

Plant-Powered Eating for Optimal Health

A One-hour Continuing Education Webinar

Suggested CDR Learning Codes: 2000, 2020, 2070, 2090, 4000, 4030, 4040, 4110, 5460, 6010, 8090; Level 2

Learning Objectives:

- List and discuss five primary statistical trends relating to plant-based eating.
- Identify five ways in which the Western diet negatively impacts human health and the environment.
- Discuss commonalities among the USDA's MyPlate program, the Academy's position on vegetarian diets, the Harvard Healthy Eating Plate, and the traditional vegetarian food pyramid.
- Inventory eight specific health benefits that research has shown to be associated with plant-based diets.
- List four nutrients that may be deficient in plant-based diets and discuss strategies for achieving adequate intakes of these nutrients.
- Develop strategies to assist clients in adopting and adhering to plant-based eating practices.

The planners and presenter of this continuing education activity certify that no aspect of their current personal or professional circumstance place them in the position of having a conflict of interest with this presentation/course.

Plant-Powered Eating for Optimal Health

A Webinar by Sharon Palmer, RD

Plant-based diets have been associated with a variety of health benefits including healthy weight, optimal health and longevity. RDs can help vegans, vegetarians, and omnivores understand the benefits of adopting whole-foods, plant-based eating strategies. This webinar provides current research relating to plant-based diets, defines what a plant-based diet really is, and develops strategies for implementing plant-based eating with clients.



Eat food.

Not too much.

Mostly plants.

Michael Pollan

In Defense of Food



Plant-based Eating Growing in Popularity



Celebrities promoting plant-based diet

Alicia Silverstone, Bill Clinton, Ellen DeGeneres, and more!

Popular books

Veganista, China Study, The Engine 2 Diet

Plant-Based Bloggers & Websites

Herbivoracious, Oh My Veggies, Savvy Vegetarian, and more!

The Vegetarian Resource Group Poll

Nationwide cross section of 1,010 adults (aged 18 and over)



Between 2 to 8% of the U.S. population is vegetarian—about 5-12 million adults.



16% of respondents reported that they eat vegetarian meals (no meat, fish, seafood, or poultry) more than half of the time.

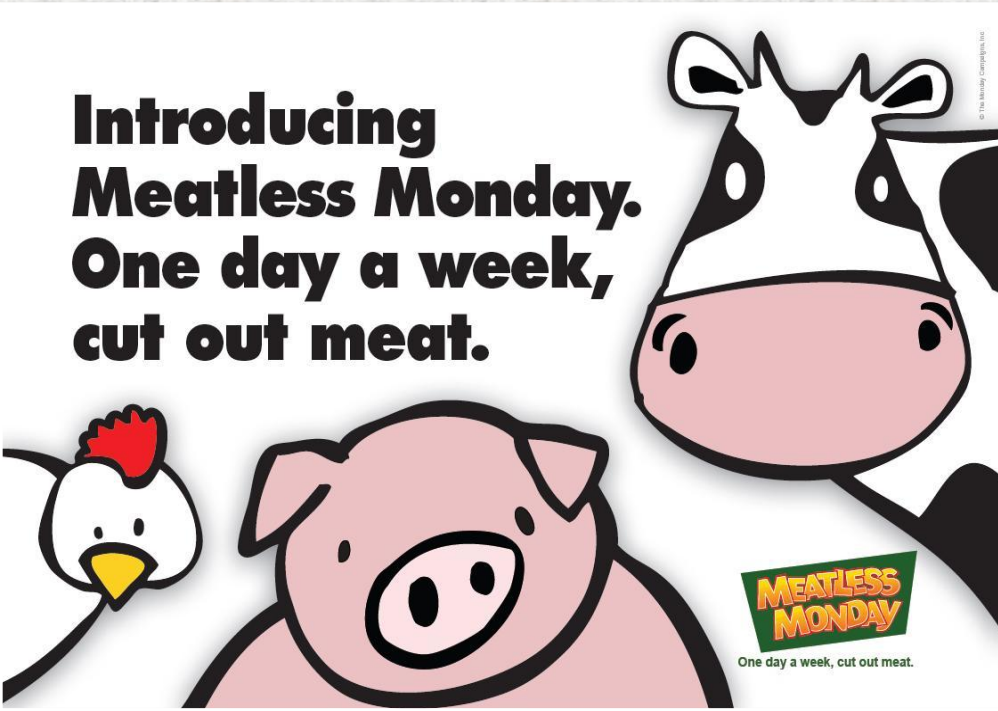


17% stated that they eat many vegetarian meals, but less than half the time.



Thus, 1/3 of the U.S. population is eating vegetarian meals a significant amount of the time—in addition to the number of vegetarians.

Meatless Monday is Growing



Associated with Johns Hopkins' Bloomberg School of Public Health

- Organizations, hospitals, schools, universities, restaurants, and more going meatless on Mondays.
- Stars lining up to support the movement, from Oprah to James Cameron.
- Key influencers, including Michael Pollan, supporting the movement.
- Even Mario Batali announced that he will embrace Meatless Monday in all of his 14 restaurants across the country.

