NUTRITION -
Is there A BEST DIET?

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Memorial Hospital West
No ONE “Best Diet” for Everyone

Choice of a Diet Plan should be based on

• Individual Risk Factors
• Personal Preference
• Ability to Adhere to a given diet
Diets to Maintain Good Health

- Low Fat Diet
- Vegetarian Diet
- DASH Diet (Dietary Approaches to Stop Hypertension)
- Mediterranean Diet
- MIND Diet
Good Fats vs Bad Fats

BAD FATS

- Trans fats (hydrogenated oils) e.g., margarine, ghee  \[\uparrow \text{LDL}, \downarrow \text{HDL}\]
- Saturated fats e.g., dairy, red meat, plant oils like palm oil

GOOD FATS

- Polyunsaturated fats:  \[\downarrow \text{LAD}, \downarrow \text{Trig}, \uparrow \text{HDL}; \downarrow \text{blood clotting}, \downarrow \text{SCD}\]
  - Omega-6 FA: safflower, sunflower oils, nuts, chicken, peanut butter, mayonnaise
  - Omega-3 FA: canola, soybean, flaxseed, walnut oil, wheat germ, cabbage, sea food
- Monounsaturated fats
  - Canola and olive oil
  - Chicken, avocado, lean beef
Dietary Fiber

Recommended: 14 g fiber /1000 cal
Moderately active adults need 25 - 36 g/day

- Reduces risk of CHD (by 30%)
- Reduces risk of Stroke (by 30%) esp. fiber derived from grain
- Reduces risk of Dying from CVD and All Cause Mortality
  - Decreases Insulin levels
  - Lowers Diastolic BP
  - Lowers Triglycerides and LDL
- Reduces Type 2 Diabetes
- Lowers Obesity
- Reduces risk of Colorectal Cancer
- Promotes Growth of Healthy Gut Microbiota
Foods High in Fiber

• **Fruits** – pears, avocados, apples, raspberries, blackberries, prunes

• **Legumes** – Navy beans, small white beans, yellow beans, adzuki beans, french beans, split peas, chick peas

• **Breads/Pasta/Flours** – Rye crackers, bulgur wheat, whole wheat spaghetti, bran muffin, quinoa
  - Oatmeal, whole wheat bread, brown rice – lesser fiber content

• **Cereal** – rolled oats, bran

• **Nuts/Seeds** – Pumpkin seeds, chia seeds, almonds, pistachios, pecans

• **Vegetables** – cooked collards, frozen mixed vegetables, baked potato,* baked sweet potato,* cooked parsnips, cooked winter squash
  - Broccoli, spinach, Brussel sprouts, carrots, zucchini, lettuce – lesser fiber content

*NOTE: Potatoes & Sweet Potatoes have a High Glycemic Index*
Dietary Fiber

• Women 65-70 yrs who consumed >25 g of fiber and ⅓ of calories from healthy fats (fish, nuts and olive oil):
  • Increased “dynamic explosive strength” ¹

• Study of older Japanese, Australian, Greek, & Swedish people found that for every 20 g consumed daily
  • Legumes were the only food that lowered mortality risk by 7-8 % ²

• For every 10 g of fiber per 1,000 calories consumed daily:
  • Participants experienced an aging benefit of 5.4 years ³

³ Archives of Internal Medicine, June 14, 2011. NIH, National Cancer Institute
### Dietary Fiber

#### Recommended Fiber Intake for Different Ages & Genders: *

<table>
<thead>
<tr>
<th>Calorie Level(s) Assessed</th>
<th>Source of Fiber</th>
<th>Child 1-3</th>
<th>Female 4-8</th>
<th>Male 4-8</th>
<th>Female 9-13</th>
<th>Male 9-13</th>
<th>Female 14-18</th>
<th>Male 14-18</th>
<th>Female 19-30</th>
<th>Male 19-30</th>
<th>Female 31-50</th>
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<td>19</td>
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#### Macronutrients

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<thead>
<tr>
<th>Source of Fiber</th>
<th>Protein, g</th>
<th>Protein, % kcal</th>
<th>Carbohydrate, g</th>
<th>Carbohydrate, % kcal</th>
<th>Dietary Fiber, g</th>
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<tbody>
<tr>
<td>RDA</td>
<td>13</td>
<td>10.30</td>
<td>130</td>
<td>45.65</td>
<td>14 g/1,000 kcal</td>
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<td>AMDR</td>
<td>5.20</td>
<td>10.30</td>
<td>130</td>
<td>45.65</td>
<td>14 g/1,000 kcal</td>
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</tbody>
</table>


