

Nutritional Benefits of Coconut Water

Dr. Bruce Fife, N.D. gave me permission to use this article for my newsletter. I have summarized his article as best I can.

Coconut water is the liquid you find inside a young green coconut. In the tropics it is not only considered a refreshing beverage but a health tonic. Hawaiians call coconut water *noelani* (no-way lah-nee), which means “dew from the heavens.” Coconut water has a long history of use as both a food and as a medicine. Although a variety of fruits grow in abundance in many tropical locations, coconut water is prized above all other juices. It not only satisfies thirst but invigorates the body and brings about a sense of well-being and renewed health. Women are encouraged to drink it when pregnant and nursing so their milk will provide all the nutrients necessary for a healthy baby. The first food an infant receives as it begins weaning is coconut water and coconut jelly (soft immature coconut meat).

Coconut water contains a variety of nutrients including vitamins, minerals, antioxidants, amino acids, enzymes, growth factors, and other nutrients. Coconut water is a good source of the major minerals like magnesium, calcium, and potassium. It is particularly rich in potassium, an essential nutrient; one 8-ounce cup of coconut water has more potassium than a banana. It also contains a variety of trace elements such as zinc, selenium, iodine, sulfur, manganese, boron, molybdenum, and others. These are derived from volcanic soils and seawater from which the coconut palms are grown. All of these minerals are in the form of electrolytes so they are easily absorbable by the human body. Many of the health benefits attributed to coconut water can be traced to its mineral content.

In the tropics where heatstroke and dehydration are common problems, coconut water is far more effective in relieving symptoms associated with these conditions than either plain water or fruit juice. Over the past two decades coconut water has been used extensively as a treatment for cholera, dysentery, influenza, and other infectious diseases that promote dehydration. Coconut water has saved thousands of lives, especially of children in underdeveloped countries. Ordinary water is not effective in treating severe dehydration caused by vomiting and diarrhea, but because of coconut water’s unique chemical composition it is able to rehydrate the body and give it the strength and energy it needs to fight off the infection. Death rates from cholera are high, but with the use of coconut water survival rates increase to 97 percent.

Coconut water has a therapeutic effect on the urinary and reproductive systems. It is reported to clear-up bladder infections, remove kidney stones, and improve sexual vitality. Medical research has shown that the consumption of coconut water can be very effective in dissolving kidney stones. Dr. Eugenio Macalalag, director of the urology department of the Chinese General Hospital in the Philippines, says that coconut water has demonstrated its effectiveness in patients suffering from kidney and urethral stones. He reports that consuming coconut water only 2 to 3 times a week results in a significant reduction in stone size and expulsion, eliminating the need for surgery.¹

In Jamaica coconut water is known as a heart tonic and is used to strengthen the heart and improve circulation. Research bears this out. Animal studies show that coconut water consumption reduces plaque formation in arteries, thus reducing risk of heart attack and stroke.

High blood pressure is one of the primary risk factors associated with heart disease and stroke. The minerals potassium and magnesium are known to help reduce high blood pressure. Human studies show that coconut water, which is a good source of both of these minerals, is effective in reducing high blood pressure and increasing circulation.² Studies also demonstrate that coconut water consumption reduces the risk of heart failure in heart disease patients.³ The evidence is so convincing that the FDA allows coconut water to carry the claim that it “may reduce the risk of high blood pressure and stroke.”

Because coconut water improves blood circulation, it is of benefit to diabetics. Coconut water helps dilate blood vessels, improves blood flow, and reduces plaque formation. Coconut water also contains certain forms of dietary fiber and amino acids that help moderate sugar absorption and improve insulin sensitivity.

Some of the most interesting components of coconut water are the plant growth hormones, particularly cytokinins. Cytokinins are a group of hormones that regulate growth, development, and aging. In some respects they are similar to human hormones with a similar name of cytokines. Cytokinins are also known as anti-aging hormones. Cytokinins regulate cell division and influence the rate at which plants age. Depending on the amount of cytokinins present, the aging process in plants can be either accelerated or retarded. One of the active sites of cytokinin production is in the roots. From here the hormone is carried by the sap throughout the plant—much like our bloodstream disperses hormones. Portions of plants that are deprived of cytokinins age faster than normal, Conversely, if additional cytokinins are added to a plant, normal aging is retarded.

Cytokinins also have an anti-aging effect on human cells and tissues. Normal human cells, as they age, go through a progressive and irreversible accumulation of changes until they reach a stage at which they finally die. Young cells are plump, round, and smooth. As they age they become irregular in shape, flatten out, enlarge, and fill up with debris; cell division slows down and eventually stops, which is ultimately followed by death.

When cytokinins are added to the culture medium, cells don't act their age. The normal sequence of aging slows down considerably. Cells do not undergo the severe degenerative changes that ordinarily occur.⁴ Although the total lifespan of human cells is not increased much, the cells remain significantly more youthful and functional throughout their lifetime. For example, treated cells after they have reached the final stage of their lifespan and no longer divide, look and function like untreated cells half their age. Treated cells never undergo the severe degenerative changes experienced by untreated cells. In all respects, their youth is extended into old age.