Flexitarian: Top Trend for 2012

“ More consumers in 2012 will become ‘Flexitarians,’ those that consciously reduce their meat intake for health reasons but still occasionally enjoy animal protein. One of the best evidences of this trend is the growing popularity and social media following of the nonprofit Meatless Monday initiative, developed in association with John Hopkins’ Bloomberg School of Public Health. ”

The Wall Street Journal’s
Market Watch

Definition of Plant-based Diets

Definition of a plant-based diet is one that *focuses* on plants



Vegan

No animal foods



Lacto-Ovo Vegetarian

No animal flesh, but allows for dairy and eggs



Pescatarian

No animal flesh, except for fish and seafood



Semi-Vegetarian or “Flexitarian”

Small amounts of animal foods

Indigenous, Traditional Diets



Common Features:

- Local whole grain
- Local legumes
- Seasonal cultivated and foraged fruits and vegetables
- Seeds and nuts
- Minimally processed
- Low use of animal foods

Mediterranean Diet Pyramid

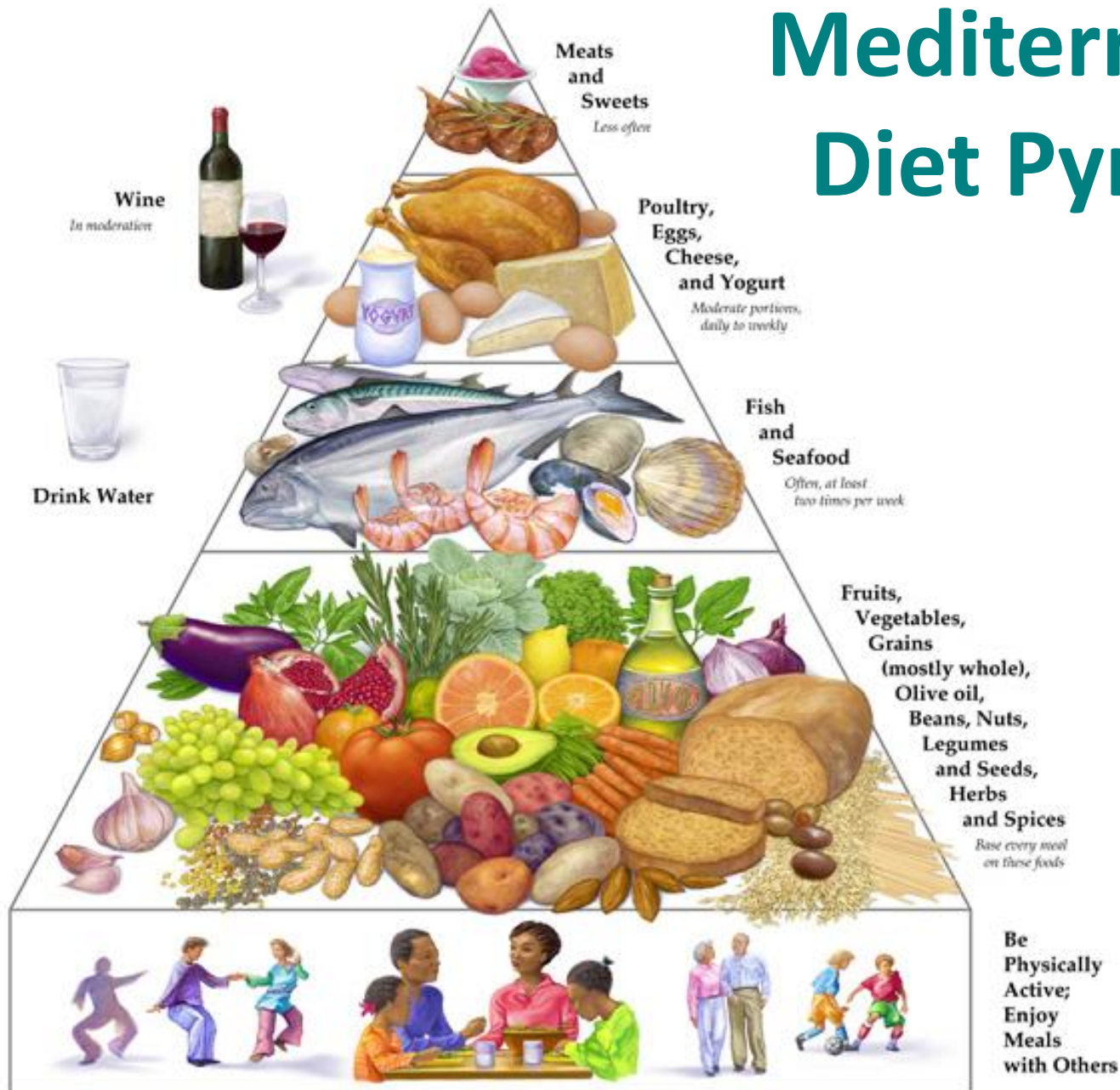


Illustration by George Middleton

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What We Did

EWG partnered with CleanMetrics, an environmental analysis firm, to assess the greenhouse gas emissions associated with 20 types of meat, fish, dairy and vegetable proteins, as well as these foods' effects on health.

**MEAT
EAT LESS
EAT GREENER**

What We Found

All meat is not created equal. Lamb, beef, pork and cheese generate the most greenhouse gases. They also tend to be high in fat and have the worst environmental impacts.



REDUCE YOUR IMPACT. IMPROVE YOUR HEALTH.

Eat Less Meat and Cheese + Make it Greener.

Americans' appetite for meat and dairy – billions of pounds every year from billions of animals – takes a toll on our health, the environment, the climate and animal welfare. Meat and dairy production requires large amounts of pesticides, chemical fertilizer, fuel, feed and water and generates greenhouse gases, toxic manure and other pollutants that contaminate our air and water.

WHAT YOU EAT MATTERS

Eating large amounts of red and processed meats increases exposure to toxins and is linked to higher rates of heart disease, cancer and obesity.

There is something you can do about it: eat less meat and cheese. When you do eat them, go greener. This EWG guide can help you green your diet and advocate for changes to make our food system better for our bodies and the planet.

