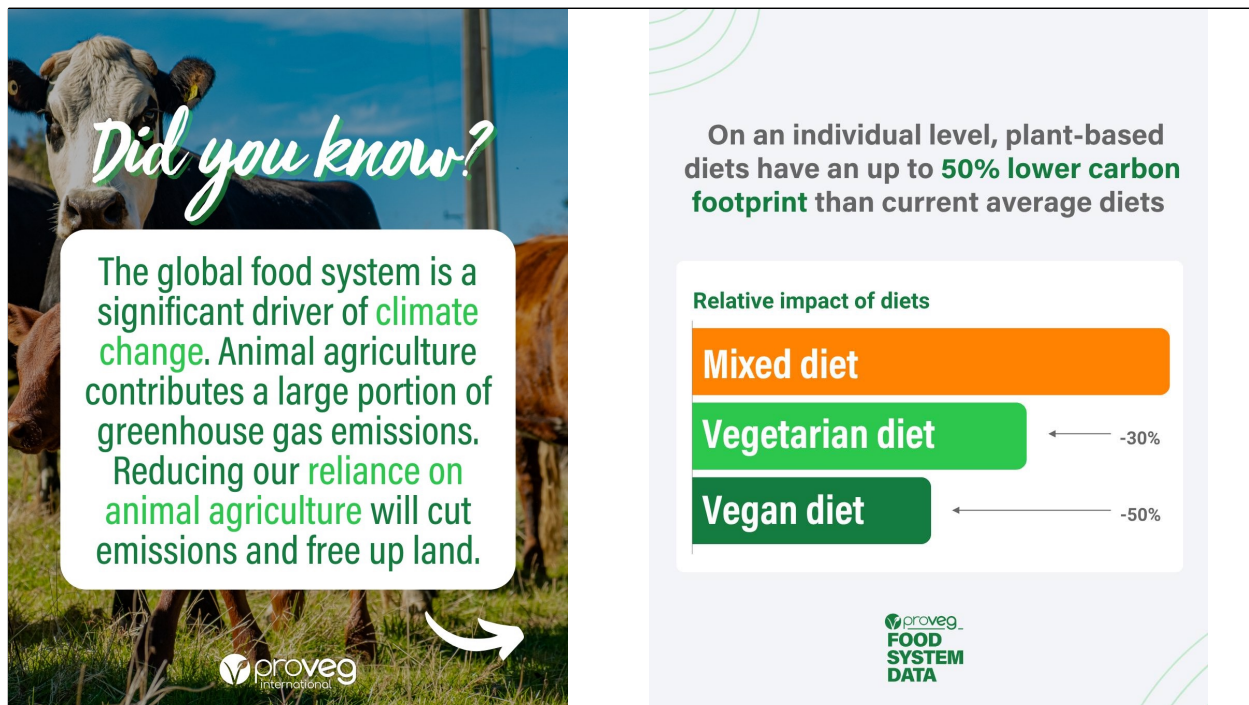
<https://www.youtube.com/watch?v=nV04zyfLyN4>

<https://www.youtube.com/watch?v=hHCCFjB8M48> (Meat the truth)

<https://matthewprescott.com/>

<https://www.plantbasednews.org/post/greenpeace-must-cut-meat-and-dairy-production-by-50-by-2050>

Prime documentary: Saving the Amazon, released 2020.



(Read the slide info)

In June of this year, at the Climate Meetings in Bonn Germany, animal agriculture was moving into the spotlight.

The benefit of this is that the more we shift to plant-based food, the more we cut emissions & free up land that can be returned to forest for Nature's carbon capture. It's a huge win for both the climate and our food security! That's precisely why this group, ProVeg International was at Bonn, advocating for urgent food system transformation.

All facts and stats from the 29 page ProVeg Food System report, are available on their website.

<https://proveg.org/us/proveg-impact-report-2024-pdf-preview/>

The Environmental Cost of Animal Products

"**Plant-based diets** in comparison to diets rich in animal products are more sustainable because they use many fewer natural resources and are less taxing on the environment."

The American Journal of Clinical Nutrition, July 2014

(2015 University of Minnesota study)

"Transitioning toward **more plant-based diets** ...could reduce...food-related greenhouse gas emissions by 29–70% ..."

Proceedings of the National Academy of Sciences of the USA

Here are just two of the many studies that back up the claims I just shared. (read slide)

The 29% is the improvement which is possible from 3rd world countries who already eat very few animal products whereas the 70% is what affluent nations such as ours can achieve.

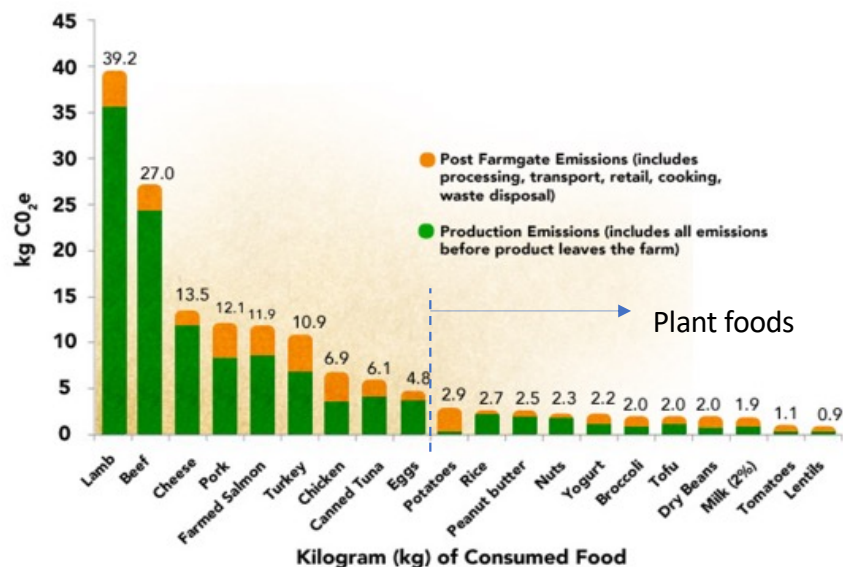
As part of explaining how & why a plant-based diet is so much better for the environment, we will address Green House Gas emissions, water consumption, air & water pollution, and resource requirements.

Am J Clin Nutr. 2014 Jul;100 Suppl 1:476S-82S. Sustainability of plant-based diets: back to the future. Sabaté J, Soret S. Author information: Departments of Nutrition (JS) and Environmental Health and Geoinformatic Sciences (SS), School of Public Health, Loma Linda University, Loma Linda, CA.

2015 University of Minnesota study <https://www.pnas.org/content/113/15/4146>

<https://nutritionstudies.org/our-food-choices-and-global-warming/> (Prof T. Colin Campbell)

<https://www.carbonbrief.org/rich-nations-could-see-double-climate-dividend-by-switching-to-plant-based-foods/>



Greenhouse gas lifecycle assessment for common proteins and vegetables (Environmental Working Group 2011).

This graph from the Environmental Working Group shows that the *production* of animal products for human consumption is their primary contributor to greenhouse gases.

This study became necessary when producers of animal products tried to shift the blame onto getting their products to market. The Environmental Working Group did the calculations demonstrated in this slide, proving that it is the animals themselves rather than their transportation & processing which are the primary source of the problem.

The top orange part of the bars shows the emissions after the product leaves the farm, which includes processing, transportation, retail, cooking & waste disposal. The lower green section of the bars shows all emissions before the product leaves the farm. So as we can see, the nature of the product matters the most; and that the plant foods produce the least GHGs by a significant margin.

This is partly why eating locally produced animal products ignores the problem, the root cause & it's solution. As this graph shows, even buying lentils from Lima has a significantly lower negative impact than animal flesh from the neighbour.

Please note that this graph shows GHGs per kilogram of food, which is why milk is ranked low, because most of it's weight is water. In the next slide, we see the GHGs ranked according to calories of the food.

<https://skepticalscience.com/animal-agriculture-meat-global-warming.htm>

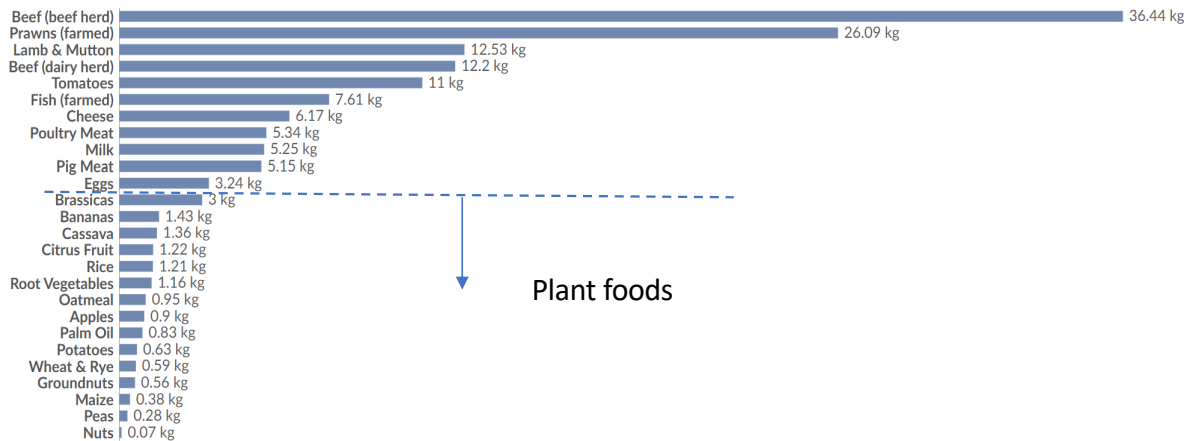
Greenhouse gas emissions per 1000 kilocalories

Greenhouse gas emissions are measured in kilograms of carbon dioxide-equivalents.

Our World
in Data

Table

Chart



Data source: Poore and Nemecek (2018) - [Learn more about this data](#)

OurWorldinData.org/environmental-impacts-of-food | CC BY

Download

Share

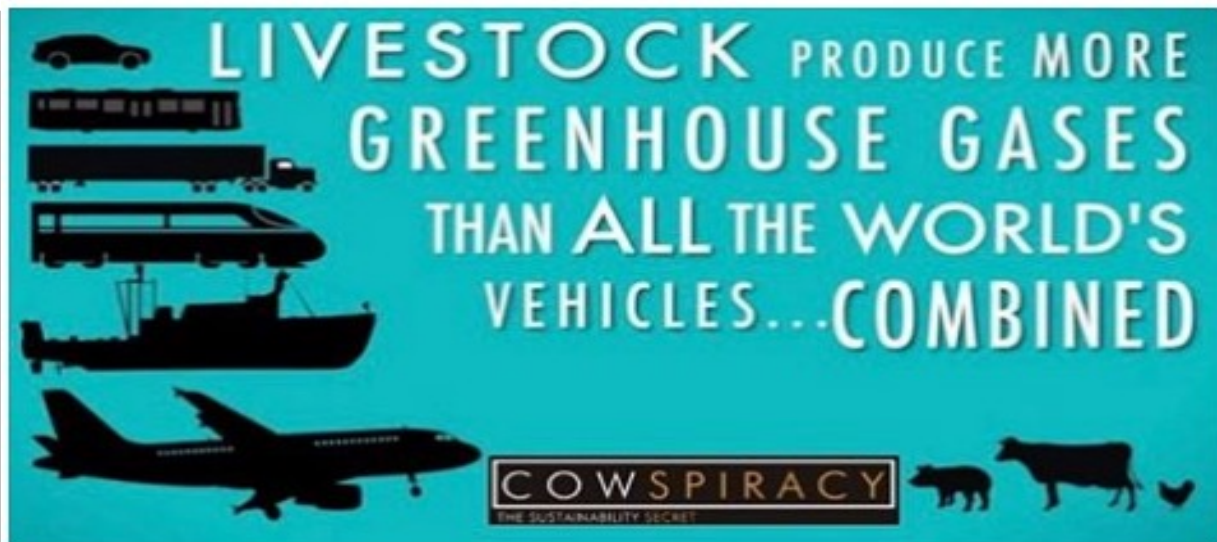
Exit full-screen

This graph shows a more accurate ranking for dairy products when calculated on the basis of calories. Also, we need to remember that all dairy cows end up slaughtered for the beef market.

