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Benefits of Sea Vegetables

What are Sea Vegetables?
Sea vegetables are wild ocean plants, or marine algae, enjoyed daily as staple and healing foods in many coastal parts of the world. Small amounts of sea veggies add a rich flavor and enhance the nutritional value of most dishes. These exceptionally vital plants inhabit the fertile, energetic region where ocean meets land; from the very exposed high tide mark to the constantly immersed bottom just below low tide. They inhabit all the world's oceans.

While there are many species of sea veggies, only a modest number have a history as human food. Sea vegetables are categorized by color group: red (6,000 species), brown (2,000 species), and green (1,200 species.) Popular American sea vegetables are Dulse, Kelp, Alaria, Laver, from the east coast, and Sea Palm from the west coast. Asian varieties include Nori, Hijiki, Arame, Kombu and Wakame, Irish Moss, Sea Lettuce, Rockweed, and Bladderwrack.

History
The consumption of sea vegetables enjoys a long history throughout the world. Archaeological evidence suggests that Japanese cultures have been consuming sea vegetables for more than 10,000 years and makes up more than 10 percent of their diet today. In ancient Chinese cultures, sea vegetables were a noted delicacy, suitable especially for honored guests and royalty. Korea, Vietnam, and Malaysia are other Asian countries where sea vegetables are widely consumed. Yet, sea vegetables were not just limited to being a featured part of Asian cuisines. In fact, most regions and countries located by waters, including Scotland, Ireland, Norway, Iceland, New Zealand, the Pacific Islands and coastal South American countries have been consuming sea vegetables since ancient times. While land plants tend to be brittle and often have rigid stalks and leaves from growing in soil, sea vegetables are soft and flexible.

Health benefits of sea vegetable.
Sea vegetables offer one of the broadest ranges of minerals of any food, containing virtually all the minerals found in the ocean - and not surprisingly, many of same minerals found in human blood. They also offer a variety of unique phytonutrients, including their *sulfated polysaccharides* (also called fucoidans). Sulfated polysaccharides, have exhibited strong antioxidant, antitumor, immunostimulatory, anti-inflammatory, pulmonary fibrosis anticoagulant/antithrombotic, lipid lowering, antiviral, antibacterial, antiprotozoan, hyperplasia prevention, gastrointestinal regenerative and nanomedicine applications. Unlike some other categories of vegetables, sea vegetables do not appear to depend on carotenoids and flavonoids for their antioxidant benefits, because in addition to these two important categories of antioxidants, sea vegetables contain several other types, including alkaloid antioxidants. Because of these combinations sea vegetables offer an array of health benefits. They are an excellent source of iodine, vitamin C, manganese, and vitamin B2, vitamin A (in the form of carotenoids) and copper as well as a good source of protein, pantothenic acid, potassium, iron, zinc, vitamin B1 & B6, niacin, phosphorus and are also rich in minerals and trace elements, including calcium, magnesium, iron, potassium, chromium and more, at levels much greater than those found in land vegetables. Sea veggies also provide aminos, fiber and enzymes. Marine phytochemicals found only in sea vegetables have been shown to absorb and eliminate radioactive elements and heavy metal contaminants from our bodies. Other recent research demonstrates the inhibition of tumor formation, reduction of cholesterol, and anti-viral properties of sea vegetables. Sea vegetables increase energy, balance the thyroid gland, which is responsible for producing hormones that keep us healthy and balanced. Sea vegetables have anti-cancer benefits as well. While research in this area remain inconclusive, sea vegetables may be able to help us increase our cells' sensitivity to insulin, help us prevent overproduction of glucose, and help us take existing

blood sugars and convert them into storable starches. These factors would help control blood sugars, and lower our risk of type 2 diabetes.

How do I include sea vegetables in my diet - is it difficult?
It's quite convenient.
~ Add spirulina or blue-green algae to your green smoothies or fruit smoothies.
~ Make raw sushi veggie rolls using nori seaweed sheets as the wrapper.
~ Slice up a nori sheet and top your salads or add to wraps for an extra crunch.
~ Use agar agar in place of an egg in raw pies and desserts to solidify the fillings.
~ Add kelp noodles to your soups, salads, or make a noodle dish with them.
~ Make a seaweed salad with any type of soaked seaweed, sliced cucumbers, and a sprinkle of sesame seeds.
~ Eat seaweed snacks alone or with added hummus and wrap a carrot or sliced red pepper in it.
~ Add small amounts of cut, bite sized pieces to your favorite soups, salads, sandwiches and stir-fries.
~ Explore different sea vegetables. Purchase a seaweed you have not tried and try a new recipe with it. Most packaged brands often include a recipe or two right on the package.

