

# CANCER DIETARY RECOMMENDATIONS

## Introduction

There has always been controversy about the role that diet should play in the prevention and treatment of cancer. Any of the recommendations that follow have been designed to complement and never replace the ongoing treatment.

## Grains

Whole grains are an important part of any diet. They contain fiber, B vitamins, as well as a variety of nutrients and minerals. It is important to note that not all grains are created equal. While white bread, for example, is well tolerated when you are feeling under the weather, it is a poor source of nutrition. Given the level of refinement, white bread is rapidly converted into sugar, a critical immune suppressant. While there is a time and place to suppress the immune system during cancer treatments, suppression from sugar will target a part of the immune system that will actually leave you more susceptible to infection.

## Examples of good grains

- Brown rice (including brown rice pasta, a better alternative than white flour pasta).
- Quinoa (pronounced keen-wa) is an ancient seed high in protein and B vitamins. It can be prepared the same way you would prepare rice. It is in health food stores and the health sections of grocery stores.

- Oatmeal – from steel cut or rolled oats, NOT INSTANT. Rolled oats should only take 10-12 minutes to prepare (steel cut oats take longer to cook properly). Try adding cinnamon, berries, or ground almonds to the oatmeal for added flavor.
- Chia seeds – another ancient seed high in vitamins and minerals, it can be ground and sprinkled on cereals, soups, or salads; it can also be added to drinks where the seeds rehydrate to a gel-like consistency.
- Millet.
- Barley.
- Flax seed – grind in a coffee grinder until powdery. Sprinkle on cereal or oatmeal.
- Whole wheat – a much better choice than white bread, but try to incorporate it along with some of the nutrient-rich grain selections cited above.

## Grains to avoid

- White flour – rapidly turned into sugar
- White rice – rapidly turned into sugar
- Anything that is highly refined – rapidly turned into sugar

## Fats & Oils

Fats and oils are an important contributor to overall health. Good fats and oils are an excellent source of calories as well as omega-3 fatty acids. Selecting the appropriate source of fats and oils can have an important effect on inflammation and protection of the nervous system during chemotherapy. When trying to understand what makes a form of fat good or bad, we often look at the balance between omega-6 and omega-3 fatty acids. Omega-6 fatty acids are abundant in the Standard North American Diet (SAD) and as a result cause an over-activation of the body's inflammatory pathways. Omega-3 oils on the other hand, have anti-inflammatory, neuro-protective and cellular-protective properties. Increasing the ratio of omega-3 to omega-6 oils in the diet

can have significant benefits to both decreasing the toxicity of cancer and cancer treatment as well as maintain good long-term health.

Another important aspect of fats and oils is their oxidative stability and presence of antioxidants and micronutrients. Many commercial oils are extracted with toxic solvents or with high-heat processes; both of these methods destroy important nutrients in the oil (such as vitamin E) and degrade the fatty acids. Because this would cause the oils to taste rancid they are further refined to remove this unpleasant taste. The consumption of low-quality and toxic, refined oils is a significant contributor to inflammation in the body. In addition to increasing the ratio of omega 3 to omega 6 oils in the diet it is important to only consume oils that have not been oxidized.

People are always asking about cooking oils. When certain oils are heated, they become very unstable and can actually have a pro-oxidant (negative) effect on the body.

**Cooking oils:** coconut, palm, butter (and ghee), high quality animal fats, extra virgin olive oil, avocado, unrefined peanut

**Raw oils:** all the above, sesame, nut oils

## Examples of good fats and oils

- Olive oil – extra virgin only
- Coconut oil – unrefined
- Avocado
- Fish (Pacific salmon, trout, haddock, tilapia)
- Flax seed – ground

- Flax seed oil is also highly nutritious but must be kept cold and eaten raw, and should be treated as a supplement rather than food
- Nuts and nut butters
- Butter from pastured cows

## **Fats and oils to avoid**

- Canola oil
- Corn oil, soybean oil, and other vegetable oils, including grapeseed oil and rice bran oil
- Sunflower and safflower oils that are not high-oleic
- Conventional peanut butter, which often contains sugar and other refined oils
- Conventional butter – butter from pastured cows contains more omega 3 fatty acids as well as CLA (conjugated linoleic acid) and is much healthier

## **Protein**

Protein is an essential ingredient in building muscle and tissues around the body. As a building block in the body, protein and its components (known as amino acids) are essential to cellular replication and repair. Protein is also an essential ingredient in muscle synthesis, hormone and red blood cell production, and proper immune health. If you are undergoing chemotherapy, protein requirements are often increased.

