

# Cancer Diet Guidelines

Whether you have recently been diagnosed with cancer, have been battling it for years, are in remission, or are simply looking to eat a healthier diet to boost your immune system, prevent cancer and improve your quality of life, the following guidelines have been designed to help you achieve your goals



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## General Recommendations

- Eat a nutrient dense, whole foods diet rich in vegetables
- Purchase organic (non-GMO) and local when possible. Refer to the Environmental Working Group's website ([www.ewg.org](http://www.ewg.org)) for the Dirty Dozen, Clean 15 List. Dirty dozen are fruits and vegetables more likely to be contaminated with pesticide residues and should ideally be purchased organic. If cost is an issue, Clean 15 can be purchased conventionally grown.
- Pay attention to any specific food intolerances you may have. It is best to avoid those foods you have difficulty digesting as they can contribute to health complaints. If you are interested, you can talk to your Naturopathic Doctor about food sensitivity/intolerance testing
- Avoid eating refined, processed and packaged foods
- Aim for a 12-hour overnight fast. For instance, if dinner is at 7 pm, do not eat anything until breakfast at 7 am the next morning

## Proteins

- Protein is one of the three macronutrients needed for proper physiological function in the body. It helps build muscle mass, supports the immune system and aids in tissue healing.
- Where the average person requires 0.8 g of protein per kg of body weight to maintain muscle mass, those living with cancer require 1.0-1.5 g of protein per kg of body weight to meet increased demand from the immune system and to prevent muscle loss.
- One way to increase protein intake is through plant sources of protein. This can be done by eating legumes such as beans, peas, chickpeas, and lentils, soy products, nuts and seeds, and whole grains.
- For animal proteins, minimize the consumption of red meats (beef, pork and lamb) and substitute with white meats (turkey, chicken), fish, or plant protein instead
  - Heavy consumption of red meat is a risk factor for several cancers, especially those of the digestive tract but also for prostate, bladder, breast and oral cancers
  - All meats should ideally be organic, free-range, wild and/or grass fed.
  - Choose wild cold water fish from Alaska or the Pacific. Avoid farm raised fish which likely contains added growth hormone.
- **AVOID:** fried, smoked, cured or processed (deli meats), charring/BBQ/grilling meats at high temperatures
- Protein Supplements can be an easy way to increase protein intake
  - Non-vegan sources: whey, beef protein, cricket, egg white
  - Vegan sources: brown rice, hemp, soy, pumpkin, pea, combination products

## Fats

- Fat is another macronutrient necessary for optimal body function.
- There are four types of fats:
  - Saturated, trans-unsaturated (trans), monounsaturated, and polyunsaturated.
- Healthier fats include monounsaturated and polyunsaturated fats (omega-3 and omega-6).
- Eating a diet rich in these healthy fats can help to control inflammation and cancer progression

### Sources of healthy fats:

Nuts	Almonds, walnuts, Brazil nuts, cashews, pecans  *ideally mostly raw/unroasted <i>*peanut consumption should be limited as they are often contaminated with aflatoxin, which has been shown to cause liver damage and potential cellular genetic changes</i>
Seeds	ALL TYPES! (e.g. Flax, chia, pumpkin, sesame, hemp, sunflower)
Wild Fish	Char, sardines, haddock, hake, herring, Atlantic mackerel, mullet, pollock (Boston bluefish), salmon, smelt, rainbow trout, lake whitefish, blue crab, shrimp, clam, mussel and oyster. <i>*limit intake of larger fish with higher levels of mercury: King mackerel, tuna, marlin, orange roughy, shark, swordfish, tilefish</i>
Oils	Extra virgin olive oil, avocado, coconut, ghee, nut and seed oils (flax, sesame, sunflower, hazelnut, almond, walnut)  <i>*Nut and seed oils should not be used for cooking. Some of the beneficial properties of these oils can be damaged when heated to high temperatures. It is best to consume these oils raw, such as on a salad or in a smoothie</i>
Supplements	Fish oils (omega-3) Flax oil (omega-3)

- Another important aspect of fat intake is the omega-6 to omega-3 ratio. In the typical Western diet, the ratio is about 16:1. A diet high in omega-6 and low in omega-3 however, may contribute to excess inflammation in the body. It is important to limit your consumption of Omega-6 rich foods such as, sunflower oil, safflower oil, corn, palm kernel oil, soybean oil and canola oil.
- **FATS TO AVOID:** saturated and trans fats found in vegetable shortening, fried foods, margarine, processed baked goods and partially hydrogenated vegetable oils.

