Nutrition for Health: Insights, Recommendations & Hot Topics

Molly Wangsgaard, MS, RD, NSCA-CPT
Objectives

1. Describe nutrition recommendations for the management of at least one systemic disease
2. Explain key components of a healthy eating pattern
3. State the truth behind a common nutrition myth
“I hope I get to limit my food choices and never eat my favorite foods again.”

said no one ever
Our Goal

• We don’t want your life to “seem” longer; we actually want it to “be” longer.

• Food is fuel; fill up on premium.
Eating for Health

Heart Disease • Cancer • Inflammation
Prevent Heart Disease

Eat Mostly Plants

Be Physically Active

Achieve/Maintain a Healthy Weight

Get Cooperized™
Prevent Heart Disease

Eat a healthy, more plant-based diet with variety

• 5+ colorful fruits and vegetables daily
• 3+ whole-grain foods daily
• 2 servings fish weekly (totaling 7-12 oz)
• 4-6 oz lean meat, poultry and/or fish daily
• 2-4 servings nonfat or low-fat dairy daily
• 4 servings of nuts and seeds weekly
Lowering LDL Cholesterol

Eat LESS saturated and trans fat

• Avoid animal products high in saturated fat
  – Butter, ribs, bacon, sausage, ice cream
• Avoid coconut and palm kernel oil
• Select foods with 0 grams trans fat (no partially hydrogenated oils)
• Limit red meat to 12 oz. per week
Lowering LDL Cholesterol

Eat MORE healthy fats, fish and omega-3 fats

• Choose more monounsaturated fats
  – Peanut butter, olives, avocados, nuts, olive/canola oils

• Eat fatty fish (high in EPA and DHA omega-3s)
  – Salmon, tuna, herring, sardines, halibut, lake trout, barramundi

• Select other heart-healthy sources of ALA omega-3 fats
  – Walnuts, flaxseeds, soybeans, chia seeds, canola oil
Lowering LDL Cholesterol

Eat MORE soluble fiber and produce daily

• Select foods with soluble fiber:
  – Oats, beans, peas, potatoes w/skin, pears, apples, oranges, berries

• Consume a wide variety of fruits and veggies

• Add a psyllium fiber supplement
  – Konsyl psyllium powder, Metamucil sugar-free (2 srv/day)

• Incorporate 2 g of plant stanols/sterols per day
  – Promise Activ Light, Smart Balance Heart Right Light
  – Nature Made CholestOff Plus softgels
Raising HDL Cholesterol

• Lose excess weight
• Exercise aerobically
• Eat less trans fat
• Increase healthy fats in moderation
• Do not use tobacco
Lowering Triglycerides

• Manage alcohol
  – Limit to 1 drink or less per day (1.5 oz. liquor, 5 oz. wine, 12 oz. beer)
• Limit sugary foods/drinks
  – <150 calories/day from sweets
  – Select cereals with ≤8 g sugar/serving
• Limit refined grains & choose whole grains
• Eat fish high in omega-3s
  – Consider adding a supplement: 2000-4000 mg omega-3 from EPA and DHA
Lowering Blood Pressure

- Attain/maintain a healthy body weight
- Limit high-fat, high-cholesterol foods
- Limit alcohol (1:2)
- Reduce sodium intake to 1500-2300 mg/day

- Do not salt food
- Add flavor w/ garlic, onion, lemon, lime, vinegar, herbs, spices and salt-free seasonings
- Use oil and vinegar in place of bottled salad dressings
- Limit canned or bottled sauces to <1 tsp (Tabasco is lowest)
- Avoid pre-seasoned, boxed pasta and rice dishes
- Limit eating out
- Read food labels
Lowering Blood Pressure

• Follow the DASH eating plan
  – Vegetables: 4-5 servings/day
  – Fruit: 4-5 servings/day
  – Dairy: 2-3 servings/day
  – Grains: 6-8 servings/day (preferably whole)
  – Nuts/Legumes: 3-5 servings/week
  – Healthy Fats: 2-3 servings/day
  – LIMIT: Lean meat, poultry, fish: ≤8 oz/day
  – LIMIT: Fats and sweets: ≤2 servings/day
What’s the Big Deal About DASH Foods?

• Plant-based foods are rich in potassium, magnesium and fiber.
• Dairy provides calcium, potassium, magnesium and protein.
• These five nutrients have blood pressure lowering effects.
Prevent Cancer

Eat Mostly Plants

Achieve/Maintain a Healthy Weight

Be Physically Active

AICR’s expert report, 2007
Prevent Cancer

Eat Mostly Plants
- Vegetables & Fruits
- Whole grains
- Legumes

Limit
- Energy-dense foods
- Red meats (beef, pork, lamb)
- Alcohol (1:2)
- Salty foods

Avoid
- Sugary drinks
- Processed Meats
- Tobacco
- Supplements to “protect against cancer”

AICR’s expert report, 2007
Why Limit Some Meats?