How much sea vegetables should I eat each day?
Sea vegetables have historically been used as garnishes, flavorants, stock bases, and side dishes. You won't see heaping piles of kelp replacing spinach or lettuce in salads in Japanese households, for example. Because they're so incredibly nutrient-and-mineral-dense, sea vegetables can be eaten in excess. Our iodine RDA of 150 micrograms is low. The Japanese typically get upwards of 5-10 mg of iodine daily without ill effects (in fact, their traditional health and longevity is excellent), but iodine toxicity does exist. Think of sea vegetables as a supplement, a supplement to be used on a regular basis.

Buy organic sea vegetables and here's why.
The Organic Standards Improvement Association (OSIA) developed standards that give clear and uniform direction to organic sea vegetable producers on the harvesting and handling of these precious plants. They also developed standards that prevent practices that may lead to resource depletion, product contamination, or inferior quality. Buying organic sea vegetables results in a higher quality and cleaner product. Organic sea vegetable producers are conscientious about how, when, where, and how much they harvest, as well as how the seaweeds are transported, dried, stored and packaged. Many also do their own testing for heavy metals, herbicides, pesticides, and microbial contaminants. If you're worried about the toxic chemical accumulation the higher up you go in the food chain, especially in fish, seaweed is as low in the oceanic food chain as it gets.

But how do they taste and how much do I need?
Sea vegetables' strong taste and odor surprise some people. Remember that dried sea vegetables are a highly vital wild food and provide highly concentrated nutrition - a little goes a long way, and most easy recipes use less than one quarter ounce per serving! Sea vegetables are sometimes rinsed or soaked in fresh water before use, but often this is unnecessary. Dulse, for instance, is eaten right out of the bag as a healthy, "salty" snack. It's wise to eat a variety of sea vegetables for maximum nutrition and taste.

How do I prepare sea vegetables?
Recipe suggestions are found on the back of most sea veggie packages. You can also google 'sea vegetable recipes' or the particular type of sea vegetable you want to use and find tasty recipes to try. They can be a simple, flavorful addition to vegetable dishes, salads, soups and stir fries and don't require cooking. They may require soaking prior to adding to dishes.

How do I store my sea vegetables?
Sea veggies, dried vegetables rich in mineral salts, keep well unless subjected to a lot of moisture, heat and/or direct light. They have a shelf life at least 2 years at room temperature in tightly sealed container out of direct light. Recommended storage containers are re-sealable bags or, for bulk amounts, glass jars with screw top lids. It is not a good idea to rinse sea veggies and store unless you're going to use in 24-48 hours or refrigerate. If sea veggies are stored in conditions of excessive moisture or heat, mold or deterioration may occur which is readily visible as discoloration or bad smell like seafood past their prime. Sea veggies also readily absorb odors, so keep them in a tightly sealed container. Sometimes as plants dry out a whitish powder will appear; this powder consists of precipitated salts and sugars and is safe to eat. You can rinse or use as is.

If your sea veggies dry out, you can rehydrate by putting a piece of lettuce, or damp paper towel in the bag and leaving it in the refrigerator for a day or two. If kelp or alaria becomes brittle, just lightly sprinkle or soak until rehydrated to your taste.

To rinse or not to rinse?
Some sea vegetables are sometimes rinsed or soaked in fresh water before use, but often this is unnecessary. Dulse for instance, is eaten right out of the bag as a healthy, salty snack. Kelp, Arame and Hijiki is often lightly soaked and rehydrated (it expands greatly). In any case, a light rinse before use lessens sea vegetables' salty taste. You will lose some sodium and potassium salts, but very little if any calcium, iron, magnesium, etc. You can save the rinse water for cooking.

What about the strong aroma?
Some sea vegetables do indeed have a relatively strong odor. Dulse and Arame has a strong smell that you may not be used to. One reason that the smell is so strong is that it's a highly concentrated, dehydrated food. If there is no mold or other signs or smells of deterioration (caused by being stored too damp and/or warm) the product is fine to eat. Storing in a tightly sealed glass or plastic jar will help keep the odor from permeating the kitchen or pantry.

