Taking A Bite out of Cancer

Healthy Columbus Nutrition Webinar - Ashley Harris, MS, RD, CSO

Where does nutrition fit in?
- Prevention
- Treatment
- Survivorship

Objectives
- Review evidenced based nutrition recommendations for cancer prevention and survivorship
- Describe nutritional management of common side effects associated with cancer and treatment

What is the right “diet” to fight cancer?
Diet & Cancer

- Messages confusing because conflicting studies looking at links between nutrition and cancer
  - Look at dietary patterns, foods (individual and groups), specific nutrients

- Many limitations to research
  - Cell & animal study findings do not always apply to humans

- Difficult to do in humans!
  - Must account for diet over lifetime
  - Hard to have subjects follow research diet precisely
  - Accurate diet assessment almost impossible

The WCRF-AICR Reports

- Expert panel reviewed 7,000+ studies from around the world
- Provide recommendations by judging strength of evidence related to diet, activity level, body fatness (Expert Reports, CUP)

Continuous Update Projects

- Updated recommendations in collaboration with experts from around the world
- Reviewed 7,000+ studies
- Provided recommendations by judging strength of evidence

- 1997, 2007, CUP

- Expert reports on diet, activity, body fatness
- CUP projects updated continuously

- www.aicr.org
AICR Recommendations for Survivors

- Survivors = in treatment and after treatment
- All recommendations apply for survivors IN GENERAL
  - Reduce risk of recurrence
  - Reduce risk of second primary
  - Improve overall health/prognosis
- Must look at each person individually
  - Recommendations may not be appropriate for all (i.e. ovarian cancer at risk for SBO, pt needing wt gain)
  - Diet & drug interactions (i.e. grapefruit)

“Eat food. Not too much. Mostly Plants.”
-Michael Pollan, In Defense of Food: an Eater’s Manifesto
**Weight:**
Aim to be a healthy weight throughout life

**Aim for Healthy Weight**

- **BMI between 18.5-25**
- **Convincing evidence increases risk for many cancers:**
  - Oesophagus, pancreas, colorectum, breast (postmenopausal), endometrium, kidney
- **Also increases risk for cancer recurrence and other chronic diseases (i.e., heart disease, diabetes)**

**Avoid high-calorie foods!**

- **“Energy Dense” Foods:**
  - High sugar drinks (soda, juice)
  - Fast foods (burgers, fries, etc.)
  - Fried foods, high-fat foods
  - Refined/processed foods
  - Candy, sweets, cookies, donuts, etc.

**Add in low-calorie plant foods!**

Watch your Portion Size

**The Portion Size Illusion**

Which plate contains the most food?

Think about it before looking at the answer below.

From http://aussieteaspoon.blogspot.com

Physical Activity:
Be physically active every day in any way for at least 30 minutes or more

Benefits of Physical Activity

- Helps reduce / control body weight
- Enhances immune function
- Improves quality of life
- Reduces stress
- Combats fatigue - especially in survivors!
- Can increase blood flow to brain and may promote healing
- Decreases risk for developing new cancers

Be as Physically Active as Possible

- **Goal:**
  - Be moderately active (equivalent to brisk walk) at least 30 minutes every day
  - As fitness improves aim for 60 minutes of moderate activity or 30 minutes of vigorous physical activity every day

- **Does NOT have to be all at once**
  - Studies show it is the cumulative workout minutes that count
  - 5-10 minute activity bursts throughout the day great way to reach fitness goals
Diet:
Eat mostly plant foods, limit red and avoid processed meats

Choose a Plant-Based Diet
- Diet comprised of MOSTLY plant foods
  - Does not mean vegetarian or vegan
  - Aim for 2/3 or more plant foods, 1/3 or less animal foods
- Plant foods include:
  - Fruits
  - Vegetables
  - Nuts & Seeds
  - Whole Grains
  - Beans & Legumes
  - Coffee, Tea, Dark Chocolate!