• Limit red meats (beef, pork, lamb)
  – No more than 18 oz. (cooked weight) per week
  – Strong evidence links red meat to colon cancer

• Avoid processed meats
  – Preserved by smoking, curing, salting or addition of preservatives
  – Ham, bacon, pastrami, salami, hot dogs, sausage
  – Carcinogens can be formed; increased cancer risk
Be Physically Active

There is a strong link between being physically active and a DECREASED RISK of 3 cancers:

• Postmenopausal Breast
• Colorectal
• Endometrial

There is a strong link between being overweight or obese and an **INCREASED RISK** of 10 cancers:

- Liver
- Advanced Prostate
- Ovarian
- Gallbladder
- Kidney
- Colorectal
- Oesophageal
- Postmenopausal Breast
- Pancreatic
- Endometrial

*Oesophageal adenocarcinoma only*
Putting It All Together
Choose Whole Foods

- **Vegetables & Whole Fruits** – all colors
- **Whole Grains** – whole-wheat products, oats, brown rice, quinoa
- **Lean Protein** – fish, poultry, beef, pork, beans
- **Low-fat Dairy** – Greek yogurt, milk, cheese
- **Nuts & Seeds** – olive, canola and other vegetable oils; almonds, walnuts, peanuts, pecans
- **Water & No-calorie Beverages** – instead of juice or soft drinks
Prioritize Fruits & Vegetables

Blackberries in oatmeal

Sliced Bananas in yogurt

Fruit Smoothie: frozen fruit, small banana & 1 cup skim milk

Pico de Gallo on eggs; pico with anything & everything!

Veggies on pizza

Salad Bar: add cut-up bell peppers, tomatoes & sweet onion

Gazpacho Soup

“5 is fine, but 9 is divine”
Why Whole Grains?

- Support GI health
- Reduce risk of some cancers
- Help maintain healthy blood sugar levels
- Benefit weight management
- Provide vitamins, minerals, and phytonutrients
Whole Grains

Whole Grain Terms:
- Brown Rice
- Bulgur
- Corn (whole)
- Popcorn
- Quinoa
- Whole Barley
- Whole Oats
- Whole Rye
- Whole Wheat
- Wild Rice

Marketing terms that are not Whole Grain: multi-grain, cracked wheat, 100% wheat, seven grain, nine grain, & twelve grain
### Fiber Recommendations

<table>
<thead>
<tr>
<th>Age</th>
<th>Grams/Day</th>
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<tbody>
<tr>
<td>19 to 49 years</td>
<td>25-38 grams</td>
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<tr>
<td>50+ years</td>
<td>21-30 grams</td>
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</tbody>
</table>

- 1 cup berries (with seeds*) = 8 g
- 1 pear, orange, apple, peach = 3-6 g
- ½ cup legumes = 5-8 g
- ½ cup whole grains = 2-4 g
- ½ cup cooked asparagus, broccoli, green beans, cabbage, carrots, mushrooms, greens, cauliflower, or Brussels sprouts = 2 g
- Fiber One, All-Bran, Kashi cereals = 8-14 g
Why Dairy?

When consumed as part of a healthy diet:

- Improves diet quality
- Prevents osteoporosis
- Helps manage blood pressure
- Protein, calcium, magnesium, potassium
- Protects against kidney stones

Choose lower-fat varieties:

- Skim or 1% milk
- 0% or 2% yogurt and cottage cheese
- Part-skim, light or 2% cheese
Calcium Recommendations

• Best source of calcium comes from food (including fortified foods)
• Dairy, soy & almond milks, greens, almonds

<table>
<thead>
<tr>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-50 years = 1,000 mg</td>
<td>19-50 years = 1,000 mg</td>
</tr>
<tr>
<td>51+ years = 1,200 mg</td>
<td>51+ years = 1,200 mg</td>
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</table>

• Calcium is shown as “%DV” on nutrient facts info, rather than milligrams (mg)

30% = 300 mg
Inflammation
Reducing Inflammation
Why Should We Care?

• Some researchers believe that low-grade inflammation is associated with everything from heart disease and diabetes to Alzheimer’s and arthritis, and may even be the cause of most chronic diseases.

