



Health from the Sea

The Healing Power of Seaweeds and Algae

The ocean is considered the cradle of all life and foods from the sea have long been prized by native populations. For starters, plants and animals from the sea are the richest sources of an essential nutrient not found in most land-based foods—iodine. Iodine is a vital component in thyroid hormones and is essential to the health of every cell in the body. This may be why unrefined sea salt and seaweeds were often transported far inland as trade commodities in ancient times.

Most of us are familiar with fish and shellfish from the ocean, but sea vegetables—seaweeds like kelp and dulse—are not a common part of American diets. This is a shame because these foods not only contain iodine, they are rich in numerous trace minerals for healthy bones, skin, hair and general health. Many also contain valuable mucilaginous fibers that absorb heavy metals and other toxins. They can also be rich in protein and vitamins.

Seaweeds are a type of algae and there are also fresh-water algae that have health benefits, like spirulina and chlorella. The algae are one of the richest sources of easily assimilated amino acids. They can help to balance blood sugar and brain function, while increasing energy and reducing appetite. They can also help the body detoxify from heavy metals and other contaminants.

In this issue of *Sunshine Sharing* we'll explore the value of algae and the supplements made from them. We'll also discuss the importance of iodine and the value of seaweeds in thyroid health.

The Nutritional and Medicinal Value of Seaweeds

The composition of mineral electrolytes (sodium, potassium, calcium, magnesium and chlorine) in sea water is very similar to the balance of these minerals in our own blood. In fact, it could be argued that when animals moved out of the sea and onto the land, they simply carried the saltwater medium their cells needed within their bodies in the form of blood plasma.

Consequently, it shouldn't surprise us that plants from the sea are rich in the minerals the body needs to survive. As previously mentioned, one of these elements is iodine, but sea vegetables can also provide us with other trace elements like iron, copper and zinc, as well as macro minerals like calcium, magnesium, sodium and potassium.

Seaweeds are also great sources of mucilaginous fiber, which can absorb toxins, soothe irritated tissues and act as a bulk laxative. They can be very healing to the mucus membranes of the gastrointestinal tract. They are also very beneficial for the health of the skin when used in baths, poultices, soaks or other topical applications because they help to soften and moisturize the skin.

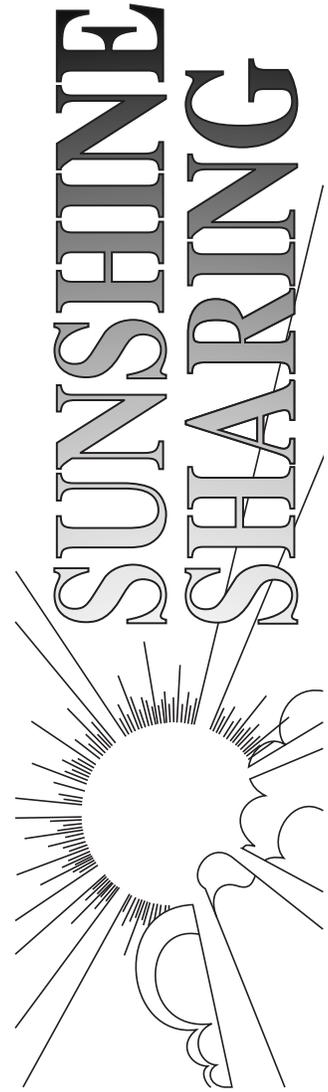
Many seaweeds are used in traditional Chinese medicine (TCM). Generally speaking, they are considered cooling, sweet, and salty and are indicated when there is swelling or a hardened mass in the body. They soften the hard, swollen tissues, reduce heat and irritation and help to loosen hardened phlegm or mucus. TCM, like Western herbalists, also use seaweeds for thyroid problems, specifically goiter.

The following are some important varieties of seaweeds and their specific nutritional, medicinal values and health benefits.

Kelp

Kelp is one of the brown algae in the *Laminariales* order. Multiple species of this rapidly growing seaweed have been used for medicine, agriculture and manufacturing. Kelp grows in large underwater forests in cold, shallow parts of the ocean and these stands of kelp harbor many species of marine life, so sustainable harvesting practices are important.

