

Medicine from the Sea

By Ginger Webb

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“Seaweed is a healing food for the modern era,” observes John Lewallen, an herbalist, from his kitchen in Mendocino, Calif., where he is packaging seaweed at the kitchen table. John and Eleanor Lewallen are owners of the Mendocino Sea Vegetable Company, a small, direct mail company that specializes in “wildcrafted” seaweeds, which means seaweed responsibly gathered from the wild. “Seaweed contains a wide spectrum of organic material including trace elements that are lacking from Western diets,” says Lewallen while sipping a cup of wakame tea prepared by soaking the seaweed in boiled water.

Scientists at the National Cancer Institute (NCI) in Bethesda, Md., agree with Lewallen that sea plants contain a remarkable spectrum of components valuable for human health. David Newman, Ph.D., a chemist with NCI’s Natural Products Branch says his research team is currently testing 15,000 compounds from about 6,000 marine species including algae, fungi, coral and seaweed for their biological activity. Many appear to have powerful anti-inflammatory, antiviral, antimicrobial, antifungal, anticancer and immuno-suppressive (useful in treating autoimmune diseases) properties.

Newman is particularly intrigued by the powerful anticancer properties of an algae found off the coast of Curacao, named Curacin-A, that appears to be more potent than taxol, a substance isolated from the bark of yew trees that is used to treat breast and prostate cancer. To date, the algae has not been developed as a pharmaceutical agent because the highly insoluble substance can’t be extracted from the algae to “deliver” it in drug form. Newman hopes that, eventually, scientists will find a way to extract Curacin-A (a process requiring the help of an as-yet undiscovered solvent), noting that it took almost 10 years for scientists to find the right solvent to extract taxol. Once the material can be extracted, Newman adds, it can be “packaged” in a suitable, standardized pharmaceutical form for clinical evaluation.

Fortunately, the pharmaceutical industry’s difficulties don’t have to be yours. Even though drug manufacturers cannot patent an entire plant and therefore cannot make a dime on them, you can still receive amazing health dividends by consuming this and other natural products from the sea. And you don’t have to wait. They’re available now at natural food stores and by mail.

The Other Seafood

To people whose cultures have evolved by the sea, where seaweed has been a dietary staple for hundreds, if not thousands of years, the benefits of sea plants are well-known. In the West, seaweed is best known as an exotic ingredient in Japanese and macrobiotic cuisine. To coastal people everywhere, however, it’s a dietary staple, enjoyed in Iceland, Scotland, Ireland, Hawaii and other Pacific Islands and coastal regions of the United States. A treasure chest of good nutrition, seaweed absorbs nutritive elements directly from the ocean water in which it lives.

By eating seaweed, we tap into the ancestral source of all life, the ocean, and replenish our bodies from this vast reservoir with essential and sometimes hard-to-get nutrients. Most varieties of seaweed contain between 10 and 20 percent protein and are rich in fiber and vitamins, including A, C, E, B complex and [B.sub.12], and minerals, including calcium, iodine, potassium, iron and trace minerals.

“People are like walking oceans. Our bodily fluids have the same composition as sea water,” says Ara Der Marderosian, Ph.D, professor of Pharmacognosy at the Philadelphia College of Pharmacy and Science. “Sea water has been shown to contain organic acids, sterols, carotenoids, carbohydrates, proteins, fats, peptides, amino acids, free enzymes and many other materials, including essential trace minerals.”

An Ocean Of Promise

Among Herbalists, seaweed is treasured for its ability to nourish and strengthen the body. Bladderwrack (*Fucus* spp.), for instance, has been used in steam baths by Native Americans for rheumatism and illness. Dulse (*Palmaria palmata*) is used by people in Japan to treat colds. Because of its high iron content, seaweed is often given to anemic people by herbalists, as well as to menstruating and lactating women whose iron requirements are high. Adding seaweed, particularly wakame (*Ularia* spp) to the diet is believed to increase hair growth and luster and improve skin tone.

In Japanese folk medicine, the seaweed *Digenea simplex* has been used traditionally to rid the body of intestinal worms. Today, kainic acid, derived from this seaweed, is sold commercially for this purpose. *Laminaria* spp., another seaweed native to the Japanese coasts and valued as a folk medicine, has been shown to be capable of lowering blood pressure. Several studies on the usefulness of seaweed derivatives, other than Curacin-A, for protecting against cancer and heart disease are currently underway.