This comes from a different resource and yet, it shows the same thing: that plant foods are vastly kinder to the environment.

<https://ourworldindata.org/grapher/ghg-kcal-poore>

Tomatoes have intensive fertilizer and fuel use either in heated greenhouses or due to long distance transport from warmer regions. They also suffer from high food waste. Since this graph is by calorie and tomatoes are mostly water, that also explains why they look high on this chart.



**Reference: FOOD AND AGRICULTURE ORGANIZATION OF
THE UNITED NATIONS Rome, 2006**

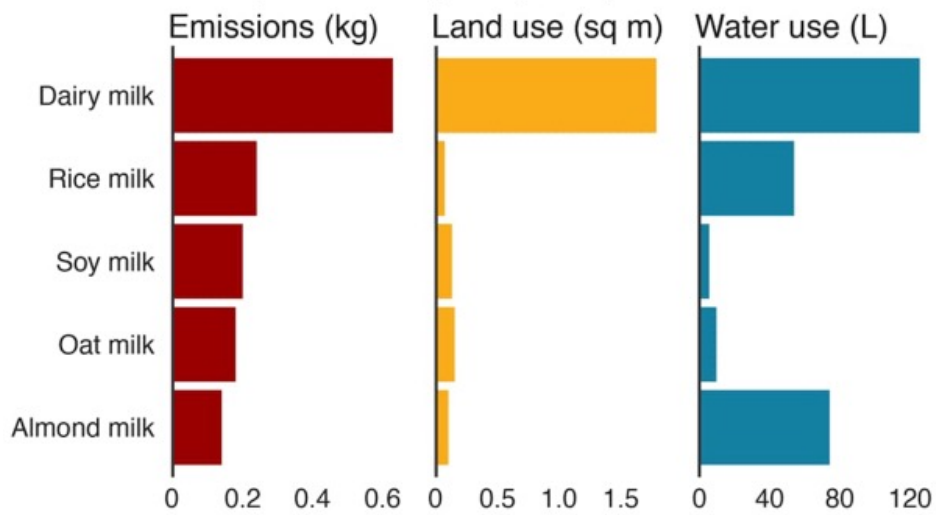
The UN also states that farming animals for their meat, milk & eggs creates more climate emissions than the entire global transport system—including planes, trains, buses, cars, trucks, and ships.

<http://www.fao.org/docrep/010/a0701e/a0701e00.HTM>

<https://news.un.org/en/story/2006/11/201222-rearing-cattle-produces-more-greenhouse-gases-driving-cars-un-report-warns>

Which milk should I choose?

Environmental impact of one glass (200ml) of different milks



Source: Poore & Nemecek (2018), Science

BBC

Specifically, regarding milk....

Although all plant milks have a lower ecological footprint than dairy products, soy and/or oat milks have the lowest, with rice also being a good choice.

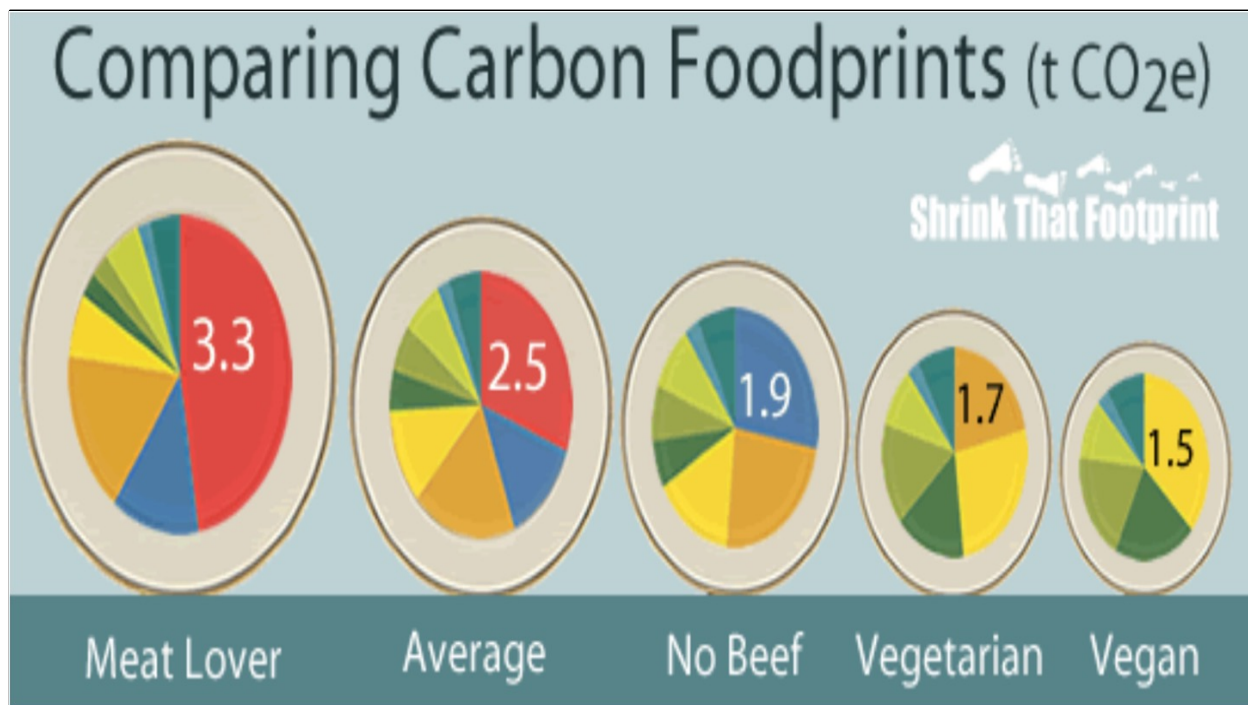
<http://environmath.org/2018/06/17/paper-of-the-day-poore-nemecek-2018-reducing-foods-environmental-impacts/>

<https://www.bbc.com/news/science-environment-46654042>

<https://bloguofto.sa.utoronto.ca/2021/02/26/which-milk-is-best/>

<https://ediblebrooklyn.com/2020/plant-milks-sustainability/>

<https://ourworldindata.org/environmental-impact-milks>



This graphic gives us a sum-total statement on the information available on this topic, some of which we are about to share with you.

The moral of this story is that eating a 100% plant-powered diet cuts our greenhouse gas production the most. Eating as close to this as possible is one of the most important things we can each do for the environment. Happily, it is also win/win for animal welfare and human health.

As you may know, CO₂ stands for carbon dioxide. The 'e' which follows stands for "equivalents", meaning that all the GHGs are included in the calculations for this graphic. The other GHGs are ammonia, methane & Nitrous Oxide.

References available upon request.

<http://shrinkthatfootprint.com/food-carbon-footprint-diet>

https://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/projects/meatless_monday/resources/meat_consumption.html

Data from USDA, ERS (economic research service), LCA (life cycle assessment commons) & EIO-LCA

<http://www.fao.org/news/story/en/item/197623/icode/>

<https://www.downtoearth.org/go-veggie/environment/top-10-reasons>

Reducing the Environmental Impact of Dietary Choice: Perspectives from a Behavioural and Social Change Approach

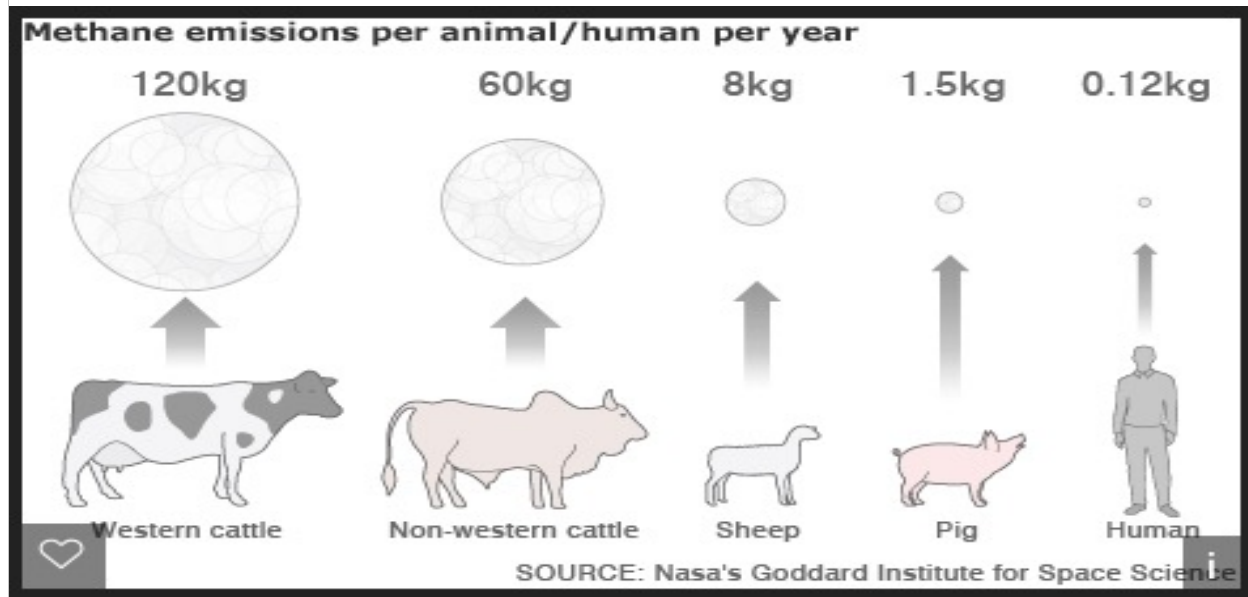
<https://www.hindawi.com/journals/jeph/2012/978672/>

<https://nutritionstudies.org/impact-of-food-choices-on-the-environment/>

<https://chooseveg.com/blog/eating-vegan-still-one-best-things-can-environment/>

<https://www.un.org/en/climatechange/science/climate-issues/food>

Greenhouse Gas Production from Digestion

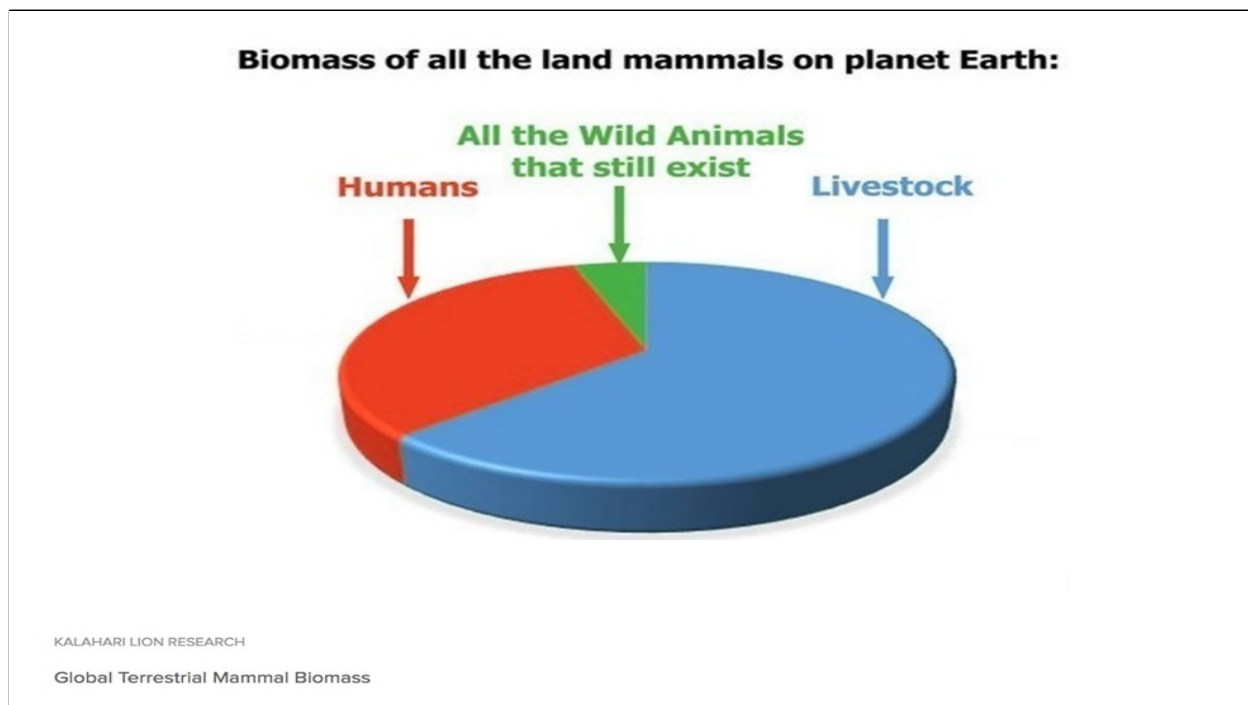


All animals (including humans) produce methane, ammonia, nitrous oxide & CO₂ as a normal part of their lifecycle.

