

Nutrition, Breast Cancer & Plant Based Foods

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Risk Factors

Non-Modifiable Risks

- **Family History**
- **Personal History**
- **Gender**
- **Age**
- **Race**

Modifiable Risks

- **Routine Food Intake**
- **Weight**
- **Physical Activity**
- **Alcohol**

Food and Cancer, How Does this Work?

- **Promoting cancer cell apoptosis
(programmed death)**
- **Reducing free radicals/oxidation rates
of cells**
- **Inhibiting the creation of carcinogenic
molecules**

Continued.....

- **Down regulating cancer-inducing gene expression pathways**
- **Promoting stable DNA and cell formation (reduced risk of mutation and cancer cell formation)**

Routine Food Intake

- **Should be foods derived from plant sources**
- **Lots of color are best**



The Cruciferous Line is important

- Cruciferous sources, high in Vitamin C and beta carotene, critical in oxygen metabolism
- Blocks activity NF- κ B, or a pro-inflammatory transcription factor, thus decreasing inflammation in our bodies

The Household

Cruciferous Vegetables

- **Also provide flavenoid antioxidants, such as isorhametin, quercitin, and kaempferol, caffeic and ferulic acid. In other words, cruciferous vegetables pack a punch!**

The Household

Common ones are....

- **Cabbage**
- **Broccoli**
- **Cauliflower**
- **Brussels sprouts**



Other Good Sources of Antioxidants

- **Pulse seeds (dry beans like pinto beans, kidney beans and navy beans; dry peas; lentils)**
- **Tomatoes, and peppers, grapefruits, oranges, berries, red and black currants, dark grapes, apples and aronia**

Weight Gain Increases Breast Cancer Risk

- **Extra 55 lb after the age of 18 increases the risk of breast cancer by 45%**
- **Extra 4.5 - 20 after menopause increases the risk of breast cancer by 30%**

Increasing Plant Foods = Decreased Weight

- **Quality evidenced based science indicates increased plant based diet leads to weight loss**
- **Regular intake is key**

Why is this so?

- **Increased Estrogen, Insulin, and IGF-1**
- **After menopause, estrogen is supplied from FAT tissue**
- **Apple vs. Pear**
 - **Insulin & Insulin-like growth factor 1(IGF-1)**
 - **Cytokines - Inflammation**

The Household

Alcohol

- **Liquid calories don't make you full, and can add up fast!**
- **Lessens willpower to resist unhealthy foods**
- **drinking at a young age increases risk for breast cancer**



Eating Today vs. 20 Years Ago

- **Healthy, well balanced diet is key!**
 - Limit portion sizes
 - Quality > Quantity

20 Years Ago



3-inch diameter
140 calories

Today



??? calories

20 Years Ago



333 calories

Today



??? calories

Increase Physical Activity

- **Lose extra body fat**
- **Modify hormone levels**
- **30-45 minutes on 5 or more days/week**
 - 20% reduced risk
- **Added benefits**
 - Cardiovascular health, muscle strength, body composition, fatigue, anxiety, depression, self esteem, happiness & quality of life



Basic Meal Planning Guidelines

- **Do not skip meals!**
 - Snacks are a good thing (if done right)
- **Avoid calories after 7 PM**
- **Variety from all the food groups daily**
 - Plant Based Focus
- **Mindful Eating**
- **Eat Breakfast everyday**
- **Hydration**



Protein

- **Meat** – Limit Red Meat to 1-2 x/weekly
- **Chicken, Turkey**
- **Fish**
- **Eggs**
- **Dairy- fat free**
- **Nuts**
- **Nut Butters**
- **Beans**
- **Seeds**



Fats

- **Omega 9**
 - **Olives, Olive Oil, Avocados, Canola Oil**
- **Omega 3**
 - **Nuts**
 - **Walnuts**
 - **Flaxseed**
 - **Fatty Fish**
 - **Salmon, White Tuna**

Carbohydrates

- **Whole Grains**
 - Quinoa
 - Barley
 - Oatmeal
 - Buckwheat
- **Fruits**
- **Vegetables**
- **Beans**



Inflammation & Chronic Diseases

- **Arthritis, Osteoporosis, Alzheimer's Disease, Cancer , Diabetes and Heart Disease**
- **Pro-inflammatory foods to limit/avoid:**
 - Saturated and Trans Fats
 - Sugars
 - Red Meat
 - Processed Meats

Anti-inflammatory Foods to enjoy!

- **Fruits/Vegetables**
- **Tea**
- **Fatty Fish (Salmon and Tuna)**
- **Whole Grains**
- **Legumes**
- **Berries**
- **Plant sources of Healthy Fats – Flaxseeds,
Nuts**

Specific Foods/Nutrients: Turmeric

- **Indian Spice common in Curry**
- **Yellow pigment = Curcumin = Anticancer agent**
- **Benefits:**
 - **Anti-inflammatory**
 - **Helps detoxify and clean out toxins**
 - **Helps repair damage already done**
 - **Helps to stop the growth and spread of cancer cells that do form = Anti-angiogenic**
- **Recommended Intake = Increase use in cooking**

Take Home Message

- **Make half your plate fruits and vegetables**
- **2 cups fruit and 2 cups veggies your daily goal**
- **Canned fruits packed in their own juice or use frozen fruits if fresh are not available**

Take Home Message

- **Be careful of too much vegetables that are bread equivalents (corn, winter squash, lima beans, black eyes, English peas)**
- **Try cauliflower, broccoli, brussel sprouts, dark green salad, tomatoes, cucumbers, mushrooms, kale, swiss chard, fresh beets**
- **Limit fat: olive oil, avocado, nuts, olives still contain 9 calories/gram, as compared to CHO/Pro containing 4 calories/gram.**

Today's Plate!

- **Small salad – assorted greens and olives**
- **Veggie soup**
- **Roasted veggie sandwich on a multi-grain roll**
- **Fresh fruit for dessert**

The Household