Seaweed Article 1

https://www.huffingtonpost.com.au/entry/seaweed-kelp-food-health-environment_us_5b8413a8e4b0348586026aa2

Seaweed has been given the ubiquitous and generally meaningless label of "superfood." But there is research into its potential health benefits, which are said to range from better heart health to contributing to an increased life expectancy. Chigozie Okolie and Dr. Beth Mason from Cape Breton University in Nova Scotia, Canada, are looking into the potential of sea vegetables to benefit our gut, for example.

"Dietary fibres from seaweeds have been scientifically proven to act as prebiotic i.e. food source for beneficial gut microbes," Okolie said in an email. He believes that an increased interest in looking at seaweed in diets comes from the sustainability credentials of the plant compared to foods from land-grown plant sources.

Seaweed is being talked up as a wonder food for its environmental benefits. As the global population grows — it's expected to reach 10 billion by 2050 — so too does demand for food. The U.N. Food and Agriculture Organization has estimated we will need to increase food production by 70 percent between 2007 and 2050. This places pressure on land and freshwater resources at a time when scientists say climate change is already increasing the extreme weather events that disrupt agriculture.

In this context, advocates say seaweed offers a near-perfect solution. It requires no fertilizer or freshwater to grow, it sucks climate-warming carbon dioxide from the atmosphere and also helps counteract ocean acidification. It is fast-growing, too, seeing around 30 to 60 times the growth rate of land-growing plants, according to Australian scientist Tim Flannery.

Seaweed Article 2
https://www.ft.com/content/032a0264-2c9c-11e8-a34a-7e7563b0b0f4

Rich in vitamins, minerals, protein and essential fatty acids, seaweed is popping up on menus and supermarket shelves, touted as the latest trendy superfood.

There are 7.3 billion of us on the planet today. That is likely to rise to 9.8 billion hungry mouths by 2050 and, put simply, our current model of food production is not cutting it. About 90 per cent of the world's fish stocks are already seriously depleted. We are losing 24 billion tonnes of fertile soil each year due to intensive farming.

Situated at the bottom of the underwater food chain, seaweed and other species of algae need only sunlight, carbon dioxide and water to grow. Compared with salmon, which feed off smaller fish, which in turn feed off algae, seaweed is a less energy-intensive source of nutrition. Plus, unlike the little fish needed to fatten our salmon, or indeed the feed required by a cow, all the ingredients needed to sustain algae are in abundant, free supply in the ocean. All except for sunlight. Many species of algae grow naturally in the shallows, where they can get enough light for photosynthesis. For hundreds of years, the seaweed has then been harvested by hand on the shoreline at low tide.

Globally, the farming of algae is the fastest-growing food production industry in our oceans. Its crop is valued at around $5bn and largely sold and consumed in Asia.

But it could also have a real and positive impact on climate change. In 2012, research led by Antoine De Ramon N'Yeurt at the University of the South Pacific suggested that converting 9 per cent of the world's oceans into seaweed farms would capture 19 gigatonnes of CO2 a year (by way of context, humanity's net emissions have been estimated at about 37 gigatonnes).

That would help to redress the acidification of waters associated with climate change, which would in turn improve conditions for shellfish.

...for seaweed to have a significant impact on global food shortages, we would need to produce far more than we currently do, even on China's giant farms.

Seaweed Article 3

https://www.globalcitizen.org/fr/content/can-eating-seaweed-stop-climate-change/

Seaweed can be farmed in columns that stretch to the seafloor, creating what one farmer calls a 3-dimensional farm. Seaweed is also very resilient — its rubbery structure allows it to move with waves.

Plus, it grows incredibly fast, as much as 18 percent a day.

All of this means it's a good crop to grow in a world with more people and increasingly volatile weather.

Currently, humanity gets 2 percent of its food from the oceans. This is because the oceans are both underused (example: seaweed) and overexploited (example: Tuna and Swordfish).

All the world's current agricultural output could be done in 1 percent of the ocean's surface area. To put that into perspective: humanity allocates about 40 percent of all land mass and 75 percent of all fresh water to agriculture.

So if the world shifted to sea farming, land and freshwater sources could be rehabilitated and better conserved.

Columns of seaweed also act as sanctuaries. Many sea creatures are harmed by industrial runoff such as phosphorous, nitrogen and other pollutants as well as the acidification caused by the water's absorption of excess carbon.