• Test for inflammation = C-reactive protein (CRP). Elevated levels of CRP often signal an increased risk of heart attack and stroke.
Now, What Can We Do About it…

- The same steps that help prevent cardiovascular disease may reduce chronic inflammation:
  - Don’t smoke; avoid inhaling other people’s smoke
  - Talk to MD about low-dose aspirin to help prevent heart attack and stroke
  - Control your blood pressure with diet, exercise, and medication (if needed)
  - If you are overweight, lose some weight. Obese people tend to have high CRP
  - Eat a healthy diet with a moderate amount of fish (omega-3 fats)
Fire Starters

Avoid:

• Saturated fats
• Refined carbs and sugars
• Trans fats (prevalent in processed foods)
Fire Fighters

Increase:

• Plant foods which are rich in antioxidants and other phytonutrients:
  – Vegetables, fruit, herbs and spices contain compounds that reduce inflammation
  – Whole grains, olive oil, nuts, seeds and legumes

• Omega-3s: the healthy fats found in fatty fish like salmon, mackerel and tuna
Dr. Andrew Weil’s Anti-inflammatory Pyramid

- **Healthy Sweets**: (such as plain dark chocolate) Sparsely
- **Supplements**: Daily
- **Tea**: (white, green, oolong) 2-4 cups a day
- **Healthy Herbs & Spices**: (such as garlic, ginger, turmeric, cinnamon) Unlimited amounts
- **Other Sources of Protein**: (high quality natural cheeses and yogurt, omega-3 enriched eggs, skinless poultry, lean meats) 1-2 a week
- **Cooked Asian Mushrooms**: Unlimited amounts
- **Whole Soy Foods**: (edamame, soy nuts, soymilk, tofu, tempeh) 1-2 a day
- **Fish & Seafood**: (wild Alaskan salmon, Alaskan black cod, sardines) 2-6 a week
- **Healthy Fats**: (extra virgin olive oil, expeller-pressed canola oil, nuts – especially walnuts, avocados, seeds – including hemp seeds and freshly ground flaxseeds) 5-7 a day
- **Whole & Cracked Grains**: 3-5 a day
- **Pasta**: (al dente) 2-3 a week
- **Beans & Legumes**: 1-2 a day
- **Vegetables**: (both raw and cooked, from all parts of the color spectrum, organic when possible) 4-5 a day minimum
- **Fruits**: (fresh in season or frozen, organic when possible) 3-4 a day

www.drweil.com
The Mediterranean Diet Pyramid

www.Oldwayspt.org
The Mediterranean Diet

Potential Health Benefits

• Lengthen your life
• Lower your risk for heart disease, high blood pressure and elevated LDL cholesterol
• Reduce cancer risk
• Aid your weight management efforts
• Improve rheumatoid arthritis
• Protection against asthma
• Reduce Alzheimer’s disease risk
• And more…
The Mediterranean Diet

Strategies to make it work in your life –
1. Eat lots of vegetables (and fruit)
2. Switch to olive oil
3. Choose seafood and legumes more often
4. Serve petite portions of meat
5. Enjoy some dairy products
6. Feature whole grains
7. “Have a handful”...of nuts or seeds every day
8. Use more spices!
More Foods to Include

- **Green Tea**: rich in catechins
  - Claims: anti-inflammatory; metabolism-boosting action

- **Tart Cherries**: rich in anthocyanins
  - Claims: anti-inflammatory; reduce the effects of muscle damage and osteoarthritis

- **Turmeric** (active ingredient, curcumin)
  - Claims: anti-inflammatory. Add to cauliflower, egg or tuna salad, fajitas, soups, etc.

- **Basil**: The oil in basil inhibits the enzyme, cyclooxygenase, which is the same enzyme that NSAIDs inhibit
# Spice It Up!

<table>
<thead>
<tr>
<th>Spice</th>
<th>Phytochemical</th>
<th>Potential health benefit</th>
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<tbody>
<tr>
<td>Allspice</td>
<td>Eugenol</td>
<td>Antimicrobial, antioxidant</td>
</tr>
<tr>
<td>Black Pepper</td>
<td>Piperine</td>
<td>Antioxidant, promotes digestion</td>
</tr>
<tr>
<td>Cumin</td>
<td>Thymoquinone</td>
<td>Antioxidant, anti-inflammatory</td>
</tr>
<tr>
<td>Cinnamon</td>
<td>Cinnamaldehyde</td>
<td>Anti-inflammatory, may help reduce blood sugar</td>
</tr>
<tr>
<td>Saffron</td>
<td>Alpha-crocin</td>
<td>Antioxidant</td>
</tr>
<tr>
<td>Turmeric</td>
<td>Curcumin</td>
<td>Antioxidant, anti-inflammatory</td>
</tr>
<tr>
<td>Red Chili</td>
<td>Capsaicin</td>
<td>Anti-inflammatory, pain reliever</td>
</tr>
<tr>
<td>Garlic</td>
<td>Allicin, Alliin, Ally</td>
<td>Antioxidant, antimicrobial</td>
</tr>
<tr>
<td>Ginger</td>
<td>Gingerol</td>
<td>Antioxidant, anti-inflammatory</td>
</tr>
</tbody>
</table>

