

BNJ Supplement

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Sea sense

OCEANS OF

GOODNESS

FROM

SEAGREENS

*By Simon Ranger, Managing
Director of SEAGREENS®*

SEAGREENS is the name given to a nutritious brown seaweed, that grows wild in the Arctic and is certified for use in organic and biodynamic foods. Through an Anglo-Norwegian joint venture, the wild Arctic Wrack seaweed is sustainably harvested and produced to Demeter and Soil Association standards among the remote Lofoten islands off the Lapland coast of Norway.

Seagreens has an important nutritional profile as it contains all the essential nutrients, and fills micronutrient gaps in land grown foods caused by deficiencies in the soil or other growing medium. To obtain such a breadth and balance of nutrients would otherwise require an uncommon daily intake of a variety of foods.

The foundation of health

Seagreens can be described as 'foundational foods' because although the amount included in the daily diet is insufficient to live on by itself, it nevertheless ensures that small amounts of all the nutrients are present in the body continuously. This daily balance is exactly what is needed to help the body make best use of other foods eaten during the day – and to help protect it from some that shouldn't be.

Seagreens can redress many of the causes of ill health, starting with the digestive, immune and nutrient distribution systems, engendering the renewed vitality we need to heal ourselves.

Digestion, immunity and cellular performance

The micronutrients in Seagreens aid food metabolism and can make nutrients more bioavailable. Deficiencies of a known nutrient – for example iron or iodine – may best be remedied not by administering the isolated nutrient, but by ensuring the presence of other nutrients needed for the absorption and metabolism of the 'deficient' nutrient from food.

Wild Arctic wrack contains a range of polysaccharides known to assist the survival of beneficial intestinal bacteria and to improve the condition of the gut wall^{2, 3}. There is also good scientific evidence for their immune enhancing, anti-viral and anti-microbial properties^{4, 5}. In addition, this type of seaweed is considered to have exceptional value in the natural treatment of candidiasis^{2, 6}.

As a rich source of all the minerals, Seagreens helps to regulate the cellular nutrients and, because the seaweed is highly alkalising – some 75 times more so than apples⁷ – it helps to maintain blood pH balance⁸. It contains all the antioxidant vitamins and minerals which cleanse free radicals, and blood-thinning agents with a mode of action similar to heparin.

It has been used to produce clinical remission in inflammatory bowel disease, and to address blood pressure and other cardiovascular disorders^{9, 5, 10-12}. It has been shown to remineralise the blood; to improve carbohydrate, protein and fat metabolism²; to lower cholesterol and to suppress the re-absorption of cholesterol in the liver and intestine¹³.

The polysaccharides in the seaweed reduce high blood sugar and triglyceride levels, activate enzymes which help reduce hyperlipidemia, inhibit smooth muscle cell proliferation in arteriosclerosis, and help prevent hypertension¹⁴⁻¹⁷.

The combined benefits to metabolism, blood and circulation may be responsible for the results of weight regulation trials at the University of Pavia, Italy (*The Times*, Nov. 1999), in which



Seagreens grows wild among remote Arctic islands

80 per cent of female subjects, after eight weeks on wrack seaweed, increased blood flow to the skin by as much as 45 per cent and reduced subcutaneous fat by up to 30 per cent.

These modes of action help explain why many people who take Seagreens report having better skin condition, more consistent energy and stay healthier for longer periods.

A naturopathic practitioner described its "composite ability to address illness states, while providing a rich nutritional resource and blood/lymphatic fluid detoxification", as "a gift and is exactly what is required"¹⁸.

Detoxing

There is evidence to show that wrack seaweed effectively binds and removes heavy metals, including lead, mercury, barium, cadmium, and radium, from the body^{19, 20}. Again this involves the combined action of polysaccharides, amino acids and minerals. The polysaccharides, which are about 25 per cent of the seaweed, again reveal their special value. In trials they inhibited almost 90 per cent of the body's absorption of radioactive strontium, removed it from the gut by converting it to an excretable insoluble salt, and from body tissue and bone where it had already passed through the gut^{21, 22}.

The late Dr Jack Levenson LDS, RCS(Edin.) was Dental Adviser to the Environmental Medicine Foundation and founding President of the British Society for Mercury-Free Dentistry. For many years, he included seaweed in the form of kelp as a minor component of a broader protocol for detoxification in mercury amalgam extraction, together with drugs, antioxidants, other nutrients and chelators²³.