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Your guide to better health the natural way.

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Important Notice

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Kelp is known to contain over 30 minerals including zinc, copper, chromium, sulfur, silicon, iron, calcium, potassium and magnesium. It is also a good source of many essential vitamins, including A, B1, B2, C, D, E and K. It is a non-toxic and extremely safe food substance that has a pleasant, salty favor. Because of this, dried kelp can be sprinkled on food as a potassium-rich salt substitute.

Kelp also contains large amounts of algin (see sidebar below), which can make it helpful in protecting the body from heavy metals. It has also been used topically as a soothing remedy for burns. **Kelp** is available in capsules and is an important ingredient in **Heavy Metal Detox** and the thyroid supporting formulas **Target TS II**, **Thyroid Activator** and **Thyroid Support**.

Dulse

Another very valuable sea vegetable is dulse, a red seaweed that grows in cold waters along the northern coasts of the Atlantic and Pacific Oceans. Found growing on rocks, it is thick, lobed and reaches 8"-16" in length. It ranges in color from a deep rose to a reddish-purple.



Like kelp, dulse is high in trace minerals, especially iron. It's low in sodium and high in potassium, but has a pleasant salty flavor that makes it a good substitute for salt. It can be sprinkled into soups and stews or added to salads. It has a high protein content (about 1/3 of its dry weight) and is high in glutamic acid, the amino acid found in monosodium glutamate (MSG). This makes it a healthy alternative to MSG in enhancing the flavor of food.

Dulse is one of the richest sources of silica, an element that contributes to healthy fingernails, hair, skin, bones, teeth and nerves. Silica gives tissues flexible strength, such as preventing fingernails from becoming brittle.

Liquid Dulse is a glycerin extract of dulse and is a great iodine and trace mineral supplement for both children and adults. Dulse is also a key ingredient in **HSN-W**, a silica and trace mineral supplement for healthy hair, skin and bones.

Other Valuable Seaweeds



Irish Moss is an algae, not a moss, found in the Atlantic Ocean off the coast of both North America and Europe. It contains a mucopolysaccharide called carrageenan, which has soothing and healing properties. Like algin, carrageenan is also used as a thickening agent in commercial foods.

Irish moss contains significant quantities of magnesium, calcium, potassium, iron and vitamins A, D, E and K. It is a bulk laxative, acts as a moistening expectorant in the lungs and is soothing to irritated skin and mucus membranes. Irish moss is found in the thyroid formulas **Target TS II**, **Thyroid Activator** and **Thyroid Support** and the natural calcium supplement **Herbal CA**.

Bladderwrack contains di-iodotyrosine, a chemical configuration containing iodine and the amino acid tyrosine. There are two of these configurations (hence the di-). All the thyroid gland has to do is join two of these di-iodotyrosine molecules together and it has produced T4 or thyroxine, the main thyroid hormone. This helps explain why herbs like bladderwrack have been historically used to aid weight loss programs. Bladderwrack is present in **CelluSmooth**, a formula used to help burn cellulite and fat deposits. It is also found in **pH GreenZone**.



There are many other edible seaweeds, including agar, arame, kombu, nori and wakamae, which can be found in health food or specialty stores. There are even seaweed "chips" you can munch on for snacks. So it's easy to add some sea vegetables to your regular diet.

Detoxify Heavy Metals and Radioactive Materials with Sodium Alginate



Algin or sodium alginate is a mucilaginous fiber found in kelp and other sea vegetables. This mucilage is so good at absorbing water that one teaspoon, dissolved in a quart of water, will result in a gelatinous mixture so thick it is difficult to pour. For this reason, algin is used as a thickening agent in foods to improve the creamy texture of the foods like ice cream or as a thickening agent in jellies.

But algin isn't just a food additive. Mucilaginous fiber is very soothing to the intestinal tissues and skin. Sodium alginate is used as a medicine to treat acid reflux. The algin creates a protective barrier on top of the stomach contents that helps prevent the acid from entering the esophagus.

