

THE SCIENCE & PRACTICE OF HEALTHY PERMANENT WEIGHT LOSS

by Dr. Neeraj & Amanda Lakhanpal



Post workout:

How you feel.



How you look.



Post workout:

How you feel.



How you look.

OUR BACKGROUND



Canadians



40%
HEALTHY



34%
OVER
WEIGHT



27%
OBESE

NATIONAL POST

It costs Canada \$9B to treat obesity, while barely any money is put into preventative care

BY SPECIAL TO NATIONAL POST
ORIGINALLY PUBLISHED: NOV 1, 2019

[LINK TO
ARTICLE](#)

Statistics Canada: 62% (13 million Canadians) are unhealthy weight (obesity is increasing with an estimate 34% of Canadian adults will be obese by 2025). The overwhelming consensus is that Canadians are eating too much calorie-rich and nutrient-poor food.

MIGRAINES, DEPRESSION,
PSEUDOTUMOR CEREBRI,
OBSTRUCTIVE SLEEP APNEA



CHRONIC OBSTRUCTIVE
PULMONARY DISEASE,
ASTHMA



NON-ALCOHOLIC FATTY
LIVER DISEASE



TYPE 2 DIABETES
MELLITUS, METABOLIC
SYNDROME



POLYCYSTIC OVARIAN
SYNDROME



VENOUS STASIS DISEASE



CARDIOVASCULAR DISEASE,
HYPERTENSION



DYSLIPIDEMIA,
HYPERCHOLESTEROLEMIA



GASTROESOPHAGEAL
REFLUX DISEASE



CANCER (VARIOUS)



STRESS URINARY
INCONTINENCE

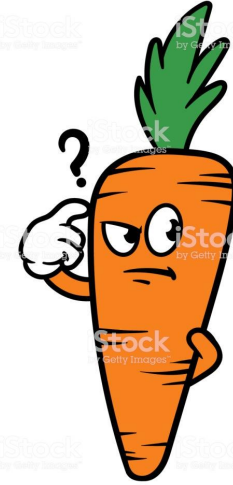
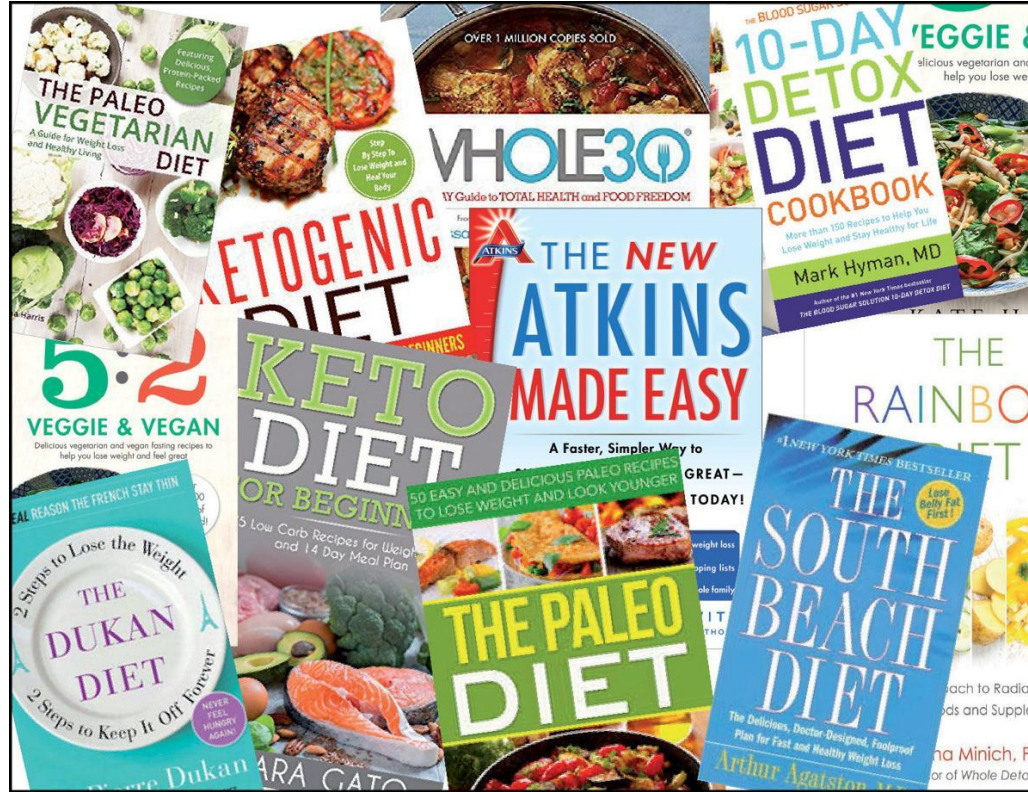


DEGENERATIVE JOINT
DISEASE



GOUT

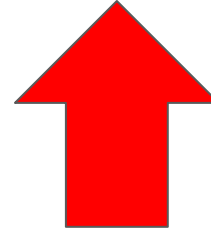
SO, WHAT IS THE HEALTHIEST EATING PATTERN?



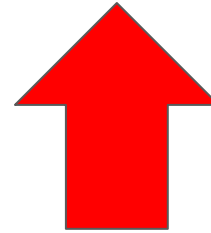
LET'S EXAMINE THE SCIENCE....

KETOGENIC DIET TRUTH BOMB

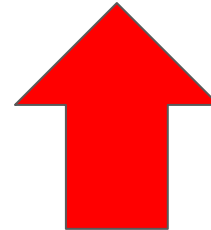
- Ketogenic (low carbohydrate & high fat) diets are a \$33 billion dollar fad diet
- Calorie for Calorie, Dietary Fat Restriction Results in More Body Fat Loss than Carbohydrate Restriction in People with Obesity.
- Weight loss on keto is due to water loss.
- WATCH:
<https://nutritionfacts.org/video/Keto-diet-Results-for-Weight-Loss/>



RISK OF DEATH



CHOLESTEROL



**INFLAMMATORY
MARKERS**

Canada's
food guide

Eat well. Live well.