Seaweed can absorb these substances, purifying the water and allowing life — from the bottom to the top of the food chain — to thrive.

It has a negative carbon footprint. Negative. This property could go a long way toward healing the oceans.

One ton of dried kelp can contain up to a third of a ton of carbon, according to

research.

While seaweed will never be able to absorb all the excess carbon that makes its way into the oceans, it can become an essential part of climate efforts.

Plus this shift to seaweed could have a big effect on economies around the world. Nothing happens in a vacuum. If the food industry shifted to sustainable farming of the ocean, then you can bet that reforestation, an end to harmful industrial agriculture and other eco-friendly moves would follow.

Some scientists, according to Goodyear's research, predict the oceans could be fishless by 2050 due to changing waters, plastic and overexploitation.

This doesn't have to happen.

If developing an appetite for seaweed is all it takes to avoid this, then that's a pretty small price to pay. I'll be heading to Whole Foods after work. Hope to see you there.

Seaweed Article 4

https://www.nationalgeographic.com/magazine/2017/11/explore-sustainability-kelp-farming-seaweed/

NAME THE LAST place where you saw seaweed on the menu, not including a Japanese restaurant. Drawing a blank? That may be because, outside of Japan and other parts of Asia, seaweed's unique flavor and mouthfeel have not been widely embraced.

These marine plants and algae are sometimes called "sea vegetables"—but there are reasons beyond gastronomy to appreciate them. Kelp, in particular, has the potential to greatly reduce ocean acidification. Naturally occurring in cold, coastal marine waters, kelp grows quickly without the need for fertilizer, and it takes up carbon dioxide—which can exacerbate climate change—as well as excess nitrogen and phosphorus. The problem, though, is that there's not enough of it.

Enter kelp farming. China currently leads the industry, having produced more than seven million metric tons in 2015, says University of British Columbia marine ecologist Muhammed Oyinlola. Kelp farms have also been in operation for centuries in Japan and Korea.

If seaweed farming expands, Oyinlola says, it "could remove billions of metric tons of carbon dioxide from the atmosphere." And more kelp aquaculture could yield more biodiversity: In California alone, researchers have found that wild kelp "forests" can shelter more than 800 species of marine life.

Kelp and other algae are high in minerals and fiber and have gelling properties. Those traits have led to their use in cosmetic products and vitamins and as feed for farmed fish and livestock. Meanwhile, look for them as a fresh, sustainable food on ever more plates.

Seaweed Article 5
https://www.naturalnews.com/2018-06-24-8-health-benefits-eat-seaweed.html#

Dubbed “the most nutritious vegetable in the world” by British celebrity chef and restaurateur Jamie Oliver, seaweed has quickly gained mainstream attention as the “health food” of the year, with its high nutritional value. It’s even said to be a major factor in the long life expectancy of Japanese people.

Seaweeds are classified according to their pigments, cell structure, and other traits. The groups of seaweed that are commonly consumed include: Blue-green algae – spirulina and chlorella

- Brown algae – kombu, arame, kelp, and wakame (the miso soup seaweed)
- Green algae – sea lettuce or ulva, and sea grapes
- Red algae – dulse, laver, and nori (the sushi seaweed)

Below are some of the numerous health benefits you can get from eating seaweed. See if this list can convince you to add more seaweed to your diet:

- Seaweed is packed with nutrients – Vegetables are generally good sources of a variety of nutrients, but seaweeds are especially potent sources of vitamin B12, which is needed for healthy blood and nerve tissue. Seaweeds like arame and wakame are great sources of calcium, folate and magnesium, while purple laver is especially rich in B vitamins.
- Seaweed is rich in iodine, but watch your intake – Seaweeds like kombu are a valuable source of iodine, which is needed for regulating metabolism and ensuring normal thyroid function. But before you stuff yourself with seaweed, it is important to note that too much iodine can cause thyroid problems. Those with existing thyroid disease (or those predisposed to it) should monitor their iodine intake. It is advisable to limit your consumption of seaweed to one to two tablespoons, two to three times per week.
- Seaweed aids in weight loss – Seaweeds like sea kelp contain alginate, which can help suppress the digestion of fat in the gut. Research found that it is possible to prevent obesity through alginates that can block the fat digesting enzymes. Likewise, there is a pigment in kombu called fucoxanthin, which is

a carotenoid that may boost production of a protein involved in fat metabolism, which can assist in weight loss.

