



Wellness News Network™

Your Source for Health & Wellness Information

Issue 1, March 2022

Take a Healthy Bite of Apple

Presented by:

The apple is one of the world's most popular fruits. Originating in Asia, it may be the first tree fruit cultivated by humans, as historical records indicate it was widely available in the ancient cultures of the world thousands of years ago. It did not arrive in North America until Europeans brought it when colonization began in the 17th century. Today, China and the United States are the world's largest suppliers of apples with nearly 60 million tonnes harvested annually. While there are more than 7,000 varieties, only a small number of apple types are grown in large quantities.

Despite its long history, the apple's health properties have only come to light in the last couple of decades. Like many fruits and vegetables, the apple contains health promoting nutrients, such as vitamin C. However, scientists believe the benefits may be only marginally related to vitamins. Other substances within the fruit may deliver a bigger contribution to health.

Good for Brain and Body

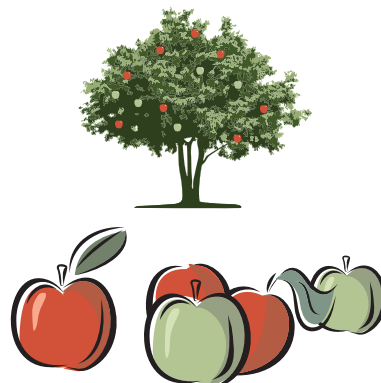
The main therapeutic roles apples play in human health are helping to prevent some type of cancers, lowering cholesterol and improving brain health. They even have been shown to increase longevity in some laboratory experiments.

Cancer and Colitis

The apple's levels of phytochemicals may provide an immune boosting and cancer repelling effect. In a study of colon cancer, researchers treated cancer cells with either an extract derived from the flesh of the apple or its peel.

The cells coated with the fruit flesh extract showed cancer cells inhibited by 29 percent but the cells coated with apple peel extract repressed the cancer cells by a surprising 43 percent, suggesting the apple's highest levels of antioxidant polyphenols are in its peel.¹

Another study indicates apples can assist the immune system. Research on mice presents evidence apple polyphenols were able to significantly reduce inflammation associated with the auto-immune disease colitis.²



QUESTION:

How much did apple extract inhibit colon cancer cells?

- A) Up to 12%
- B) Up to 43%
- C) Up to 68%

ANSWER:

- B) Up to 43%

QUESTION:

How long did apple polyphenols extend the life of fruit flies?

- A) 3%
- B) 6%
- C) 10%

ANSWER:

- C) 10%

TRUE OR FALSE:

Apple polyphenols are hormones

ANSWER:

False. They are a type of antioxidant

Presented by:

Cholesterol

Your heart can reap advantages of a diet rich in apples. The University of Florida conducted a cholesterol study on women aged 45 to 65. The women were divided into two groups, with one group consuming dried apples daily for one year and the other group eating dried prunes daily for the same amount of time. Blood samples were taken from all the women at the 3, 6 and 12 month intervals during the study. At the six month mark, scientists discovered the apple eating group saw their bad (LDL) cholesterol slashed by 23 percent.¹

Brain Health

Can apples slow the progress of dementia related conditions like Alzheimer's disease? Some studies suggest apple juice consumption may have a positive outcome.

Laboratory research demonstrated mice that were fed apple juice could better navigate mazes, had improved cognitive function and registered less oxidative damage to their brains.³

A 2009 study published by the Journal of Alzheimer's Disease reported that 2 cups of apple juice consumed over 1 month lowered levels of beta amyloid, which is a protein responsible for creating senility plaques in the brains of Alzheimer's patients.³

However, a 2010 study on Alzheimer's revealed that apple juice only elevated the mood of affected patients but had no impact on alleviating their dementia symptoms.⁴



While apples do show promise in slowing the progress neurological conditions, more scientific study is needed.

Muscle Weakening

Muscle wasting is a common effect of aging and illness. With this condition, the muscles become progressively weaker. The cause of this problem still baffles scientists, but genetics are suspected to have an influence. Scientists extracted ursolic acid from apple peels and then fed the substance to mice. After several weeks of receiving the extract, the mice had increased muscle mass. The researchers believe the results occurred because the compound caused better insulin communication to the muscles and repaired genes connected to muscle atrophy.⁵

A Longer Life?

“An apple a day keeps the doctor away,” according to the old saying but could apples delay death's arrival? In lab experiments, fruit flies that ingested apple polyphenols showed a 10% increase in lifespan. The probable reason? The antioxidants have the ability to counteract chemical substances responsible for age-related decline.⁶

* * *

Although extremely healthy, the apple does have a negative side. It is listed at #1 in the Environmental Working Group's Dirty Dozen – a list of the most pesticide contaminated fruits and vegetables. According to its website, the organization says 98% of apples in the US contain pesticide residue. You may want to opt for organic apples instead.⁷

Quote to Inspire

*“We are born believing.
A man bears beliefs
as a tree bears apples.”*

~ Ralph Waldo Emerson

References and sources:

1. 'Apple a day' advice rooted in science - *Federation of American Societies for Experimental Biology*, press release, April 12, 2011.
2. Apple polyphenols require T cells to ameliorate dextran sulfate sodium-induced colitis and dampen proinflammatory cytokine expression - *Journal of Leukocyte Biology*, 2011; 90 (6): 1043 DOI: 0.1189/jlb.0311168.
3. Dietary Supplementation with Apple Juice Decreases Endogenous Amyloid- β Levels in Murine Brain - *Journal of Alzheimer's Disease*, 16:1 (January 2009).
4. Apple Juice Improved Behavioral But Not Cognitive Symptoms in Moderate-to-Late Stage Alzheimer's Disease in an Open-Label Pilot Study - *American Journal of Alzheimer's Disease and Other Dementias*, 2010; 25 (4): 367 DOI:10.1177/1533317510363470.
5. mRNA Expression Signatures of Human Skeletal Muscle Atrophy Identify a Natural Compound that Increases Muscle Mass - *Cell Metabolism*, 2011; 13 (6): 627-638 DOI: 10.1016/j.cmet.2011.03.020.
6. Apple Polyphenols Extend the Mean Lifespan of *Drosophila melanogaster* - *Journal of Agricultural and Food Chemistry*, 2011; 110214164435048 DOI:10.1021/jf1104626.
7. The Shopper's Guide to Pesticide in Produce, 2011 – *Environmental Working Group website*.

Disclaimer: Information contained in the Wellness News Network Newsletter is for educational and general purposes only and is designed to assist you in making informed decisions about your health. Any information contained herein is not intended to substitute advice from your physician or other healthcare professional.