

# **Food for Thought with Parkinson's: What's on Your Plate?**

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# What's on your Plate ? **NUTRITION AND PARKINSON'S**

# Managing the Symptoms

- **Weight Changes**
- **Taste, Smell ,Appetite**
- **Chewing, Swallowing**
- **Constipation, Hydration**
- **Bone Health**
- **Effectiveness of PD Medicines**

# Weight Changes

- Nausea or appetite loss, Taste, Smell
  - Medication
- Depression
  - Adjustment to changes
- Changes in Movement
  - Hand to mouth feeding
  - Swallow
  - Mobility





# Unplanned Weight Loss

- **Causes?**
  - Depression
  - Excess calorie expenditure due to tremor, dyskinesias or rigidity
  - Inability to self-feed at a normal pace-early fatigue
  - Chewing or Swallowing problems



# Poor Appetite

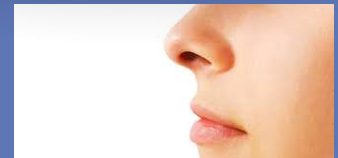
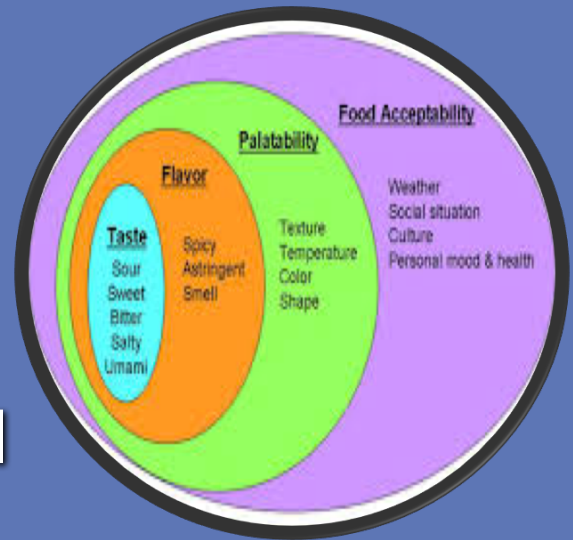


- Loss of smell is a contributor
- Activity can stimulate appetite
- Avoid coffee and tea which may curb appetite
- Eat small meals and snacks



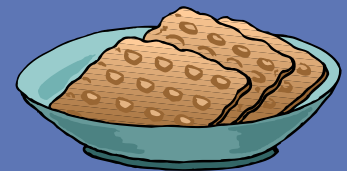
# Taste and Smell

- May lead to overuse of condiments
- **Salt**- may aggravate blood pressure condition or fluid retention
- **Sugar**-may increase blood sugar in Diabetes
- **Pepper /Spices** – may cause Heartburn



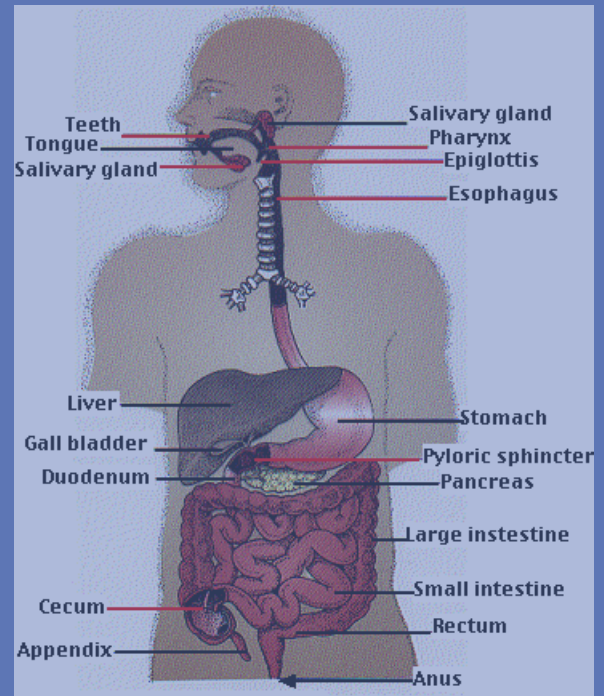
# Controlling Nausea

- Drink clear or ice cold drinks
- Avoid acidic juices
- Drink liquids between meals
- Try bland foods ( crackers, toast)
- Avoid fried, greasy or sweetened foods
- Don't mix hot and cold foods
- Cold foods have less aroma
- Eat some crackers before getting out of bed