HERE'S HOW EATING LESS MEAT MEASURES UP AGAINST OTHER CLIMATE-SAVING ACTIONS:

OVER 1 YEAR

IF YOU

eat one less burger
per week

It's like taking your car off the road
for 320 miles, or line-drying your
clothes half the time.

IF YOUR 4-PERSON FAMILY

skips meat + cheese
1 day a week

It's like taking your car off the road
for 5 weeks or shortening everyone's
daily shower by 3 minutes.

IF YOUR 4-PERSON FAMILY

skips steak 1 day a week

It's like taking your car off the road
for almost 3 months.

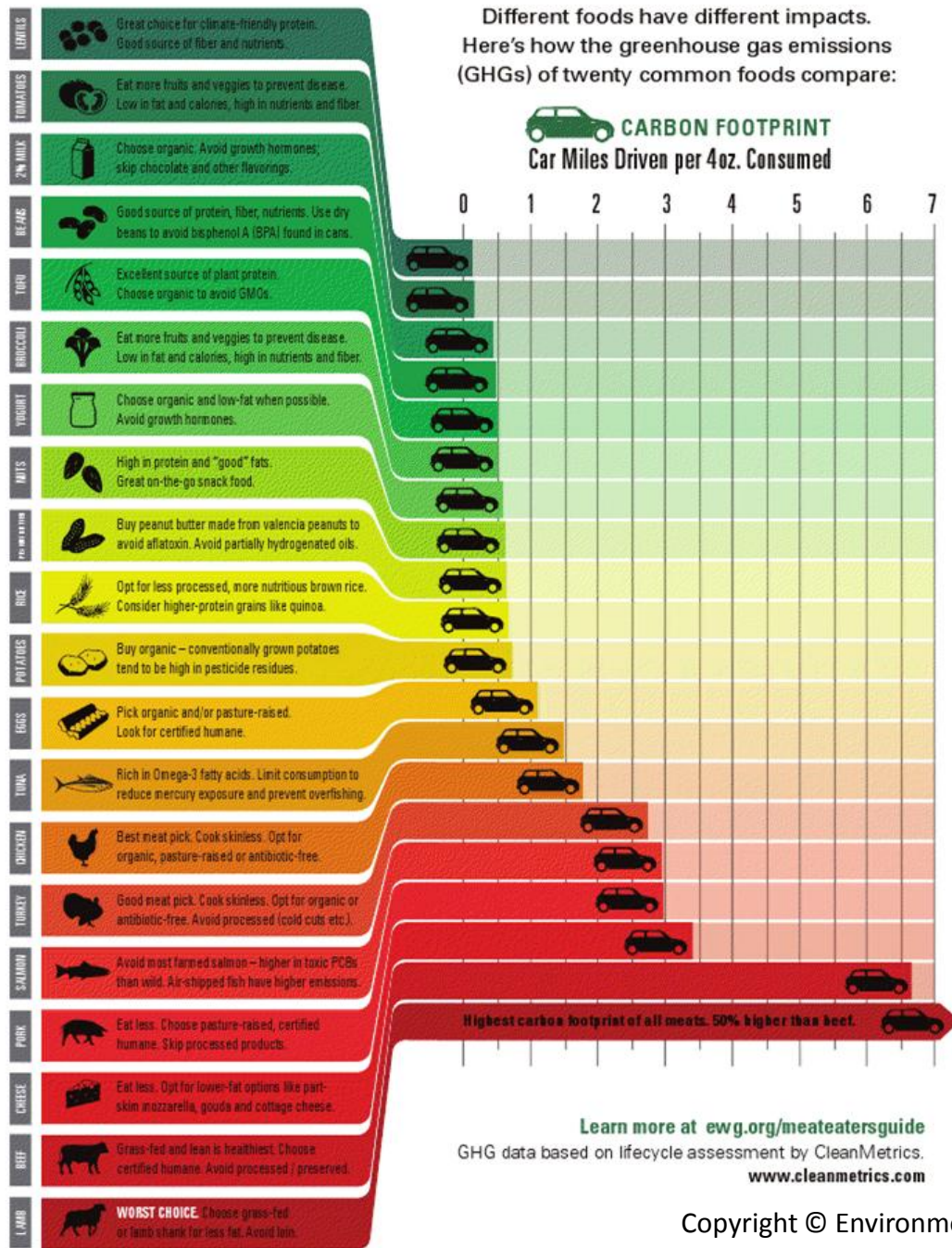
IF EVERYONE IN THE U.S.

ate **NO** meat or cheese
just 1 day a week

It's like not driving 91 billion miles –
or taking 7.6 million cars off the road.

OVER 1 YEAR

Different foods have different impacts. Here's how the greenhouse gas emissions (GHGs) of twenty common foods compare:



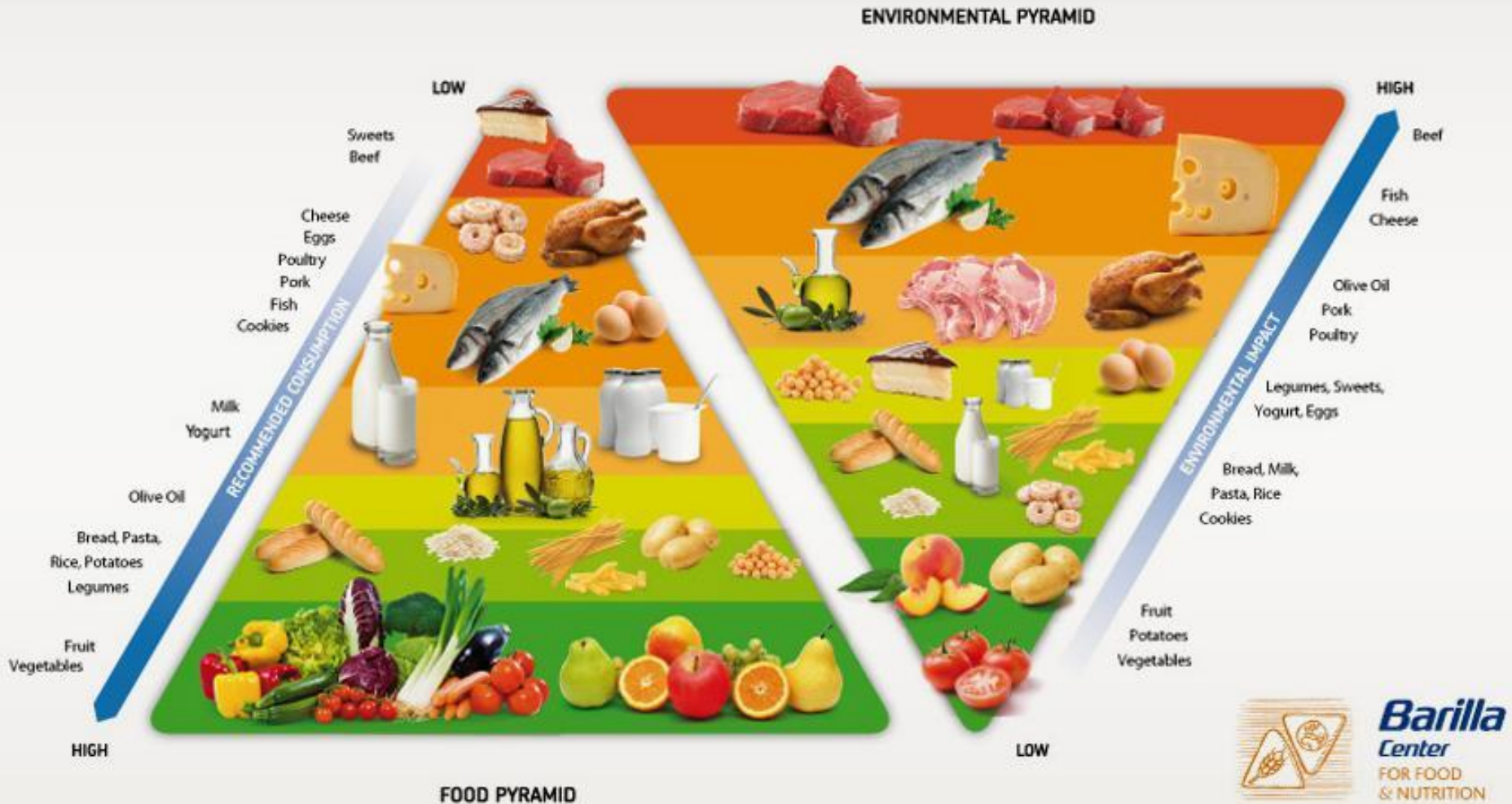
Best Choices

- Lentils
- Tomatoes
- 2% Milk
- Beans
- Tofu
- Broccoli

Worst Choices

- Salmon
- Pork
- Cheese
- Beef
- Lamb

Barilla Double Pyramid



Barilla
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FOR FOOD
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Optimal Health:

Key Motivator for Plant-based Eating

“Vegetarian-style eating patterns have been associated with improved health outcomes, including lower levels of obesity, a reduced risk of cardiovascular disease, lower blood pressure, and lower total mortality.”

Dietary Guidelines, 2010



LearningLibrary
TODAY'S DIETITIAN

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Academy's Position on Vegetarian Diets

“ Well-planned vegetarian diets are completely healthful and nutritionally adequate for people throughout all stages of life and that they have a number of health advantages, including lower blood cholesterol levels, lower risk of heart disease, lower blood pressure levels, and lower risk of hypertension and type 2 diabetes. In addition, vegetarians tend to have a lower body weight and lower overall cancer rates, lower intakes of saturated fat and cholesterol, and higher levels of dietary fiber, magnesium, potassium, vitamins C and E, folate, carotenoids, flavonoids, and other phytochemicals. ”