- **Raspberries:** 8 g fiber / cup
- **Pumpkin Seeds:** 5.2 g fiber / oz.
- **Small White Beans:** 18.6 g fiber / cup
Mediterranean Diet

• **Eat Veggies & Fruits & Switch to Whole Grains:** 7-10 servings a day
• **Pass on the butter:** Try olive oil or canola oil instead
• **Go Nuts:** Snack on almonds, walnuts, pistachios; natural peanut butter, tahini
• **Spice it up:** Use herbs and spices rather than salt
• **Go fish:** Twice a week; oily fish; grilled
• **Rein in Red Meat:** Small portions, lean cuts, avoid processed meats & cold cuts; substitute fish and poultry instead
• **Go Easy on Dairy:** Chose low fat dairy, reduce to 2 cups equivalent/day
• **Cheers:** Wine or purple grape juice, ≤ 5 oz. /day for women or 10 oz. for men under age 65 yrs

Guidelines from Mayo Clinic Website
DASH Diet
Dietary Approaches to Stop Hypertension

*Lifelong* approach to healthy eating that helps prevent & treat high blood pressure.

- **Beneficial effects on BP** may be seen within 2 weeks and over time, SBP can drop by 8-14 mm Hg
- **Helps prevent osteoporosis, heart disease, stroke, cancer, & diabetes**
- **May help with losing weight** by encouraging healthier food choices
DASH DIET Components

- **Reduce Sodium Intake**
  - **Standard** DASH Diet: Up to 2,300 mg of Sodium /day
  - **Lower Sodium** DASH Diet: Up to 1,500 mg of Sodium /day

- **Add Foods rich in Potassium, Calcium, & Magnesium**
  - Emphasis on vegetables, fruits, & low-fat dairy
DASH DIET Components

Serving Sizes for 2,000 cal/day diet

Whole Grains: 6-8 servings/day ... whole wheat bread, brown rice, whole wheat pasta

Vegetables: 4-5 servings/day ... spinach, arugula, carrots, broccoli, sweet potatoes, greens

Dairy: 2-3 Servings/day ... 1% fat or skim milk, low fat yogurt, low fat cheese

Fruits: 4-5 servings/day ... apples, pears, canned fruits/juices w no added sugar

Lean Meats, Poultry, Fish: ≤ 6 servings/day ... Trim skin & fat; salmon, tuna, herring

Nuts, Seeds, Legumes: 4-5 servings/week ... almonds, sunflower seeds, peas, lentils

Fats & Oils: 2-3 servings/day ... limited butter, cream, margarine, salad dressing

Sweets: ≤ 5 servings/week ... sugar, jam, jelly, sorbet, graham crackers, low fat cookies

Serving Sizes:

1 Serving = 1 cup skim milk, ½ cup juice, ½ cup nuts, 1.5 oz low fat cheese, 1 oz dry cereal, 2 Tbsp seeds, ½ cup cooked cereal or rice, 1 slice bread, ½ cup beans, ½ cup fresh or canned fruit, 1 cup raw leafy vegetables, ½ cup chopped or cooked vegetables, 2 oz of meat, chicken or fish, 1 tsp margarine, 1 Tbsp mayonnaise, 2 Tbsp salad dressing, 1 Tbsp sugar, ½ cup sorbet

Guidelines from Mayo Clinic Website
MIND Diet

*Mediterranean-DASH Intervention for Neurodegenerative Delay*

Mediterranean type “Plant-based diet” w Berries & Leafy Green Vegetables

- **Reduced Incidence of Parkinson’s & Alzheimer’s Diseases**
  - Large randomized trial – JAMA 2015
  - By improving CVD outcomes, lowered dementia risk
  - Improved cognitive test scores before & after trial in Nurses Health Study

- **MIND Diet Lowered Alzheimer's Risk**
  - by ~35% for people who followed it moderately well
  - By up to 53% for those who adhered to it rigorously.*

*Morris M. C., “New MIND Diet May Significantly Protect Against Alzheimer’s Disease,” J of Alzheimer's Assoc., March 2015*
Mind Diet (Mediterranean & DASH)