What about the whitish surface powder?
Don't worry about the white powdery substance on the surface of stored plants! Sometimes as these plants dry out a whitish powder will appear; this powder consists of precipitated salts and sugars and is safe to eat - you can rinse or use as is. In kelp, the principle sugar is mannitol and the salts are predominantly potassium and sodium. Mannitol is much less "sweet" than fructose, sucrose, glucose or pentose, and even less sweet than complex sugars found in brown rice syrup, yet it still adds a subtle flavor quality. This, along with the high mineral component and the naturally occurring glutamic acid is why kelp makes beans taste so great, cook so quickly and digest so easily. This whitish powder also appears on dulse sometimes, but not as often. It seems harder to manage the osmotic process in the brown sea weeds (kelp and alaria) than the reds (dulse and laver), perhaps because the brown sea veggies are thicker.

What about sea vegetable as raw foods?
Sea Veggies can contribute a lot to a raw/living foods diet: minerals, enzymes, vitamins, protein, healing fiber, and marine phytochemicals. All Maine Coast sea vegetables except toasted sushi nori sheets are dried under low temperature conditions. Dulse is a favorite for raw fooders – it’s succulent and sort of melts right in your mouth. It is easily cut into salads, added to cold soups, and in the flake, granule, or powder form is easily blended in drinks. Many sea vegetables can be eaten uncooked, right out of the bag. Some are quite chewy and call for soaking or marinating in vinegar or citrus juice. Some Japanese sea vegetables, arame, hijiki, and wakame are processed with heat. In fact, the arame and hijiki are often boiled or blanched.

How do I use sea vegetables for healthy skin and hair?
In many Asian nations, beautiful healthy hair and skin and nails are attributed to the regular use of sea veggies in food, soap and shampoo. Exactly how seaweed works on skin and hair is still under investigation, but it is thought that a combination of factors such as the abundance of organic colloidal minerals, particularly calcium, silica, iron and phosphorous; the emulsifying alginates (fibrous material) that cleanse surface toxins, emulsify oils and de-acidify; and the abundance of iodine, amino acids, active enzymes, beta carotenes, B-vitamins, etc. If you want to experiment, try mixing 1 tsp. of whole kelp, alaria, bladderwrack or dulse in your next bath.

Most Common Sea Vegetables

What an amazing nutrient profile this list of sea vegetables has. When compared with land vegetables we see they have 10 to 20 times the mineral content including iodine, calcium, and iron. You don’t need to consume large portions of these nutritional powerhouses; small amounts do a superior job for your body. Sea vegetables are capable of binding with heavy metals and radioactive toxins to safely escort them out of the body. Sea vegetables are high alkaline foods which is optimal for the body. This list of sea vegetables also includes algae; blue-green algae, chlorella and spirulina. These algae absorb toxins better than any other natural food and contain nine essential amino acids in a balanced and very easily digested form. They are very high in chlorophyll, a very important nutrient. Chlorophyll is also a great purifier and works throughout the digestive tract. Adding just a tablespoon of algae to a green smoothie is a wonderful way to take them. It’s documented that humans living near bodies of water have included sea vegetables in their diets for thousands of years and perhaps much longer. The Aztecs were one of the many ancient civilizations that consumed spirulina.

Kelp

Kelp is the most readily available type of edible seaweed; kelp is generally found in dried form and can be eaten right out of the bag. It can be soaked for several minutes in warm water and added to vegetable stir-fries, bean stews, soups, cooked grains or simple noodle dishes. It complements carrots, onions, kale, cabbage and other greens well. It will add a salty flavor to dishes and can be purchased in granulated form, to be used in place of salt or as a mineral supplement to your food. Kelp can also be sold in caplets or pressed into pill form.

Kelp Noodles are a raw noodle made from edible seaweed. Kelp noodles are becoming more popular outside Japan. They can be eaten raw, or for added taste add spices or mix with a favorite sauce or dressing for flavoring. The noodles can be purchased in health food stores and Asian food markets. Some Asian restaurants serve kelp noodles as an alternative to noodles or rice in their dishes.

Kelp is a very sustainable plant that grows exceptionally fast and can grow back fully within ten days of being harvested. A study by the University of Berkeley's School of Public Health found that kelp can reduce the level of hormone related to breast cancer.

Kombu

Kombu is a type of kelp, brown algae most commonly eaten in Japan. It comes dried, for soup, broth, or fresh. Add a five-inch strip to a pot of water with a bit of salt and pepper for a simple, mineral-rich broth, or incorporate a few more ingredients and make a simple soup. It is known to help release toxins from the body and strengthen the blood.