# Parkinson's and Digestion

- PD can affect any part of the GI tract
- Swallow
- Stomach
- Bowels
- PD slows down movement of the GI Tract



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# Chewing and Swallowing



- Difficulty moving the tongue to position food for swallowing
- Muscles in throat which push food down to stomach may be slowed
- Foods which stick together easier to manipulate (casseroles vs dry rice, salads, etc)
- Adding moisture to food ( gravy, sauces ) may help

# The Dining Process

- Slowed due to decreased coordination, weaker muscles of the tongue and mouth affecting:
- Hand to Mouth Feeding
- Chewing & Swallowing
- Tips:
  - Do's -finger foods, ground meats
  - Don'ts-salads, foods requiring fork-spearing ,cutting





# Mealtime Place Setting Strategies

- Place plates on rubber or silicone mat to prevent slippage
- Plate placed on a raised surface ( bar or box) reduces lifting effort of spoon to mouth
- Elbows on table steadies hands and arms
- Weighted cups may ease tremors



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# Heartburn or GE Reflux



## Causes:

- Fatty foods
- Mint
- Large meals
- Chocolate
- Caffeine
- Alcohol
- Laying down

## Solutions:

- *Avoid Causes*
- Antacids or Anti-GERD Medicines
- Avoid laying down for 1-2 hours after meal

# Delayed Stomach Emptying Gastroparesis



## Treatment:

- Eat frequent *small* meals
- Low Fat meals
- Ginger (  $\frac{1}{4}$  tsp=1200mg)
- Cooked foods empty faster than *raw* foods  
( example cooked vegetables or fruit rather than salads)
- Liquids empty the fastest ( smoothie or soup)

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# Constipation • Soluble Fiber



## Fiber

25 -40 grams  
/day

## Fluid

48-64 ounces/day

- Soaks up water and softens stool

- Fruit pulp

## Insoluble

- Pushes food through the bowel

- Whole grains, beans ,vegetable and fruit skin

# Soluble and Insoluble fibre



**Soluble - dissolve in water and slow down digestion to give you that “full feeling”.**



**oatmeal  
lentils  
apples  
oranges  
nuts  
flaxseeds  
beans  
dried peas  
cucumbers  
celery  
carrots.**



**Insoluble – add bulk to diet and help with constipation, have that “laxative” benefit.**



**barley  
couscous  
brown rice  
zucchini  
broccoli  
cabbage  
green beans  
dark leafy vegetables  
root vegetable skins.**



**NutritionResearch101**

# Constipation

- Medications often necessary to stimulate contraction of bowels
- Increase fiber to 25- 40 grams
  - Flaxseed or Chia Seeds a great source
  - Fluid intake 6-8 glasses ( at least  $\frac{1}{2}$  as water)
- Acidophilus or probiotics to improve colon balance



# Constipation Treatments

- **Prune Juice cocktail :**

  - 1/2 c Applesauce

  - 2 Tbsp Wheat bran

  - 4-6 oz prune juice

- **Stool softeners** – absorb water into stool

  - Examples Metamucil, Citrucel, Unifiber

- **Stimulant Laxatives** – increase intestine

- muscle contractions - examples Dulcolax, Ex Lax

# Hydration

## Dehydration leads to:

- Confusion
- Weakness and Balance
- Kidney Problems

## Why is liquid important ?

- Kidneys process our food
- Carries waste from body as stool or urine
- Lubricates our joints and eyes and spine
- Maintains alertness and balance
- Saliva and Dental Health



# Causes of Dry Mouth

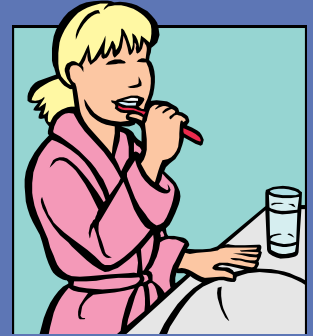


- Common in PD and Aging
- PD meds can increase dry mouth and dry eyes ( Artane and Cogentin)
- Thirst sensation is blunted with age
- Unintentional Liquid Limitation



# Dry Mouth Solutions

- Limit caffeine
- Moisten bread, crackers in liquid
- Take a sip after each bite of food
- Add sauces or gravy to food to moisten
- Sour candy or fruit ice to increase saliva
- Avoid commercial mouthwashes which contain alcohol(mouth drying)
- Good dental care to prevent decay