Why a plant-based diet?
- Studies have shown it can decrease risk of many chronic diseases:
  - Cancer – Occurrence AND Recurrence
  - Diabetes
  - Heart Disease
  - High Blood Pressure
  - Cholesterol
  - Stroke
  - Obesity

Moderation with Meats
- Limit red meat to <18 oz per week
  - Includes beef, lamb, pork, goat
- Avoid processed meats
  - Includes meats preserved by smoking, curing or salting or addition of chemical preservatives (i.e. nitrates)
- Avoid charring or blackening
  - Creates cancer causing substances (HCA – heterocyclic amines, PCA – polycyclic aromatic hydrocarbons)
Why a plant-based diet?

- Plant foods in general tend to be:
  - Lower in calories - Prevents Obesity
    - Fruits & vegetables about 1/3 calories of protein & starches
  - Improves Health - Nutrient dense
    - Vitamins
    - Minerals
    - Fiber
    - Phytochemicals

Phytochemicals and Cancer

<table>
<thead>
<tr>
<th>Phytochemical(s)</th>
<th>Phytochemical Plant source</th>
<th>Possible benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lycopene (such as tomato, papaya, watermelon)</td>
<td>Lycopene is found in tomato, papaya, and watermelon, as well as in the seeds of chile peppers, onions, and tomatoes.</td>
<td>May reduce risk of prostate cancer and may be protective against skin, oral, and other cancers.</td>
</tr>
<tr>
<td>Lutein (such as corn, broccoli, collard greens)</td>
<td>Lutein is found in corn, broccoli, collard greens, kale, and spinach.</td>
<td>Promotes immune function and may be protective against macular degeneration.</td>
</tr>
<tr>
<td>Beta-carotene (such as sweet potato, winter squash, carrots, apricots)</td>
<td>Beta-carotene is found in sweet potatoes, winter squash, carrots, apricots, and melons.</td>
<td>Promotes immune function and may be protective against macular degeneration.</td>
</tr>
<tr>
<td>Allenylsulfides (such as garlic, onion, leek)</td>
<td>Allenylsulfides are found in garlic, onion, leek, and related vegetables.</td>
<td>May be protective against cancer and cardiovascular disease.</td>
</tr>
<tr>
<td>Curcumin (such as turmeric)</td>
<td>Curcumin is found in turmeric.</td>
<td>May be protective against cancer and cardiovascular disease.</td>
</tr>
</tbody>
</table>

I already have cancer, so does it really matter?

- Phytochemicals give plants their distinctive color, smell, taste
  - Provide MANY health benefits
    - Especially for fighting cancer!
  - 1000's discovered so far!
Benefits of Diet & Exercise AFTER Diagnosis

- Study by the National Cancer Institute (NCI) looking at 670 women 30 months after breast cancer diagnosis
  - HEALTHY DIET:
    - When comparing women eating a healthy diet (fruits, vegetables, whole grains, lean proteins) to the standard western diet (refined sugars/grains, red meats, saturated fats)
      - 60% reduced risk of death by any cause, 88% reduced risk of death from breast cancer
  - HEALTHY DIET + EXERCISE:
    - When comparing women eating a healthy diet AND engaging in regular physical activity
      - 89% reduced risk from any cause, 91% reduced risk of death from breast cancer!!!
Nausea/Vomiting

- Small, frequent meals of easy to digest foods
- Room temperature/cold foods
- Salty foods (pretzels, saltines potato chips, chicken noodle soup)
- Ginger
- Lemon
- Avoid rich, greasy, fried, spicy foods
- Replenish with electrolyte fluids if vomiting

Poor Appetite

- Small, frequent meals (5-6 “mini-meals”)
- Keep easy go-to snacks around of favorite foods
  - Snack basket (granola bars, trail mix)
- Set alarm
- Choose calorie dense foods or high-calorie food additions
  - Olive oil in soups, smoothies, veggies, sandwiches
  - Add Cal to Ensure to increase calories!
- Avoid greasy/rich & hard to digest foods

