

Nutrition and Parkinson's Disease: Can food have an impact?

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- Good nutrition practices can help treat or prevent many of complications of PD
- A healthy balanced diet...
 - Increased energy
 - Maximizes potential of medications
 - Prevents hospitalization
 - Promotes overall well-being

What are the most important nutrients for individuals with Parkinson's Disease?

Name the nutrients...



- Why are they important?
 - Bone health
 - Calcium is building block of bone
 - Vitamin D helps to absorb calcium
 - Prevention of Osteoporosis
 - Deterioration of bone mineral and matrix
 - Increases risk for fractures of hip, wrist, spine
 - Individuals with PD are at HIGH risk for developing osteoporosis

- Calcium:
 - 1200 mg per day (Age: 50+)
 - Where can we get it?
 - Dairy products (milk/cheese/yogurt), dark leafy greens, calcium-fortified foods
 - Supplement: Calcium carbonate
- Vitamin D:
 - 400 IU / 10 mcg (Age 51- 69)
 - 600 IU / 15 mcg (70+)
 - Where can we get it?
 - Sunlight: 15 minutes on arms/face per day
 - Food sources: Dairy products, fish, fortified foods
 - Supplement: 800-2000 IU per day or more??

- Vitamin D
 - Deficiency linked to development of PD?
 - Over 50% of individuals with PD have insufficient Vitamin D levels
 - Vitamin D receptors on many organs including the brain
- Dairy products
 - Men with higher intakes of dairy have increased risk of PD
 - Need more research!
 - Dairy may interfere with action of Levodopa
 - Try more vegetable-based dairy products
 - i.e. soy/rice/almond milk

- Why is it important?
 - PD slows gastric & intestinal motility leading to constipation
 - Fiber adds bulk to stool to help for regular bowel movements
 - Helps control blood sugars
 - Lowers cholesterol
- How much do we need?
 - 25- 35 g per day
- Where can we get it?
 - Fruits, vegetables, whole grains, beans, nuts, seeds, legumes
- Research
 - Whole grains are good source of vitamin E, B-vitamins, magnesium
 - Vitamin E: Antioxidant which may prevent damage to nerve cells
 - Food sources may be more protective than supplements alone

Name the nutrient...



- Why is it important?
 - Serves as the building block of tissue
 - Necessary in the diet to maintain lean muscle mass
 - Food drug interaction: Protein & Levodopa
 - Amino acids (building block of protein) competes with levodopa to get into the brain
 - May decrease effectiveness of medication in some individuals
 - Take levodopa 30 min before or 1 hour after meals with protein containing foods
- How much do we need?
 - 5-6 ounces per day
 - Protein (grams) = Body weight (kg)
 - $\text{Kg} = \text{Lbs} / 2.2$
- Where can we get it?
 - Meats, eggs, beans, nuts, seeds, soy

- Studies show that men with high uric acid levels in blood are at reduced risk of PD
 - Uric acid found in foods high in purines
 - ?? Uric acid is neuroprotective
- Food sources
 - Seafood, alcohol, organ meats, gravies
- Limited evidence in study
 - More research needed before making conclusions
- Diet high in uric acid= increased risk of developing gout

- Coffee
 - May have neuroprotective effect
 - Male coffee drinkers have lower risk of PD
 - Research shows decreased mortality in men with PD who drink coffee
 - No solid evidence for effects on women
 - How Much?
 - At least 3 cups/week
- Black Tea
 - Reduced risk of Parkinson's Disease
 - No conclusions for herbal teas
 - How much?
 - At least 1 cup/week

- Polyunsaturated fats
 - Omega-3
 - Docosahexaenoic acid (DHA)
 - May prevent loss of cognitive function
 - Also important for heart health
 - Found in seafood, coldwater fish (salmon, sardines, tuna), algae
 - Omega- 6
 - Arachidonic Acid (AA)
 - Typically encouraged to avoid due to pro-inflammatory effects
 - May aid in the regeneration of neurons
 - Found in meats and made in the body from omega-6 fats in vegetable oils
- Insufficient evidence...still more research needed...



Nutrition Standards to Live by...

- Eat MORE fruits & vegetables
- WHOLE grains
- Adequate amounts of protein containing foods
 - Try vegetarian sources of protein
 - Fish at least 2x/week
- Eat a variety of foods
 - Avoid eating the same thing every day...
- Stay hydrated!
- Don't be afraid to try something new
 - Food can be fun !

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