

# ***The Health Benefits of Apples***

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Most of us have heard the old saying, "An apple a day keeps the doctor away." Carl Sagan, astronomer, educator, author and some thought, a philosopher, once said, "If you want to make an apple pie from scratch, you must first create the universe." Sagan was well-known for his work on the PBS series *Cosmos*, the show that became the most watched series in public-television history, and the accompanying book, *Cosmos* (1980), was the best-selling science book ever published in English. I'm sure you've also heard the expression, She's "the apple of her Daddy's eye," as well.

The first speaks of health benefits, and the second, awe and respect, and the third, of affection, and that's just a few of the ways the world relates to apples. If an apple a day really does keeps the doctor away, what might we find the health benefits of apples to be?

According to a study conducted by the Canadian government (not the orchard lobby), and published in an issue of the *Journal of Agriculture and Food Chemistry*, apples can add a huge, health-boosting antioxidant punch to anyone's diet. But not all apples are created equal, the study concludes. As reported in a AP piece, America's own Red Delicious apples were top of the antioxidant heap. Popular breeds Macintosh and Golden Delicious were also ranked in the top five. You have to eat the skins to get full the benefit. Though there are some of these powerful compounds in the juicy flesh of the fruit, the bulk of the antioxidants are contained in the skin – as much as six times more, in fact. Now, if only we could get schools to replace typical vending-machine and cafeteria fare like chips, chocolate bars, pastries, crackers, and pretzels for nice, crunchy, shiny apples, we'd really be onto something...

We also know now that apples are naturally fat-free, saturated fat-free and cholesterol-free and are a good source of fiber -- making them a smart dietary choice. The FDA recognizes that "diets low in saturated fat and cholesterol and rich in fruits, vegetables and grain products that contain some types of dietary fiber, particularly soluble fiber, may reduce the risk of heart disease and some types of cancer, diseases associated with many factors."

French researchers have discovered that a flavanoid called *phloridzin* (found only in apples), may protect post-menopausal women from osteoporosis and may also increase bone density. Another ingredient in apples, Boron, can also strengthen the bones.

One recent study shows that children with asthma who drank apple juice on a daily basis suffered from less wheezing than children who drank apple juice only once per month. Another study showed that children born to women who eat a lot of apples during pregnancy have lower rates of asthma than children whose mothers ate few apples.

A study on mice at Cornell University found that the *quercetin* in apples may protect brain cells from the kind of free radical damage that may lead to Alzheimer's disease. Researchers at the University of Massachusetts at Lowell found that mice who drank apple juice regularly were more skillful and agile in maze tests and avoided the decline in mental performance associated with aging. Apple juice slows the proliferation of protein fragments, called *beta-amyloid*, that gather in the brain and cause oxidative stress, which is associated with Alzheimer's disease and cognitive decline. The researchers even tried to create a group of mice prone to mental decline by depriving them of Vitamin E and folic acid, which increases oxidative stress. But even that group responded well to regular doses of apple juice.

Another Cornell University study found that rats who ate one apple per day reduced their risk of breast cancer by 17 percent. Rats fed three apples per day reduced their risk by 39 percent and those fed six apples per day reduced their risk by 44 percent. The more the better, it would appear.

One study found that rats fed an extract from apple skins had a 43 percent lower risk of colon cancer, and researchers found that rats fed an extract from apple skins had a 57 percent lower risk of liver cancer. According to another study of 10,000 people, those who ate the most apples had a 50 percent lower risk of developing lung cancer. The researchers in that study believe this is due to the high levels of the *flavonoids*, quercetin and naringin in apples

Other research shows that the *pectin* in apples reduces the risk of colon

cancer and helps maintain a healthy digestive tract. The pectin will also lower LDL ("bad") cholesterol. People who eat two apples per day may lower their cholesterol by as much as 16 percent. The pectin in apples also supplies *galacturonic acid* to the body which lowers the body's need for insulin, and may help in the management of diabetes.

A Brazilian study found that women who ate three apples or pears per day lost more weight while dieting than women who did not eat fruit while dieting.

So it looks like apples, apple skins and apple juice can make for better health ... of mice, men, and women. The difference is that the mice can't scrutinize the labels of juice bottles to make sure they're getting pure, antioxidant-rich apple juice and not some concoction heavy on high-fructose corn syrup. Fortunately, you can, so live it up, and enjoy an apple a day, at least one, or a tall glass of quality apple juice.

I make my own, additive-free applesauce, and everyone seems to love it, and everyone from baby to grandpa can eat it with no problem. Homemade applesauce is a fun and nutritious treat that reveals the work behind even the most simple dish. Like fresh apples, applesauce has no fat, no sodium, and no cholesterol, and its energy-boosting carbohydrates come from natural sources. A mere half-cup serving qualifies for one of the daily servings of fruits and vegetables recommended by the National Cancer Institute and the Produce for Better Health Foundation, and contains only 60 calories. Add a little cinnamon, and you're living high. Thank you, Johnny Appleseed. Lyle