Despite these scientific studies, most of our knowledge about the benefits of seaweed still derive from folklore and the herbalist tradition. Western doctors may be catching on, however. A Manhattan plastic surgeon, Michael Joseph Pober, M.D., uses seaweed topically with post-surgical patients to restore skin texture and reduce swelling in surgical incisions.

Michael Tierra, an herbalist, licensed acupuncturist and author of *The Way of Herbs* (Pocket Books, 1990), explains that in traditional Chinese medicine, seaweed is considered a yin tonic, that is, it has “warming” characteristics. It is good for conditions characterized as “cold” such as poor circulation, anemia and chronic diseases of the thyroid or pancreas.

Seaweed’s antioxidant properties make it specific for prevention and treatment of cancer, supporting the immune system in eliminating the proliferation of cancer cells, says Tierra. Seaweed is considered a medicinal substance with wet, softening properties, which, according to traditional Chinese medicine, Tierra explains, enables it to dissolve hard nodules and tumors and to reduce swelling of the thyroid and lymph glands. Efram Korngold, a doctor of Oriental medicine and a licensed acupuncturist, adds that because seaweed helps decongest swollen or inflamed lymph nodes, it can be consumed as a treatment for autoimmune illnesses, including chronic fatigue, HIV, arthritis and chronic allergies.

In US scientific studies in the 1970s, an entire family of red marine algae was found to possess antiviral properties. One species, *Cryptosiphonia woodii*, a microalgae found in inner-tidal areas along the Pacific coast, was found by Scripps Institute researchers based in La Jolla, Calif., to suppress the herpes virus and clear out *Candida* (*Candida albicans*), a systematic yeastlike fungal infection. Both Korngold and Tierra offer a supplement made of dried whole plants to clients in their clinical practices with these problems and claim exciting results.

Detoxification Duty

Seaweed may be especially important for people in the modern age because of its ability to protect us from damage caused by toxic elements in the environment, including heavy metals and some types of radiation byproducts. Rosalie Bertell, M.D., president of the International Institute of Concern for Public Health in Toronto, believes that seaweed can help pull dangerous heavy metals out of the body. Research at McGill University in Montreal has shown that sodium alginate, a derivative of wakame, binds with radioactive strontium 90 in the body, allowing it

to be excreted. Strontium 90 is considered the most dangerous component of atomic fallout.

Ernest J. Sternglass, Ph.D., professor emeritus in Radiation Physics at the University of Pittsburgh School of Medicine, explains how strontium adversely affects health: “When radioactivity, spread from nuclear waste dumps or fallout from other nuclear facilities, gets into the drinking water, gets into the milk and gets into the vegetables, it lodges in our bone. It goes through the food chain and concentrates. As a result, materials like strontium [produce] an internal radiation throughout our body, [irradiating] the whole bone marrow where the cells of the immune system originate.” These internal doses of radiation can weaken the immune defenses of the body needed for fighting disease. In fact, many herbalists recommend adding some seaweed to the diet for a period of time if you plan on having X-rays taken, to encourage the excretion of any radiation products left by the treatment.

Mindy Green, an herbalist at the Herb Research Foundation in Boulder, Colo., believes everyone can benefit from seaweed in the diet. “It’s highly nutritious and is a good source of minerals that are often short in the diets of women, especially vegetarian and vegan women, such as iron, calcium, iodine and magnesium,” said Green. Her personal preference is for a kelp wildcrafted off the northern coast of Washington state. She either toasts the kelp or nibbles on chunky chips of it as a snack. Green also favors a thick seaweed called kombu in vegetable soups and stews along with astragalus in the winter and uses hijiki and wakame in salads.

One caution about seaweed from herbalist C.J. Puotinen, a columnist for the Northeast Herbalist Association Journal published in New York. She points to a commonly overlooked cause of acne flare-ups: iodine, which explains why herbal treatments that emphasize kelp can sometimes make the problem worse in individuals who are iodine-sensitive. So if you avoid iodine-containing salts and seafoods or iodine-based therapies because they trigger acne problems, add seaweed to the “to be avoided” list.

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