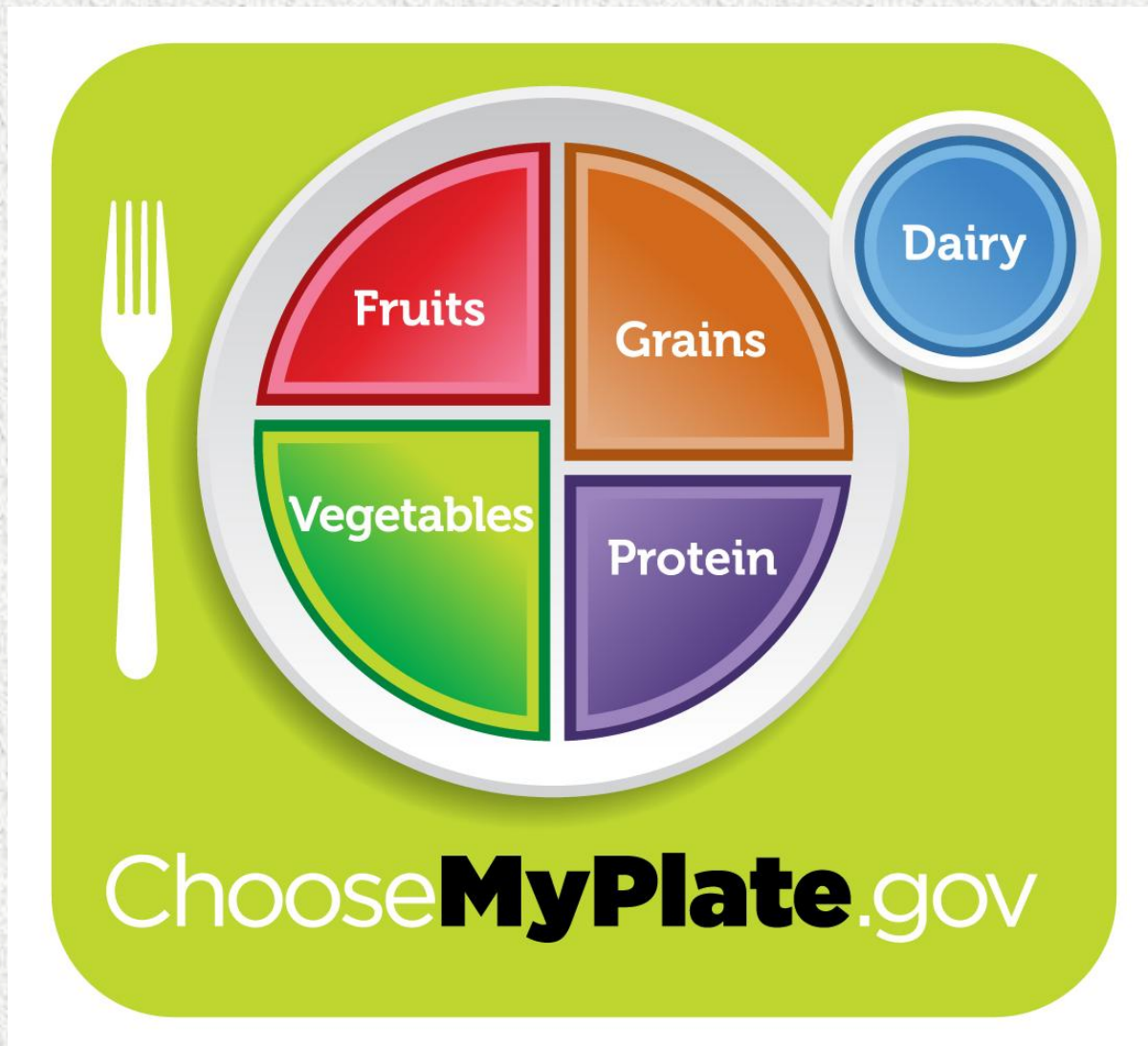
Academy of Nutrition and Dietetics

Whole, Minimally Processed Plant Foods



- **High in “good” stuff:** fiber, vitamins, minerals, healthy fats, phytochemicals, low glycemic carbs.
- **Low in “bad” stuff:** saturated fat, dietary cholesterol, sodium, toxins (nitroso compounds, heterocyclic amines, polycyclic aromatic hydrocarbons, glycation end products formed in cooking, curing, processing meats).

MyPlate



3/4 Plate
Filled with
Plant
Foods

HEALTHY EATING PLATE

Use healthy oils (like olive and canola oil) for cooking, on salad, and at the table. Limit butter. Avoid trans fat.



The more veggies—and the greater the variety—the better. Potatoes and french fries don't count.

Eat plenty of fruits of all colors.



STAY ACTIVE!

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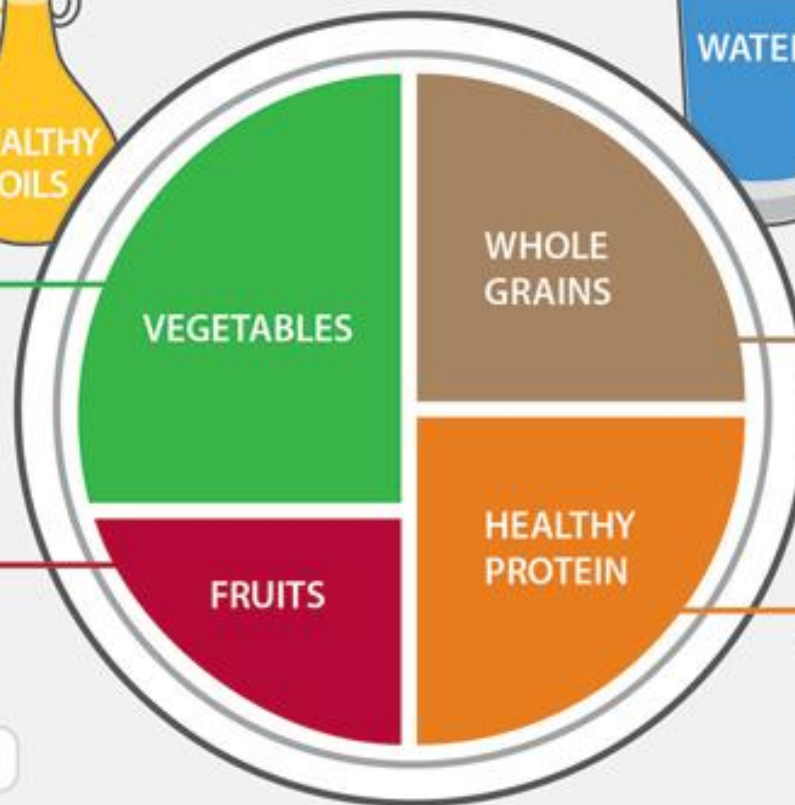
Harvard School of Public Health
The Nutrition Source
www.hsph.harvard.edu/nutritionsource



Drink water, tea, or coffee (with little or no sugar). Limit milk/dairy (1-2 servings/day) and juice (1 small glass/day). Avoid sugary drinks.