Algin also absorbs irritating substances in the gastrointestinal tract so they pass out of the body without being ab-

sorbed. These include the radioactive substance strontium 90. One study has shown that alginate supplements can reduce strontium 90 absorption by as much as 83 percent. Studies have shown that it also absorbs barium, cadmium and radium and it may also help the body detox from mercury and lead.

Sodium alginate can be used along with **Heavy Metal Detox** or **MegaChel** to eliminate heavy metals from the body. It is a good supplement to take after having a barium X-ray or if one lives near a nuclear reactor or is otherwise exposed to radioactive materials. Because it also binds to calcium, zinc and other minerals the body needs, it should be taken between meals on an empty stomach.



The Iodine Controversy

Iodine is a trace element that is absolutely essential to health. It is a vital component of the thyroid hormones, which regulate metabolism, and it appears to be helpful in other tissues as well. Iodine is a natural disinfectant and may help the immune system fight infection. There is also evidence that suggests iodine may help to prevent breast cancer.

Getting sufficient iodine for good health was never a problem for people living near the ocean. Iodine is introduced into the air by salt water spray and winds up in the nearby soils and the foods grown in them. Natural sea salt also contains small, but critical amounts of this important nutrient.

Farther inland, however, the story is different. At one time there were major inland areas where a large percentage of the population would develop goiters, a swelling of the thyroid gland due to low intake of iodine. These areas were known as goiter belts. Goiters have long been treated using seaweeds as a food or supplement or by taking liquid iodine. The goiter belt problem was largely eliminated when iodine was added to refined salt and inland drinking water supplies.

The FDA recommendation for iodine (DRI) is set at 150 mcg per day. They also consider anything over 1,100 mcg (a little more than 1 mg.) per day to be too high. This latter amount is easily exceeded by people using iodized salt. The nutritional researcher Dr. Weston Price found traditional diets varied widely in iodine intake. The Inuit consumed about 131-175 mcg, which is right in line with the DRI, but other native people's consumed less and still had no thyroid problems.

This raises the question, if low intake of iodine is the only cause of thyroid problems, why do millions of people suffer from low thyroid when iodine is so readily available in today's society? Different researchers have different answers to this question.

One explanation is the increased intake of other halogens. Halogens are a group of elements with similar chemical properties, and include iodine, chlorine, bromine and fluorine. The latter two have no known nutritional value. Use of halogens in water supplies, medicine and as food additives has greatly increased our exposure to them. These other halogens can displace iodine, which may mean that iodine levels are reduced by exposure to them. Doctors like David Brownstein, author of *Iodine: Why You Need It, Why You Can't Live Without It* believes that increasing iodine intake helps to detoxify these other halogens, and recommends doses far in excess of 1,000 mcg. per day.

Another explanation is that people are deficient in other nutrients needed for the proper utilization of iodine. The thyroid also needs selenium, zinc, magnesium, vitamin A and vitamin B6. Some research suggests that commercial vegetable oils, which are high in omega-6 essential fatty acids also inhibit thyroid function. In contrast, higher intake of good fats like butter and coconut oil, along with omega-3 essential fatty acids may actually reduce the need for iodine.

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Super Algae for Super Health

Like salt water algae or seaweeds, fresh water algae have also been used as food and medicine for thousands of years. For example, the Aztecs gathered algae from the great lakes of Central Mexico, dried it and made cakes from it. The Kanembu's, a tribe in Africa, used algae from lake Johann in soup and bread.

Because algae is easy to grow and is one of the highest plant sources of protein science fiction writers have sometimes depicted a futuristic world in which algae is the major food source. And, like seaweeds, fresh-water algae have a high vitamin and mineral content, giving them both nutritional and medicinal value.

One popular fresh water algae is **spirulina**, which is a rich source of protein, chlorophyll, carotenoids, minerals and gamma-linolenic acid (GLA). It also contains some unique pigments that provide the bluish tint to this blue-green algae. Research suggest spirulina may have the ability to inhibit viral infections such as flu, measles, mumps, cytomegalovirus and herpes simplex type 1. It also appears to boost immune activity and inhibit allergic reactions.