Eat a variety of healthy foods each day

Have plenty
of vegetables
and fruits

Eat protein
foods

Make
your
choices

Choose
whole grain
foods

Discover your food guide at
Canada.ca/FoodGuide



Canada

Fast facts

Canadian women need 25 grams of fibre per day and men need 38 grams of fibre per day. Most Canadians are only getting about half that much.

**88% +
PLANT
BASED**

**THERE IS
NO
UPPER
LIMIT
FOR
FIBRE**

Top 20 High Fiber Foods

			
PASSION FRUIT	NAVY BEANS	WHITE BEANS	ADZUKI BEANS
25g	19g	19g	17g

			
BUCKWHEAT	SPLIT PEAS	LENTILS	FIGS
17g	16g	16g	16g

			
BLACK BEANS	LIMA BEANS	PEAS (green)	OAT BRAN (1oz)
15g	14g	14g	12g

			
PINON NUTS	ACORN SQUASH	AVOCADO	GUAVA
12g	9g	9g	9g

			
FLAXSEED (1oz)	BLACKBERRIES	RASPBERRIES	BULGUR (cooked)
8g	8g	8g	8g

*Amounts are per cup unless otherwise noted

@naturallysavvy

■ ORIGINAL RESEARCH & CONTRIBUTIONS

Special Report

Nutritional Update for Physicians: Plant-Based Diets

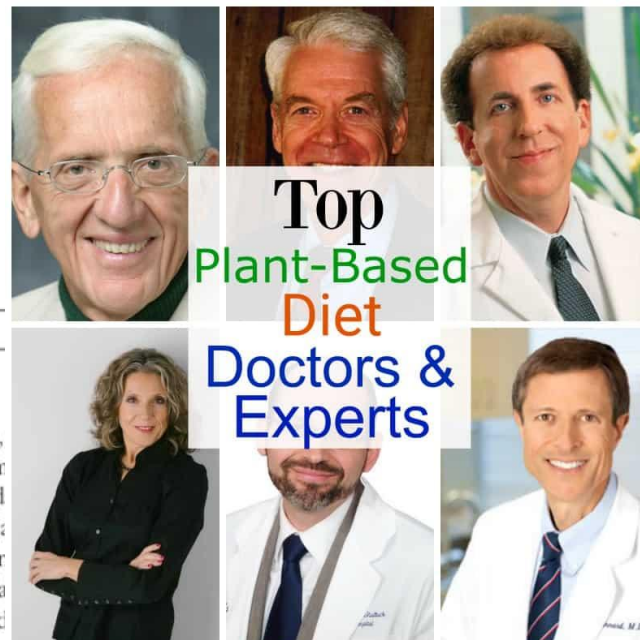
Philip J Tuso, MD; Mohamed H Ismail, MD; Benjamin P Ha, MD; Carole Bartolotto, MA, RD

Abstract

The objective of this article is to present to physicians an update on plant-based diets. Concerns about the rising cost of health care are being voiced nationwide, even as unhealthy lifestyles are contributing to the spread of obesity, diabetes, and cardiovascular disease. For these reasons, physicians looking for cost-effective interventions to improve health outcomes are becoming more involved in helping their patients adopt healthier lifestyles. Healthy eating may be best achieved with a plant-based diet, which we define as a regimen that encourages whole, plant-based foods and discourages meats, dairy products, and eggs as well as all refined and processed foods. We present a case study as an example of the potential health benefits of such a diet. Research shows that plant-based diets are cost-effective, low-risk interventions that may lower body mass index, blood pressure, HbA_{1c}, and cholesterol levels. They may also reduce the number of

rates. Physicians should consider recommending a plant-based diet to all their patients, especially those with high blood pressure, diabetes, cardiovascular disease, or obesity.

daily; and atorvastatin, was prescribed metformin daily; glipizide, 5 mg d of neutral protamine H; bedtime. His physician a low-sodium, plant-based included all animal products and limited bread, rice, potatoes, and tortillas to a single daily serving. He was advised to consume unlimited non-starchy vegetables, legumes, and beans, in addition to up to 2 ounces of nuts and



WHAT IS BMI?



