



InMotion

Impact of Plant-Based Nutrition on Chronic Disease

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ABOUT ME:

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- Dietetic Internship completed at University Hospitals Cleveland Medical Center
- Former clinical inpatient dietitian at University Hospitals Seidman Cancer Center
- Current community dietitian at The Gathering Place

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OBJECTIVES

- Review nutrition considerations for Parkinson's disease and cancer
- Define a whole-food plant-based diet
- Discuss the nutritional benefits of a whole-food plant-based diet
- Watch a cooking demonstration
- Q&A

NUTRITIONAL CONSIDERATIONS



Cancer

- **Unintended weight change** (↑↓)
- Manage cancer & treatment related side effects such as nausea, vomiting, poor **appetite, taste & smell** changes, diarrhea, **constipation**, early satiety, **swallowing** difficulties, **bone thinning**, etc.
- Diet goals: **provide adequate nutrition and hydration** to support body during and after treatment

Parkinson's Disease

- **Unintended weight change** (↑↓)
- Manage disease & treatment related side effects such as change in **swallow** function, **taste & smell** changes, decreased **appetite, constipation, bone thinning**, orthostatic hypotension, etc.
- Monitor protein timing
- **Diet goals: provide adequate nutrition and hydration** to support body



NUTRITION CHAPTER

- Before, during, or after cancer treatment
- On-off fluctuations in Parkinson's Disease symptoms

NUTRITIONAL CONSIDERATIONS

Symptom management

- Unintended weight change → Appropriate nutrient intake and balance
- Appetite loss → Make each bite count with small, freq meals
- Taste change → Flavor & balance with fat, acid, salt, and sweet
- Constipation → Increase hydration and gradually increase fiber
- Difficulty swallowing → Change the texture of meals
- Bone loss → Resistance exercise, adequate vitamin D and calcium

NUTRITION AND CHRONIC DISEASE



One single food or nutrient cannot cause, cure, or prevent disease. However, daily balanced eating habits can help manage disease while nourishing the body and can reduce risk for other chronic disease.

Overall eating habits show the strongest potential to support health

WHOLE FOOD PLANT-BASED DIET



WHAT IT'S NOT



- Strictly vegan or vegetarian eating
- Shopping only at Whole Foods
- Whole 30 diet, or any short term/restrictive diet
- Only organic
- Excessive dietary supplement use to replace balanced eating

*Iron supplementation \neq Sinemet

WHOLE FOODS

Defining terms

Minimally processed foods that make up most of the major food groups



PLANT-BASED

Defining terms

Add **more** plants to your plate – period!



WHOLE FOOD PLANT-BASED GOALS

Increasing...

Fiber

Phytonutrients

Fruits &
vegetables to
meet 5
servings/day

WHOLE FOOD PLANT-BASED GOALS

Decreasing...



Excessive red
meat



Processed meat



Ultra-processed
foods



Sugar sweetened
beverages

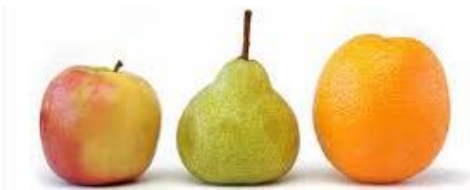


HEALTH BENEFITS OF WFPB

Fiber^{1,6}

- Undigestible carbohydrate
- Helps to control stable blood sugar
- Supports gut health and heart health
- Promotes bowel regularity
- Diets high in fiber are associated with reduced risk of colon cancer and some evidence to suggest reduced risk of breast cancer

Recommendation:
25-38 grams per day



SOLUBLE / VISCOUS

- Forms gel in digestive tract
- Helps to lower LDL cholesterol

INSOLUBLE/ BULKING

- Helps to create large, soft stools
- Beneficial for both diarrhea and constipation

FERMENTABLE

- Ferment in colon producing short chain fatty acids
- Fuel probiotics

ADDING IN MORE FIBER

Tips

Breakfast

- Choose a whole grain cereal
- Add nuts or seeds to cereal, yogurt, or smoothies
- Include fruit
- Scramble eggs with vegetables

Lunch or dinner

- Choose whole grain starch
- **Beans and lentils!**
- Have vegetables with meals

Snacks

- Opt for whole fruit vs juice
- Keep peels on (apples, potatoes, cucumbers)
- Dried fruit and nuts
- Cut vegetables
- Whole grain crackers
- Popcorn



FIBER

What it can do for you

Cancer¹

- Can help manage non-obstructing constipation
- Support gut health and immunity
- Hormonal regulation

Parkinson's Disease^{3,6}

- Can help manage non-obstructing constipation
- High fiber diet can help to increase Prevotella bacteria and short chain fatty acids

Nutrition Facts

8 servings per container

Serving size 2/3 cup (55g)

Amount per serving

Calories **230**

% Daily Value*

Total Fat 8g **10%**

Saturated Fat 1g **5%**

Trans Fat 0g

Cholesterol 0mg **0%**

Sodium 160mg **7%**

Total Carbohydrate 37g **13%**

Dietary Fiber 4g **14%**

Total Sugars 12g

Includes 10g Added Sugars **20%**

Protein 3g

Vitamin D 2mcg **10%**

Calcium 260mg **20%**

Iron 8mg **45%**

Potassium 235mg **6%**

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.