As we can see in this Nasa graphic, the digestive processes of agricultural animals contribute FAR more to climate change than we ourselves. A cow puts out 1000 times more GHG than a person. Pigs produce 10 times more. Even chickens produce more than double that of humans.

What makes this all even worse, is that there are far more animals being raised for slaughter than there are people on the planet.

1. http://alumni.stanford.edu/get/page/magazine/article/?article_id=29892
2. <http://www.cbc.ca/news/technology/bob-macdonald-agriculture-emissions-1.3591177>
3. <http://link.springer.com/article/10.1007/s10584-014-1169-1>
4. <http://nutritionfacts.org/video/diet-and-climate-change-cooking-up-a-storm/>
5. <http://www.pcrm.org/health/medNews/vegetarian-diets-best-for-environment-and-health>
6. <https://www.downtoearth.org/go-veggie/environment/top-10-reasons>
7. <http://science.sciencemag.org/content/early/2016/03/09/science.aad2705>
8. <https://www.co2everything.com/co2e-of/chicken>
9. <https://www.thepoultrysite.com/articles/global-warming-how-does-it-relate-to-poultry-1>



This is how many more of them there are than us.

As animal agriculture has spread out over the planet, forests have been felled, destroying habitat of wild animals, resulting in species extinction & loss of biodiversity.

Wild mammals, 20 million tonnes; humans 390 million tonnes, farm animals 651 million tonnes.

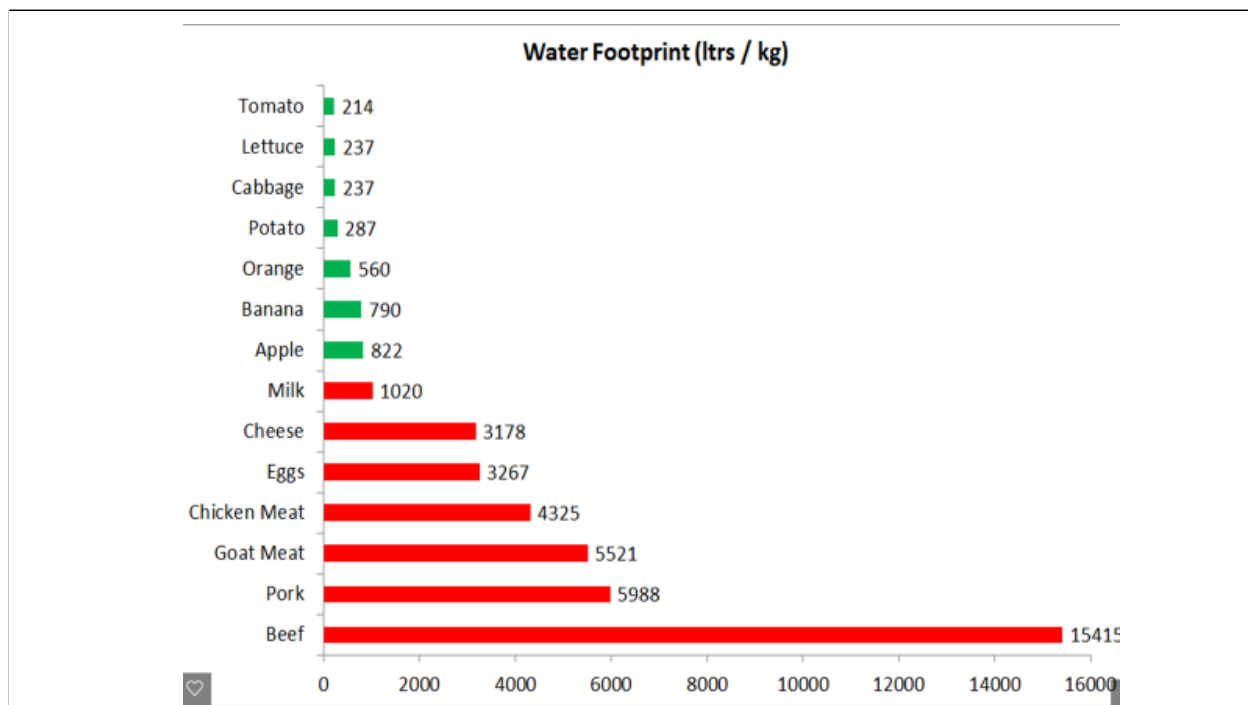
(numbers in the biomass) <https://www.pnas.org/doi/10.1073/pnas.2204892120>

<http://science.time.com/2013/12/16/the-triple-whopper-environmental-impact-of-global-meat-production/>

<https://www.smithsonianmag.com/travel/is-the-livestock-industry-destroying-the-planet-11308007/>

<https://www.economist.com/blogs/feastandfamine/2013/12/livestock>

<https://www.globalagriculture.org/report-topics/meat-and-animal-feed.html>

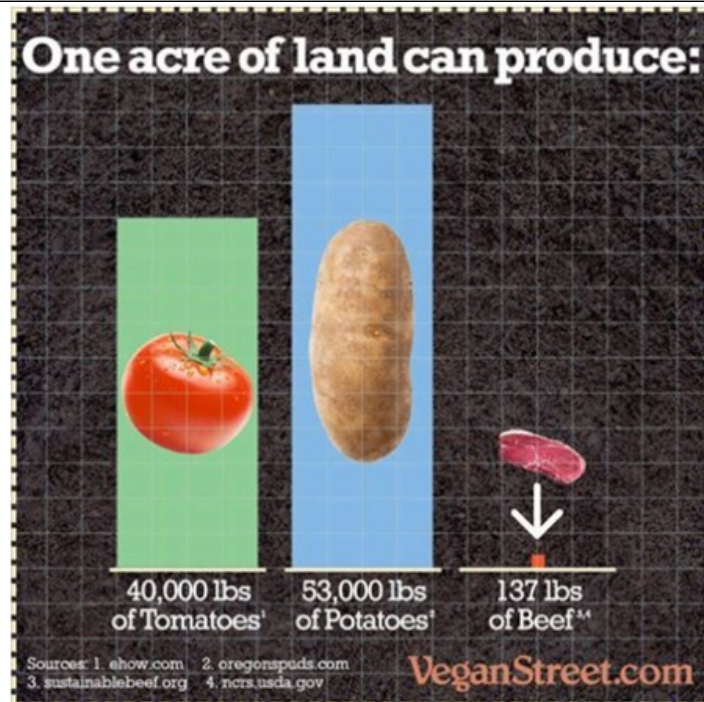


Water usage.

As you can see, it takes significantly more water to raise animals for humans to eat than to raise plant crops for humans to eat. According to a National Geographic report on water conservation, eating a fully plant-based diet saves nearly 600 gallons (2,300 L) of water per day compared to a diet based on animal products.

This comes from a UNESCO report.

<http://waterfootprint.org/media/downloads/Report-48-WaterFootprint-AnimalProducts-Vol1.pdf>



Land use.

According to the Food & Agriculture Organization (FAO) of the United Nations, the livestock sector is THE world's largest user of agricultural land. They need it for grazing and production of animal feed crops. As the slide suggests, growing plant foods for humans to eat requires much less land than raising animal products.

1. <http://nutritionstudies.org/fifty-shades-of-green/>
2. <http://www.greenpeace.org.uk/blog/forests/how-cattle-ranching-chewing-amazon-rainforest-20090129>
3. <http://www.fao.org/livestock-environment/en/>
4. <http://www.fao.org/ag/againfo/themes/en/Environment.html>
5. <https://www.youtube.com/watch?v=fnh9zT41wWo> (grazing, William Ripple, PhD)

Using Plant Foods to Produce Animal Products



The slide shows the inefficiency of eating the flesh of a dead cow. It requires about 13 pounds of plant foods to produce only 1 pound of edible cow flesh.

This wasteful ratio holds true for all forms of animal flesh: they require more food than what we get from them. For example, chickens require about 5 lbs. of feed to grow 1 lb. of edible flesh, pigs require 6 pounds of feed for 1 pound of edible flesh.

Let's look at this from the human point of view. An average human consumes approximately 2000 calories per day. One pound of cooked steak provides about 1000 calories, which would be about ½ a day's calories for an adult human. Thirteen pounds of grain provides about 20,000 calories. So a human could manage on that sack of grain for 10 days.

So the meat provides half a day's calories whereas the sack of grain provides 10 days of calories.

Now THAT's resource efficiency!

1. <http://www.beefresearch.ca/blog/cattle-feed-water-use/>
2. <http://www.new-terra-natural-food.com/raising-chickens-for-meat.html>
3. http://usatoday30.usatoday.com/news/nation/environment/2009-04-21-carbon-diet_N.htm
4. http://www.earth-policy.org/data_highlights/2011/highlights22



At this point, you may feel inclined to remind me that animals can feed themselves on grass land instead of being fed crops; and you would be correct about that.

Sadly though, while grazing animals may have a better quality of life, they require more land to sustain them and longer to put on the weight the industry requires of them. Living longer gives them longer to produce more GHGs.

That's partly why this miserable waste-land of a factory farm is the most efficient way to raise animals. They are fed higher calorie-density crops, laced with antibiotics to make them gain weight faster.

This is one of the most dangerous secrets of the meat & dairy industries: according to the Center for Disease Control, 70 to 80% of antibiotics are fed to animals, making animal agriculture ground zero for antibiotic resistance & pandemics.

1. <http://james-mcwilliams.com/?p=4091>
2. <http://freefromharm.org/agriculture-environment/can-animal-foods-be-sustainable/>
3. <http://www.hindawi.com/journals/ijbd/2014/163431/>
4. <http://freefromharm.org/agriculture-environment/organic-meat-not-sustainable/>
5. <http://www.thewildlifeneeds.com/2013/03/18/alan-savory-gives-a-popular-and-very-misleading-ted-talk/> (Allan Savory)
6. <https://terrastendo.net/2016/07/22/free-range-is-not-the-answer/>
7. <http://www.thewildlifeneeds.com/2016/08/20/livestock-a-factor-in-yellowstone-fish-kills/>
8. <http://www.cdc.gov/drugresistance/threat-report-2013/>
9. http://www.consumerreports.org/content/dam/cro/magazine-articles/2015/October/Consumer%20Reports%20Food%20%26%20Sustainability%20Center_Beef%20Report_8-15.pdf
10. <http://www.drcarney.com/topics/item/351-100-of-ground-beef-samples-contain-fecal-bacteria#.V5kEy4-cGUk>
11. <https://www.pcrm.org/news/blog/video-fecal-matter-grocery-store-chicken-too>
12. <https://www.forksoverknives.com/wellness/coronavirus-e-coli-zoonotic-influenza-animal-agriculture-spawns-infectious-diseases/>

Veganic

is the future of agriculture.