<18.5
underweight



18.5-24.9
normal weight



25-29.9
overweight



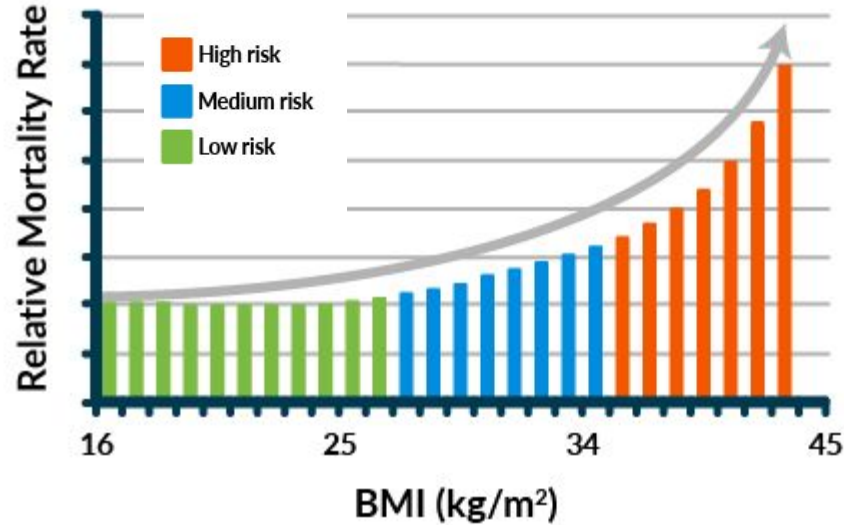
30-39.9
obesity



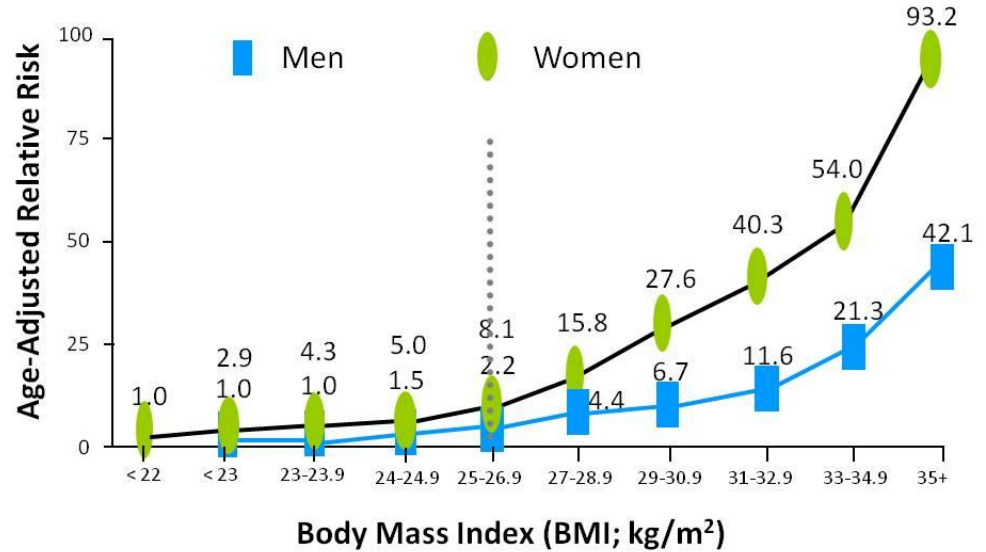
>40
morbid obesity

Body Mass Index vs. Mortality

Exponential Increase in Risk



Relationship Between BMI and Risk for Type 2 Diabetes Mellitus








Chan J, et al. *Diabetes Care*. 1994;17:961-969.

Colditz G, et al. *Ann Intern Med*. 1995;122:481-486.

MedscapeCME™

“Body-mass index and all-cause mortality: individual participant-data meta-analysis of 239 prospective studies in four continents” by The Global BMI Mortality Collaboration *in The Lancet*, 2016.

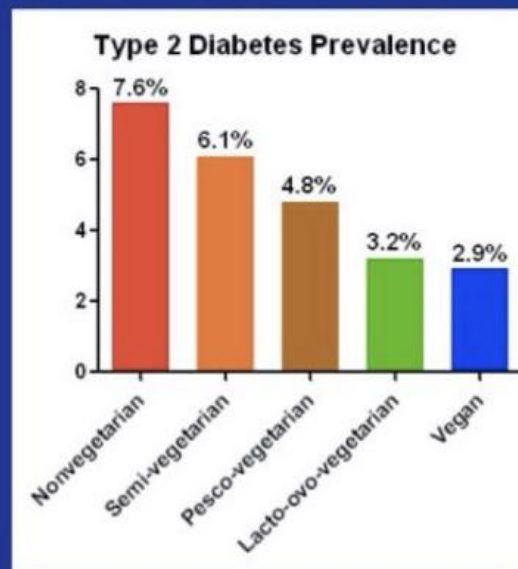
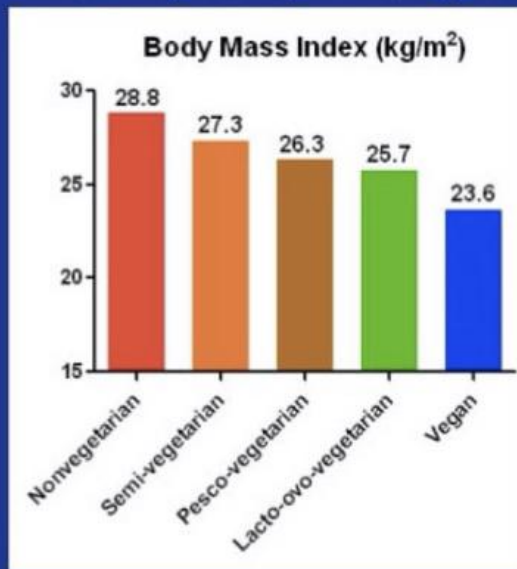
PLANT-BASED vs. VEGAN

	Vegan Diet	Plant-Based Diet	Whole-Food, Plant-Based Diet
 Meat & Poultry	✗	—	—
 Seafood	✗	—	—
 Eggs & Dairy Products	✗	—	—
 Oils	✓	✓	—
 Highly Processed Foods <small>Refined Sweeteners, Bleached Flours, White Rice</small>	✓	✓	—
 Whole Grains <small>Including Whole Grain Flours, Breads, Pastas</small>	✓	✓	✓
 Fruits, Veggies, & Starchy Veggies	✓	✓	✓
 Legumes	✓	✓	✓

[LINK TO STUDY](#)

Adventist Health Study – 2

60,903 participants, aged ≥ 30 , enrolled 2002-2006



Tonstad S, et al. Type of vegetarian diet, body weight and prevalence of type 2 diabetes. Diabetes Care 2009;32:791-6.

[LINK TO
STUDY](#)

ARTICLE

Open Access

A plant-based diet in overweight individuals in a 16-week randomized clinical trial: metabolic benefits of plant protein

Hana Kahleova¹, Rebecca Fleeman¹, Adela Hlozkova¹, Richard Holubkov² and Neal D. Barnard^{1,3}

Abstract

Background and objectives: A plant-based diet is an effective strategy in the treatment of obesity. In this 16-week randomized clinical trial, we tested the effect of a plant-based diet on body composition and insulin resistance. As a part of this trial, we investigated the role of plant protein on these outcomes.

