

James L. Holly, M.D.

Popeye and Spinach - The Cartoons Had It Right By: James L. Holly, MD

Popeye made his first public appearance January 17, 1929, in Elzie Segar's then 10-year-old comic strip, "Thimble Theatre," which originally revolved around Olive Oyl's family. Although he was introduced as a minor walk-on character, Popeye quickly "muskled" his way into the limelight and eclipsed the older characters to become the star of "Thimble Theatre." Popeye made the jump to the silver screen in a 1933 Betty Boop cartoon entitled, Popeye the Sailor from the Fleischer Studios.

Popeye's spinach obsession began in the Thimble Theatre strip but became an indispensable plot device in his later animated adventures. Spinach capital Crystal City, Texas, erected a statue in 1937 to honor E.C. Segar and Popeye for their influence on America's eating habits, making Popeye the first cartoon character ever immortalized in public sculpture. The spinach growers credited Popeye with a 33 percent increase in U.S. spinach consumption — and saving the spinach industry in the 1930s!

Nutrition and Popeye

How did Popeye -- or better, the creators of Popeye -- know that spinach is one of the healthiest food on earth? The reality is that they didn't, but it is worth noting that for 70 years this cartoon has promoted the eating of a green, leafy vegetable which contributes more antioxidants, vitamins and other healthy elements to the diet of America's youth than any other food being promoted today on television or in the comics.

Today's advertisements encourage unhealthy fast foods, sweetened cereals and other processed foods filled with dangerous "trans" fats. These foods are filled with excessive calories with no nutritional benefit. This is promoting obesity in our children, which has become epidemic among all Americans and particularly in our youth.

Popeye promoted the eating of a vegetable which has 41 calories per cooked cup and which will only make you healthier. Also, Popeye's Girl friend was named Olive Oyl. One can only wonder if the name came from the very healthy "olive oil." If so, then not only did Popeye eat healthily, his girlfriend was healthy also.

What About Spinach?

Spinach was cultivated over 2,000 years ago in Iran. In 647 A.D. spinach was introduced into China and was then transported to Spain in 1100. By 1806, spinach had become a popular vegetable and was listed in American seed catalogs. In the 1920's the U.S. pushed spinach commercially, with Popeye the Sailor man cartoon being a great advocate in spinach consumption.

Why is Spinach so nutritious?

Spinach contains large amounts of minerals and vitamins, especially vitamin A, calcium, phosphorus, iron and potassium. Spinach also has high levels of protein. Ninety-one percent of spinach weight is water. A serving of spinach contains 3.2 grams of protein, 4.3 grams of carbohydrates, and 0.3 grams of fat. It also contains Vitamin A, and C, thiamin, riboflavin, and niacin. Calcium, phosphorus, iron, sodium, and potassium are also found in spinach greens.

Spinach is loaded with iron and folate, a B vitamin considered so important that it is now routinely added to flour. Folate not only prevents neural-tube defects in babies but also lowers blood levels of homocysteine, an amino acid that irritates blood vessels and is linked to heart disease. Just as impressive, spinach contains two phytochemicals, lutein and zeaxanthin, that seem to ward off macular degeneration, a leading cause of blindness. One cup of spinach contains just 41 calories and no fat, so you needn't worry about any unsightly bulges in your forearms or anywhere else. Kale, Swiss chard and collard greens have the same health benefits of spinach.

Spinach and Cataracts

Spinach, kale, broccoli, and other foods rich in the carotenoid lutein may cut the risk of cataracts, according to two major studies at the Harvard Medical School. Johanna Seddon and colleagues monitored more than 77,000 women in the Nurses' Health Study and more than 36,000 men in the Health Professionals' Follow-up Study. After 12 years, 1,471 cataracts were extracted from the women and after eight years, 840 cataracts were extracted from the men.

Those who ate the most lutein had about a 20 percent lower risk of cataract surgery than those who ate the least. For example:

Women who ate spinach and other greens at least twice a week had an 18 percent lower risk than women who consumed them less than once a month, and
Men who ate broccoli more than twice a week had a 23 percent lower risk than men who consumed it less than once a month.
Don't Like Spinach? Join the Club!

It is amazing to me that some people will say that they love the taste of spinach. I don't, at least not cooked spinach. Spinach in salads is delicious, but cooked? Well, I am

learning to eat it because of its health benefits, but I still can't say I like it. Raw spinach is a healthy addition to salads, but to get the full benefit from this leafy green, it should be cooked. Cooking makes the antioxidant carotenoids responsible for much of spinach's nutritional potency easier for the body to absorb.

Spinach Extends The Season for Available Healthy Foods

It's easy to eat plenty of antioxidant-rich fruits and vegetables in the summer when sweet peaches, juicy tomatoes, and just-picked corn are plentiful at farm stands and supermarkets. But what do you do when fall rolls around? Fortunately, some of the best sources of antioxidants are at their peak during the autumn and winter months. According to laboratory tests by researchers at the Human Nutrition Research Center on Aging at Tufts University, the vegetables kale, beets, spinach, and Brussels sprouts, as well as oranges were ranked among the most potent weapons against free radicals--the cell-damaging compounds believed to accelerate aging and contribute to heart disease, cancer, and other diseases. And while two other fall favorites, butternut squash and sweet potatoes, weren't part of the testing, they too are antioxidant powerhouses.

The ORAC Antioxidant Score

The test, called oxygen radical absorbance capacity (ORAC), measures the total antioxidant potency of foods or supplements. It's a more precise way of determining the free radical-destroying power of a food than just focusing on individual nutrients, because ORAC takes into consideration the effect of all of the plant's compounds--including many phytochemicals that aren't traditionally considered nutrients--and the impact they have when they work in concert. Very simply, a sample of a food or a chemical substance (such as vitamin E) is put in a test tube to measure how well and for how long it disarms free radicals. The test substance is then given an ORAC score that reflects its power.

The researchers estimate that the average person's daily ORAC intake from diet alone is about 1,200 units. In a study of 36 older people, boosting fruit and vegetable intake to reach 3,200 ORAC units a day increased the antioxidant potential of the blood by 10 to 15%--enough to have an impact on disease prevention. The researchers think most people should strive to consume 1,000 to 2,500 ORAC units above what they currently get.

The ORAC Score of Various Foods (per 100 grams)

Prunes	5770
Raisins	2830
Blueberries	2400
Blackberries	2036
Strawberries	1540
Raspberries	1220
Plums	949
Oranges	750

Red Grapes	739
Cherries	670
Kale	1770
Spinach	1260
Brussels Sprouts	1260
Alfalfa Sprouts	930
Broccoli Florets	890
Red Bell Peppers	840
Beets	710
Onions	450
Corn	400
Eggplant	390

Some of these foods, particularly the dried fruits, have such a high glycemic index that they should be used only in small amounts, but the ORAC is another factor to consider in selecting foods for your health.

The bottom line is: add spinach to your diet. Eat it two to four times a week. Remember, like Popeye, in addition to "I yam what I yam," you are what you eat.

It is your life and it is your health.