# Water, Water...

## Goals

- 48-64 ounces per day \*
- Increase gradually 4 ounces per day



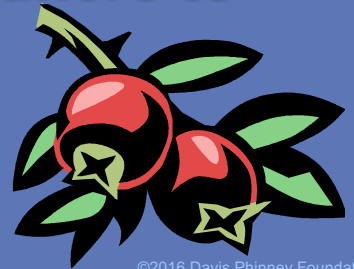
## Sources

- Ice, Gelatin , Soups, Puddings, Fruit ,Vegetables all contain fluid and can be part of fluid intake
- Sauces and gravies added to foods
- \*If heart or kidney condition , may need less

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# Bladder Infections

- Thirst sensation blunted by age or meds
- Limited fluid = fewer bathroom trips
- Less fluid flushing bladder , more opportunity for bacteria to grow = infection
- *Solution* : Cranberry juice or concentrate makes it difficult for bacteria to adhere to bladder



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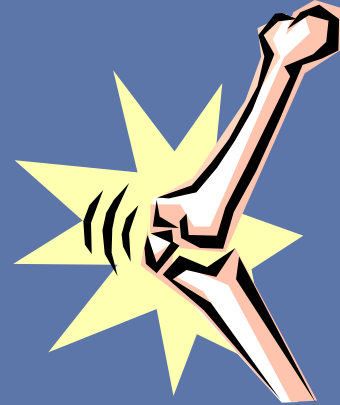
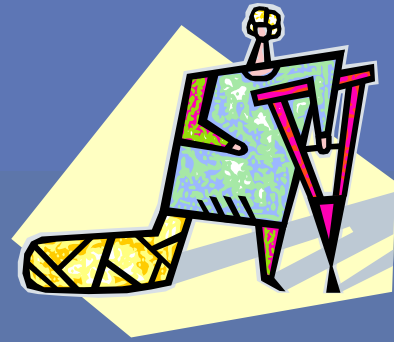
# Excess Saliva and Drooling

- Best treatment is chewing sugar-free gum
- or lozenges
- ( reminds you to swallow –
- the real cause
- for the drooling)



# Bone Fractures

- Causes
  - Lack of sunshine
  - Decreased weight-bearing exercise
  - Insufficient
    - calcium
    - magnesium
    - vitamin D



# Healthy Bone RX

- Calcium

- age 19 yrs-50 years 1000 mg/ day
- Age 50 years or older 1200 mg/day

Sources milk, yogurt, kale, broccoli

- *If levodopa-milk protein a concern- use calcium alternatives*



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# Calcium Alternatives

**Dairy – may interfere with levodopa absorption**

- **Calcium fortified Orange Juice**
- **Calcium fortified rice and soy milks**
- **Breakfast cereals fortified with calcium**
- **Calcium Supplements**

# Calcium Supplements



- **Read Label** to determine amount of *elemental calcium* and how many pills will provide the dose
- Take With Food except for **Calcium Citrate** – does not need to be taken with Food
- Best absorbed when taken in 500mg or less –may need to take more than once per day



# Vitamin D

- Blood test required (25-hydroxyvitaminD)
  - Current requirement
    - age 19-50 : 200 iu
    - age 50-70 : 400 iu
    - age 70+ : 600 iu
  - Use the *Active* Form of Vitamin D –Vitamin D3
  - Vitamin D2 is the synthetic ,less potent form



# Vitamin D Sources

- Fatty Fish such as salmon, tuna
- Cod liver oil
- 1 hour of sunshine weekly ( converts in skin to Vitamin D)
- Supplements of D3 ( cholecalciferol)



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# Magnesium

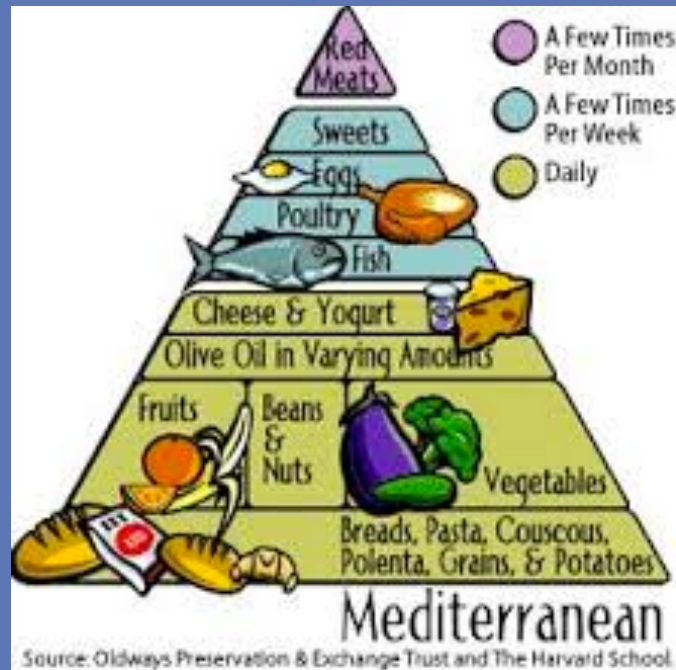
- Rebuilds bones
- Strengthens Bones
- Muscle relaxant