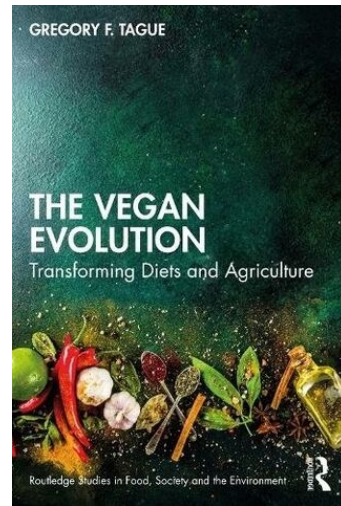


One of the major excuses for animal agriculture is that manure is essential for growing food crops. But many farmers are discovering that they can grow nutritious and plentiful vegetables and fruits with just the use of plant-derived compost. The future of agriculture is animal-free.

Photo and vegetables: Gentle World Veganic Farm

VeganStreet.com
patreon.com/veganstreet

*What is true
regenerative farming?*



The most effective style of regenerative farming is based entirely on raising plant crops for people to eat. It is sometimes called “veganic” or ‘stock-free’ agriculture. It uses crop rotation & composting to feed soil. Soil nurtured this way becomes healthier over time, rather than stripped & barren.

This simple, old-fashioned method prioritizes sustainability, biodiversity, and ethical practices without animal by-products or synthetic chemicals.

Crops raised this way are also safer for humans. Food poisoning associated with plant foods are due to ecoli & other zoonotic pathogens such as salmonella & listeria, due to contamination from manure.

Happily, farmers who are getting the message, are switching from raising animals to growing plant foods for humans. They routinely report feeling happier, more peaceful, grateful to be free of struggle involved with caring for animals then sending them to slaughter.

<https://veganannie.com/2015/08/veganic-stockfree-farming-at-la-ferme-de-laube-by-jimmy-videle/> (Canadian)

<https://www.youtube.com/watch?v=DWDznkdUjb0> (Mic the Vegan) USA
<https://www.youtube.com/watch?v=6MMYg4QY1co> (UK)
<https://faunalytics.org/veganic-farming-agroecology/>
https://www.youtube.com/watch?v=b_UgGazOdk (Million Vegan Grandmothers)
<https://www.psychologytoday.com/ca/blog/animal-emotions/202208/the-vegan-evolution-transforming-diets-and-agriculture> (Canadian)
<https://genv.org/8-farmers-who-gave-up-their-animals-and-grew-plants-instead/>
<https://freefromharm.org/animal-farmer-turned-vegan/jay-wilde/>
<https://uniquescientificpublishers.com/wp-content/uploads/2023/zon-v1/361-373.pdf>

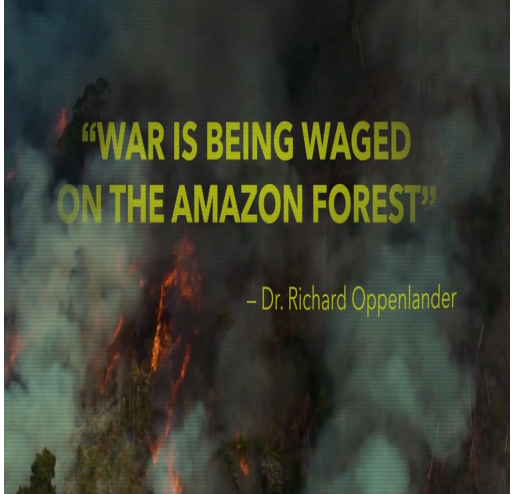
Here's a novel plan to help protect the rainforest.



More than 90% of the destruction of the Brazilian rainforest is directly attributable to the beef and dairy industries. A food awareness group called ProVeg Brasil has begun a project to help local livestock farmers transition to plant-based agroforestry. The Cultiva Project is offering free technical support to beef and dairy producers to switch to growing sustainable plant-based foods to feed the people of Brazil.

Source: Agriland

VeganStreet.com



"WAR IS BEING WAGED ON THE AMAZON FOREST"

- Dr. Richard Oppenlander

(Read slide)

Animals raised as food for humans are given soybean meal formulated to speed their growth. Along with animal welfare concerns, increased global soy production for them raises environmental issues such as increased agrochemical use and deforestation, as well as land grabs from indigenous peoples.

This is a significant aspect of the problem. Only 6% of soybeans grown are used to feed people.

<https://www.arc2020.eu/soya-a-problematic-animal-feed/>

<https://www.greenpeace.org.uk/challenges/soya/>

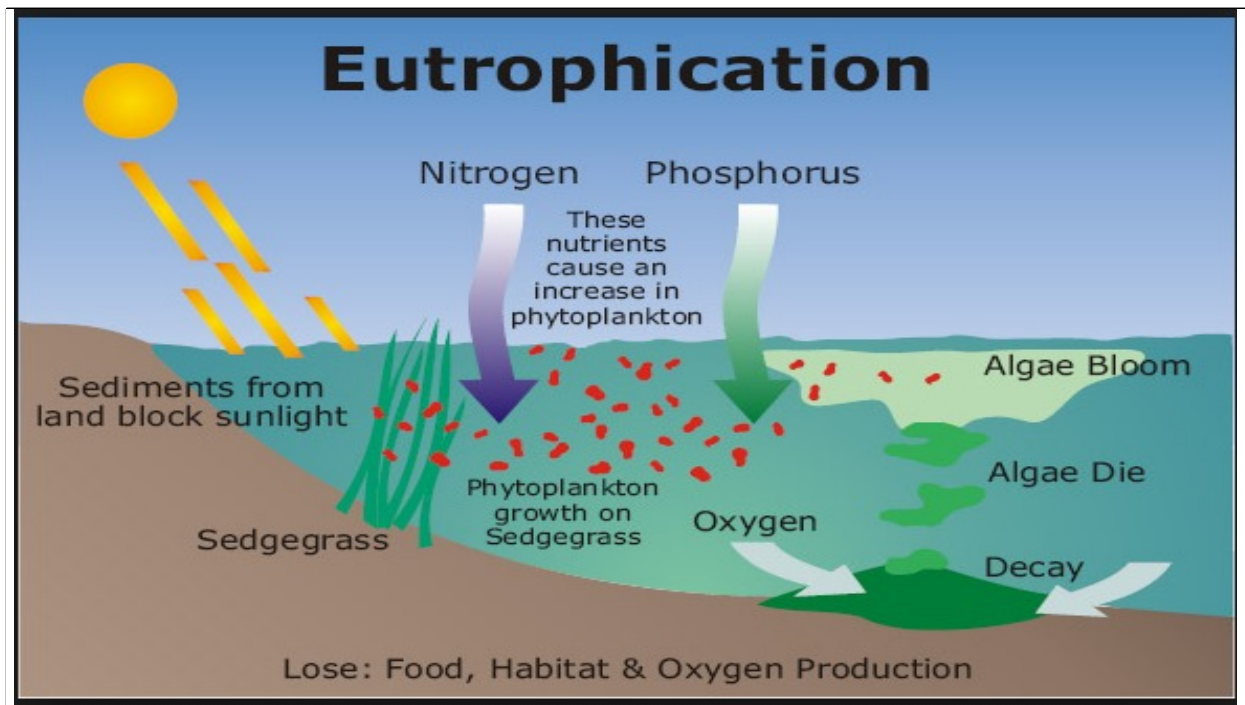
<https://www.greenpeace.org.uk/resources/industrial-meat-deforestation-jbs/>

<https://www.greenpeace.org.uk/news/tesco-urged-to-cut-links-with-forest-destroyers-as-the-amazon-burns/>

<https://www.greenpeace.org.uk/news/the-shocking-violence-and-suffering-behind-the-global-meat-industry/>

<https://www.fao.org/4/xii/0568-b1.htm>

<https://www.greenqueen.com.hk/takeout-documentary-exposes-the-devastating-impact-of-our-food-choices-on-the-amazon-rainforest/> (Takeout)



Sadly, another cost of raising land animals for human consumption is their impact on water pollution.

“Eutrophication” is the process of producing dead zones in lakes & coastal waters due to run-off of nitrogen from manure ponds on factory farms.

Some of that manure is spread on surrounding fields, to grow crops to feed them. The run-off stimulates overgrowth of algae in the water, which consumes the oxygen in the water, smothering marine life & coral reefs. THIS is the process killing the Great Barrier Reef, which began long before the so-called “bleaching events”.

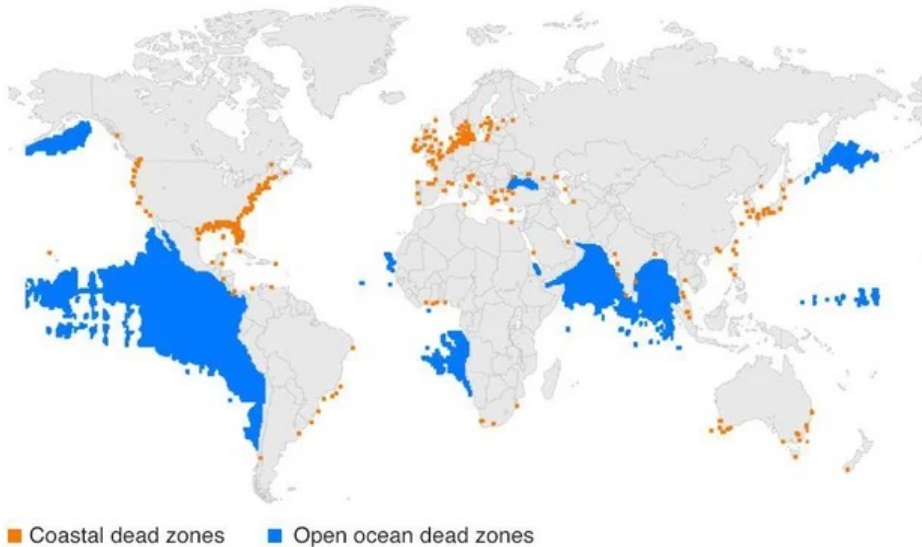
<http://www.nature.com/scitable/knowledge/library/eutrophication-causes-consequences-and-controls-in-aquatic-102364466>

<https://nutritionstudies.org/america-the-beautiful-swimming-in-the-slurry/>

<https://www.youtube.com/watch?v=LNe7UaR4Ujg>

<https://awellfedworld.org/food-choice-and-oceans/>

Ocean dead zones, where oxygen is lower than 2 milligrams per litre



Source: Global Ocean Oxygen Network, Science

BBC

This is a 2022 BBC graphic showing dead zones around the globe caused by factory farms and fish farms.

Fish farms supply almost half of all fish consumed worldwide.

1. <http://environmentalproblems5.wikispaces.com/Ocean+Dead+Zones+%28--%29>
2. <Http://nutritionstudies.org/world-without-fish-link-personal-action-environment/>
3. <http://nutritionstudies.org/impact-of-food-choices-on-the-environment/>
4. <http://www.fao.org/ag/againfo/themes/en/Environment.html>
5. <https://terrastendo.net/2017/06/18/meat-eaters-vs-the-great-barrier-reef/>



Another cost of fish farming is that carnivorous fish species, such as salmon, need fish to eat. So, fishermen net herring for them, resulting in deprivation to seabirds, marine mammals & top-predator fish species.

While we are looking at this food chain graphic, this is a good illustration of how toxin bio-accumulation happens. "Bio-accumulation" is the process through which persistent environmental toxins are concentrated up the food chain. The little fish eat the algae with its trace amounts of toxins. Examples of toxins are pesticides, PCBs, flame retardants, mercury plus over a hundred others. The research on people who develop ALS (aka Lou Gerig's Disease) has shown significant concentrations of these toxins in their systems, which is associated with consumption of fish.

