

# Nuts for Cancer Prevention: Health Benefits and Hype

Eating nuts may protect health without promoting weight gain.

August 14, 2020 By Karen Collins

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If you think of nuts with a split personality when it comes to a diet for lower cancer risk, you may need to reconsider. Nuts do have a reputation for being a super-healthy choice, but for years they have also had a reputation for being calorie-dense and “fattening.” The good news is that nuts are a great choice to include in a diet that promotes lower cancer risk and better overall health. And newer evidence shows that you can eat a reasonable portion every day without fearing weight gain – and they may even help with weight management.

[AICR’s Third Expert Report and Continuous Update Project \(CUP\)](#) found evidence too limited to draw any conclusions about nuts and cancer risk. However, one analysis of large population studies identified a 15% lower overall cancer risk for each daily ounce of nuts. Studies that focus on specific types of cancer have found a reduced risk of colon, endometrial and pancreatic cancer among people who eat more nuts (usually an ounce a day), but this [evidence](#) is even more tentative.

## How Nuts May Protect Health

Although nuts differ in the nutrients and plant compounds they provide, they all offer the potential to support good [health](#).

Antioxidant and anti-inflammatory protection is what many people associate with nuts. Antioxidants are free radical scavengers that trap and neutralize highly reactive molecules before they can damage cells’ DNA and start the cancer process. Anti-inflammatory compounds offer dual protection by reducing the formation of free radicals and by putting the brakes on cell signals that support and promote cancer development.

- Alpha-tocopherol is the form of vitamin E that traditionally received the most attention as an antioxidant in nuts. It’s especially high in almonds, hazelnuts and pine nuts.
- Gamma-tocopherol and tocotrienols are other forms of vitamin E that some cell and animal studies suggest may provide even stronger anti-inflammatory protection than alpha-tocopherol.

In both cell and animal studies gamma-tocopherol decreases cancer cell growth. Pecans, pistachios and walnuts are especially rich sources.

- Selenium is an essential component of several antioxidant enzymes and is super-concentrated in Brazil nuts. Just one of these nuts supplies almost two times the total recommended selenium for the day. Having even an ounce (about 6 nuts) on a daily basis could cause selenium toxicity. So enjoy them, but don't assume "if some is good, more is better."
- Flavonoids and phenolic acids are phytochemicals that influence gene expression and cell signaling in ways that increase antioxidant, anti-inflammatory enzymes in cell and animal studies.

Gut microbiota support is an emerging area when it comes to how your eating habits might influence your risk of cancer. Some types of dietary fiber nourish gut microbes that seem to support health. And research now shows that certain phytochemicals are such large molecules that they pass through most of the digestive tract without being broken down by digestive enzymes. Their interaction with microbes in the colon seems likely to produce protective effects.

- Ellagitannins are polyphenol compounds found in walnuts and pecans. Bacteria in the colon convert ellagitannins to ellagic acid and then to compounds called urolithins. Urolithins can be absorbed out of the digestive tract, and may also act within the colon, where they can nurture bacteria that make up the gut microbiome. In cell and animal studies, ellagic acid and urolithins increase antioxidant enzymes and influence gene expression in ways that decrease growth and stimulate self-destruction of cancer cells.

Emerging evidence from human intervention trials shows that a few weeks of daily walnut consumption enhanced populations of gut bacteria that seem to have health-promoting effects.

### **What About Weight?**

Since nuts concentrate calories in relatively small portions, some people wonder if nuts might promote weight gain. This is an important question since excess body fat and weight gain [increase risk of at least 12 cancers](#). Analysis for the AICR Continuous Update Project (CUP) found evidence on nuts and weight gain, overweight and obesity too limited for any conclusions so far. However, intervention trials and observational studies are pretty consistent linking nuts with less [weight gain](#), less likelihood to develop obesity and compatibility with efforts for weight loss.

Nuts are concentrated in calories. You get 160 to 200 calories in just one ounce – a small handful

or a portion about the size of a large egg. So, why aren't nuts associated with weight gain the same way chips and sweets are?

Some of this apparent contradiction may stem from nuts' fiber, protein and fat content. Some studies suggest that nuts may reduce hunger, possibly by slowing how quickly food leaves your stomach. For example, [a small randomized controlled trial with walnuts](#) showed increases in a hormone produced in the gut that sends fullness signals to the brain and reduces appetite. However, these results are inconsistent, so there's likely more to the picture. Another intervention study with walnuts found changes in other hormones that could be beneficial for weight and health. More research is needed to understand individual differences in how much nuts reduce appetite or overall calorie consumption.

Moreover, [limited research shows](#) that nuts provide from 5 to 20 percent fewer calories to the body as would be predicted based on standard calculations. This is likely because a portion of the calories in nuts seems to pass through the digestive system unabsorbed.

### **Healthy Ways to Include Nuts**

Use nuts to complement and add to your enjoyment of nutrient-rich, cancer-protective foods.

- Add nuts to hot or cold cereal and yogurt.
- Enjoy nuts in salads as a healthy way to add crunch.
- Toss with stir-fried vegetables, pasta or cooked grains like brown rice or quinoa.
- Combine nuts with dried fruit for a portable trail mix snack.

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