- Sources :

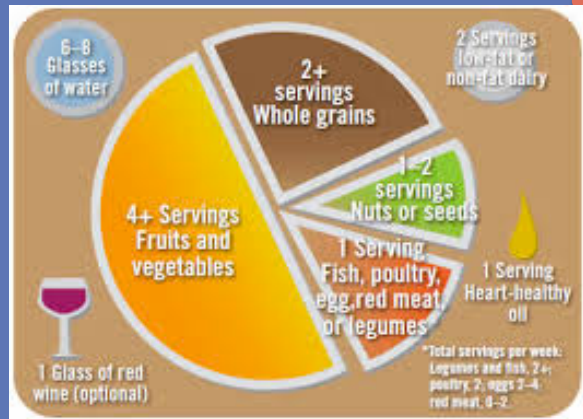
- Broccoli
- Dark Green Vegetables
- Dried Beans and Peas
- Whole grains
- Requirement :
- Men 420 mg /day
- Women 320 mg/day



# Mediterranean Food Pyramid



# Perfect Plate



Fruits and Vegetables with color for anti-oxidants

Whole Grains for constipation

Calcium Rich Foods for Bones

Protein - strong toned muscle, balance, strength

# Protective Foods

- **Neuroprotective**

- Nuts
- Herbs-Turmeric, cinnamon, rosemary
- Green Tea
- Healthy Fats-coconut, avocado



- **Anti inflammatory**

- Oily fish (salmon, tuna)
- Dark, Leafy Greens

- **Antioxidants**

- Purple, red and blue fruits and orange and dark green vegetables

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# Neuroprotective Foods

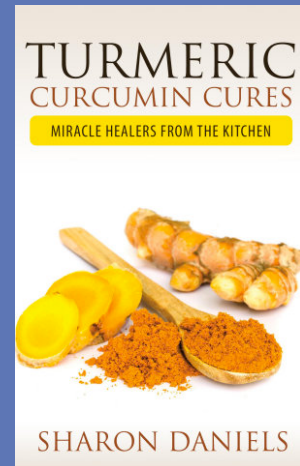


- **Flax** helps with constipation and lower cholesterol ; they must be ground
- **Tea:** Green, black, oolong contain antioxidants - protective in Diabetes and Heart Disease; Green tea-shows a protective effect against neurodegeneration in PD



# Spices

- **Turmeric** – antioxidant , anti inflammatory
- **Cinnamon** – may boost memory
- **Rosemary** – prevents breakdown of acetylcholine



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# Antioxidants

- **Vit C** - citrus , berries, leafy veg , potatoes
- **Vit A** - sweet potatoes, carrots, tomatoes Greens , melon
- **Vit E** - Nuts, seeds, whole grains Fish oil
- **Lycopene** - melon, tomatoes
- **Polyphenols** - tea, berries, grapes tumeric,sesame seeds, artichokes
- **Selenium** - eggs, chicken, garlic, grains, red meat , fish, shellfish

# Benefits of Fatty Fish

- Fatty Fish –salmon, sardines, halibut, herring-  
high intake associated with low risk of PD
  - Contain B12 and Vit D
  - Omega 3 fatty acids
  - DHA( brain grey matter is 20% DHA),  
protective against PD, Alzheimers

# Benefits of Fatty Fish

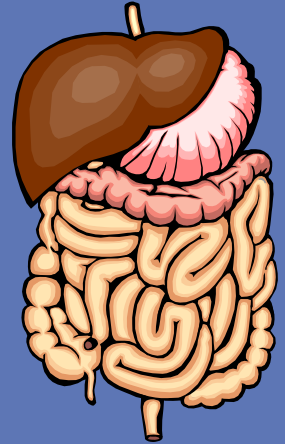
- Relieves depression
- Prevents clotting
- Lowers blood pressure
- Lowers triglycerides