HEALTH BENEFITS OF A WFPB LIFESTYLE

Phytonutrients

- Phyto = plant; found in fruits, vegetables, beans, lentils, nuts, and seeds
- “Eat the rainbow”
- Nutrients that have antioxidant and anti-inflammatory properties when digested to protect cells from damage
- Example: Flavonoids, Carotenoids

5 Colors of Phytonutrients



PHYTONUTRIENTS

Phytonutrients:
lycopene, ellagic acid, quercetin, hesperidin, anthocyanidins



Red Benefits

Supports prostate, urinary tract and DNA health. Protects against cancer & heart disease.

Phytonutrients:
resveratrol, anthocyanidins, phenolics, flavonoids



Purple Benefits

Good for heart, brain, bone, arteries, & cognitive health. Fights cancer & supports healthy aging.

PHYTONUTRIENTS

Phytonutrients:

lutein/zeaxanthin, isoflavones, EGCG, indoles, isothiocyanates, sulphoraphane



Green Benefits

Supports eye health, arterial function, lung health, liver function, & cell health. Helps wound healing & gum health.

Phytonutrients:

EGCG, allicin, quercetin, indoles, glucosinolates



White Benefits

Supports healthy bones, circulatory system, & arterial function. Fights heart disease & cancer.

Phytonutrients:

alpha-carotene, beta-carotene, beta cryptoxanthin, lutein/zeaxanthin, hesperidin



Yellow Benefits

Good for eye health, healthy immune function, & healthy growth & development.

PHYTONUTRIENTS



Research

Cancer¹

- Cell & animal studies: protective effect on cell cycle regulation, angiogenesis, apoptosis, DNA repair, and inflammation
- Epigenetic changes that directly and indirectly regulate cancer progression
- Antioxidant defenses from carotenoids, Vitamin C, Vitamin E; flavonoids, polyphenols, allyl sulfur compounds

Parkinson's Disease^{3,4}

- Cell & animal studies: catechins, caffeic acid, and curcumin are effective in alleviating and protecting against neurodegenerative processes
- Human observational studies: diets high in flavonoid- rich foods were 40% less likely to develop Parkinson's disease
- Other studies show diets high in fish, vegetables, whole grains, fruits, and legumes may be protective

FRUIT SERVINGS

Fruit	Serving Size
Apple, pear, orange, nectarine, peach	1 medium
Avocado	½ medium
Banana	1 small (6 inches)
Grapefruit	½ medium (4 inches across)
Grape	16
Kiwi	1 medium
Mango	½ medium
Melon	½ inch thick wedge
Pineapple	¼ medium
Strawberry	4 large
Dried	¼ cup
Canned	½ cup
Juice	¼ cup

VEGETABLE SERVINGS



Vegetable	Serving Size
Raw leafy greens	1 cup
Cooked leafy greens	½ cup
<i>Fresh, frozen, or canned peas</i>	<i>½ cup</i>
Vegetable juice	½ cup
Bell pepper	½ large
Broccoli, cauliflower, Brussel sprouts	5-8 florets
Carrots	6 baby or 1 medium
<i>Corn</i>	<i>1 small ear or ½ large</i>
<i>Potato, sweet potato</i>	<i>½ medium</i>
Zucchini	½ large



Choose a minimum
of 3 servings of non-
starchy vegetables
per day

Goal: make 2/3 of
your plate plant
foods

PROTEIN IN WFPB LIFESTYLE

- Limit to special occasions: processed meats

- Salted, cured, smoked, fermented, or addition of chemical preservatives

- Choose moderately: red meat

- Keep within range of 12-18 oz of red meat weekly

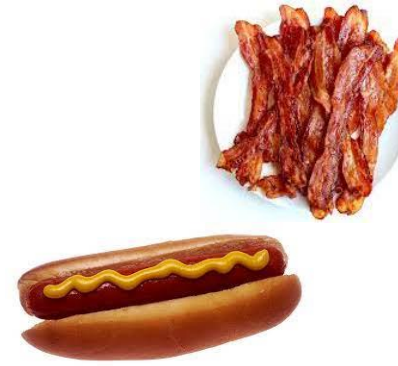
- Choose more often



- Plant-based sources



*Plant sources provide blend of carbohydrates which may be beneficial for people with Parkinson's Disease



PROTEIN CONSIDERATIONS



Cancer

- Needed to support and preserve lean body mass
- Required to promote healing and repair before and after surgery, treatment

Parkinson's Disease^{5,6}

- Needed to support and preserve lean body mass
- Strategic timing with Sinemet for best levodopa absorption
 - Some may be advised to take medications with meals; others may be advised to take medications 30-60 minutes before meals
 - Protein redistribution



Putting it All Together

New American Plate by the American
Institute for Cancer Research⁷
Mediterranean style eating pattern⁸

RESOURCES



Information (and recipes!)

- [American Institute for Cancer Research](#)
- [National Parkinson's Foundation](#)

Plant-based recipes

- [Cook for Your Life](#)
- [Oh She Glows](#)
- [Love and Lemons](#)

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COOKING DEMONSTRATION

Curried Coconut Carrot Soup by Cook for Your Life



Makes 4 servings

Per serving:

- 435 calories
- 25g fat
- 19g saturated fat
- 3g polyunsaturated fat
- 2g monounsaturated fat
- 47g carbohydrates
- 14g fiber
- 12g protein



the
gathering
place

FACING CANCER • EMBRACING LIFE



WAYS TO CONNECT

216-595-9546
touchedbycancer.org



TGP EAST

The Arnold & Sydell Miller Family Campus

23300 Commerce Park
Beachwood, Ohio 44122

TGP WEST

The Sandy Borrelli Center

25425 Center Ridge Road
Westlake, Ohio 44145