

Christina L. DiSegna, MS, RD, CSO, CNSC, LDN | Senior Clinical Dietitian
Dana-Farber Institute / Brigham & Women's Cancer Center

CANCER & Organic Foods

Organic foods are emerging as a potential strategy for decreasing cancer risk. But does the research support this trend?

Summary

- Organic foods are grown or produced without use of synthetic pesticides or herbicides and chemical fertilizers
- Exposure to pesticides and herbicides may increase risk for certain cancers
- Choosing organic foods as a strategy for decreasing pesticide exposure may decrease cancer risk but the research at this point is conflicting and unclear
- Many studies show the benefits of increased intake of fruits and vegetables to decrease cancer risk and a diet high in a variety of fruits and vegetables is recommended

Recommendations

- Wash all produce with running water prior to consuming
- If choosing to buy organic, utilize the "Dirty Dozen" and "Clean Fifteen" lists from the Environmental Working Group to prioritize organic purchases
- Consider local farms and farmers markets for in-season produce with potential cost benefit
- Organic does not necessarily mean healthy! Choose diets high in fruits and vegetables, whole grains, lean proteins, and healthy fats over organic processed foods.

Organic foods are those which are grown or produced without use of synthetic pesticides or herbicides and chemical fertilizers. Certain pesticides – malathion and diazinon – as well as the herbicide glyphosate have been classified as probable human carcinogens and have been linked to higher rates of certain cancers in those with workplace exposures such as farm workers.

However, for the general population, low-level pesticide exposure occurs mostly from diet through conventionally-grown produce. The health consequences of these low-level exposures, including cancer risk, are not clear at this time. Regardless, many people are choosing organic foods as a strategy for decreasing pesticide exposure to, in theory, lower cancer risk. The research to support this practice has been conflicting thus far.

A recent study published in the Journal of the American Medical Association followed 70,000 adults over a seven-year timeframe; those who reported the highest intakes of organic foods had decreased cancer incidence compared with those who rarely chose organic foods.

However, the researchers noted that those who reported eating organic foods also engaged in healthier lifestyle behaviors and ate an overall healthy diet which are known to decrease cancer risk. Although the study adjusted for these factors in the analysis, there may be unadjusted factors that contributed to the results.

Additionally, the study did not measure pesticide residues in any of the participants, so it is unclear if differences in pesticide levels correlated with decreased cancer incidence. One other large study conducted previously in 2014 did not

show a decreased cancer risk in those who usually or always consume organic foods. Based on these two studies with differing results, conclusive recommendations on the benefit of organic foods and cancer risk cannot be made.

In contrast, the research surrounding the importance of fruits and vegetables in reducing cancer risk is vast.

The American Institute of Cancer Research and World Cancer Research Fund have compiled expert reports which assess decades of research, looking at hundreds of studies, to make recommendations on overall diet and lifestyle factors that can reduce the risk of developing cancer. In the most recent report, many studies suggested decreased cancer risk associated with increased consumption of fruits and vegetables.

The inverse was also true; low intakes of fruits and vegetables were associated with increased risk of certain types of cancers. Therefore, high intakes of a variety of colorful fruits and vegetables are suggested for decreasing overall cancer risk.

One major problem: For those looking to choose organic as well as increase produce intake, the cost increase can be a barrier for many people and this goal is often cost-prohibitive. Practically, what can consumers do to increase produce intake while also decreasing potential pesticide exposure?

First, all produce – both conventional and organic – should be washed thoroughly before being consumed. Washing produce under running water with light friction if needed helps remove dirt, bacteria, chemicals, and pesticide residues.

[CONTINUE READING CANCER & ORGANIC FOODS »](#)

References

1. Baudry J, Assmann K, Touvier M. Association of Frequency of Organic Food Consumption With Cancer Risk. JAMA Intern Med. 2018;178(12):1597-1606 2. Bradbury KE, Balkwill A, Spencer EA, Roddam AW, Reeves GK, Green J, Key TJ, Beral V, Pirie K and the Million Women Study Collaborators. Organic food consumption and the incidence of cancer in a large prospective study of women in the United Kingdom. BR J Cancer. 2014 Apr 29; 110(9): 2321-2326 3. Hemler EC, Chavarro JE, Hu FB. Organic Foods for Cancer Prevention – Worth the Investment? JAMA Intern Med. 2018;178(12):1606-1607 4. International Agency for Research on Cancer. IARC Monographs Volume 112: evaluation of five organophosphate insecticides and herbicides. Available at <https://www.iarc.fr/wp-content/uploads/2018/07/MonographVolume112-1.pdf> 5. World Cancer Research Fund/American Institute for Cancer Research. Continuous Update Project Expert Reports 2018. Wholegrains, vegetables and fruit and the risk of cancer. Available at <https://www.wcrf.org/dietandcancer/CancerPreventionRecommendations>. American Institute for Cancer Research. Accessed 6 September 2019. <https://www.aicr.org/reduce-your-cancer-risk/recommendations-for-cancer-prevention/index.html> 6. Shopper's Guide to Pesticides in Produce. Environmental Working Group. Accessed 6 September 2019. <https://www.ewg.org/foodnews>

