The Nut That Heals: A Report on Almonds

Scott Grady, CIT
Research & Education, A.R.E. Clinic

For most scientists, an almond is a nut like any other nut. The common opinion seems to be that nuts taste good, fill you up, and provide you with plenty energy — and that’s about it. They’re just a handy source of calories. But this way of thinking is on the verge of change. The latest research into the biochemistry of nuts is shining a new light on the importance of nuts in the daily diet. The early stages of this research suggest that the nut of the sweet almond tree (Prunus dulcis) may possibly be the greatest of all the nuts, and capable of providing remarkable health benefits.

It was in ancient times that the sweet almond first developed a reputation as a healing food. It was thought to help increase vitality, clear up skin problems, and help the body resist intoxication. In the late 20th century most researchers simply assumed that these old ideas were exaggerations, mere folk tales based upon mythology and the basic nutritional properties of nuts: protein, calories, and...
the known healing effects of vitamin E, which is abundant in almonds.

Edgar Cayce, a man regarded as the father of American holistic medicine, also highly favored the almond. In his readings, Cayce often recommended that almonds be included in the diet. Sometimes the consumption of almonds was portrayed as a key therapeutic agent — used to improve the complexion, improve eliminations through the colon, and even to prevent cancer.

If these recommendations of Cayce are accurate, and almonds are highly therapeutic in action, then clearly there are some unknown special qualities to the almond. What are these special qualities? What has modern research shown?

A search on the Internet for research on the benefits of almonds yields scant, yet intriguing results. Among these are studies where the American Institute for Cancer Research and the World Cancer Research Fund have reported that nuts, including almonds, are made up of many health-producing substances which could be helpful in the prevention of cancer.

Almonds vs Colon Cancer

The University of California at Davis reports that a high-fat diet rich in whole almonds reduced the colon cancer risk in rats chemically treated to induce this cancer. When compared with rats fed a high-fat, wheat bran-rich diet, which has been thought to protect against colon cancer, the whole-almond group showed a 33% reduction in colon cancer precursor cells, a significantly greater reduction than found with the wheat bran.

Paul Davis, PhD, the study's lead researcher said, “Colon cancer is thought to be a nutrition-related disease, brought on and exacerbated by high-fat, low-vegetable, low-fiber diets. Since whole almonds are a complex, natural package of plant-based protein, monounsaturated fats, fiber, and a variety of micronutrients and phytochemicals, we hypothesized that they may be protective against colon cancer.

“In fact, not only did whole almonds inhibit colon cancer precursor cells from developing, but we were gratified to see that they were significantly more effective than wheat bran, widely believed to protect against this type of cancer.”

Almonds vs Lung, Breast, and Prostate Cancer

Research at Pennsylvania State University showed that plant chemicals found in almonds inhibited tumor cell growth in culture. Two flavonoids in particular, quercetin and kaempferol were found to be strong suppressors of lung and prostate tumor growth.

Other research has shown that flavonoids in almonds, fruits, and vegetables can suppress breast cancer cell growth when these cells have been exposed to cancer-causing agents. Other phytochemicals, such as plant sterols and plant sulfur compounds, are also being linked to cancer prevention.

But not all of the almond research relates to cancer. New research presented at the Experimental Biology ’99 conference suggests that almonds and other nuts can help reduce body weight.

“Smart” Fats are Good for You

Researchers at Harvard University have found that oils from almonds, other nuts, and olive oil do not significantly raise body fat. Contrary to popular belief, nutritious dietary oils — “smart” oils — rarely contribute to body fat. Body fat is typically created by the consumption of too much refined sweets and starches, as was noted by Edgar Cayce in the early 20th century.

The Harvard research shows that a person will lose just as much weight on a low-calorie/smart-fat diet as they would on a low-calorie/low-fat diet. In fact, eating a diet rich in smart fats like olive oil and almond oil provides multiple additional benefits. Smart oils add essential nutrients to the body, including important factors for building hormones. A diet including smart fats is also more satisfying and can help dieters avoid the “yo-yo effect” of weight loss followed by weight gain.