Eat whole grains (like brown rice, whole-wheat bread, and whole-grain pasta). Limit refined grains (like white rice and white bread).

Choose fish, poultry, beans, and nuts; limit red meat; avoid bacon, cold cuts, and other processed meats.



Harvard Medical School
Harvard Health Publications
www.health.harvard.edu



Meat Lover Society



- On average, Americans consume 8 oz of meat per day – 45% more than the USDA recommends.
- Three times the global average of meat.
- Favorite meat is beef (58%); not eating much fish (5 oz per week—as much as we eat turkey).

Typical Restaurant Burger

1,149 calories

21 grams of saturated fat

175 mg cholesterol

2,571 mg sodium

79 total carbohydrates

8 grams of fiber

63 grams of protein



Typical Restaurant Steak

1,390 calories

36 grams of saturated fat



Red/Processed Meat + Health Risks



- Harvard meta-analysis: high processed meat → 42% higher risk of CHD. (*Circulation*, 2010)
- Health Professionals Follow-up Study: 100 g/d red meat → 19% higher risk type 2 diabetes; 50 g/d processed meat → 51% increased risk. (*AJCN*, 2011)
- NIH-AARP Diet and Health Study: highest tertile for consumption of red meat → higher risk colorectum, esophagus, lung, liver cancer; highest tertile for consumption of processed meat → higher risk colorectal, lung cancer; both → cancer mortality. (*AJCN*, 2011)

Health Benefits for Plant-Based Diet



Longevity

Weigh Less

Lower Oxidative Stress & Inflammation

Reduced Risk of Heart Disease

Reduced Risk of Type 2 Diabetes

Lower Risk of Cancer

Healthy Gut/Immune System

Brain Protection

Longevity



- EPIC study (cohort with 520,000 people in ten European countries), more closely adhered to plant-based diet, longer lifespan (*Public Health Nutrition*, 2007)
- Diets that include more whole plant foods are linked with longer life span (*AJCN*, 2009)

Weigh Less

- EPIC study, BMI of fish eaters, vegetarians, and particularly vegans is lower than meat eaters. (*International Journal of Obesity*, 2003)
- For example, a 55 year old male or female vegan weighs 30 pounds less than nonvegetarian of similar height.
- Consume more fiber, low glycemic carbs. (*Diabetes Care*, 2009)



Lower Oxidative Stress & Inflammation



- Studies show that a diet rich in whole plant foods, such as fruits, vegetables, whole grains, nuts, tea, coffee, red wine in moderation and olive oil, decreases levels of oxidative stress and inflammation, which are associated with the development of chronic disease. (*Nutrition*, 2004 and *JACC*, 2006)
- In the Adventist Health Study II, a vegetarian diet was linked to lower CRP levels, a marker of inflammation. (*Ethn Dis*, 2011)

Reduced Risk of Heart Disease

- Several studies show heart benefits, possibly due to lower inflammation, oxidative stress, blood pressure, LDL levels. (*AJCN*, 2009)
- Analysis of five studies including 76,000+ subjects found rates of ischemic heart disease 34% lower in vegetarians than nonvegetarians. (*AJCN*, 1999)



Lower Risk of Type 2 Diabetes



Harvard review of three cohorts and updated meta analysis (total of more than 442,000 subjects) Red meat linked with higher risk of type 2 diabetes, but when one serving swapped for nuts every day, decreased risk by 21%, substituting whole grains reduced risk by 23%. (AJCN, 2011)

Lower Risk of Cancer

- Vegetarians 12% lower overall rate of cancer (*British Journal of Cancer*, 2009).
- Plant foods linked with protection against mouth, pharynx, esophagus, stomach, lung, pancreas, and prostate cancer; in particular, high fiber plant foods may protect in digestive cancers. (*AICR*)
- Study linked plant-based diet to 20% lower breast cancer risk. (*American Journal of Epidemiology*, 2011)



Healthy Gut/Immune System



- Increasing evidence fiber-rich, plant-based diet promotes healthy gut microbiota, linked to immune support and digestive health.
- EPIC study found lower rate of hospital admissions and risk of death from diverticular disease among vegetarians. (*BMJ*, 2011)

Brain Protection

- Chronic inflammation and oxidative stress lead to development of Alzheimer's.
- High adherence to Mediterranean, plant-based diet linked with 48% lower risk of Alzheimer's disease. (*Archives Neurology*, 2009)



Challenges for Plant-Based Eating



- Misperceptions, such as getting adequate protein and calcium intake.
- More food preparation required.
- Lack of cooking skills regarding beans, whole grains, tofu.
- Unfamiliarity with new foods, such as tofu, tempeh, seitan.