### Carbohydrates

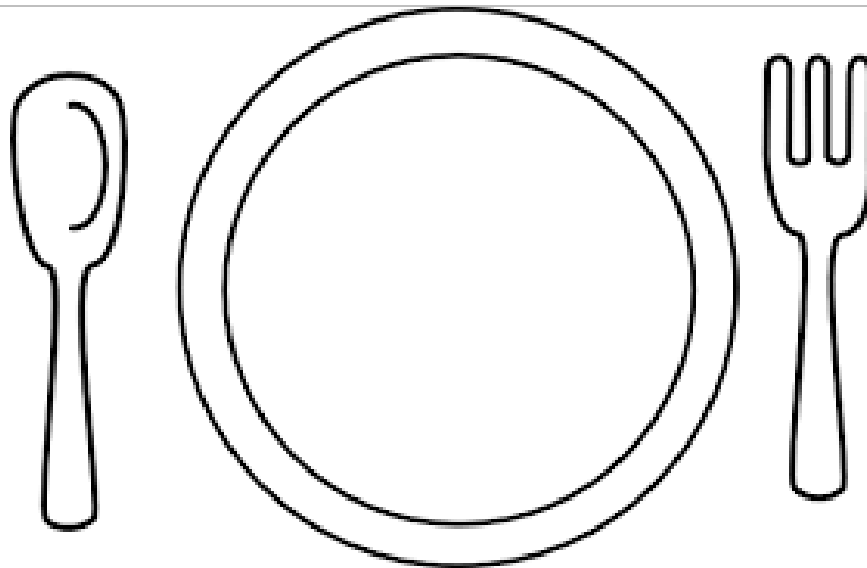
- Fruits, vegetables, legumes and whole grains contain carbohydrates
- The body breaks down most carbohydrates from food into glucose (sugar).
- Not all carbohydrates affect blood glucose levels in the same way, this depends on whether they are a simple or complex carbohydrate:
  - *Simple carbohydrates:* Refined, modified and processed carbohydrates are considered simple carbohydrates. Glucose is released quickly into the bloodstream after consuming simple carbohydrates, spiking your blood glucose. E.g. white flour.
  - *Complex carbohydrates:* Contain fiber, which slows down the release of glucose into the bloodstream, leading to balanced blood glucose levels. Whole, natural foods such as fruits and vegetables, legumes, and whole grains contain fiber. E.g. whole wheat flour.
- Blood glucose spikes cause an increase in Insulin levels and Insulin-like growth factor-1 (IGF-1), among other growth factors. These hormones promote cellular proliferation and growth, both of which have been implicated in cancer.
- The goal is to balance the blood glucose and to lower insulin and IGF-1 levels by consuming complex carbohydrates, avoiding simple ones.
- Consuming proteins and fats along with carbohydrates will slow down the absorption of glucose from the digestive tract into the blood.

- All fruits and vegetable are complex carbohydrates and an essential part of a healthy, cancer-fighting diet. Fruits and vegetables are high in fiber, vitamins and minerals and other phytochemicals, which have been shown to help prevent cancer growth. Fruits and vegetables promote elimination and detoxification. They boost energy and are essential for the function of the immune system.
- The cruciferous or brassica family of vegetables (broccoli, cauliflower, kale, Brussels sprouts, cabbage, collard greens, rutabaga, mustard greens, chard, turnip greens, radishes, watercress, and horseradish) have been shown to inhibit tumour growth.
- Allium family (onion, garlic, chives, leeks) contain bioflavonoids such as quercetin, allicin, s-allylcysteine and selenium which all contribute to their cancer protective effects.
- Eat lots of berries which contain ellagic acid and other bioflavonoids, which can block cancer growth
- Enjoy citrus fruits such as oranges, lemons, limes and grapefruits which contain d-limonene that has been shown to inhibit cancer cell growth.
- Mushrooms contain a number of compounds shown to help the body against cancer and build the immune system. They seem to have an increased effect when water-processed, therefore using them in soups or soaking in hot water first may help increase their effectiveness.
- Seaweeds are mineral-rich sea vegetables that can be helpful in re-mineralizing the body. Consider adding dulse, wakame, nori or kelp, sprinkled on your food or in cooking.
- LIMIT: tropical fruits like banana, pineapple, mango, etc. that contain a larger amount of sugar. Replace these fruits with stone fruits (peaches, plums), apples and pears that have less sugar.
- Replace added sugar (cane sugar, honey, maple syrup, agave, brown sugar, etc.) with natural sweetener options like Xylitol, Erythritol, Stevia, Monkfruit/Lo Han Guo. Consider using Yacon syrup or coconut sugar as these will not raise blood sugars as much as cane sugar does. Also consider blending dates or pineapple when baking to replace sugar.
- AVOID: simple/refined/processed carbohydrates like baked goods/breads/cereals, etc., aspartame/artificial sweeteners, added sugars, fruit juices.

### What to Drink

- Mostly **water**: eight 12-oz glasses daily
- **Green Tea** contains catechins and many other phytochemicals, which have been found to have anticancer properties. Caution as this contains caffeine. If you prefer to have decaffeinated green tea, purchase water-processed or simply steep a cup of green tea and discard the liquid, steep a second cup from the same tea bag.
- **Juicing**: The benefits from juicing are in the high doses of nutrients and active enzymes; these degrade quickly therefore fresh juices should ideally be consumed soon after juicing. Organic vegetables are highly recommended and should be washed thoroughly.
  - Caution with adding a lot of fruit to fresh juices as this increases the sugar content and should only be used as part of a vegetable juice.
  - Juicing alone does not replace eating and will not provide adequate protein if you are actively receiving conventional cancer treatments.
- Drink alcohol in moderation, if at all. Drinking even a small amount of alcohol (less than one drink/day) can raise the risk of numerous cancers, including mouth, esophageal, liver, breast and colon.

# Diet Goals

## References:

- [https://www.dietitians.ca/Your-Health/Nutrition-A-Z/Sports-Nutrition-\(Adult\)/Sports-Supplements.aspx](https://www.dietitians.ca/Your-Health/Nutrition-A-Z/Sports-Nutrition-(Adult)/Sports-Supplements.aspx)
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- Schwingshackl L, Schwedhelm C, Galbete C, Hoffmann G. Adherence to Mediterranean Diet and Risk of Cancer: An Updated Systematic Review and Meta-Analysis. Nutrients. 2017;9(10):1063. doi:10.3390/nu9101063.
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