

Seaweed power

Seaweed has great value in providing low-cost, wholesome nutrition and therapeutic protection

Almost everywhere in the world, from ancient times, people have been consuming marine algae. The Chinese, the Japanese, the Filipinos and the Hawaiians consider seaweed a food of great delicacy and have been using it in their diets for centuries. Archaeological research has shown that the Japanese have been eating seaweed for more than 10,000 years. In Japan and in parts of Southeast Asia, seaweed is consumed raw, with salads or with cooked vegetables. The Japanese refer to seaweed as 'sea vegetables'.

In the countries around the Atlantic Ocean too, people have been eating seaweed for hundreds of years, and, since 1800, a seaweed industry has prospered here. Scientists and industrialists are constantly developing new uses for seaweed—in the food industry, in chemistry, pharmacology, cosmetology and agriculture, in the paper and textile industry, in the film industry and in several other areas, even in metallurgy.

Seaweed has plenty of essential nutrients, especially trace elements and several other bioactive substances. That is why today seaweed is considered as the food supplement for the 21st century, containing proteins, lipids, polysaccharides, minerals, trace elements, vitamins, and enzymes.

Seaweed contains between 7 and 36 per cent of proteins by dry weight. The amino acids they contain are very similar to those of vegetables, but they are more complete, comparable to those found in eggs. Almost all edible varieties of seaweed contain the amino acids that humans need.

The proteins found in seaweed are of very high quality and have all the essential and

non-essential amino acids. The lipids, which are present in very small amounts, are unsaturated and thus afford protection against cardiovascular pathologies. The polysaccharides (with alginic acids) have exceptional properties. The high quantities of glucides in algae are mucilaginous and, with the cellulose that they also contain, they have a positive effect on digestive pathologies. As these polysaccharides are not assimilated, even diabetic patients may consume seaweed.

Seaweed has a very high content of minerals and trace elements. It is a perfect source of calcium, phosphorus, iron, sodium, potassium, magnesium, sulphur, copper, zinc, cobalt and iodine. The content of calcium in seaweed is not only up to 10 times higher than that in cow's milk but is also much easier for the body to assimilate. Pregnant and lactating women, as well as malnourished children, should thus consume some seaweed daily to ensure that they get enough of the element that is found in the greatest quantity in our bodies.

More than one million people are exposed to goitre and related diseases, mainly in developing countries. Through iodine deficiency alone, nearly 20 million youth suffer severe mental and thyroid problems. Most algae and seaweed contain more iodine than sea water and are a much better alternative than iodised salt or drugs in regulating the production of thyroid hormone. Seaweed also strengthens the immune system and help maintain psycho-emotional equilibrium by increasing physical resistance to stress.

Vitamins aplenty

Seaweed has abundant vitamins, including betacarotene, which is the precursor of vitamin A, the vitamins of the B group, including B12, vitamin C, D, E

and K. The very high levels of enzyme activity in seaweed help the assimilation of all these vital elements.

Seaweed is very rich in betacarotene and may contain up to 44,500 IU (international units) per 100 g. Normally, high doses of vitamin A may be toxic, but the betacarotene found in vegetables, spirullina and seaweed is totally safe, because the human body converts betacarotene into vitamin A only as needed. Vitamin C is also an important factor in seaweed. Sea lettuce (*ulva lactuca*), for instance, contains much more vitamin C than oranges.

The most astonishing quality of seaweed is its ability to purge the body of pollutants. Watanabe, a Japanese scientist, discovered in 1968 that certain algae may overcome the toxic effects of nicotine.

Dr Slorvna of McGill University, Canada, discovered that seaweed protects us from X-rays and even reduce radioactive heavy-metal contamination. Not only does it prevent absorption but also helps evacuate toxins, including strontium and other radioactive elements that were already stored in the body.

In places where people suffer from a deficiency of minerals and vitamins, the consumption of seaweed seems to be one of the most natural solutions to these nutritional deficiencies. Thus, low-income developing countries ought to propagate the use of seaweed. But this does not seem to be happening.


Consider the case of India. There is plenty of edible seaweed along the coasts of India and Sri Lanka. But the people of these countries are not yet familiar with using seaweed as a food supplement. Only sporadically is awareness imparted of the importance of including seaweed in the daily diet.

In India, where thousands of the population live along the coastal zone, people should use seaweed as one of the vital sources of good nutrition. Since it can be easily dried and preserves well, seaweed can be easily transported inland to places where people suffer from thyroid problems due to lack of iodine

(goitre). In Kanyakumari District of the Indian State of Tamil Nadu, where we have started awareness programmes on the value of seaweed, some fishermen collect sea lettuce, which is dried and powdered at the Community Health Development Programme (CHDP) centre. People use it as a food supplement or as a medicine, mainly for goitre-related problems. They report very good results, without any side-effects, unlike the case with most allopathic drugs.

Japan, China, Korea, Taiwan, Philippines and Indonesia have successfully produced a few hundred thousand tonnes of seaweed a year. There is no reason why India should not follow suit. India boasts a wide variety of seaweed along its coasts, mainly in the Gulf of Mannar, as well as around its several hundred islands. The huge stretches of coastal marshy lands and bays are natural centres for seaweed cultivation, which could open new possibilities of combating malnutrition, poverty and unemployment.

In the Philippines, more than 10,000 families earn their living through seaweed cultivation. The government has encouraged the private sector to invest in seaweed cultivation. It would be good if the Indian government took similar steps to encourage local communities with subsidies and appropriate technologies, through demonstration and training programmes.

One reason why India has not, so far, given importance to seaweed cultivation could be the absence of experienced cultivators. Philippines and Indonesia have skilled cultivators, whose services could be made available to Indian cultivators through training programmes and demonstrations. India's Ministry of Agriculture could be requested to assist such projects. 

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