Developing a Plant-based Eating Style

Include more whole plant foods, such as plant proteins:



Legumes (beans, lentils, and peas)



Whole Soy Foods (tofu, tempeh, soy milk)



Nuts and Nut Butters (almonds, walnuts, hazelnuts, pecans, pistachios, macadamias, Brazil nuts, peanuts)



Seeds and Seed Butters (sunflower, sesame, hemp, chia, pumpkin)



Whole grains (quinoa, wheat berries, oats, brown rice) can be good protein source (up to 11 g protein per cup, i.e. Kamut)



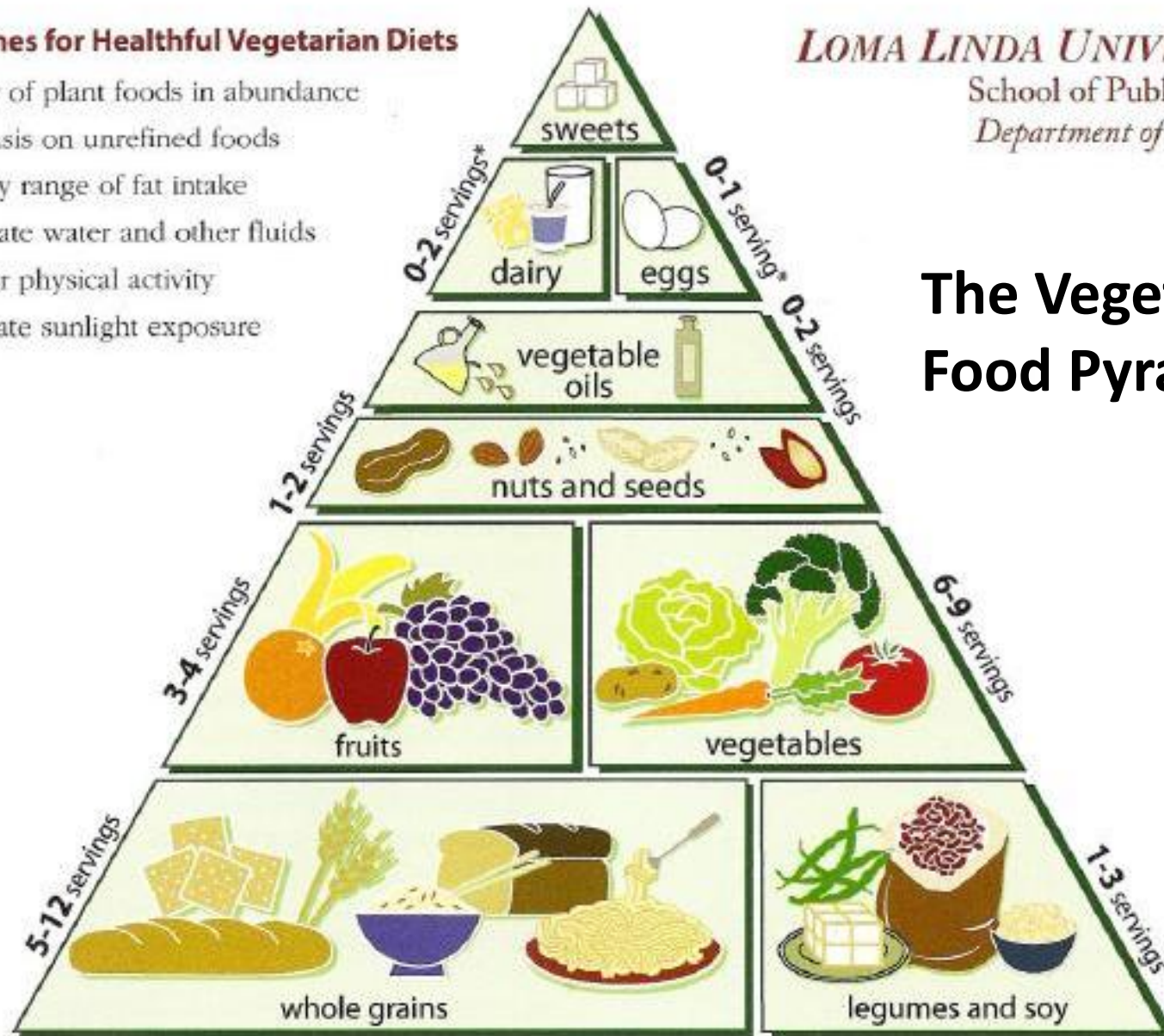
Vegetables, such as peas, spinach, broccoli (can contain up to 6 g protein per cup)

Guidelines for Healthful Vegetarian Diets

- Variety of plant foods in abundance
- Emphasis on unrefined foods
- Healthy range of fat intake
- Adequate water and other fluids
- Regular physical activity
- Moderate sunlight exposure

LOMA LINDA UNIVERSITY
School of Public Health
Department of Nutrition

The Vegetarian Food Pyramid



* A reliable source of vitamin B12 should be included if no dairy or eggs are consumed.

Other Lifestyle Recommendations



Daily Exercise



Water—eight, 8 oz. glasses per day



Sunlight—10 minutes a day to activate vitamin D

Adequate Protein

Choose adequate servings at each meal, depending on needs.



Plant proteins, such as legumes, nuts and seeds, have excellent “protein package” — packed with fiber, micronutrients, phytochemicals and contain up to 9 g protein per serving.



Whole grains such as wheat can have up to 6 g protein per $\frac{1}{2}$ cup.



Vegetables such as broccoli can contain 3 g per $\frac{1}{2}$ cup.

Nutrient of Concern: Calcium

Goal: 1,000 mg for most adults; 1,200 mg a day for women over 50 and men over 70. (DRI)



If no dairy, choose total of two servings per day of calcium-fortified foods, such as plant-based milk alternatives, tofu, or orange juice.



Choose one daily serving of dark green leafy vegetables.



May consider taking a calcium supplement to meet daily calcium needs.

Nutrient of Concern: Vitamin D

Goal: 600 mg/day for everyone 1 to 70 years of age. (DRI)



If you're no dairy, it may be difficult to meet vitamin D requirements.



Aim for ten minutes of sunlight exposure a day.



Consume vitamin-D-fortified foods, such as soy milk and orange juice, and consider a vitamin D supplement.

Nutrient of Concern: Vitamin B12

Recommended dietary allowance for adults ages 14 and up is 2.4 mcg per day. (DRI)



Available only in animal foods: meat, fish, poultry, eggs, and dairy products.