Subjects and methods: Overweight participants ($n = 75$) were randomized to follow a plant-based ($n = 38$) or a control diet ($n = 37$). Dual X-ray Absorptiometry assessed body composition, Homeostasis Model Assessment (HOMA-IR) assessed insulin resistance, and a linear regression model was used to test the relationship between protein intake, body composition, and insulin resistance.

Results: The plant-based vegan diet proved to be superior to the control diet in improving body weight, fat mass, and insulin resistance markers. Only the vegan group showed significant reductions in body weight (treatment effect -6.5 [95% CI -8.9 to -4.1] kg; Gxt, $p < 0.001$), fat mass (treatment effect -4.3 [95% CI -5.4 to -3.2] kg; Gxt, $p < 0.001$), and HOMA-IR (treatment effect -1.0 [95% CI -1.2 to -0.8]; Gxt, $p = 0.004$). The decrease in fat mass was associated with an

Conclusions: These findings provide evidence that plant protein, as a part of a plant-based diet, and the resulting limitation of leucine and histidine intake are associated with improvements in body composition and reductions in both body weight and insulin resistance.

[LINK TO
STUDY](#)

PAPER

Diet and body mass index in 38 000 EPIC-Oxford meat-eaters, fish-eaters, vegetarians and vegans

EA Spencer^{1*}, PN Appleby¹, GK Davey¹ and TJ Key¹

¹*Cancer Research UK Epidemiology Unit, University of Oxford, Oxford, UK*

OBJECTIVE: To compare body mass index (BMI) in four diet groups (meat-eaters, fish-eaters, vegetarians and vegans) in the Oxford cohort of the European Prospective Investigation into Cancer and Nutrition (EPIC-Oxford) and to investigate lifestyle and dietary factors associated with any observed differences.

DESIGN: Cross-sectional analysis of self-reported dietary, anthropometric and lifestyle data.

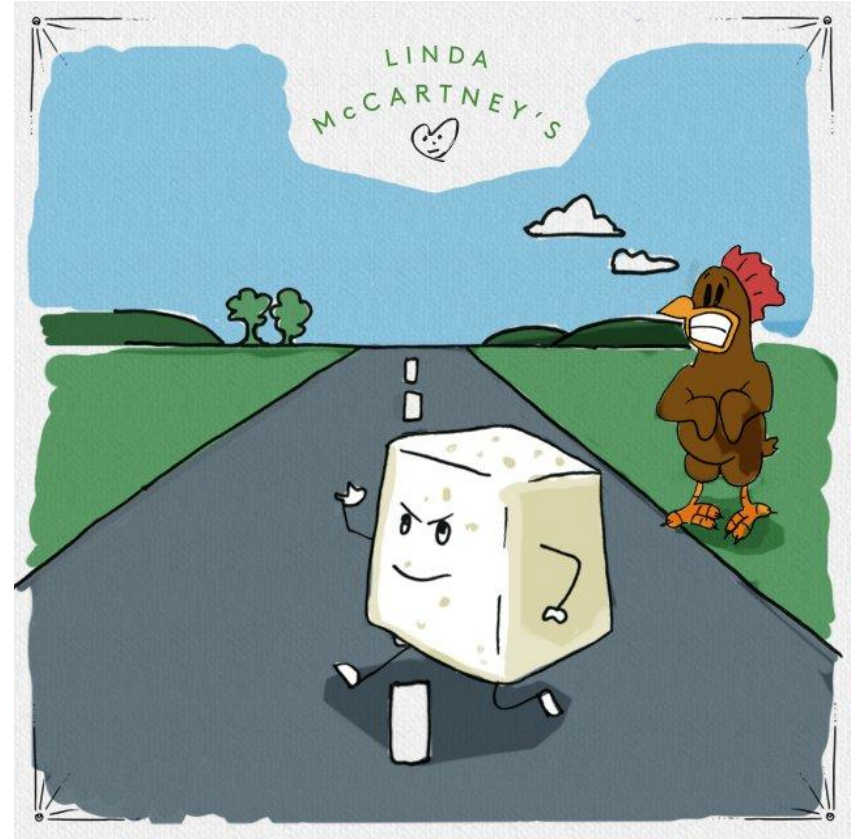
PARTICIPANTS: A total of 37 875 healthy men and women aged 20–97 y participating in EPIC-Oxford.

RESULTS: Age-adjusted mean BMI was significantly different between the four diet groups, being highest in the meat-eaters (24.41 kg/m² in men, 23.52 kg/m² in women) and lowest in the vegans (22.49 kg/m² in men, 21.98 kg/m² in women). Fish-eaters and vegetarians had similar, intermediate mean BMI. Differences in lifestyle factors including smoking, physical activity and education level accounted for less than 5% of the difference in mean age-adjusted BMI between meat-eaters and vegans, whereas differences in macronutrient intake accounted for about half of the difference. High protein (as percent energy) and low fibre intakes were the dietary factors most strongly and consistently associated with increasing BMI both between and within the diet groups.

CONCLUSIONS: Fish-eaters, vegetarians and especially vegans had lower BMI than meat-eaters. Differences in macronutrient intakes accounted for about half the difference in mean BMI between vegans and meat-eaters. High protein and low fibre intakes were the factors most strongly associated with increasing BMI.

International Journal of Obesity (2003) **27**, 728–734. doi:10.1038/sj.ijo.0802300

WHY DID THE TOFU
CROSS THE ROAD?