Source: AICR, Summer 2013, Science Now 45
The MIND Diet

• MIND = Mediterranean-DASH Intervention for Neurodegenerative Delay

• Researchers found:
  – Participants who followed the MIND diet had a 53% lower risk of developing Alzheimer’s
  – Even moderate adherence put participants at a 35% lower risk for developing the disease

• Consists of 15 dietary components:
  – 10 “brain healthy food groups”
  – 5 “unhealthy” food groups
The MIND Diet

10 “Brain Healthy” Food Groups
- Green leafy vegetables
- Other vegetables
- Nuts
- Berries
- Beans
- Whole grains
- Fish
- Poultry
- Olive oil
- Wine

5 “Unhealthy” Food Groups
- Red meats
- Butter and stick margarine
- Cheese
- Pastries and sweets
- Fried/fast food

Is There A Best Diet?
“Which is more evil...Darth Vader, The Joker, Frankenstein, sugar, fat or carbs?”
Clear the Clutter

• “Carbs make me fat.”
• “All processed food is bad.”
• “Don’t eat anything after 5 p.m.”
• “Eggs and butter are good again.”

• “There’s too much sugar in carrots.”
• “Gluten is evil.”
• “High protein is the way to go.”
• “I will never dine out again.”
Best Diets 2015
U.S. News and World Report (Jan 6, 2015)

Best Diets Overall – relatively easy to follow, nutritious, safe, effective for weight loss and protective against diabetes and heart disease

4.1 – DASH Diet
4.0 – TLC Diet
3.9 – Mayo Clinic Diet
3.9 – Mediterranean
3.9 – Weight Watchers
3.8 – Flexitarian
3.8 – Volumetrics
3.7 – Jenny Craig
3.6 – Biggest Loser
3.6 – Ornish Diet

(Worst Diets – Paleo, Dukan, HCG Diet)

0.0 - 5.0 rating scale
# Best Diets 2015

**U.S. News and World Report (Jan 6, 2015)**

**Best Heart-Healthy Diets** – can help you lose weight or lower cholesterol, blood pressure or triglycerides.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Diet</th>
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<tbody>
<tr>
<td>4.6</td>
<td>Ornish Diet</td>
</tr>
<tr>
<td>4.5</td>
<td>TLC Diet</td>
</tr>
<tr>
<td>4.3</td>
<td>DASH Diet</td>
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<tr>
<td>4.0</td>
<td>Mediterranean Diet</td>
</tr>
<tr>
<td>3.9</td>
<td>Engine 2 Diet</td>
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<tr>
<td>3.9</td>
<td>Vegan Diet</td>
</tr>
<tr>
<td>3.8</td>
<td>Flexitarian Diet</td>
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<tr>
<td>3.6</td>
<td>Anti-Inflammatory Diet</td>
</tr>
<tr>
<td>3.6</td>
<td>Mayo Clinic Diet</td>
</tr>
<tr>
<td>3.6</td>
<td>Vegetarian Diet</td>
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</tbody>
</table>

(Worst Diets – Atkins, Body Reset, Paleo, Dukan)

0.0 - 5.0 rating scale
Vegetarian Diet (Lacto-ovo)

Includes -
• Eggs
• Dairy (milk, yogurt, cheese)
• Fruits and non-starchy vegetables
• Starchy vegetables, legumes and beans
• Grains (including whole grains)
• Nuts, seeds, nut and plant-based oils

Eliminates -
• Meat (beef, poultry, pork) and fish

Criticisms - none (be mindful to take in adequate protein, calcium and iron)
Vegan Diet

Includes -
• Fruits and non-starchy vegetables
• Starchy vegetables, legumes and beans
• Grains (including whole grains)
• Nuts, seeds, nut and plant-based oils

Eliminates -
• Meat (beef, poultry, pork) and fish
• Eggs
• Dairy

Criticisms – takes planning; can be difficult to obtain adequate amounts of certain nutrients (protein, calcium, iron, vitamin D, vitamin B12, iodine, omega-3 fatty acids)
The Paleo Diet

Includes -

• Lean meats, fish and eggs
• Fresh fruits and non-starchy vegetables
• Nuts (except peanuts), seeds, nut and plant-based oils

Eliminates -

• Grains (including whole grains)
• Starchy vegetables, legumes and beans
• Dairy (milk, yogurt, cheese)

Criticisms - Nutritional completeness, cost, long-term weight loss, preventing or controlling diabetes and heart disease
Is There a Best Diet?