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# Levodopa Absorption

- Primary medication (Sinemet) used to treat Parkinson's
- Competes with amino acids in protein foods in the intestines and brain
- Absorption reduced if taken with meals



# Effectiveness of Levodopa Meds

- Balancing Meals and Medications
- Medication takes longer to be absorbed or is less effective if taken with protein foods
- High Fat Meals delay absorption of Medication
- Take medication 30-60 minutes before a meal .
- Decrease protein at the time of day you wish to be more mobile

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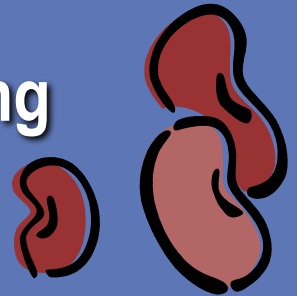
# Levodopa

- Suggested to be taken 30 min before meals or snacks
- If bulk of protein is consumed in the evening- allows patient optimal use of levadopa during the day .
- However in evening may interfere with turning over in bed, getting up to use bathroom during the night.



# Alternate – High Carbohydrate

- 5 parts carbohydrate to one part protein
- Plant based diet provides a 3:1 ratio or higher ( legumes, seeds, nuts)
- Plant based diet also provides more fiber, B vitamins, Folate.
- Note large amounts of Vit B6( > 10 mg per day ) may reverse effects of Levadopa



# Sample High Carb Menu

- 1 1/2c Split pea or Lentil Soup
- 1 oz whole grain crackers ( 6-8)
- 1 Tbsp Peanut Butter
- 8 oz Cranberry Juice
- 1/2c Grapes
- **Ratio 5:1/694 calories/16 grams fiber**
- Resource: Kathrynne Holden [www.nutritionucanlivewith.com](http://www.nutritionucanlivewith.com)





# Improving Intake at Meals

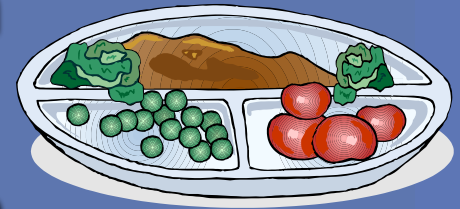
- Drink beverages after or between meals to save room for solid food
- Try eating high calorie foods first
- Try calorie-dense foods ( casseroles)



# Fatigue Later in the Day



- Choose foods easy to prepare.
  - frozen dinners, pre-prepared meals
- Get help with meal preparation
  - deli prepared meals
  - Meals on Wheels program ?
  - Healthy snacks ( high fiber cereals, fruit, vegetables)
  - Eat main meal earlier in the day



# Snacks

- Avoid empty calories ( soft drinks, chips, candy bars )
- Can help with weight re-gain
- Snacks can prevent heartburn
- Commercial or homemade shakes, drinks may provide needed nutrients in easy to consume form
- Include foods with fiber



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# Problem Solving: Insomnia



- Avoid Large meals , spicy foods in evening
- Try cup of Chamomile tea 1-2 hours before bedtime
- Try 200 mg Calcium citrate plus 100mg magnesium supplements at bedtime
- Melatonin- long-term safety uncertain
- discuss with doctor



# Take Home Message



## • Increase

- Dark green or orange vegetables
- Nuts
- Blue ,Red, purple Fruits
- Whole Grains >3 grams Fiber /serving
- Fatty Fish

## Decrease

- Dairy
- Fried foods
- Highly processed foods
- Processed Sugars

# Self Care Take Away

- **Daily Activity + Vit D, Calcium = Strong Bones**
- **Increased fluid and fiber = better bowel function**
- **Small Meals frequently=weight maintenance and less nausea and heartburn**

# Self Care Take Away

- Finger foods, casseroles, smoothies require less physical effort and are nutrient dense
- Maintain involvement with others for support
- Enlist the aid of a speech, occupational therapist for swallowing or feeding challenges

# Resources

- Website for individuals with Parkinsons  
[www.nutritionucanlivewith.com](http://www.nutritionucanlivewith.com)
- National Parkinson Foundation Online Forum  
moderated by Kathrynne Holden  
[www.parkinson.org](http://www.parkinson.org)
- Recipes for smoothies
- [www.briangrant.org/category/shake/](http://www.briangrant.org/category/shake/)
- Association of Nutrition and Dietetics – Find a Dietitian in your area [www.eatright.org](http://www.eatright.org)
- Nutrient Analysis Tool [www.nat.uiuc.edu](http://www.nat.uiuc.edu)

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