An extra-large egg, two tablespoons of almond butter or one-half cup of beans provide six to eight grams of protein each; about the same amount is found in each ounce (30g) of lean meat, fish, or poultry. There are also 2-4 grams of protein in each serving of breads and cereals and one to three grams in a serving of most vegetables.

## **Examples of good protein sources:**

- Fish – wild-caught

- Eating lower on the food chain is also preferable, such as sardines, mackerel, and other smaller fish
- Organic chicken and turkey
- High quality protein powder that can be mixed with juice
- Nitrate free deli turkey – see note below
- Legumes (except unfermented soy products)
- Tempeh

### **Protein sources to minimize/avoid:**

- Tuna – high in mercury, advised to avoid in all children, adolescents, and adults of child-bearing age
- Conventionally raised red meat – small amounts of pasture-raised beef, bison, lamb, and pork is ok
- Deli meat – see note below on nitrates
- Peanut butter – very high in sugar and omega-6 fatty acids
- Cheese – ok in moderation, particularly goat cheese

**A note on nitrates:** The Canadian Council of the Ministries of the Environment describes nitrates and nitrites as naturally occurring chemicals that are part of the nitrogen cycle. Nitrate is used widely in inorganic fertilizers, in explosives, as a food preservative, and as a raw chemical in industrial processes. Nitrite is used predominantly as a food preservative, especially in cured meats. It is also suspected that nitrites can combine with amines in the human stomach to form N-nitroso compounds. These compounds are known carcinogens and have been associated with cancer of the oral cavity, urinary bladder, esophagus, stomach and brain. While fruits and vegetables may contain nitrites, nitrite-containing vegetables also have vitamins C and D, which serve to inhibit the formation of N-nitroso compounds. Consequently, vegetables are quite safe and healthy, and serve to reduce cancer risk. Nitrites are found as a

preservative, coloring, and flavoring agent in bacon, ham, hot dogs, luncheon meats, corned beef, smoked fish and other processed meats. These products should be avoided.

## Fruits and Vegetables

Fruits and vegetables are an important component of a healthy diet. Historically there has been some controversy about whether the antioxidants found in fruits and vegetables may interfere with chemotherapy, and individualized advice can be made in this regard depending on your course of treatment. It is important when selecting fruits and vegetables that you endeavor to purchase organic produce when possible.

Consumer Reports has done an analysis of the USDA's Pesticide Data Program, looking at pesticide data over the 5 years from 2014 to 2018. Use their [table](#) to assess whether or not to eat a particular fruit or vegetable, and to decide whether it's necessary to buy organic. Ideally eat only from the Excellent category; make sure to avoid the Fair and Poor categories.

The table compiled by Consumer Reports can be found at <https://www.consumerreports.org/pesticides-in-food/stop-eating-pesticides-a1094738355/#pick>

In addition to picking fruits and vegetables with low pesticide residues, here are other helpful fruits and vegetables to include in a cancer fighting diet:

### Top Cancer fighting foods

- Broccoli sprouts
- Green tea
- Spinach

- Cilantro – not necessarily anti-cancer, but will definitely help with the side effects from chemo
- Garlic
- Pumpkin
- Berries (blueberries, raspberries, blackberries)
- Pomegranate

## Juicing

Juicing is an excellent way of consuming fruits and vegetables without having to overwhelm the body with a lot of solid food. This is especially a great way of getting nutrients into them if they are not feeling well. To juice effectively, you will need to purchase a juicer; choose a masticating juicer instead of a centrifugal one in order to avoid heating the juice, and to avoid disrupting the structured water of the juice. Try mixing many of the fruits and vegetables mentioned above to make some delicious fruit and vegetable juice mixtures on your own or as part of a recipe.