Because of their effects on human cells, cytokinins have been tested for the possible treatment for age spots, wrinkles, sagging, and dry skin. One of the factors that cause wrinkles and sagging skin is the aging and breakdown of connective tissues in the skin. Connective tissues give the skin strength and elasticity. When cytokinins are applied to the skin, they stimulate cell division of connective tissue which replaces older, damaged tissue with functionally younger tissue. The result is that on the surface of the skin, wrinkles tend to flatten out. Dry, aging skin is replaced with smoother, softer skin. This has led some cosmetic manufacturers to add cytokinins to facial creams and lotions.

Coconut water is the richest natural dietary source of cytokinins. Researchers have suggested the possibility that consuming a rich source of cytokinins, such as coconut water, may produce an anti-aging effect on the body, reducing risk of developing degenerative and age related diseases.

In regulating cell growth, cytokinins also prevent mistakes that may lead to the development of cancer. Normal cells are kept healthy while cancerous cells are programmed to die, preventing them from growing and spreading. Subsequently, the anti-cancer effects of cytokinins have been well documented.⁵⁻⁶

Summary of the Nutritional Benefits of Coconut Water

Coconut water contains a complex blend of vitamins, minerals, amino acids, carbohydrates, antioxidants, enzymes, health enhancing growth hormones, and other important nutrients.

Because its electrolyte (ionic mineral) content is similar to human plasma, it has gained international acclaim as a natural sports drink for oral rehydration. As such, it has proven superior to commercial sports drinks. Unlike other beverages, it is completely compatible with the human body, in so much that it can be infused directly into the bloodstream. In fact, doctors have used coconut water successfully as an intravenous fluid for over 60 years.

Published medical research and clinical observation have shown that coconut water:

- Makes an excellent oral rehydration sports beverage - replaces electrolytes from exercise, heat stress and illness
- Aids in exercise performance

- Natural isotonic beverage – contains the same level of electrolytes found in human blood
- Has 15 times the amount of potassium as most sports and energy drinks (264 mg vs 12.5 mg /100 ml)
- Reduces problems for infants suffering from intestinal disturbances
- Cardioprotective: helps regular blood pressure (due to high potassium); improves circulation
- Reduces swelling in hands and feet
- Prevents abnormal blood clotting
- Aids in kidney function including those with kidney stones; Nutritional support for those with urinary tract/bladder problems
- Helps balance blood sugar in diabetics
- Improves digestion
- Reported by some people to reverse cataracts
- Contains nutrients that feed friendly gut bacteria
- Helps relieve constipation or diarrhea
- Possesses anti-aging properties
- Nutritional support for healthy skin: restores strength and elasticity to skin; reduces age spots; reduces wrinkles and sagging
- Regulates the functioning of the intestine which promotes smoother, more hydrated skin
- Enhances healing of wounds and lesions
- Supports good vision and provides nutritional support in those who have a tendency towards glaucoma
- Contains potent antioxidants
- Nutritionally supports immune function
- Provides nutrients important in preventing osteoporosis

Where to Find Coconut Water

Young coconuts are available at many health food stores and at Asian markets. But they don't look like the brown, hairy ones with which you may be familiar. Young coconuts have only a portion of the husk cut off, leaving about an inch covering the shell. The husk is white and often shaped like a large toy top, with a point on one end and flat on the other. They are perishable so you will find them in the refrigerated section of the store.

You can now get coconut water in easy-to-carry bottles, cans, and tetra paks from many health food stores, Asian markets and some grocery stores.

Dr. Bruce Fife is a certified nutritionist and naturopathic physician. He is the author of 20 books including *Coconut Water for Health and Healing* and serves as the director of the Coconut Research Center, www.coconutresearchcenter.org. This article has only touched the surface. For a more complete description along with summaries of medical studies, case histories, news and historical accounts, recipes and references, I recommend Dr. Bruce Fife's new book, *Coconut Water for Health and Healing*. For more information on coconut water from Dr. Fife's newsletters, go to http://www.coconutresearchcenter.org/hwnl_4-4.htm.

I am now stocking both this excellent book and coconut water for your online ordering convenience.

References

1. Macalalag, E.V. and Macalalag, A.L. Bukolysis: young coconut water renoclysis for urinary stone dissolution. *Int Surg* 1987;72:247.
2. Alleyne, T., et al. The control of hypertension by use of coconut water and mauby: two tropical food drinks. *West Indian Med J* 2005;54:3-8.
3. Shah, N.J., et al. Use of coco-nut water in treatment of congestive cardiac failure. *Ind Jour Med Res* 1956;44:341-351.
4. Rattan, S.I.S. and Clark, B.F.C. Kinetin delays the onset of ageing characteristics in human fibroblasts. *Biochem Biophys Res* 1994;201:665-672.

5. Adair, W.L. and Brennan, S.L. The role of N-6-isopentenyl adenine in tumor cell growth. *Biochem Biophys Res Commun* 1986;137:208-214.
6. Dolezal, K, et al. Preparation and biological activity of 6-benzylaminopurine derivatives in plants and human cancer cells. *Bioorg Med Chem* 2006;14:875-874.