RECIPES

View more recipes at CancerNutrition.org/recipes

HEART HEALTHY COOKING DEMONSTRATION SERIES

Recipes from Rich Duclos: Executive Chef Brigham and Women's Hospital (teaching affiliate of Harvard Medical School)

Curry Squash Soup with Poblano Peppers & Kale



SERVINGS: 6
CALORIES: 160
FAT: 7g
SAT FAT: 1g
CARB: 22g
FIBER: 2g
PROTEIN: 5g
SODIUM: 480mg

INGREDIENTS

- 1 oz EXTRA VIRGIN OLIVE OIL
- 7 SPRIGS OF SAGE CHOPPED
- 2 PEELED SHALLOTS
- 1 oz CHOPPED GARLIC
- 4 oz POBLANO PEPPERS CHOPPED
- 1/2 PEELED AND DESEEDED MEDIUM DICED CURRY SQUASH
- 1 Tbsp RED CURRY PASTE
- 1/2 tsp SALT
- 1 tsp PEPPER
- 1 qt LOW SODIUM VEGETABLE STOCK
- 1 cup SOY MILK
- 2 cup WASHED AND CHOPPED KALE
- 1 SMALL WHOLE WHEAT BAGUETTE

DIRECTIONS

Heat olive oil in a gallon soup pot
Add sage, shallots, garlic and poblano peppers
Cook herbs and vegetables until caramelized

Add in curry squash and red curry paste

Add in vegetable stock and season with salt and pepper
When mixture is tender blend until smooth and add soy milk and kale.

Return to simmer

Cut whole wheat baguette into 6 pieces – toast & garnish

Dijon & Ginger Roasted Vegetables with Ancho Chili



SERVINGS: 4
CALORIES: 117
FAT: 4g
SAT FAT: 1g
CARB: 18g
FIBER: 6g
PROTEIN: 5g
SODIUM: 229mg

INGREDIENTS

- 8 oz BABY BELLA MUSHROOMS, WASHED AND CUT IN HALF
- 12 oz RAINBOW BABY CARROTS, PRE-PEELED, PAR COOKED AND COOLED
- 20 each MEDIUM ASPARAGUS, TRIM END, CUT EACH ASPARAGUS INTO TWO
- 2 oz RED ONION, PEELED AND MEDIUM DICED
- 1 Tbsp EXTRA VIRGIN OLIVE OIL
- 1 Tbsp DIJON MUSTARD
- 1/2 tsp GROUND GINGER
- 1/4 tsp CHILI POWDER
- 1/8 tsp BLACK PEPPER & KOSHER SALT
- 1/2 each LEMON (DESEEDED AND JUICED)

DIRECTIONS

In a medium stainless-steel bowl, mix all ingredients until vegetables are coated fully

Place vegetable mixture in roasting pan

Place mixture in a 425deg, preheated oven for 15 minutes

Roast until vegetables are lightly browned

Place on serving platter

THANK YOU! TO OUR CNC PROGRAM SUPPORTERS



CNC Carepack Grant Initiative Update
1,000+ Carepack donations as of October 2019!



Many people undergoing treatment don't have the resources they need to get adequate nutrition.

The CNC initiated a Carepack Grant program, with additional support from Hormel Foods to provide free nutritional care packs to help them in their time of biggest need.

Anyone in need of additional nutritional support during their treatment can apply!
» CancerNutrition.org/Send-A-Carepack

Helpful Nutrition
During Treatment, Recovery, & Beyond

Order online or by phone
VitalCuisine.com | (888) 617-3482

Hormel Vital Cuisine™ products are designed by experts to meet your nutritional needs during cancer treatment and recovery. High protein, convenient options that taste great.

- » Ready-to-Serve Meals
- » Protein Nutrition Shakes
- » Whey Protein Powder

Hormel Foods is a proud sponsor of the Cancer Nutrition Consortium