ORIGINAL ARTICLE

The BROAD study: A randomised controlled trial using a whole food plant-based diet in the community for obesity, ischaemic heart disease or diabetes

N Wright¹, L Wilson², M Smith³, B Duncan⁴ and P McHugh⁵

BACKGROUND/OBJECTIVE: There is little randomised evidence using a whole food plant-based (WFPB) diet as intervention for elevated body mass index (BMI) or dyslipidaemia. We investigated the effectiveness of a community-based dietary programme. Primary end points: BMI and cholesterol at 6 months (subsequently extended).

SUBJECTS: Ages 35–70, from one general practice in Gisborne, New Zealand. Diagnosed with obesity or overweight and at least one of type 2 diabetes, ischaemic heart disease, hypertension or hypercholesterolaemia. Of 65 subjects randomised (control $n = 32$, intervention $n = 33$), 49 (75.4%) completed the study to 6 months. Twenty-three (70%) intervention participants were followed up at 12 months.

METHODS: All participants received normal care. Intervention participants attended facilitated meetings twice-weekly for 12 weeks, and followed a non-energy-restricted WFPB diet with vitamin B₁₂ supplementation.

RESULTS: At 6 months, mean BMI reduction was greater with the WFPB diet compared with normal care (4.4 vs 0.4, difference: 3.9 kg m^{-2} (95% confidence interval (CI) ± 1), $P < 0.0001$). Mean cholesterol reduction was greater with the WFPB diet, but the

CONCLUSIONS: This programme led to significant improvements in BMI, cholesterol and other risk factors. To the best of our knowledge, this research has achieved greater weight loss at 6 and 12 months than any other trial that does not limit energy intake or mandate regular exercise.

Nutrition & Diabetes (2017) 7, e256; doi:10.1038/nutd.2017.3; published online 20 March 2017

Nutrition

Volume 31, Issue 2, February 2015, Pages 350-358

Applied nutritional investigation

Comparative effectiveness of plant-based diets for weight loss: A randomized controlled trial of five different diets

Gabrielle M. Turner-McGrievy Ph.D., R.D. ^a ✉ ... Edward A. Frongillo Ph.D. ^a

✚ Show more

<https://doi.org/10.1016/j.nut.2014.09.002>

[Get rights and content](#)

Clinical meaningful level =
5% weight loss

Vegans = 4.8% (2 months),
7.5% (6 months)

Vegetarians = 4.8% (2 months),
6.3% (6 months)

Pesco- and Semi-vegetarians,
Omnivores = **3.2% (6 months)**

<https://www.sciencedirect.com/science/article/abs/pii/S0899900714004237?via%3Dihub>

EXCERPT FROM 2019 CASE STUDY* PUBLISHED IN THE BRITISH MEDICAL JOURNAL

***patient followed a strict whole foods plant based diet for 4.5 months (the duration of the study) and continued on the diet after study completion**

Patient's perspective

At the outset, it seemed like this was going to be a difficult and restrictive way to eat. What I quickly discovered was that I could begin eating foods that I'd been depriving myself of for years because I thought they were unhealthy. By enjoying fresh, ripe fruits, for example, I was suddenly encouraged rather than discouraged. I began feeling different almost immediately and we had to decrease my insulin after ONE day. It seemed like almost overnight I had more energy than I'd had in years. Weight that I had been trying to lose for a decade began dropping off. As the weight came off, I felt lighter, and more able to move my body again. I began walking daily and am now up to 6 miles per day. This lifestyle change has been the greatest gift I've ever received. I am off most of my medications, I've lost over 70 pounds, and I've regained control over my health. I feel empowered by this lifestyle change and I finally feel like I'm in charge of my health, not just an unlucky victim shuffling from one specialist to the next. My only regret was that I didn't know about this sooner.

<https://casereports.bmj.com/content/bmjcr/12/12/e232080.full.pdf>

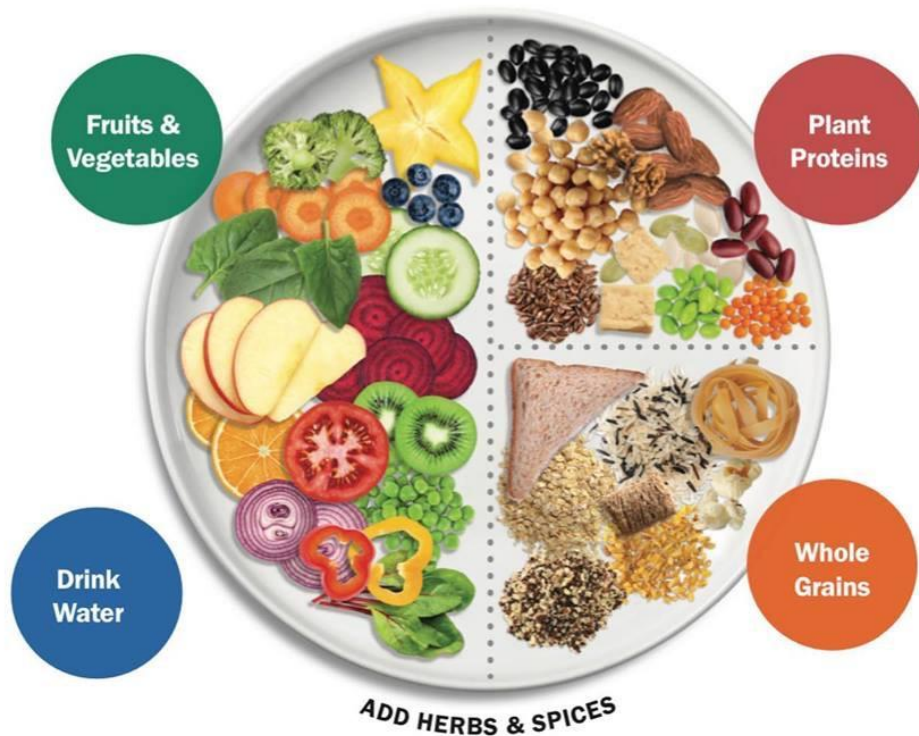
A vibrant collage of various plant-based foods. In the top left, a wooden bowl is filled with almonds. Next to it are several heads of green broccoli. To the right, there's a halved red apple, a whole yellow pear, and a bunch of green celery sticks. In the center, a kiwi is sliced in half, showing its green flesh and black seeds. Below the kiwi, there are several ripe red cherries. In the bottom left, there are fresh raspberries and blueberries, along with a small wooden spoon filled with chia seeds. To the right of the berries, there are some yellow mango sticks. In the bottom right, a large wooden bowl contains a mix of beans and lentils, with a smaller bowl of oatmeal or quinoa sitting on top of it.