The bigger fish eat a whole lot of smaller fish, and with each predation, the toxins are concentrated in the flesh & fat of the animal. The last one on the chain receives the largest dose. This is one of the hidden costs of being at the top of the food chain & one of the reasons why health professionals who understand this issue, recommend that we eat as low on the food chain as possible (aka plants). More on that is coming...

<http://bit.ly/29KFAFc>

<https://www.pcrm.org/news/innovative-science/persistent-pesticide-exposure-associated-increased-risk-lou-gehrigs-disease>

<http://globalissueoverfishing.weebly.com/why-is-overfishing-a-problem.html>

		Carbon footprint		
		Low	Medium	High
Health effect	Favorable	Fruits Vegetables Beans & Peas Nuts & Seeds Whole grains Water	Coffee & Tea	Fish
	Neutral	Potatoes Margarine Refined grains Vegetable oils	Eggs Butter Dairy substitutes Meat substitutes Fruit & Veg. Juices	Poultry Dairy products Shellfish
	Unfavorable	Candy & Sugars Savory snacks Dressings & Sauces	Ready-to-eat cereals Pastries & Desserts Alcoholic drinks Sodas	Processed meats Pork Beef

Here is another angle for making smarter food choices. This 3 × 3 matrix is from a 2025 study out of Loma Linda University in California. Thirty food groups were studied and ranked to provide this easy-to-compare image of the combined health impacts & environmental data.

The foods in the green, upper left corner are the healthiest, most sustainable choices with the lowest carbon footprint and the highest nutritional value. They are whole plant foods: fruits, oil-free vegetables, nuts & seeds, whole grains, and legumes (beans, peas & lentils) with water for drinking.

The yellow, middle sections have medium environmental impact and some nutrient value. They are fish, eggs, plant-based dairy- & meat-alternatives, juices & low-fat junk foods.

The bottom right/red foods have the worst of both, destructive impacts on the environment & proven to be disease-promoting. They are fresh & processed meats.

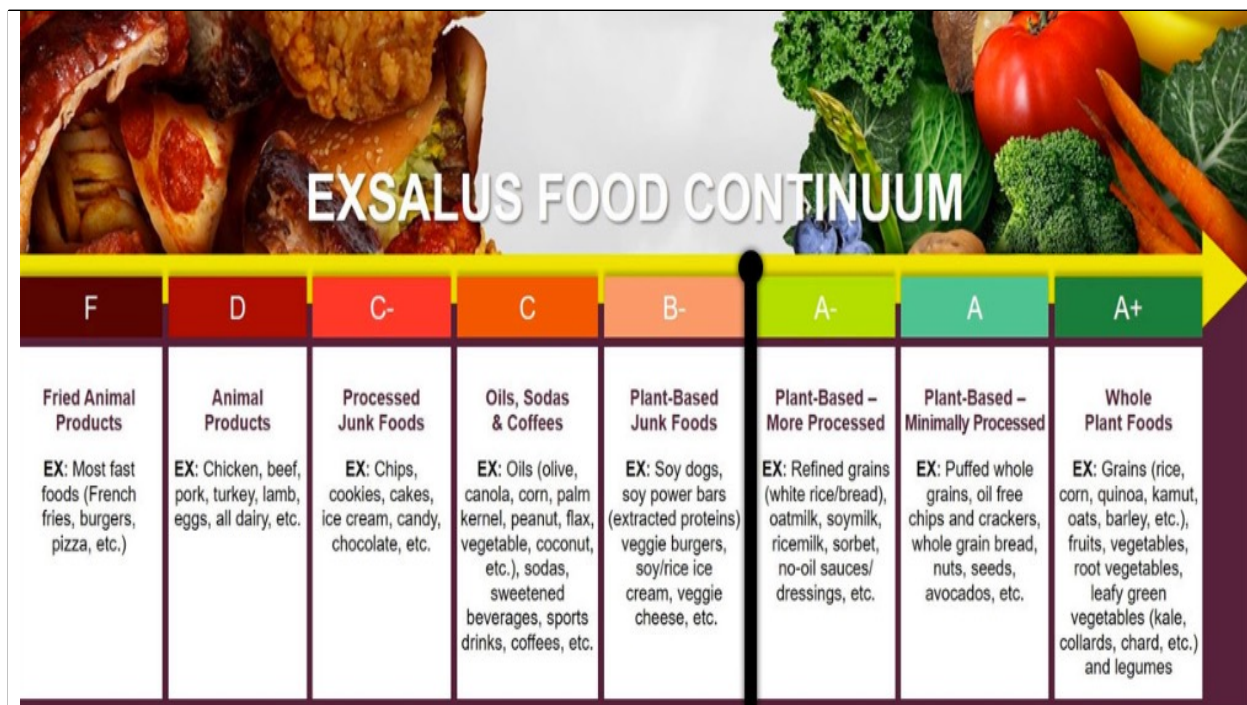
Similar results were reported in the 2017 Sustainable Nutrient Rich Foods Index by

researchers in the Netherlands.

<https://pmc.ncbi.nlm.nih.gov/articles/PMC12361189/> (Loma Linda)

<https://www.sciencedirect.com/science/article/abs/pii/S0921800916300830>
(Netherlands)

<https://www.animalagricultureclimatechange.org/processed-foods-environment/>



Similarly, we have the Exsalus Food Continuum from the T Colin Campbell Center for Nutrition Studies, associated with Cornell University. This rating system reflects the research showing just the impacts of these foods on human health. However, now that we know which foods have the worst environmental impact, we again see that win/win status of the foods with the A+ rating.

<https://www.youtube.com/watch?v=h0XJWKWtGSw>

<https://thankful2plants.com/how-to/exsalus-food-continuum/>



OK, we've faced the bad news. So now let's deal with this burning question!

Please raise your hand if you grew up eating animal products & being taught by trusted, well-meaning care-givers that we need to do so for our health & wellbeing.

We were too. For us, it took developing serious health issues before we were motivated to make any changes.

Switching to a plant-powered diet was an adjustment for us too and we felt very alone with it back in 1985. Happily, more & more people ARE transitioning. If this is what you are doing, please know you are in good company! Please give yourself credit for making an important upgrade, possibly saving your own life, absolutely saving the lives of innocent animals and contributing to the protection of the planet's environment. This is a worthy endeavor. So please give yourselves a round of applause!

The point of this cartoon is to illustrate that there are far more plant foods to eat than there are animal products to reduce/eliminate. When we begin to think of

eating MORE plants, the variety in our diet expands rather than contracts.

You may notice that the younger lady has a “vegan” motif on her t-shirt. That means that she avoids eating all animal products, without telling us what she does eat. Her basket looks very wholesome, but if she is only interested in being vegan, she could also fill a basket with vegan junk foods. This is why the plant-powered health care providers recommend we eat a low-fat diet of whole plant foods, limiting/avoiding processed foods such as oil, white flour, sugar, alcohol.



The greater the diversity of plants in your diet, the more diverse and stable your microbiome becomes.

When I eat a plant-powered diet, do I have to buy only organic foods?

It's certainly a good option when available and within your budget. Even so, ordinary grocery-store whole plant foods are safer & cleaner than animal products, even when compared to organically-raised animals. The flesh & secretions of animals typically have 10x more persistent environmental toxins, due to bio-accumulation than plant foods. All animal products come with zoonotic pathogens, hormones & disease promoting fats, all of which are unique to the animal kingdom.

Eating even just ordinary whole plant foods reduces intake of toxins significantly. The most important focus is diversity, aiming for at least 30 different types of whole plant foods in a week for the sake of your microbiome.

Registered dietitian Jeff Novick explains the choices that are far worse than regular, grocery-store plant foods.

<https://www.drmcDougallforums.com/viewtopic.php?f=22&t=42831&sid=f3543d57af07e5d1f0c81e996a37461f>

Registered dietitian Susan Levin explains why organic meat, dairy & eggs are more contaminated than regular, grocery store produce.

<https://www.forksoverknives.com/wellness/will-switching-to-organic-meat-dairy-and-eggs-save-your-health/>

<https://nutritionfacts.org/blog/how-chemically-contaminated-are-we/> (people eating animal products have more contamination)

<https://nutritionfacts.org/video/pandemics-history-prevention/> (pandemics)

<https://nutritionfacts.org/topics/zoonotic-disease/> (Ciguatera, e.coli. MRSA, certain types of cancer, parasites, Rabies & salmonella)



What's the big deal about fiber (fibre?) these days?

Increasing intake of low-fat whole plant foods to at least 30 different types in a week is the basis of optimal health.

(read question)

We're glad you asked! Fifty years ago, fiber was thought to be little more than the "roughage" that keeps us "regular".

Current research in modern gastroenterology (the study of the digestive system) is showing us that fiber is much, much more. It's being affectionately called the Clark Kent of the digestive tract. Although it seems simple & boring, it has surprising hidden power.

When we eat a varied diet of whole plant foods, the fiber they provide feeds the health-promoting critters of our intestinal microbiome. Those good guy critters run 70% of our immune system that helps us prevent & fight disease including cancers, reduce inflammation and cardiovascular disease risk, produce the serotonin that helps us feel happy & clear-headed, help us maintain optimal hormone levels & body weight, and more.

Conversely, eating high-fat foods & those with little or no fiber, such as processed foods & animal products, feeds a different set of microbes which

increase our risks of developing chronic disease & obesity.

This is the core reason why transitioning gradually to a low-fat diet of whole plant foods, if at all possible, is optimal. It gives the microbiome the chance to adapt and minimizes intestinal objections.

The ultimate goal as recommended by the Lifestyle Medicine gastroenterologists is to eat at least 30 different types of plant foods in a week to encourage as much diversity in the microbiome as possible.

[https://www.pcrm.org/news/news-releases/doctors-share-top-five-foods-prevent-constipation-light-new-research-linking \(Alzheimer's\)](https://www.pcrm.org/news/news-releases/doctors-share-top-five-foods-prevent-constipation-light-new-research-linking-(Alzheimer's))

<https://www.pcrm.org/news/health-nutrition/plant-based-diets-promote-healthy-gut-microbiome>

<https://pubmed.ncbi.nlm.nih.gov/35870901/> (gastric cancer)

<https://pmc.ncbi.nlm.nih.gov/articles/PMC10830803/> (skin cancer)

<https://nutritionfacts.org/blog/what-meat-and-eggs-do-to-our-microbiome/>

<https://www.theguthealthdoctor.com/30-plant-points>

<https://nutritionstudies.org/fiber-fueled-the-key-to-a-strong-immune-system/>

<https://plantbasedhealthprofessionals.com/fibre-the-overlooked-nutrient-that-supports-your-gut-heart-and-overall-health>

<https://www.nature.com/articles/s41564-024-01870-z>

<https://nutritionfacts.org/blog/hijacking-our-appetites/>

Kidney Beans: \$2.20/kg

Nutrition Facts	
Serving Size 100 grams	
Amount Per Serving	
Calories 333	Calories from Fat 7
% Daily Value*	
Total Fat 1g	1%
Saturated Fat 0g	1%
Trans Fat	
Cholesterol 0mg	0%
Sodium 24mg	1%
Total Carbohydrate 60g	20%
Dietary Fiber 25g	100%
Sugars 2g	
Protein 24g	
Vitamin A 0%	Vitamin C 8%
Calcium 14%	Iron 46%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	
NutritionData.com	

Rib Steak \$46.50/kg

Nutrition Facts	
Serving Size 100 grams	
Amount Per Serving	
Calories 471	Calories from Fat 379
% Daily Value*	
Total Fat 42g	65%
Saturated Fat 18g	89%
Trans Fat	
Cholesterol 94mg	31%
Sodium 50mg	2%
Total Carbohydrate 0g	0%
Dietary Fiber 0g	0%
Sugars 0g	
Protein 22g	
Vitamin A 0%	Vitamin C 0%
Calcium 1%	Iron 13%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	
NutritionData.com	

Is eating a diet of whole plant foods expensive ?