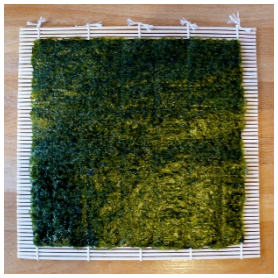
Wakame

Wakame is another popular seaweed in Japan and Korea, where restaurants will often serve fresh (or reconstituted) wakame tossed with a bit of sesame oil over a bed of lettuce. The chewy robustness of this seaweed holds up well against the delicate lettuce. Wakame often appears in miso soups or simple broths, floating on the top in thin strips. It has about the same nutrient composition as kombu and other kelps.

Arame

Arame is brown Japanese kelp used primarily in Japan, China, and Korea, but Peruvian and Indonesian cuisine employs it as well. It has a sweet, mild flavor, making it a great sea vegetable for beginners. Try sautéing soaked, drained arame with winter squash, onions, and a bit of chili pepper for a great side dish. Soak dried arame for five minutes before using (unless it's going right into a soup). A tablespoon of dried arame will give you 0.7 mg of iodine and is packed with iron and calcium and improves circulation.

Nori



Anyone who's eaten sushi knows nori. It's the mildest form of seaweed, generally coming roasted in sheets or squares. Compared to other sea vegetables, it's also low in minerals and other nutrients. Try dropping hummus on nori for a quick, healthy snack, or just eat them plain.

Dulse

Dulse does not require cooking and can be eaten right out of the bag as a snack. It's a great, healthy substitute for corn chips as it has a crunchy, salty flavor. A red seaweed originating from the waters of the Atlantic Coast of Canada and the shores of Ireland and Norway, it can be eaten raw, roasted, fried, dried or can be used to thicken soups. Dulse is often ground into flakes for sprinkling onto salads, soups or other favorite dishes. Keep it on the dinner table for seasoning foods instead of using table salt.

Irish Moss

Irish Moss is also known as carrageen moss (as in carrageenan, the common thickening agent used in yogurt, nut milks, ice cream, pudding, dips, … that makes up about 55% of Irish moss' bulk), Irish moss grows along the rocky Atlantic coasts of Europe and North America. It's about 15% mineral and 10% protein, and it softens into a jelly-like substance when heated in liquid. In the Caribbean Irish moss is boiled until it's jelly. The Irish and Scottish boil it to make a tapioca-like pudding dessert. It should be noted some individuals experience digestive upsets and inflammation from consuming carrageenan.

Alaria Esculenta

Sometimes called dabberlocks, badderlocks, or winged kelp, alaria esculenta is a traditional sea vegetable found in the far north Atlantic Ocean. Greenland, Iceland, Scotland, and Ireland all count it among their traditional foods. It's a brown seaweed with a large central rib, from which wavy membranes shoot out on either side. Alaria was traditionally dried, then added to soups and stews. A big strip of it goes well in a pot of chili and increases the mineral content considerably. If you don't prefer the flavor of sea vegetables, soups and broths are excellent ways to extract the bulk of the useful minerals and nutrients from sea vegetables.

Agar Agar

Agar agar is a jelly-like substance, obtained from algae. It was discovered in the late 1650's or early 1660's. Throughout history into modern times, agar has been chiefly used as an ingredient in desserts throughout Asia. Agar can also be used as a laxative, an appetite suppressant, a vegetarian substitute for gelatin, a thickener for soups, fruit preserves, ice cream and other desserts.

Chlorella

Chlorella (an algae) is a true super food and blue-green algae like its cousin spirulina. Studies have shown that chlorella benefits the entire body by supporting healthy hormonal function, promoting cardiovascular health, helping to negate the effects of chemotherapy and radiation, lowering blood pressure and cholesterol, and aiding in the detoxification of our bodies. If you're taking the tablets or capsules, your work is already done. Just take them with some water or juice, about half an hour before meals. If you're opting for the powder form, there are many ways in which to add chlorella to your daily regimen. Add them to smoothies, homemade raw nutrition bars or vegetable juice.

Spirulina

Spirulina is a natural “algae” and a cousin to chlorella and looks like chlorella. Spirulina is incredibly high in protein and a good source of antioxidants, B-vitamins and other nutrients. When harvested correctly from non-contaminated ponds and bodies of water, it is one of the most potent nutrient sources available. Add them to smoothies, homemade raw nutrition bars or vegetable juice.

Blue-Green Algae

Organic blue-green algae is one of the most nutrient dense foods on the planet. Two varieties, spirulina and Aphanizomenon flos-aquae, are the most consumed forms of blue green algae; which has superfood status due to high concentrations of proteins, vitamins and nutrients. Blue green algae looks like chlorella and spirulina. Add blue green algae to smoothies, homemade raw nutrition bars or vegetable juice. It can also be taken as a supplement.

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