Whole Food Plant-Based

A WHOLE FOOD, PLANT-BASED PLATE

Nutrition Prescription for Treating & Reversing Chronic Disease

The American College of Lifestyle Medicine Dietary Lifestyle Position Statement for Treatment and Potential Reversal of Disease: ACLM recommends an eating plan based predominantly on a variety of minimally processed vegetables, fruits, whole grains, legumes, nuts and seeds.



8 GREAT SOURCES OF PLANT-BASED PROTEIN

TEMPEH 30 g
1 CUP

ALMONDS 18 g
3 OZ

LENTILS 18 g
1 CUP

CHICKPEAS 15 g
1 CUP

QUINOA 11 g
1 CUP

PEAS 9 g
1 CUP

OATS 7 g
1 CUP

SPINACH 5 g
1 CUP COOKED



jonvenus ✓

Venice, California



4 VEGAN
BODYBUILDERS



CALORIE DENSITY

WHAT 500 CALORIES LOOK LIKE

OIL



CHEESE



MEAT



POTATOES,
RICE, BEANS



FRUITS &
VEGGIES



...and why whole plant-based foods will help keep you lean and satisfied.

forksoverknives.com

HOW?

EXSALUS FOOD CONTINUUM

F	D	C-	C	B-	A-	A	A+
Fried Animal Products	Animal Products	Processed Junk Foods	Oils, Sodas & Coffees	Plant-Based Junk Foods	Plant-Based – More Processed	Plant-Based – Minimally Processed	Whole Plant Foods
EX: Most fast foods (French fries, burgers, pizza, etc.)	EX: Chicken, beef, pork, turkey, lamb, eggs, all dairy, etc.	EX: Chips, cookies, cakes, ice cream, candy, chocolate, etc.	EX: Oils (olive, canola, corn, palm kernel, peanut, flax, vegetable, coconut, etc.), sodas, sweetened beverages, sports drinks, coffees, etc.	EX: Soy dogs, soy power bars (extracted proteins), veggie burgers, soy/rice ice cream, veggie cheese, etc.	EX: Refined grains (white rice/bread), oatmilk, soymilk, ricemilk, sorbet, no-oil sauces/dressings, etc.	EX: Puffed whole grains, oil free chips and crackers, whole grain bread, nuts, seeds, avocados, etc.	EX: Grains (rice, corn, quinoa, kamut, oats, barley, etc.), fruits, vegetables, root vegetables, leafy green vegetables (kale, collards, chard, etc.) and legumes