When we avoid animal products, processed & restaurant foods, we can save money because a varied diet of whole plant foods is cheaper.

For example, a kilogram of dried kidney beans costs about \$2.00 whereas a kg of meat may cost over \$40.00. Even better, once the dry beans are soaked & cooked, there is DOUBLE the amount of beans, which effectively reduces the cost per serving even more. Additionally, the beans are a better nutritional value since they are high in health-promoting fiber, cholesterol-free, super-low in sodium & fat, higher in anti-inflammatory non-heme iron, potassium & calcium, as well as being a nitrogen-fixing crop for soil care.

As an example of processed foods, 100 grams of potato chips may be about \$4.00, while 100 grams of whole fresh potatoes cost about 60 cents.

When berries are out of season, buying frozen is much cheaper.

MOST people report that their grocery bill goes down when they eliminate the expense of animal products & processed foods from their diet.

(Prices from Loblaws, 20-Oct-2019)

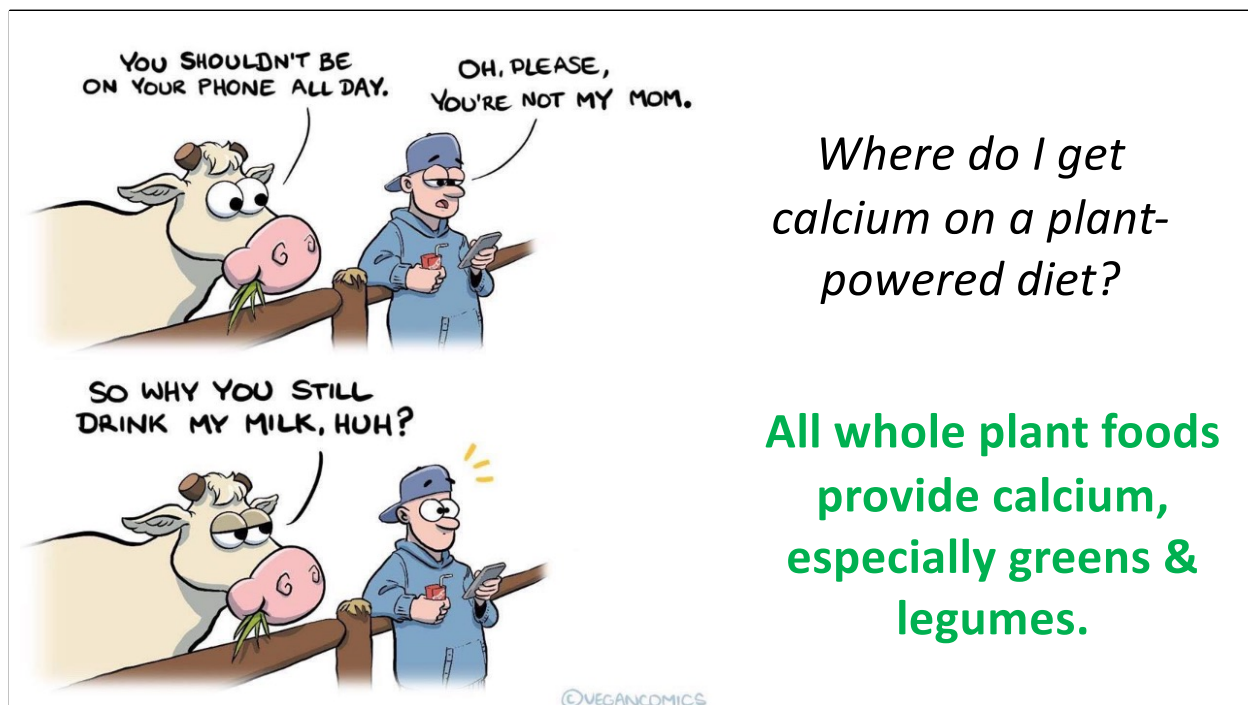
<http://www.ucdintegrativemedicine.com/2015/03/cheap-or-expensive-the-real-truth-about-plant-based-diets/>

<http://www.plantifulhealth.com/3-super-cheap-vegan-meals-easy-prep/>

<https://nutritionfacts.org/video/eating-healthy-on-a-budget/>

<https://nutritionstudies.org/plant-based-on-a-budget/>

<https://www.sciencedirect.com/science/article/abs/pii/S0002916525004599>



Where do I get calcium on a plant-powered diet?

All whole plant foods provide calcium, especially greens & legumes.

Calcium is simply one of the many minerals in the soil which plants take-up during their life cycle. When eating a varied diet of whole plant foods, we consume our daily requirement bite by bite instead of trying to consume it all from just one type of food. To be extra sure of getting plenty of calcium, greens & beans are the richest sources so having some of both every day is a good idea for that, and other health-nurturing reasons.

The cow is reminding us that babies of all mammalian species are weaned from their mother's milk onto the solid foods suited for their species. This is why lactose intolerance in human adults can not be considered an abnormal "condition" since it is the normal state of adult mammals, and about 70% of adult humans globally .

<https://www.foodpolitics.com/what-to-eat-an-aisle-by-aisle-guide-to-savvy-food-choices-and-good-eating/>

<http://www.pcrm.org/health/diets/vegdiets/what-is-lactose-intolerance>

<https://medlineplus.gov/genetics/condition/lactose-intolerance/#frequency>

USDA Nutrient Database for Standard Reference, Release 24, 2011 and manufacturers' information.

<http://nutritionstudies.org/how-to-get-calcium-without-dairy/>
<http://www.pcrm.org/health/diets/vsk/vegetarian-starter-kit-calcium>
<http://www.osteoporosis.ca/osteoporosis-and-you/nutrition/calcium-requirements/>
<http://www.vrg.org/nutrition/calcium.php>

Protein requirements

Carnivores have 11 essential amino acids:

taurine
arginine
histidine
Isoleucine
leucine
lysine
methionine
phenylalanine
threonine
tryptophan
valine

Omnivores have 10 essential amino acids:

arginine
histidine
isoleucine
leucine
lysine
methionine
phenylalanine
threonine
tryptophan
valine

Herbivores & humans have 9 essential amino acids:

histidine
isoleucine
leucine
lysine
methionine
phenylalanine
threonine
tryptophan
valine

It can seem shocking when people examine that belief and discover that it is a myth, based on a faulty understanding of the term & a simplistic view of our biology.

The animal kingdom, of which humans are members, is divided into three dietary groups: carnivore, omnivore & herbivore. When used technically & accurately, the categories describe the physiological traits & biological needs of an animal. In the wild, their food behaviours match their taxonomy. While we could spend this whole 2-hour session simply reviewing all those factors, in the spirit of brevity, let's focus in on the most revealing characteristic: the Essential Amino Acid needs of each group.

Amino acids are the building-blocks of protein. The Essential Amino Acids (EAA) are the ones a species must consume in their diet. From these, each species (including humans) makes their own protein for building & maintaining our bodies.

Carnivores such as vultures, cats & killer whales have 11 EAAs, some of which can only be obtained from animal products.

Omnivores like pigs, racoons & rats, have 10 EAAs, so they have a lesser need of animal flesh and greater need of whole plant foods.

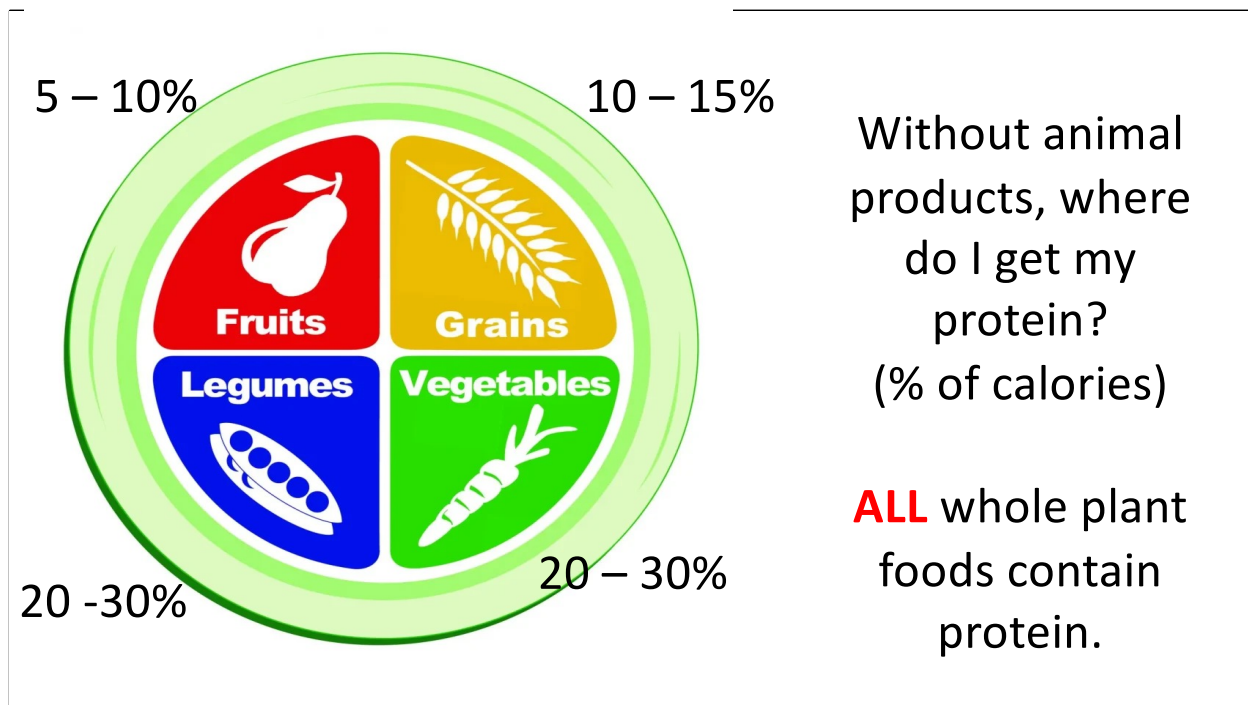
Herbivores mammals (such as primates, cows & horses), after the age of weaning from their mother's milk, have 9 EAAs, all of which are easily provided by a varied diet of whole plant foods.

The EAA research has shown repeatedly that weaned humans have 9 EAAs.

The confusion about this began back in 1940 after doing the first EAA experiments using rats. Initially, the researchers innocently assumed humans were the same as rats. When they recognized the obvious success of large segments of human populations in Asia & Africa that rarely, if ever, ate animal products, they created the "protein combining" theory.

That theory was shared as fact over the following ten years until the early 50's, when the researchers finally redid the EAA tests on humans & discovered that we have the amino acid needs of herbivores. Sadly, that 10-year gap gave the meat & dairy industries a significant head-start in convincing us of a need for their products. ... and then more time after that for the protein combining theory to be debunked.

<https://nutritionfacts.org/video/the-protein-combining-myth/>
<https://www.forksoverknives.com/the-latest/the-myth-of-complementary-protein/>
<https://tenderly.medium.com/busting-the-myth-of-incomplete-plant-based-proteins-960428e7e91e>
https://drive.google.com/file/d/13SuCkUWOnOmRLGdyft90Nlf_UNOlPqK5W/view?fbclid=IwAR200-RGNpUgz_7aju5Kew8lvKCDBboMSHWJFhjDCH4ofjmJUq_S2Q8Kf8 (protein content chart from registered dietitian Jeff Novick)
<https://www.drmcDougall.com/misc/2007n/apr/protein.htm>
<https://www.drmcDougall.com/education/information/protein-overload/>
<https://www.youtube.com/watch?v=mhJDUqZ3ZKc> (Prof. Christopher Gardner 12 minutes)
<https://www.youtube.com/watch?v=9Cm6oKRvr2I> (Jeff Nelson on why too much protein is the real issue)



Many people find it surprising how much protein is in whole plant foods. These numbers are calculated from the USDA food nutrient data base listings by registered dietitian Jeff Novick, as a percentage of calories. As a comparison, meat has 30 - 50% protein.