Mouth Sores/Dry Mouth

- Choose soft, moist foods
  - Can add gravy, broth or soak in milk, juices
- Suck on ice chips or popsicles
- Choose cool, bland foods
- Avoid spicy, dry, acidic foods
- Rinse mouth with baking soda (1 Tbs/1 qt water)
- Use straws
- Avoid alcohol, tobacco
- Use cool mist humidifier

Taste Changes

- “Shock” taste buds with salty, sweet, sour*, vinegar tastes
- If metallic taste:
  - Use plastic silverware
  - Choose fresh/frozen over canned
  - Use other proteins in place of meats
- Choose cool or room temperature foods
- Rinse mouth with baking soda (1 Tbs/1 qt water)
Diarrhea
- Increase soluble fiber (Benefiber)
- Replace fluid losses, include electrolyte rich fluids
  - At LEAST 64oz non-caffeine, non-alcohol fluids + 1 cup water for each loose stool
  - Broth, coconut water, V8, G2
- Potentially aggravating:
  - Insoluble fiber
  - Dairy
  - Greasy, fatty, rich foods
  - Sorbitol and concentrated sweets

Constipation
- Eat regular meals throughout the day
- Maintain adequate hydration
- Movement, massage
- Hot beverages (smooth move tea)
- Fiber
- Prune juice (hot), prunes, apple/prune sauce
- Avoid caffeine

Fatigue
- Maintain stable blood sugars
  - Small frequent meals (every 2-3 hours)
  - Protein with each meal
  - Choose complex carbs (whole grains, whole fruit, starch veggies) over simple carbs (juice, sugar, soda, “whites”, candy, cookies, sweets)
- 64+ oz water
- Moderate physical activity (as MD approved)
- Yoga/meditation

Resources
- Registered Dietitian!!!
- American Institute for Cancer Research website
  - www.aicr.org
- Books:
  - The New American Plate Cookbook (AICR)
  - The Cancer Fighting Kitchen (Rebecca Katz)
- NCI “Eating Hints: Before, During, and After Cancer Treatment” booklet
- Smart Phone Apps: Dana-Farber Cancer Institute Nutrition
Questions??

THANK YOU!!

Bonus:
Tips for making it work!!

Ideas to Get Moving

- Park further away from the door
- Use the stairs whenever possible
- Cleaning counts
  - Try putting headphones to get into the job and keep your heart rate up
- Dance!
- Get outside
  - Sled with the kids
  - Go for a walk in the woods
  - Fresh air (as little as 5 minutes/day) provides extra mood boosting benefits
- Take a break and stretch at the top of every hour

Take it Slow!

Traditional American Plate
Transitional Plate
New American Plate
Tips for a Plant-Based Diet

- Start the day right:
  Go veggie at breakfast

- Join the Meatless Monday bandwagon

- Shop for plants first:
  Instead of planning your menu around meat, plan it around plants!

Tips for a Plant-Based Diet

- If you eat meat, use it as a seasoning:
  Cut down on animal food intake while pushing plants by using meat as a flavoring in dishes instead of the main event.

- Create a plant-based pantry list:
  Many plant based foods like beans and whole grains are shelf-stable, convenient and economical!

Tips for a Plant-Based Diet

- Get cooking:
  Plan at least one night a week to try a new vegetarian recipe.

- Keep it simple:
  Not every meal has to involve cookbooks and cutting boards; it can be as easy as black bean burritos, vegetarian chili, or hummus pita sandwich.

Tips for a Plant-Based Diet

- Try ethnic flair:
  Some cultures know how to do vegetarian meals right!

- Convert your favorite dishes:
  Turn your favorite meat-based recipes veggie for an easy dinner solution.
Tips for a Plant-Based Diet

- **Dust off your slow-cooker:**
  Just throw in veggies, herbs, vegetable broth, canned tomatoes, whole grains and dried beans; then turn the dial off!

- **Grab a cook book:**
  There are tons of great vegetarian or plant based cookbooks like the AICR’s New American Plate!