• Reduced Risk of CVD mortality & overall mortality
  • Meta-analysis of > 1.5 million healthy adults
  • Lowers oxidized LDL “bad cholesterol” that may cause plaque build up

• Reduced Incidence of Cancer (esp. Breast Cancer in women –
  when supplemented w extra virgin olive oil & nuts)

• Omega-3 -rich Seafood:
  • Decreases Risk of Death from CAD
  • Reduces Risk of Dementia (in persons with APO-E genotype with
    epsilon-4 carriers)
  • May help keep telomeres long (w Omega-3 fish oil & folate-packed
    greens)

• Nuts & Olive Oil:
  • Lower Inflammation - a/w aging, heart disease, diabetes, cancer
  • Reduce Signs of Aging by increasing telomere length
MIND Diet

MIND Diet has 15 dietary components:

- **10 “Brain-healthy” food groups:** Green leafy vegetables, other vegetables, nuts, berries, beans, whole grains, fish, poultry, olive oil, and wine
- **5 Unhealthy groups:** Red meats, butter & stick margarine, cheese, pastries & sweets, and fried or fast food.

MIND Diet includes:

- At least 3 servings of whole grains, a salad, & 1 other vegetable every day — along with a glass of wine
- Snacking most days on nuts and eating beans every other day or so,
- Eating poultry & berries at least twice a week & fish at least once a week.
- Limit eating unhealthy foods — butter ≤ 1 Tbsp a day, cheese, & fried or fast food ≤ 1 serving a week

*According to Martha Morris:*
- “The MIND diet is easier to follow than the Mediterranean diet, which calls for daily consumption of fish & 3 to 4 daily servings of each of fruits and vegetables”
- “Blueberries are one of the more potent foods in terms of protecting the brain”
- Strawberries have also performed well in past studies of the effect of food on cognitive function

*Morris M. C., “New MIND Diet May Significantly Protect Against Alzheimer’s Disease,” J of Alzheimer's Assoc., March 2015*
MIND Diet

Those eating 5% of their daily calorie consumption from nuts & seeds:

- **Reduced Cellular Aging by 1.5 years** – 2017 study*

Studies of centenarians have reported:

- Healthy Gut Microbiota to be a Key Marker of Longevity
- Good gut health is boosted by high levels of dietary fiber

Foods Gaining in Popularity

• **Swap fruit juices with Kefir** – Contains many strains of probiotics, is high in protein, minerals like calcium & magnesium, vitamins

• **Make room for Kombucha** – Fermented, slightly alcoholic, effervescent, sweetened black or green tea drink which is rich in probiotics and anti-oxidants

• **Eat more Avocado** – A review of 129 previously published avocado studies found that eating the fruit often could ward off metabolic syndrome and belly-fat
How to give Good Nutrition Advice when Time is Short

• **Establish Nutrition as a Priority**
  • Taking meds is important, but meds alone are not enough to keep you healthy
  • Lifestyle changes matter

• **Address one nutritional topic each visit**
  • e.g., Switching from sweetened drinks to unsweetened sparkling water

• **Make a dietary referral that counts**
  • Dietician, nutritionist, or provide print-out of diet plan

“How to give Good Nutrition Advice when Time is Short,” JAMA online, March 2019
THANK YOU

CHEERS!

Special Thanks to Alicia Charles, MPA, RD, LD/N, Asst. Director – Food & Nutrition Sciences, MRH, for her valuable input.
# Fiber Content of Foods
(2015 Dietary Guidelines)

## BEANS:
Fiber Content per ½ cup

<table>
<thead>
<tr>
<th>Food</th>
<th>Fiber Content</th>
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<tbody>
<tr>
<td>cooked navy beans</td>
<td>9.6 g</td>
</tr>
<tr>
<td>cooked small white beans</td>
<td>9.3 g</td>
</tr>
<tr>
<td>cooked yellow beans</td>
<td>9.2 g</td>
</tr>
<tr>
<td>cooked adzuki beans</td>
<td>8.4 g</td>
</tr>
<tr>
<td>cooked french beans</td>
<td>8.4 g</td>
</tr>
<tr>
<td>cooked split peas</td>
<td>8.1 g</td>
</tr>
<tr>
<td>canned chickpeas</td>
<td>8.1 g</td>
</tr>
<tr>
<td>cooked lentils</td>
<td>7.8 g</td>
</tr>
<tr>
<td>kidney bean</td>
<td>5.7 g</td>
</tr>
<tr>
<td>baked beans</td>
<td>5.2 g</td>
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## NUTS:
Fiber Content