Also available in some nutritional yeasts and fortified products, such as cereal and soy milk.



Vegans should take a vitamin B₁₂ supplement daily.

RDs Can Help

- Offer creative, simple plant-based recipes, or have a vegetarian option in instructions.
- Help educate on using legumes, soy foods, and whole grains in meals.
- Guide people to consume a balanced, plant-based diet, with good sources of protein, calcium, and vitamins D and B₁₂.
- Be aware of vegan and vegetarian preferences, which may vary widely.
- Teach plant-based cooking classes.
- Understand intricacies of plant-based products, including taste, cooking use, variations and nutritional profiles.
- Develop resources: The Vegetarian Resource Group, The Vegetarian Nutrition Dietetic Practice Group, Oldways, Loma Linda University, Seventh Day Adventist Dietetic Association.

Tips for a Healthy Plant-Based Eating Style



Start the day right. Go veggie at breakfast.



Join the Meatless Monday bandwagon.



Shop for plants first. Instead of planning your menu around meat, plan it around plants.

Tips for a Healthy Plant-Based Eating Style



If you eat meat, use it as a seasoning. Cut down on animal food intake while pushing plants by using meat as a flavoring in dishes instead of main event.



Create a plant-based pantry list. Many plant-based foods like beans and whole grains are shelf-stable, convenient, and economical.



Get cooking! Plan at least one night a week to try a new vegetarian recipe.

Tips for a Healthy Plant-Based Eating Style



Keep it simple. Not every meal has to involve cookbooks and cutting boards; it can be as easy as black bean burritos, vegetarian chili, or hummus pita sandwich.



Try ethnic flair. Some cultures know how to do vegetarian meals right!



Convert your favorite dishes. Turn your favorite meat-based recipes veggie for an easy dinner solution.

Tips for a Healthy Plant-Based Eating Style



Dust off your slow-cooker. Just throw in veggies, herbs, vegetable broth, canned tomatoes, whole grains, and dried beans; then turn the dial on.



Try plant-based dairy products. Try more plant-based alternatives for milk, yogurt, and cheese.



Think “yes”. Don’t dwell on what you *can’t* have, think about what you *can* have!

Today's Dietitian's Results Are In!

Dietitians gave us their best tips for helping patients incorporate plant-based eating into their diet

Puree, chop, or dice vegetables into smaller pieces to hide them in dishes and stuffed foods to increase taste and nutrition without the family noticing.



Anna Stadler, RD, LDN

I introduce people to green smoothies... If possible, we make a smoothie together so they can see how simple it is. Hands-on or demo gives them more confidence than just getting a recipe.



Sheila Ginsberg, MS, RD, CDE

Warn clients that not all meat free foods (especially the packaged products) are healthy just because they are meat free. Encourage them to read food labels and try to follow the 5 ingredient rule (try to stick to foods that only include 5 ingredients).



Noreen Gallo, MS, RD, LD

I recommend to my clients to eat a fruit or vegetable (or both!) at each meal and snack. That way they'll get 5 or more servings in each day. Repeat this day after day and you have a positive healthy habit.



Heather Klug, MEd, RD, CD

Add veggies to your traditional recipes. Try adding a can of pumpkin puree to your favorite chili recipe. You can't taste the pumpkin at all, but it boosts the nutrient profile and gives it a fabulous texture!



Sharon Lehrman, MPH, RD, LD

Today's Dietitian's Results Are In!

Dietitians gave us their best tips for helping patients incorporate plant-based eating into their diet

Buy in bulk. Purchase more when there is a good deal or when something is especially delicious. Most fruits and vegetables keep well in the freezer and then you will always have them on hand.



Kylie Harmison, RD

Be open to adding different spices and herbs, it can really tantalize the taste buds! Every day you can have a mini food adventure trying new foods and flavors while becoming healthier.



Serena Garges, RD, LDN

On Sunday afternoons, turn on some good music and invest an hour to chop up veggies and prepare "food for the week"...This way you have "ready to go" options to get you through the week for lunches, meals and side dishes!



Bev Benda, RD, LRD

No time to slice fresh veggies for a salad? Add frozen peas or frozen mixed veggies instead. They will be defrosted by lunch and ready to top with your favorite dressing.



Jane Becker, RD, LD

Start your grocery store trip in the produce aisle. Only shop on the outside of the store. This helps eliminate most processed foods and helps your cart contain fresh foods. Fruits and vegetables should fill up the bottom of your cart.



MaLinda Coffman, MS, RD, LD

References on Plant-Based Nutrition

- The Vegetarian Resource Group: <http://www.vrg.org>
- The Vegetarian Nutrition Dietetic Practice Group: <http://vndpg.org/>
- The Academy of Nutrition and Dietetics Position on Vegetarian Diets: <http://www.eatright.org/about/content.aspx?id=8357>
- ***The Plant-Powered Diet*** by Sharon Palmer, RD, the Plant-Powered Dietitian: www.sharonpalmer.com
- ***The Dietitian's Guide to Vegetarian Diets: Issues and Applications, Third Edition*** by Reed Mangels, Virginia Messina and Mark Messina

Supplemental Materials

Click the “Reference” tab on CE.TodaysDietitian.com for supplemental materials associated with this webinar including:

- Slideshow PDF
- Tips for a Healthy Plant-Based Eating Style
- Plant-Based Eating Tips for Patients
- Plant-Powered Protein List
- Plant-Based Dairy Alternatives Guide
- Cooking Up Legumes Guide

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Thank You

Sharon Palmer, RD
info@sharonpalmer.com