## Cleansing Carrot Cocktail

- 5 carrots
- 3 large salad tomatoes
- 1 cucumber
- 1 cup raw spinach
- 1/2 cup raw cilantro
- 1 teaspoon extra virgin olive oil
- salt to taste
- lime to taste (green-skin kind)

## **March to the Beet**

- 1/2 beet with top
- 1/2 cup wheatgrass or parsley
- 4 carrots
- 1 apple
- 2 celery ribs

## **Peter Piper's Pepper Punch**

(compliments of [www.happyjuicer.com](http://www.happyjuicer.com))

- 2 Yellow peppers
- 3 Oranges
- 2 Apples
- 2 Pears
- 1/2 Grapefruit

This juice recipe is great for boosting your immune system as it contains high levels of vitamin C. Bell Peppers are great sources of vitamin C and red and yellow peppers contain twice as much vitamin C as green peppers.

Some can find the flavor of green peppers a little bitter for their tastes when used in juicer recipes, the yellow peppers in this recipe are sweeter and melt into the other fruit flavors to give a subtle but definite taste.

Thoroughly wash and deseed the peppers and peel the oranges and grapefruit. Leave the pith on the citrus fruit as it contains bioflavonoids, which help the body absorb the vitamin C.

## Water

Juice does not count as water. At least 1.5L (48 ounces) of water should be consumed each day. Water can be consumed as herbal tea.

## Big Picture

Overall there are some top food choices that you can try to include as part of their overall diet. They can be incorporated into juice, meals, or snacks. Any or all of these dietary suggestions can be modified over time to reflect ongoing concerns, changes in symptoms, or new goals.

Here are some “big picture” food choices and guidelines:

- Avocados – rich in glutathione, a powerful antioxidant that attacks free radicals in the body, and also a strong source of beta carotene.
- Black Raspberries – contain an antioxidant that research has found to selectively kill leukemia cells without harming healthy cells.
- Blueberries – contain antioxidants.
- Broccoli, cabbage, and cauliflower – contain a chemical component called indole-3-carbinol that can convert a cancer-promoting estrogen into a more protective variety to protect against breast cancer. Broccoli, especially sprouts, contain a product that can deactivate free radicals and carcinogens and inhibit the growth of tumors.
- Carrots – contain beta carotene, which may help reduce cancers.
- Chili peppers and jalapenos – contain capsaicin, which may neutralize certain cancer-causing substances (nitrosamines).

- Cruciferous vegetables – broccoli, cauliflower, kale, Brussels sprouts, and cabbage contain two antioxidants, lutein, and zeaxanthin that may help decrease cancer.
- Curcumin – has antiinflammatory effects that fight cancer and it interferes with cell-signaling pathways, thereby suppressing the transformation, proliferation, and invasion of cancerous cells.
- Figs – contain a derivative of benzaldehyde, which is thought to be highly effective at shrinking tumors.
- Flax – contains lignans, which may have an antioxidant effect and block or suppress cancerous changes. It is also high in omega-3 fatty acids.
- Garlic – increases the effectiveness of immune cells and helps break down substances that cause cancer.
- Grapefruits, oranges, and other citrus fruits – believed to help prevent cancer by sweeping carcinogens out of the body.
- Almonds – contain antioxidants that may suppress the growth of cancers.
- Papayas – contain an antioxidant that may reduce absorption of cancer-causing nitrosamines.
- Pomegranate juice – studies show it may inhibit the growth of cancer.
- Raspberries – contain many vitamins, minerals, plant compounds and antioxidants.
- Rosemary – may help increase the activity of detoxification enzymes.
- Soy products – (such as miso soup) help by blocking and suppressing cancerous changes. They are also a potent inhibitor of the growth and spread of cancerous cells.
- Seaweed – cut into miso soup.
- Sweet potatoes – help protect DNA in the cell nucleus from cancer-causing chemicals outside the nuclear membrane.

- Teas – green tea contains antioxidants, which appear to prevent cancer cells from dividing.
- Tomatoes – contain lycopene, an antioxidant that attacks free radicals. They also have vitamin C, which can prevent cellular damage that leads to cancer.

## **Dietary Tips**

- It is recommended to eat a lot of fresh fruits and vegetables and whole grains. It is also important to cut down on high fat foods.
- Eat foods as close to their natural state as possible.
- Shop the perimeter of the grocery store. The aisles contain foods that are not heavily processed. Processed foods should be avoided.
- Choose whole grains over processed grains.
- Avoid sugar. Cancer loves sugar.
- Remove red meat from the diet.
- Add more cancer fighting foods to your diet.
- Avoid products that contain aspartame and splenda, which have been linked to an increased risk for cancer.
- Avoid foods that contain nitrites.