• Depends on who you ask…
• ADHERENCE predicts success
• Choose a diet (eating pattern) with a composition based on:
  – Health status
  – Personal preference

“Inch by inch it’s a cinch. Yard by yard is much too hard.”
Clearing Up Confusion

“That’s an urban myth. Do you have any idea how much pearl would cost?!”
Coconut: The Cure-all

Claims: Coconut oil is a wonder oil, a cure-all for your heart, brain, weight loss, thyroid function, and fighting bacteria and viruses like HIV.

Real Story:
• Very limited research
• Coconut may help raise HDL cholesterol, but it raises LDL too
• Interest in the medium-chain triglycerides (MCTs)…
Coconut: The Cure-all

Medium-chain triglycerides (MCTs)
- Absorbed directly from the intestines into the liver
  - Some burned as fuel
  - May increase metabolic rate slightly
  - [2 Tbsp of MCT oil a day ➔ ~60 extra calories burned a day]
- Have less of an effect on raising LDL
- Some antifungal and antiviral properties

Coconut Oil
- 1 Tbsp = 120 calories
- 13.6 g total fat
- 12.4 g saturated fat (91% of total) ... ~60% is MCTs
  - Leaving 5 g sat fat that are not MCTs

Limit Saturated Fat to <10-15 grams/day
“Natural” Is Healthy

**Assumption:** “Natural” or “all natural” foods are healthy, minimally processed, and do not contain any additives or artificial ingredients.

**Real Story:**
- In the US, the term means nothing.
- FDA has no specific rules for “natural” labeling.
- FDA.gov = the agency has not objected to the use of the term if the food does not contain added color, artificial flavors, or synthetic substances.
- Lawsuits have led to many companies taking “natural” off food packages.
The Food Halo

• Organic
• Low glycemic index
• Fat-free
• Natural
• Sugar-free
• Gluten-free
Water: How Much?

Claim: You should drink 8 glasses of water a day.

Real story:
• Nobody knows where the 8x8 rule started
• Americans aren’t walking around in a chronic state of dehydration
• Not a bad recommendation—easy to remember target
• Water and adequate fluids are good for our health
Water: How Much?

- 80% of total fluid intake comes from beverages & 20% from food
- Water is a nutrient
  - Men: 16 cups of fluid/day (13)
  - Women: 11 cups of fluid/day (9)
- Diet | Activity | Climate
- Alternative method for determining fluid needs
  - Half your weight in lbs = ounces of fluid required

Institute of Medicine, 2004
Processed Foods = Bad

**Assumption:** Processed foods are unhealthy and should be avoided

**Real Story:**
- Processed foods are foods that have undergone any process that may alter it from its natural state
- Processing is not always bad or unhealthy…
Why Do We Process Foods?

• To decrease prep time
• To maintain freshness and nutrient content
• To increase food safety with addition of preservatives
• To improve nutrient content through fortification of essential vitamins and minerals such as folate, calcium and iron
Additives and Preservatives?

• Definition of an additive/preservative:
  – substances added to food to preserve flavor or improve its taste and appearance; food safety

• Role of preservative:
  – act as either antioxidants or antimicrobials
    • Antioxidants prevent oxidation (keeping it from becoming rancid or from developing black spots)
    • Antimicrobial preservatives kill or prevent growth of bacteria/fungi
“Natural” Food Additives/Preservatives

• Natural substances such as salt, sugar, vinegar and alcohol are traditional preservatives
• Processes for preservation: freezing, pickling, smoking and salting
• Some preservatives targets enzymes in fruits/veggies
  • Example – Citric/ascorbic acid inhibits the action of the enzyme phenolase which turns cut apples brown
Additives to limit

**Sodium Nitrate** (also called Sodium Nitrite)
- Preservative, coloring, and flavoring commonly added to deli meats, hot dogs, smoked fish, and corned beef … studies have linked it to cancers (specifically colorectal cancer)

**Food Dyes** (such as Yellow 5, Red 40, and six others, that are made from petroleum)
- Risks include hyperactivity in children, cancer (in animal studies) and allergic reactions
- Banned throughout Europe.

Now what?...

Visualize Being Successful
Thank you for coming!

Molly Wangsgaard, MS, RDN, NSCA-CPT
mwangsgaard@cooper-clinic.com