In practical use, many people feel spirulina boosts energy, reduces sugar cravings and aids weight loss. It is antioxidant and hepatoprotective and may also help to reduce cholesterol.

Super Algae is an algae supplement containing spirulina and two other algae species—chlorella and blue-green algae. Chlorella is a freshwater green algae noted for its chlorophyll content and as a rich source of vitamins A, B2, B3, iron, magnesium and zinc. Research suggests it helps to detoxify heavy metals, radiation and chemotherapy agents. It boosts your immune system and may help to lower blood sugar and cholesterol.

The other algae in Super Algae is a blue-green algae from Klamath Lake in Oregon. This algae contains chlorophyll, protein and amino acids, neuropeptides, fatty-acids, B vitamins and beta-carotene. There is some research suggesting it may be helpful for reducing allergic reactions, boosting immune activity, balancing brain function in ADHD, normalizing blood sugar levels and reducing levels of heavy metals like arsenic.

Many people have found that taking 2 capsules of Super Algae at breakfast, 2 more at lunch and possibly 2 more in the late afternoon has been helpful in reducing sugar cravings and stabilizing mood and energy. It can also boost immune responses, reduce allergic reactions and aid in the detoxification of heavy metals, radiation and other toxins.

Additional Help and Information

For more information about the health benefits of seaweed and algae contact the person who gave you this newsletter. You can also consult the following resources:

The Comprehensive Guide to Nature's Sunshine Products, 6th edition by Steven Horne and Kimberly Basal

PDR for Nutritional Supplements by Sheldon Saul Hendler with David M. Rovik

Kelp, Dulse and Other Sea Supplements by William H. Lee

<https://www.westonaprice.org/health-topics/modern-diseases/the-great-iodine-debate/>

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Algae for Health

Each year, millions of tons of seaweeds are harvested for industrial, agriculture and food purposes. These salt-water algae are loaded with numerous essential minerals and vitamins, including a relatively rare, but important element called iodine. They also provide gums and mucilage that have soothing and detoxifying effects. Salt-water algae and their fresh-water cousins are also great sources of complete protein. Read all about the health benefits of both salt and fresh water algae in this issue of *Sunshine Sharing*.

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On the negative side, there is some evidence that adding iodine to salt and drinking water has caused an increase in Hashimoto's thyroiditis, an autoimmune condition that results in low thyroid. So, supplementing with iodine (especially in high doses) is not a good idea without professional supervision.

This is why seaweeds may be the best way for us to get the iodine we need. Seaweeds don't just contain iodine, they are also providing numerous other trace elements the body needs.

Liquid Dulse, mentioned earlier, is a particularly good iodine supplement because you can regulate the dosage by drops. 15-20 drops of Liquid Dulse will supply about 225 micrograms (mcg.) of natural iodine. It's pleasant tasting, too.

Seaweeds are key ingredients in Target TS II, Thyroid Support and Thyroid Activator, three valuable thyroid supporting supplements. Thyroid Activator contains Irish moss and kelp along with

black walnut and fo-ti (also known as ho shou wu) which help to regulate thyroid activity. Target TS II contains both Irish moss and kelp, along with the chelated minerals zinc and manganese, which aid pituitary and thyroid function.

An even better choice for helping the thyroid is Thyroid Support. It contains a thyroid glandular (which is believed to help rebuild the thyroid) along with nettle leaf, an herb that has also been used to help a damaged thyroid gland rejuvenate. Thyroid Support also contains other nutrients needed for iodine utilization, vitamin B6, zinc, copper and manganese, and the seaweed, kelp.

Seaweeds are extremely safe foods with numerous health benefits, but is best to avoid them or use them with caution when dealing with autoimmune thyroid conditions like Grave's disease or Hashimoto's. However, freshwater algae, like spirulina and Super Algae, are safe to use with these conditions.