- Seaweed supports bone tissue – Seaweeds, especially the dark green ones, contain high levels of calcium. Moreover, seaweeds contain magnesium, another mineral that supports bone health.
- Seaweed promotes heart health – Marine algae contain peptides that effectively lower blood pressure, which is a great way to combat heart disease.
- Seaweed balances blood sugar – Adding seaweed to meals can reduce blood sugar spikes and help us feel fuller for longer. Research found that alginate in brown seaweed like arame can strengthen gut mucus and slow down the digestion of carbohydrates. Similarly, previous studies found that alginate can reduce cholesterol and glucose uptake in obese participants.
- Detoxify with seaweed – Certain seaweeds like arame and hijiki have plenty of soluble fiber, which promotes detoxification. It cleanses our gut of toxins such as those found in pollutants like cigarette smoke.
- Seaweed improves skin condition – Red seaweed is a great source of omega-3 fatty acids, which help reduce inflammation. This, in turn, reduces the risk of acne breakouts and other skin problems, leading to smoother, younger-looking skin. Winter is a great time to eat foods rich in omega-3s to help counter the skin-drying effects of central heating.
- Add seaweed into your diet by sprinkling dried or fresh pieces into salads or soups; swapping potato chips for seaweed versions; adding shredded seaweed strips in stir-fries; and using seaweed flakes instead of salt for flavoring. You can also try making your own sushi by rolling vegetables and rice in dried nori sheets; or adding seaweed when cooking beans to make them more digestible.

Seaweed Article 6

https://www.webmd.com/food-recipes/features/why-is-seaweed-good-for-me#2

What It Is

The generic term "seaweed" is used for a bunch of sea vegetables that are classified by their color, shape, taste and texture. In the States, the edible preparations we most commonly see are nori, hijiki, wakame, arame and kombu, which made their way here from Japan. Eat up -- there's good reason to munch on this seaworthy stuff.

The Dirty Deets

With seaweed nutrition, we're not limited to the comfortable ground of carbs, fiber, fat and protein. We get to plunge deep with this one. Two tablespoons of seaweed has no calories. There's no fat, no protein and only a couple grams of carbohydrates. How can something with so much nothing be good for you?

Almost all of the minerals found in the ocean are found in seaweed. The mineral profile in seaweed is one of the most diverse you can find. Minerals are essential to our well-being, and sprinkling a few flakes of seaweed on your food can really help you get 'em in.

Research shows that chomping on seaweed is an effective tool for preventing breast cancer and lowering PMS symptoms. It has anti-inflammatory properties to fight arthritis, celiac disease, asthma and obesity, and it is also a rich source of antioxidants. Most of us have a family history of at least one of these issues, so give sea veggies a chance.

Think you can eat seaweed by the fistful? Think again. The high concentration of the mineral iodine can be damaging to your thyroid. Before you give yourself free rein, remember to use in moderation. It is, after all, possible to have too much of a good thing.

How To Chow Down

Seaweed is a versatile ingredient. You can warm to the idea of adding it to your food by sneaking it into a soup or using it as an additive if having it as a feature of your dish is just too daunting. What I mean is, there's room for seaweed in your

burger if the thought of eating a seaweed-rich salad gives you the willies. Here are some tricks to try.

If you're looking to ditch the salt shaker and add a ton of flavor, try seaweed flakes. A little shaker of seaweed and sesame seeds, this magical seasoning is perfect on top of rice, stirred into soups or used as an ingredient in savory baking. A little shimmy-shake over your grilled or broiled fish really brings out the flavor. Not just for sushi, you'll find sheets of nori seaweed at regular markets, Asian food stores and health food stores. Use these as little wrappers for rice, fish or veggies; make a hand roll by placing your filling on one side of the sheet of nori and rolling it into a cone. I like to wrap turkey in a sheet of nori as a fast, mineral-loaded "wrap." You can also make a nori omelet. Line a tortilla with a piece of nori before filling it with your fixins, or cut it into your miso or noodle soup for kicks and giggles. Seaweed salad is a Japanese staple and will likely be a welcome alternative to your usual method of eating greens. The texture is substantial, and it's a great vehicle for all of your favorite Japanese flavors, including ginger, soy, sesame and green onions. There is amazing flavor in this seemingly simple bowl of greens!