One researcher, Kathy McManus, MS, RD, said, “We found that initially people were reluctant to join the nut and olive oil diet group because they feared they might gain weight. But in the end, not only was this eating pattern as effective for loss as the low-fat diet, but there were additional benefits, both in terms of health and enjoyment.”

The report states that people in both the low-calorie/low-fat and low-calorie/smart-fat groups lost an average of 10 pounds over a 12-month period. The group using the smart-fat diet was
successful in keeping the excess weight off, and even showed a significant drop in blood pressure, toward healthier levels. Those who used the low-fat diet, however, began to regain lost pounds and showed no change in blood pressure.

Almond and Olive Oils Lower Blood Pressure

Why did the Harvard researchers report a reduction in blood pressure for the smart-fat group? This positive change came about from better nutrition. The body's blood pressure is governed by hormones, so high blood pressure can be a sign that the body is starved for the substances found in the nutritional fats.

Almond Oil Reduces Cholesterol, Prevents Heart Disease

Not only can the oil in almonds lower blood pressure, but by the same mechanism it can positively affect blood cholesterol levels. A study conducted by the University of California at Davis showed a significant improvement in blood lipid profiles among men and women who replaced 50% of their habitual fat intake with either whole almonds or almond oil for six weeks. The reduction of “bad” LDL cholesterol was similar regardless of whether whole almonds or almond oil was consumed. The “good” HDL cholesterol levels remained fine.

"Since there were no differences in blood lipid parameters between the two dietary groups in this study," said Davis, "it appears as if the oils in almonds, which contain monounsaturated fats as well as other lipid-related compounds, are primarily responsible for their cholesterol-lowering effects."

Researchers from Harvard University's School of Public Health found that four thousand male and female heart attack survivors who ate nuts at least twice weekly had a 25 percent reduction in risk of recurrent coronary heart disease, compared to those who never consumed nuts. Reductions in risk were seen both in those on cholesterol-lowering therapy and those not on such therapy.

"We looked at other healthful foods, such as fruits, vegetables and grains," said Lisa Brown, DSc. "Of these, only broccoli, cabbage and other cruciferous vegetables showed a similar reduction in recurrent heart disease risk."

Almonds for Fertility and Diabetes

As the research on almonds continues, studies are beginning to illuminate the mechanisms behind Cayce's recommendations and the beliefs of ancient healers. Almonds contain nutrients that can help complexion, heal the cardiovascular system, and prevent cancer. Research from other countries suggests that almonds may also improve vitality.

Scientists at the King Saud University Research Center, in Saudi Arabia, have conducted a study on almonds, which are used as aphrodisiacs in Traditional Arab Medicine (TAM). Their research included acute toxicity tests, which show no toxicity related to almonds. Their findings also indicated that consumption of almonds can lead to improved vitality in mice, as shown by an average increase in body mass, a reduction in white blood cell count, and significantly increased sperm motility and content without any evidence of spermotoxicity.

The Centre for Biomedical Engineering at the Indian Institute of Technology, in New Delhi, India, has conducted research showing significant hypoglycemic effects from a non-oil portion of the almond. This may indicate a use for whole almonds in the diets of those with excessively high blood sugar.

What is in Almonds?

So far laboratories have come up with only a few hints as to why almonds produce the health results they do.

Nearly half of the weight of an almond is almond oil. Almond oil is a bland-tasting oil — though rare, higher grades have a wonderfully sweet aroma.

The non-oil portion of the almond is largely made up of proteins, and contain virtually no starch, hence their reputation as an alkaline nut.

One ounce of almonds contains over 35% of the Daily Value (DV) for the antioxidant vitamin E, 21% DV for magnesium, 8% DV for calcium and 6% DV for potassium, as well as 3 grams of dietary fiber. Almonds also contain important flavonoids (including quercetin and kaempferol), plus biotin and sulphur compounds.

As the research continues, I'm sure we'll hear much more about the remarkable properties of the almond.