Please note, the World Health Organization says we only need 5 - 6% of our calories from protein. That is the normal, natural amount of protein in human breast milk, perfectly formulated to feed the fastest period of growth in the life of a human. Protein deficiency diseases such as Kwashiorkor or Marasmus are caused by lack of sufficient calories from whole foods or an excessively limited diet such as in parts of Africa where they may only have cassava.

Additionally, the Association of Nutrition & Dietetics states that we consume more-than-enough protein when we eat a varied diet of low-fat, whole plant foods, in sufficient calories to maintain our optimal weight and energy level.

http://www.jeffnovick.com/RD/Q_%26_As/Entries/2013/8/27_Supplement_Recommendations_2_files/Protein%20in%20Veggies.pdf

<http://www.pcrm.org/health/diets/vegdiets/how-can-i-get-enough-protein-the-protein-myth>

<http://archinte.jamanetwork.com/article.aspx?articleid=2540540>

<https://www.ncbi.nlm.nih.gov/pubmed/27886704> (American Academy of Dietetics Registered Dietitians)

<https://www.youtube.com/watch?v=XQCt3lhaUtU> (Dr. Garth Davis, author of "Proteinaholic")

https://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/english_bmi_calculator/bmi_calculator.html (to help estimate your LEAN body mass)

<http://www.pcrm.org/health/diets/vsk/vegetarian-starter-kit-protein>

<http://proteinaholic.com/calculator/>

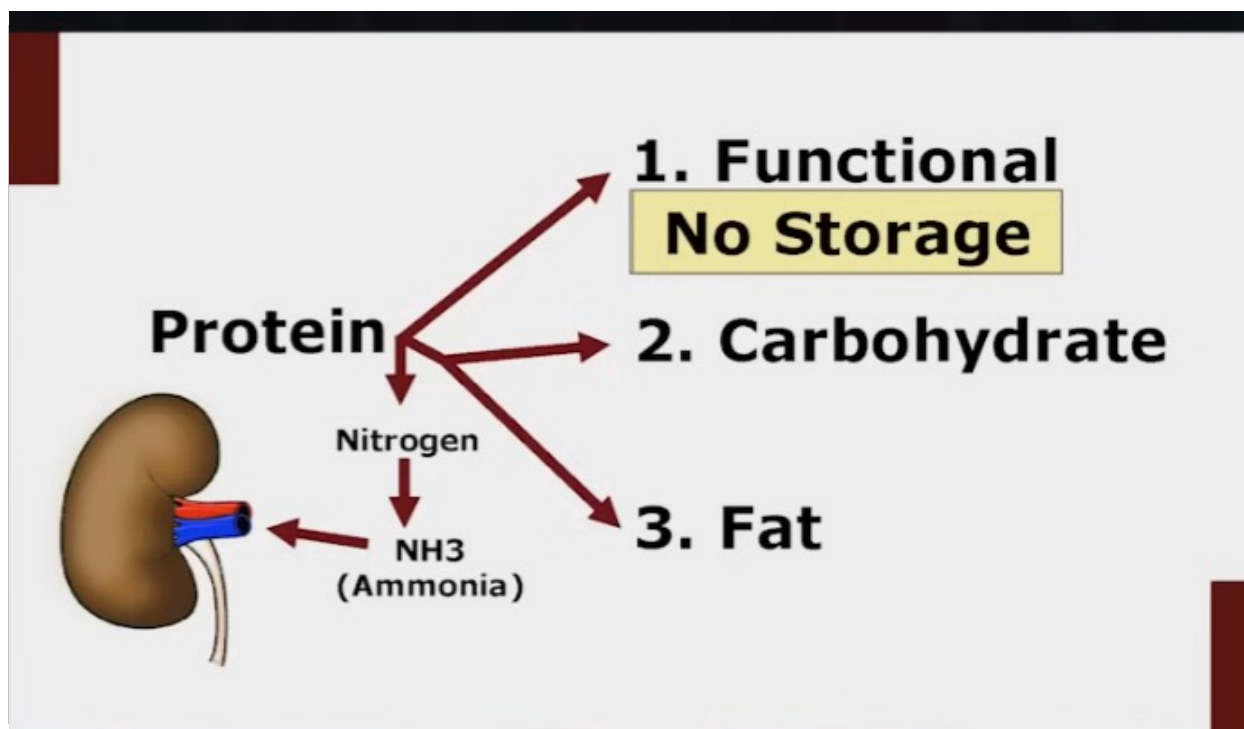
<https://nutritionstudies.org/how-much-protein-do-we-need-rda-vs-dietary-guidelines/>

<https://www.drmcDougall.com/misc/2007nl/apr/protein.htm> (rat research)

<https://www.drcarney.com/blog/entry/current-protein-recommendations-flawed>

<https://nutritionstudies.org/2015-dietary-guidelines-commentary/> (80-10-10)

<https://plant-based4health.com/tag/ted-talk/>



Of our 3 macronutrients, fat, protein & carbohydrates, our bodies only have methods to store fat & carbohydrates. The fat we eat is stored in fat cells around the body as a potential source of fuel for times of scarcity. Carbohydrates are stored as glycogen in the muscles & liver, to be burned preferentially as fuel. Protein however, is NOT stored. We only need a small amount each day and any more than that, is wasted.

This is why high protein diets tend to be the opposite of helpful. High protein diets can be harmful to our kidneys, requiring our bodies to spend energy disposing of the excess. In a complex process of biochemical clean-up, excess protein is converted into carbohydrates & fat, while the excess nitrogen & ammonia are filtered out by the kidneys to be voided in the urine. After many years of dealing with this extra load, the kidneys commonly begin to fail and develop chronic disease.

Slide credit: Dr. Christopher Gardner of Stanford University

<https://www.youtube.com/watch?v=mhJDUqZ3ZKc>

Dr. Gardner's TED talk <https://www.youtube.com/watch?v=mhJDUqZ3ZKc>

Dr. Michael Klaper explains the process of disposing of excess protein.

<https://www.youtube.com/watch?v=7URjN1-aro>

Dr. Michael Greger explains the risks of excess dietary protein.

<https://nutritionfacts.org/video/are-bcaa-branched-chain-amino-acids-healthy/>

Can athletes improve performance & build muscle on a plant-powered diet?



These six 100% plant-powered gentlemen from the American team “PlantBuilt” are living proof that they can.

This photo was taken at the 2017 Naturally Fit Games held in Texas where the team was “Breaking myths and shattering stereotypes...”. They “...won an impressive 32 medals across a range of sports, including bodybuilding, CrossFit, Olympic weightlifting, kettlebell and powerlifting - 22 of which were first place....”

Plant-powered diets provide many advantages to athletes, one of them being improved recovery rate & longevity. The fact that they help an athlete improve performance and recover more quickly from exertions, is amplified by the primary benefit of staying alive longer to compete. Athletes attempting to subsist on animal products tend to die prematurely of heart disease.

The biggest hurdle for male athletes to overcome is the myth that men need meat to maintain their masculinity. In fact, the opposite is true. When men consume the flesh of female animals and/or their secretions (milk & eggs), they are consuming the animals' female hormones which repress their testosterone levels & raise their cortisol levels. Whereas, when men eat 100% plant-powered

diets, they tend to have higher testosterone levels AND lower cortisol levels. Cortisol is a stress hormone that drives aggression.

<https://nutritionfacts.org/blog/meat-can-cause-stress-hormone-levels-to-rise-and-testosterone-levels-to-drop/>

<https://www.riseofthevegan.com/blog/vegan-athletes-show-the-world-meat-is-unnecessary> (source of the photo)

<https://www.youtube.com/watch?v=e-VNXCSGgsg> (Nimai Delgado has never eaten meat)

<https://www.pcrm.org/good-nutrition/nutrition-for-athletes>

<https://www.forksoverknives.com/wellness/top-tips-for-plant-based-athletes/> (Robert Cheeke, body builder)

<https://www.greatveganathletes.com/> (all types, male & female)

<https://nutritionfacts.org/video/why-all-athletes-should-eat-plant-based-diets/>

<https://www.wholefoodplantbasedrd.com/2013/07/wfpb-for-athletes/> (list of famous vegan athletes)

<https://switch4good.org/plant-based-nutrition-for-athletes/>

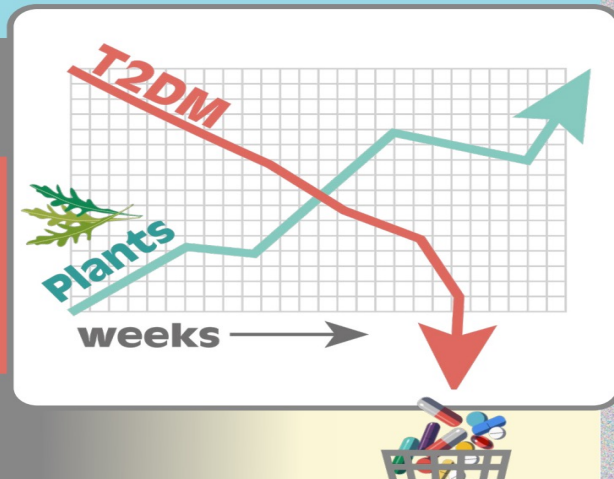
I've been told to limit/avoid carbohydrates because they raise blood sugar and cause weight gain.

Whether you have diabetes or simply wish to **reduce your risk**, the goal should be to **eat a healthy, plant-rich diet**. The diet should be **low in saturated fat** and **high in fibre**.

Numerous studies show that **plant-based diets** are **highly effective** in **treating insulin resistance** and **improving outcomes** and **management of T2DM**.

Plant-based diets are also **effective** at treating and, **in some cases, putting T2DM into remission**. It can take a few weeks or months to see a **dramatic improvement**, depending on factors including **how insulin resistant you are** as well as the **dietary and lifestyle changes you make**.

This type of diet, sometimes called a **whole food plant-based diet**, has a number of benefits:



The medical abbreviation T2DM stands for Type 2 Diabetes Mellitus. This slide shows what happens to symptoms of Type 2 when a person consistently eats a low-fat diet of whole plant foods.

Here's why that may sound shocking and wrong....

The belief that “carbs” are the enemy has a long history. It began with the first Greek physicians in ancient times, who named the condition “diabetes” because of the distinctly sweet taste of the patient’s urine. Having little else with which to diagnose the illness led them to conclude (we now know, falsely) that sweet drinks & foods were the cause of the condition. That belief dominated medical practice until the advent of the electron microscope which enabled researchers to peer INTO the cells of people afflicted with diabetes, revealing that excess fat lodged in the cells from a diet high in saturated fat, was the root of the problem, interfering with insulin doing it’s intended job of escorting glucose from the blood, into cells where it is needed.

Happily, the up & coming specialty in medicine called Lifestyle Medicine, promotes a ***low-fat*** diet of whole plant foods, high in natural carbohydrates

along with lots of fiber that helps slow down their digestion.

[https://plantbasedhealthprofessionals.com/wp-](https://plantbasedhealthprofessionals.com/wp-content/uploads/2024/11/Diabetes-factsheet08.11.24.pdf)

[content/uploads/2024/11/Diabetes-factsheet08.11.24.pdf](https://plantbasedhealthprofessionals.com/wp-content/uploads/2024/11/Diabetes-factsheet08.11.24.pdf)

<https://plantyourself.com/carbs-not-enemy-type-1-diabetic-josh-turner-pyp-249/> (success story)

<https://www.plantbaseddrjules.com/post/fruit-vs-froot-loops-are-carbs-really-the-enemy> (Canadian physician)

<https://www.pcrm.org/good-nutrition/nutrition-information/the-carbohydrate-advantage> (Fiber-rich **carbohydrates** are an essential part of a healthy diet.)

