

CANCER FIGHTERS IN YOUR FOOD

Introduction

- Foods that we eat play a role in the risk of developing cancer
- The American Institute for Cancer Research (AICR) recommends eating a mostly plant-based diet while limiting red and processed meat in order to lower cancer risk. Red meats include beef, pork, and lamb and processed meats include ham, bacon, and salami. A plant-based diet focuses on fruits, vegetables, legumes and whole grains.
- Plant-based foods are full of cancer-fighters like vitamins, minerals, fiber, and phytochemicals.

What are Phytochemicals?

- Phytochemicals are plant chemicals that have protective or disease preventative properties.
- They have been shown to:
 - ▣ stimulate the immune system
 - ▣ prevent DNA damage
 - ▣ help repair DNA
 - ▣ slow the growth of tumors
 - ▣ regulate hormones
 - ▣ trigger damaged cells to die before they can multiply
- Many phytochemicals are antioxidants which prevent the body's cells from damage that may lead to cancer or other diseases.

http://www.aicr.org/reduce-your-cancer-risk/diet/elements_phytochemicals.html

Berries

including strawberries, raspberries, blackberries, blueberries, cranberries

- Contain *ellagic acid** and vitamin C to hinder tumor growth and protect cells' DNA
- Good source of dietary fiber which can increase fullness, and help control body weight
- Good bacteria in the gut (probiotics) use fiber to protect the gut (colon cells).
- Contain *anthocyanins** which are found to inhibit the growth of cancer cells and stimulate destruction of cancer cells

*examples of phytochemicals

<http://www.aicr.org/foods-that-fight-cancer/blueberries.html>

<http://www.aicr.org/foods-that-fight-cancer/cranberries.html>

Cruciferous Vegetables

including broccoli, kale, cabbage, Brussels sprouts, and cauliflower, bok choy, cabbage, arugula

- Contain fiber, magnesium and folate (helps) maintain and repair cell DNA
- Excellent source of isothiocyanate*-the bitter component of these foods block tumor growth and cause cancer cells to die
- *Isothiocyanates** have been thought to prevent against cancers of the colon, liver, lung, stomach small intestines and the mammary glands (breast)

*examples of phytochemicals

http://www.aicr.org/foods-that-fight-cancer/foodsthatfightcancer_leafy_vegetables.html

Carotene containing foods

including carrots, sweet potatoes, mango, corn, cantaloupe, squash, peppers

- Contains *beta-carotene** that may help control abnormal cell growth
- *Carotenoids** protect against cancers of the mouth, pharynx, and larynx and have also been found to reduce the growth of some breast, lung, skin, and stomach cancer cells

*examples of phytochemicals



Allium Vegetables

including leeks, chives, onions, garlic, scallions, and shallots

- Slow or stop the growth of tumors
- Reduce risk of cancers of the digestive tract
- Compounds in garlic have been shown to decrease the growth of tumors in the prostate, bladder, colon, and stomach tissue
- Contains *diallyl disulfide** which has preventative effects against skin, colon, and lung cancer

*examples of phytochemicals

http://www.aicr.org/foods-that-fight-cancer/foodsthatfightcancer_garlic.html

http://preventcancer.aicr.org/site/PageServer?pagename=foodsthatfightcancer_garlic

Legumes

including beans (chick peas, kidney beans, black beans, lima beans, pinto beans), peas, and lentils

- Loaded with fiber and protein which increases feeling of fullness which may help decrease your risk for obesity. Obesity may increase risk for certain types of cancer
- Fibers feeds good bacteria in digestive track to keep cells healthy
- Source of folate which may decrease risk for cancer of the breast, pancreas, colon, and other parts of the gastrointestinal tract because of its role in cell division and repairing damaged cells
- Contain resistant starch which is used by bacteria in the colon to protect cells



Red and Pink Produce

including red grapefruit, tomatoes, watermelon, peppers, apples, pomegranate, cherries, beets

- Contain *lycopene** to protect against prostate and colorectal cancer
- Best source of lycopene is tomato sauce as these compounds are fat soluble and more available when cooked
- Good source of fiber, *carotenoids**, and Vitamin C which all protect against cancer by protecting healthy cells

*examples of phytochemicals

<http://www.aicr.org/foods-that-fight-cancer/grapefruit.html>

http://www.aicr.org/foods-that-fight-cancer/foodsthatfightcancer_tomatoes.html

Nuts

including walnuts, cashews, peanuts, hazelnuts, almonds, brazil nuts, pecans, pistachios, pine nuts

- Walnuts found to decrease growth of tumor cells
- Contain high amounts of polyphenols and phytochemicals that have antioxidant properties (protect cell and DNA damage)



How Much Should I Be Eating?



- 1 ½ – 2 cups of fruit per day
 - ▣ A serving of fruit is about ½ cup or a medium sized piece of fruit. A serving of dried fruit is ¼ cup

- 2 – 3 cups of vegetables per day
 - ▣ A serving of vegetables is about 1 cup

- 1 ½ cups of nuts per week
 - ▣ A serving of nuts is about ¼ cup

- 1 ½ cups of legumes per week
 - ▣ A serving of legumes is about ¼ - ½ cup



How to Add More Cancer Fighters to Your Everyday Diet

- Try one new fruit or vegetable recipe each week
- Prepare ahead and store fruits, vegetables, nuts, and legumes for an easy and convenient snack
- Add fruit to a yogurt or dip vegetables in hummus or guacamole
- Add fresh or dried unsweetened fruit to your hot or cold cereal for breakfast
- Put together a homemade trail mix with mixed nuts and dried fruits
- Add extra vegetables to your favorite entrees like adding peppers and broccoli to spaghetti, topping burgers with lettuce and tomato, or adding spinach and onions to pizza
- Toss beans or lentils into a fresh salad or a soup

Easy and Fun Cancer Fighting Recipes – using cruciferous vegetables, berries, and nuts



Shredded Brussels Sprouts with Cranberries and Walnuts:

Thinly slice Brussels sprouts. Heat about a tablespoon of olive oil over medium heat in a sauté pan. Cook Brussels sprouts until tender and bright green. After taking off the heat, add dried cranberries and chopped walnuts.

May add other things like parmesan cheese or onions or switch up the nut or dried fruit type!

Easy and Fun Cancer Fighting Recipes – using red and pink produce and allium vegetables

Watermelon and Tomato Salad:

Dice watermelon, red onion, and tomato. Toss with feta cheese, fresh basil or mint, and a little balsamic vinegar for a fresh side dish.

White Bean and Tuna Salad:

Top a bed of your favorite type of lettuce with a quick mixture of white beans, red onion, canned tuna, and cherry tomatoes. Add a splash of red wine vinegar.

Easy and Fun Cancer Fighting Recipes – using berries

Blueberry and Raspberry compote:

Heat a small saucepan over low heat. Add a cup of blueberries, a cup of raspberries, and 1/3 cup of water. Simmer and occasionally stir until berries have broken up into a smoother consistency. Let cool and swirl into plain yogurt or oatmeal or spread on toast.

May use different kinds of berries too!



Want to learn more?

- American Institute for Cancer Research
 - ▣ <http://www.aicr.org/foods-that-fight-cancer/>
 - ▣ http://www.aicr.org/reduce-your-cancer-risk/diet/elements_phytochemicals.html
- Cancer Cure (NIH website)
 - ▣ <http://www.cancure.org/12-links-page/37-cancer-fighting-foods-spices>
- Linus Pauling Institute
 - ▣ <http://lpi.oregonstate.edu/mic/dietary-factors/phytochemicals/isothiocyanates>