<table>
<thead>
<tr>
<th>Nut</th>
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<tbody>
<tr>
<td>1 oz pumpkin seeds</td>
<td>5.2 g</td>
</tr>
<tr>
<td>1 tbsp chia seeds</td>
<td>4.1 g</td>
</tr>
<tr>
<td>1 oz almonds</td>
<td>3.5 g</td>
</tr>
<tr>
<td>1 oz pistachios</td>
<td>2.8 g</td>
</tr>
<tr>
<td>1 oz pecans</td>
<td>2.7 g</td>
</tr>
<tr>
<td>1 oz peanuts</td>
<td>2.7 g</td>
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## FRUITS:
Fiber Content

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<thead>
<tr>
<th>Fruit</th>
<th>Fiber Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium raw pear</td>
<td>5.5 g</td>
</tr>
<tr>
<td>½ cup Avocado</td>
<td>5 g</td>
</tr>
<tr>
<td>Medium apple w/ skin</td>
<td>4.4 g</td>
</tr>
<tr>
<td>½ cup Raspberries</td>
<td>4 g</td>
</tr>
<tr>
<td>½ cup Blackberries</td>
<td>3.8 g</td>
</tr>
<tr>
<td>½ cup Stewed Prunes</td>
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<tr>
<td>Medium Banana</td>
<td>3.1 g</td>
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<tr>
<td>½ cup Dates</td>
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### Fiber Content of Foods

**VEGETABLES:**

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<thead>
<tr>
<th>Food Description</th>
<th>Fiber Content</th>
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<tbody>
<tr>
<td>½ cup frozen mixed vegetables</td>
<td>- 4 g</td>
</tr>
<tr>
<td>½ c cooked collards</td>
<td>- 3.8 g</td>
</tr>
<tr>
<td>1 medium baked sweet potato</td>
<td>- 3.8 g</td>
</tr>
<tr>
<td>1 medium baked white potato</td>
<td>- 3.6 g</td>
</tr>
<tr>
<td>½ c cooked parsnips</td>
<td>- 3.1 g</td>
</tr>
<tr>
<td>½ c cooked Winter squash</td>
<td>- 2.9 g</td>
</tr>
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**BREAD/PASTA/FLOURS:**

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<th>Fiber Content</th>
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</thead>
<tbody>
<tr>
<td>2- Plain rye wafer crackers</td>
<td>- 5 g</td>
</tr>
<tr>
<td>½ cup bulgur</td>
<td>- 4.1 g</td>
</tr>
<tr>
<td>½ cup whole wheat spaghetti cooked</td>
<td>- 3.2 g</td>
</tr>
<tr>
<td>1 small oat bran muffin</td>
<td>- 3 g</td>
</tr>
<tr>
<td>½ cup cooked pearled barley</td>
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<tr>
<td>½ cup cooked quinoa</td>
<td>- 2.6 g</td>
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<tr>
<td>½ cup oatmeal</td>
<td>- 2.2 g</td>
</tr>
<tr>
<td>1 slice whole wheat bread</td>
<td>- 2 g</td>
</tr>
<tr>
<td>½ cup brown rice</td>
<td>- 1.8 g</td>
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(2015 Dietary Guidelines)
Risks a/w Increased BMI > 30

• Increased risk of CVD
• Increased risk of diabetes
• Increased risk of HTN
• Increased risk of premature death
• Common adult cancers - renal
  • Thyroid, nasopharyngeal adeno Ca, colon, renal - men
  • Endometrial, gall bladder, esophageal adeno Ca - women
  • Asian Pacific - breast cancer
Omega - 3 Fatty Acids

- Multiple epidemiologic studies, including several large randomized controlled trials, have demonstrated higher survival rates among individuals with high dietary intake of marine omega-3 fatty acids and established cardiovascular disease.
- On this basis, the American Heart Association recommends increased oily fish intake and the use of omega-3 fatty acid supplements for the primary and secondary prevention of coronary heart disease.
- The mechanisms underlying this protective effect are poorly understood but are thought to include anti-inflammatory, antiplatelet, anti-hypertensive, antiarrhythmic, and triglyceride-lowering effects.
- There is ongoing interest in the identification of novel mechanisms of cardiovascular benefit from omega-3 fatty acids.