CALORIE DENSITY WEIGHT LOSS KEY	
CALORIES PER POUND	
100 CALS. -	VEGETABLES (NON-STARCHY)
300 CALS. -	FRUIT
400 CALS. -	POTATO, CORN, SQUASH, OATS
500 CALS. -	WHOLE GRAINS, RICE, PASTA
600 CALS. -	BEANS & LEGUMES
	Eat More
	^
750 CALS. -	AVOCADOS
	Eat Less
	v
1200 CALS. -	ICE CREAM
1400 CALS. -	BREAD/BAGELS/WRAPs
1600 CALS. -	CHEESE, DRY CEREAL
1800 CALS. -	SUGAR, CRACKERS, POPCORN
2500 CALS. -	CHOCOLATE
2800 CALS. -	NUTS, SEEDS, BUTTERS, TAHINI
4000 CALS. -	ALL OILS, OIL-POPPED POPCORN

Oil is THE most
calorie dense
food option on
the planet

The real culprit in the insulin resistance of type 2 diabetes and in weight gain is excess dietary fat.

There are 3 macronutrients, the nutrients which provide calories: protein, carbohydrates & fat. Protein & carbohydrates have only 4 calories per gram, while fat has NINE. Fat has more than double the calorie density of the other two, which is why dietary oil is THE most calorie-dense thing that humans can eat.

The increased consumption of high-fat fast foods & oils of all type are primarily responsible for the increasing obesity epidemic.

Oil is THE most calorie-dense food on the planet. It makes foods taste better, but it also very low in satisfaction value. This urges us to eat more total calories when extra fat is added to our food.

<https://nutritionfacts.org/video/what-causes-diabetes/>

<https://www.drcarney.com/blog/health-issues/increased-dietary-fat-causes-increased-diabetes>

<https://www.pcrm.org/news/health-nutrition/improving-diabetes-low-fat-vegan-diet>

<https://nutritionfacts.org/blog/the-roles-diet-and-exercise-play-in-the-obesity-epidemic/>

I've heard that soy will give me cancer and/or man-boobs?



**Phytoestrogens
are protective
against cancers;
and promote
healthy
hormonal levels
in men &
women.**

Spoiler alert: No.

The fears about soy are based on a single case of one man who tried to live on quarts of soy milk; and on rats, who do not in fact, do well with soy. Thankfully, we are substantially different biologically compared to rats.

Here are the facts. Soy contains phytoestrogens (aka plant estrogens) which is what caused the initial confusion. Happily, PHYTO estrogens have the opposite effects from animal estrogens. In fact, the evidence suggests that whole, unfermented soy products such as edamame, tofu & soy milk have protective effects for breast & bone tissues. A half a cup per day of whole soybeans has also been shown to reduce symptoms during perimenopause.

When consumed as part of a varied diet of whole plant foods, soy is similarly beneficial to men's health, increasing testosterone levels & sperm quality. Whole soybeans are rich sources of protein, essential minerals, vitamins & fiber. They also provide all our essential fatty acids.

What DOES however have a feminizing effect on men is dairy products, which

always contain the natural animal estrogen of the mother animal who gave birth to a baby. In fact, the impact of dairy products has been shown to reduce testosterone levels in men and reduce fertility for both genders.

<https://www.pcrm.org/news/health-nutrition/new-research-disputes-biggest-soy-myths>

<https://nutritionstudies.org/soy-myths-vs-facts-is-soy-healthy-or-not/>

<https://nutritionstudies.org/3-myths-about-soy-setting-the-record-straight/>

<https://www.youtube.com/watch?v=WpLMDQipafA> (Dr. T. Colin Campbell)

<https://drmatthewnagra.com/3-myths-about-soy-setting-the-record-straight/>

<https://freefromharm.org/health-nutrition/vegan-doctor-addresses-soy-myths-and-misinformation/>

<https://podcasts.apple.com/us/podcast/241-the-truth-about-soy-debunking-the-myths-with/id1479362562?i=1000584915407>

<https://www.drfuhrman.com/blog/137/dont-fall-for-the-myths-about-soy>

<https://nutritionfacts.org/topics/soy/>

A top-down view of a woven wicker basket overflowing with a variety of fresh vegetables. The basket is placed on a dark, weathered wooden surface. The vegetables include several green asparagus spears tied together with a piece of twine, a bunch of bright red radishes with green tops, a large red bell pepper, a green bell pepper, a yellow bell pepper, a purple eggplant, a green zucchini, a yellow squash, a bunch of green onions, several mushrooms (including button and cremini), a red chili pepper, a green chili pepper, a red tomato, and a yellow tomato. The vegetables are arranged in a dense, overlapping manner, showcasing their natural colors and textures.

- An international group of nutrition and medical experts has released a sweeping report that outlines the healthiest diet for countries to adopt, with the goal of preventing chronic disease in their citizens. These recommendations include: daily eating 3 or more servings of legumes, 4 servings of fruit, 5 servings of vegetables, 3 servings of whole grains, and a serving of nuts/seeds. The authors believed this report was necessary due to rising rates of chronic disease and the influence of industry in government recommendations. The lead author for this report is professor emerita Dr. Elizabeth Dean of UBC.

36



As you may have heard, the 2019 Canada's Food Guide is predominantly plant-powered. Thankfully, it is a massive improvement from the previous incarnation that had separate quadrants for animal products. Canada's Food Guide is published by Health Canada, which gives us a distinct advantage because it is informed by research rather than industry lobby groups, as it is in the USA. Fortunately, we now have this solid basis with which to defend your plant-powered environmental choices.

The one weakness is the upper right-hand quadrant which is labelled "protein foods" which falsely suggests that only those foods provide protein. I can only guess why they decided to take that route, which encourages the reductionist approach (aka referring to foods by one of the 3 macronutrients, as if that is all they are). As we have just clarified, all whole plant foods contain all 3 of our required macronutrients in varying amounts: protein, carbohydrates & fat.

Happily, when we click on the “Food Choices” button on the live website, we see the recommendation quoted on the right: “Eat plenty of vegetables & fruits, whole grains & protein foods. Choose protein foods that come from plants more often. Choose foods with healthy fat instead of saturated fat.”

This may have been the best they could do for this transitional step. For whatever reasons, they included images of animal products in the protein group but then in the instructions, effectively advise us to avoid them in favour of the legumes (beans, peas & lentils) also represented in that quadrant.

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In A Nutshell
S4/E12

**Plant-powered progress:
transforming food
systems for a
cooler planet**

With Prof. Paul
Behrens

The Plant-Based Health
Professionals Podcast

As an academic with a background in Physics, Professor Behrens is an environmental expert, and he combines this expertise with a communication style that is accessible to all in his book 'The Best of Times, The Worst of Times: Futures from the Frontiers of Climate Science'

<https://linktr.ee/inanutshellpodcast>

If you like podcasts, this is a good initiative from the UK. Two female doctors are co-hosts & on this episode, one male guest.

<https://podcasts.apple.com/gb/podcast/plant-powered-progress-transforming-food-systems-for/id1694154034?i=1000712395459>

Other podcasts:

Registered dietitian Julianna Hever "Choose you now"

<https://podcasts.apple.com/us/podcast/choose-you-now/id1551880024>

Dr. Peter Rogers

https://www.youtube.com/results?search_query=peter+rogers+md+diabetes

Rip Esselstyn of Plantstrong & guests.

<https://www.plantstrongpodcast.com/>

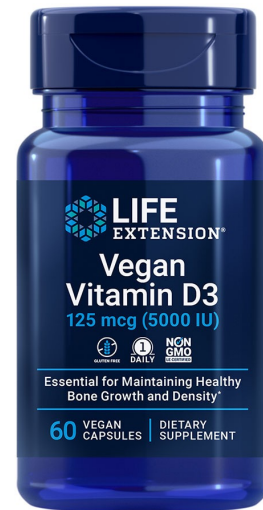
Dr. Alan Desmond, Irish gastroenterologist hosts guest.

<https://podcasts.apple.com/gb/podcast/the-diet-and-lifestyle-habits-that->

prevent/id1782701296?i=1000714142163

Lawyer & ultra-endurance athlete Rich Roll & guests.
<https://www.richroll.com/podcast/josh-lajaunie-2/>

Do I need to take a bunch of supplements to ensure I get complete nutrition when eating a plant-powered diet?



(read question)

There is only one required and one that may be wise. Interestingly, these are both often required for everyone.

B12 is made by cyanobacteria & is required by all vertebrate animals. While animal products may have some in them, it is always a questionable amount and even folks who eat meat may need to supplement it for a variety of reasons. For example, it is regularly recommended for EVERYONE over the age of 55.

Vitamin D3 supplements may be required by most modern humans because our natural source of it is a photosynthetic reaction of sunshine on bare skin. Vegan D3 is made from lichen. Non-vegan ones are made sheep's lanolin.

<https://veganhealth.org/vitamin-b12/can-a-natural-diet-require-supplements/>
<https://nutritionfacts.org/video/are-supplements-and-vitamins-b12-and-d-really-necessary-on-a-plant-based-diet/>
<https://baltimorepostexaminer.com/carnivores-need-vitamin-b12-supplements/2013/10/30>

<https://nutritionfacts.org/topics/supplements/>



deborah.pageau@gmail.com

Let's get cookin'! What new plant-based foods or recipes are you trying this week?

Here is my email. If you send me an email, I will happily send you recipes & resource websites for you to explore. I can also add your name to my facebook groups, if you'd like. Emailed questions are welcome at any time!

If you are taking any medications, please inform your doctor of any changes you make to your diet so that your medications can be ***reduced***  as needed. You may need to check blood pressure & blood sugar every morning.

To track improvements, before you begin eating a whole foods plant-based diet, you may want to have your blood cholesterol, A1c, blood pressure, weight & eyesight measured; and repeat after 6 months & one year.

This is our disclaimer statement.

<http://nutritionfacts.org/2015/06/02/why-do-heart-doctors-favor-surgery-and-drugs-over-diet/>

<http://www.pcrm.org/health/medNews/a-vegan-diet-for-diabetes-control>

<https://pan-int.org/nutrition-insights> (Physicians Association for Nutrition)

<https://plantbasedhealthprofessionals.com/why-we-recommend-a-plant-based-diet> (UK)

<https://lifestylemedicine.org/articles/> (American College of Lifestyle Medicine)

<https://www.ornish.com/> (Dr.



Take the 4Leaf Survey

This dietary assessment tool is a quick and efficient way to estimate the percentage of your calorie intake coming from whole plant sources.

It was designed to enhance your understanding of your dietary habits and identify areas for improvement. By answering these questions, we can assess your eating pattern and provide recommendations to optimise your overall health.

There are no right or wrong answers, so just respond as accurately as you can.

Let's get started – it only takes two minutes to complete.



Since this is our only planned meeting this evening, here is some homework for you to do, if you would like.

The 4 leaf survey is a quick & easy dietary assessment to help you see where you are at now, and where you may want to go to minimize your climate footprint.

The results are for your eyes only.

<https://www.doctorsfornutrition.org/4-leaf-survey/>

Here is another calculator for private use, from the BBC.

<https://www.bbc.com/news/science-environment-46459714>

The image shows the cover of the 'Plant-Based Starter Guide'. It features a top-down view of a white bowl filled with a vibrant salad of leafy greens, orange segments, and other vegetables. The bowl sits on a white rectangular card. In the top left corner of the card is the 'plant-based canada' logo. Below the bowl, the title 'Plant-Based Starter Guide' is printed in bold, followed by the subtitle 'For personal and planetary health' in a smaller font. The background of the entire advertisement is a blurred image of green vegetables.

**Simple tool.
Big impact.**

**Transformation
one plate at a time**

Designed for everyone, everyday – Plant-Based Canada’s new Starter Guide offers clear, practical steps to eat well, eat easily, and eat with purpose. From core nutrition questions to easy meal planning, it’s a practical tool for sustainable change – for you and the planet.

Get the guide now. Sign up to receive your exclusive preview link.

<https://plant-based-canada.kit.com/9cca078209>

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