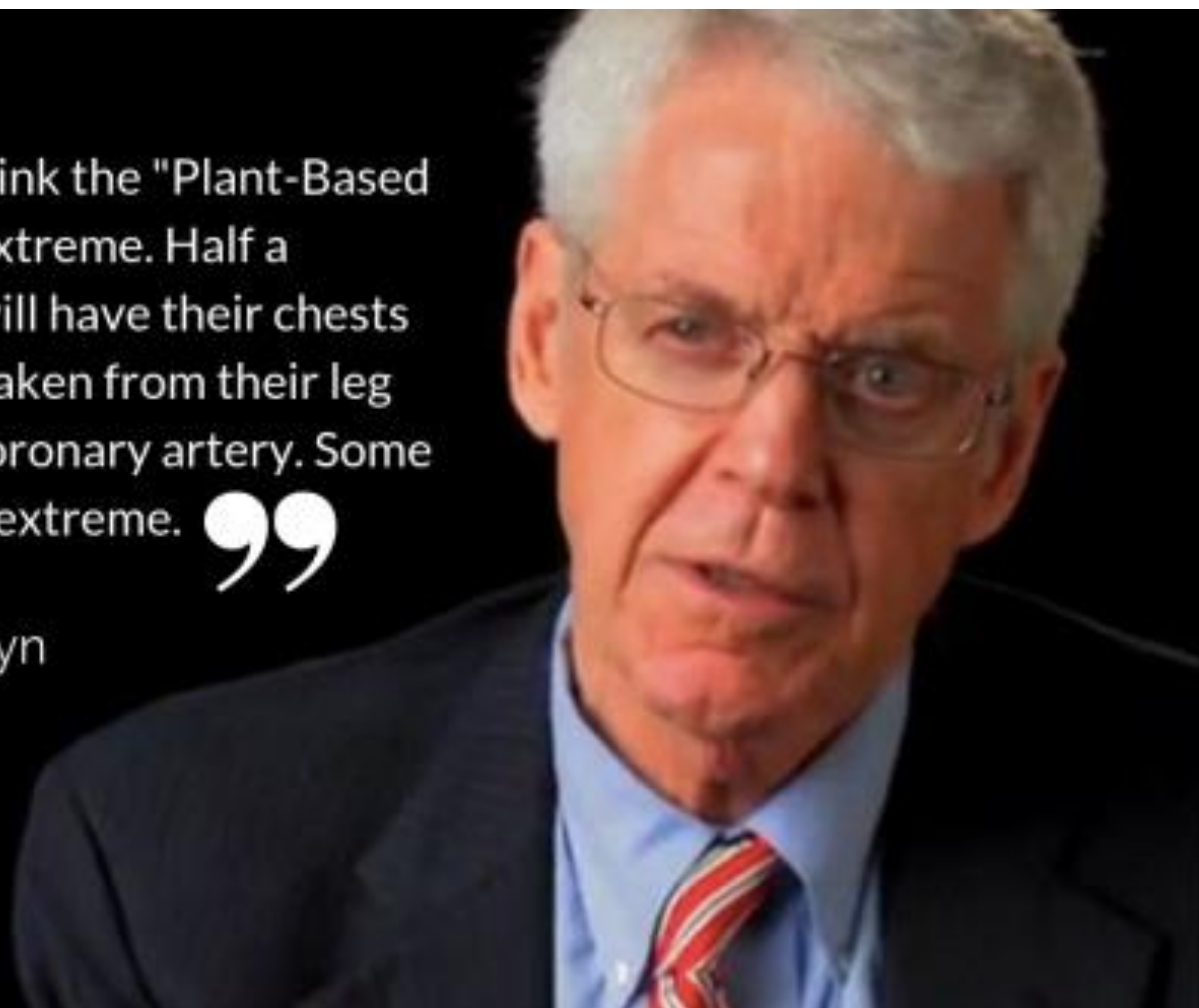


EAT
FOOD
NOT TOO MUCH
MOSTLY
PLANTS



“ Some people think the "Plant-Based Whole Foods" diet is extreme. Half a million people a year will have their chests opened up and a vein taken from their leg and sewn on to their coronary artery. Some people would call that extreme. ”

- Dr. Caldwell Esselstyn
Forks Over Knives



EATING ANIMAL PRODUCTS IS A CHOICE RATHER THAN A REQUIREMENT

MEAT TASTES GOOD

I NEED PROTEIN

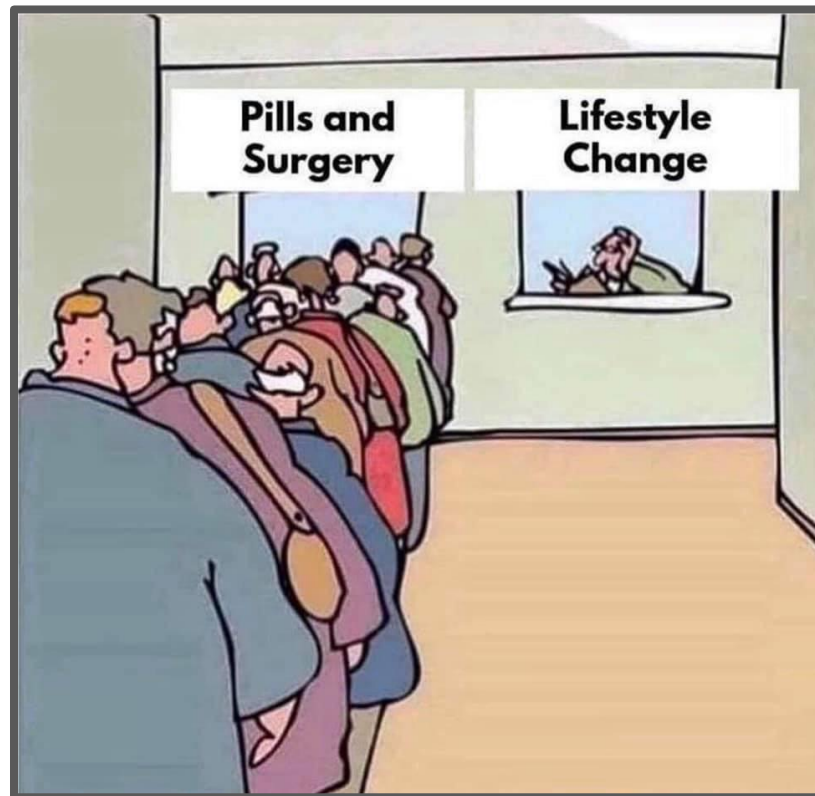
I GREW UP EATING
MEAT AND DAIRY
-IT'S PART OF MY
HERITAGE

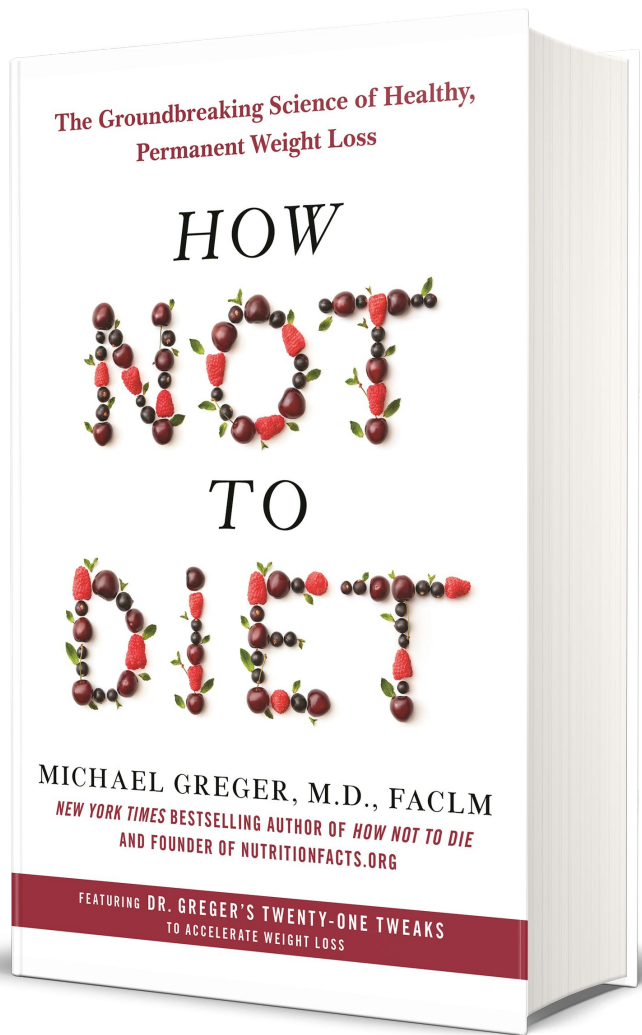
I'M A CARNIVORE

THERE WOULD BE TOO
MANY ANIMALS IF WE
DIDN'T EAT THEM

I CAN'T LIVE
WITHOUT CHEESE

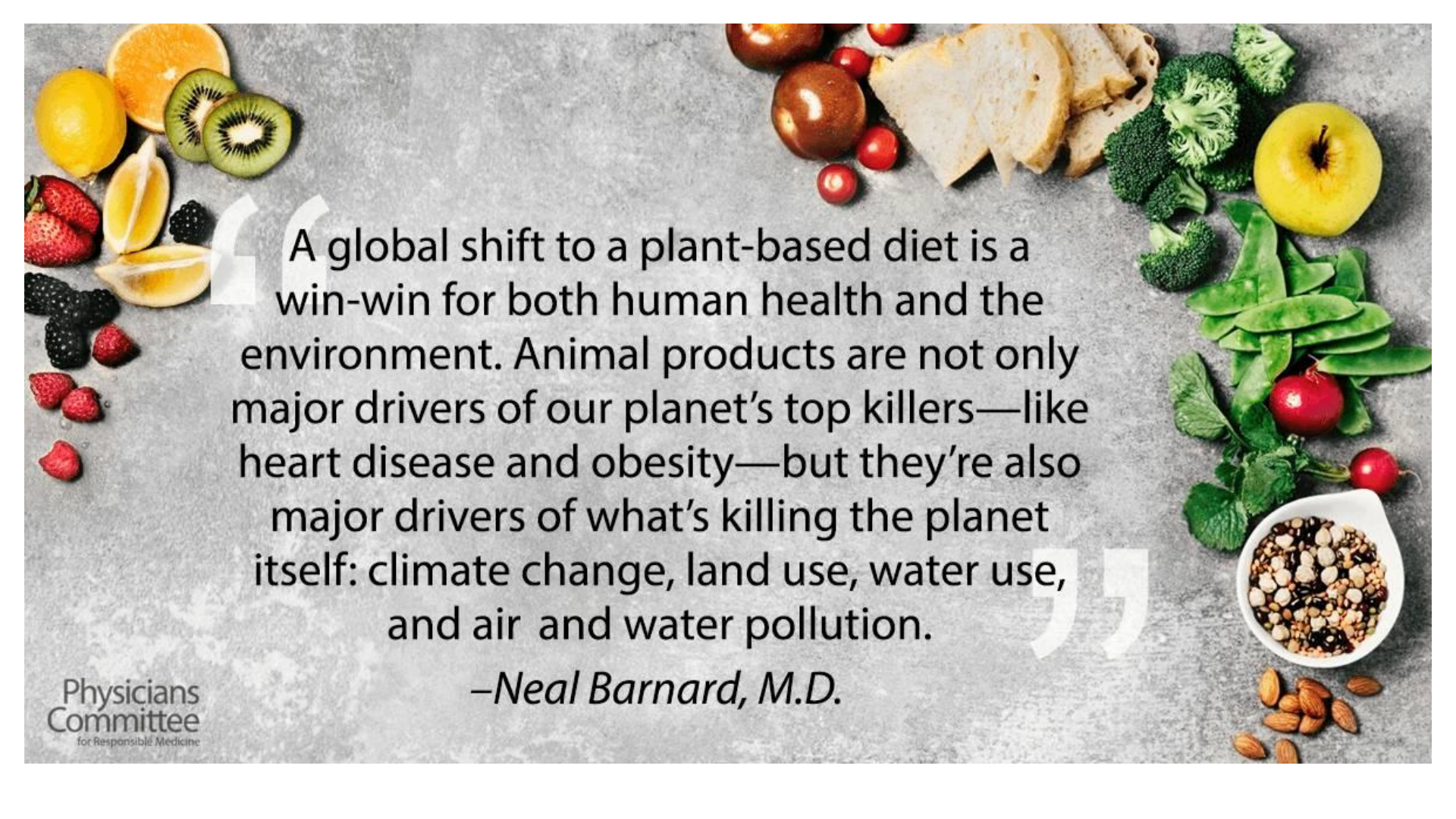
A VEGAN DIET IS
TOO EXPENSIVE





BONUS WEIGHT LOSS HACKS

1. Weigh yourself twice a day every day
2. Eat your biggest meal in the morning or at least earlier in the day
3. Spices like ¼ tsp. Black Cumin, ¼ tsp. Garlic, 1 tsp ground ginger, 2 tsp nutritional yeast boost weight loss
4. Eat an apple (or any fiber rich food) before a meal
5. Drink 1-2 cups of Cool water before a meal
6. Get 7 hours sleep
7. Don't eat after 7pm
8. Drink Apple Cider Vinegar (2 tsp/meal)
9. Drink ground flax (2 Tbsp/day mixed in water)
10. Exercise 6 hours after your last meal (non-diabetics)



A global shift to a plant-based diet is a win-win for both human health and the environment. Animal products are not only major drivers of our planet's top killers—like heart disease and obesity—but they're also major drivers of what's killing the planet itself: climate change, land use, water use, and air and water pollution.

—Neal Barnard, M.D.

WHATS NEXT?

- WWW.PLANTBASEDDOCTOR.CA
- [PLANT BASED BURLINGTON-HAMILTON](#)
- Sign up sheets (MD consults, newsletter, plant-based cooking class)
- Samples