Favouring more gentle, natural chelation and elimination, preferably through the bowel, he began using Seagreens in capsule form with favourable results, eventually using only small amounts of nutritional supplements and other natural mobilisers or chelators for a short while during treatment.

Even severe cases responded well and often tolerated Seagreens where adverse reactions to drugs and other natural binding agents, like Chlorella, were common.

He found that gradual detoxification with Seagreens, sometimes up to 24 months, avoided the frequent side effects of harsher

conventional protocols. This was not possible with a less balanced seaweed like common kelp where excessive iodine prohibits prolonged daily use at really significant levels.

A feature in *The Times*, Body & Soul page on October 20, reported a case study from Dr Gareth Rhidian BDS (Lond), LFHom (Dent), a leading amalgam-free dentist in which the patient was given two grams of Seagreens a day for six months with excellent results⁵⁴.

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Detoxification is frequently 'sold' to consumers as a periodic necessity involving harsh regimes often detrimental to the very homeostasis the body works ceaselessly to achieve and maintain. The continuous dietary inclusion of Seagreens may prove for many, a more pleasant way to achieve the desired results. Seagreens capsules were nominated one of the two "best detox aids on the High Street" by *The Guardian's* natural remedy guru in May, 2005²⁵.

Nutrition in preventive care and cancer management

The extent to which seaweed may be a beneficial input in a range of treatments is revealed by the wide spectrum of research, leading one author to state that "modern science confirms seaweed as one of Nature's all-round pharmaceutical miracles that can accomplish everything from warding off and treating several types of cancer, lowering blood cholesterol and blood pressure, thinning the blood, preventing ulcers, and killing bacteria, even curing constipation"⁵⁵.

Trials in the early 1990s at the Russian National Centre for Preventive Medicine demonstrated a 29.5 per cent decrease in the incidence of bronchitis and other respiratory conditions among subjects fed powdered wild wrack seaweed, against a 3.6 per cent increase in the control group²⁶.

A significant benefit of a natural whole food multivitamin is the virtual absence of any contra-indication in conjunction with any natural remedies or drugs. Medications like diuretics, some of which cause potassium loss, can be countered by the use of Seagreens in which potassium is present at about 25mg per gram.

Seagreens may therefore be an appropriate adjunct to many kinds of treatment and convalescence. For example, it might be used before, during and after chemotherapy and radiation therapy, for its natural chelating ability. Japanese research in the 1960s showed that wrack seaweed inhibits the body's absorption of radioactive strontium and cadmium by up to

seven-eighths of the dose received, and it removed Strontium 90 that had already been absorbed through the gut wall and deposited in tissues and bone¹.

Polysaccharides in wrack seaweed have been shown to cause destruction of cancer cells by interrupting the progress of their DNA and preventing their adhesion to healthy cells²⁷⁻³⁰. This is reminiscent of the way wild wrack seaweed has been described as preventing the adhesion to the gut wall of the ulcer-forming bacteria *Helicobacter pylori*³¹.

The research covers brain tumour³², breast cancer^{33, 34}, intestinal cancer³⁵, leukaemia^{36, 37}, lung cancer^{36, 38-42} and throat cancer⁴³. Although dietary soya is thought to contribute to the low incidence of cancer in Japan, some references now attribute this to dietary seaweed which "has shown consistent anti-tumour activity"⁴⁴.

Obesity

Obesity is a sign that the body is in metabolic crisis. The nutritional composition of the seaweed with its known effects on metabolic disorder and its comprehensive array of amino acids, minerals and trace elements, presents practitioners with an ideal natural resource. As whole nations put on weight, the links between diet, digestion, circulation and obesity are clearer than ever. Many factors including loss of nutrients in food and soil, a concomitant increase of fats, sugars, modified starches and other artificial inputs to food and livestock, sedentary consumerist lifestyle and several generations for whom responsibility for health has shifted from individual to 'welfare' state, are coming home to roost in a pandemic in which more than half of British school-aged children are expected to be obese by 2020⁴⁷.

The UK is rapidly developing the US statistics, where only three per cent of adults follow government guidelines for a healthy lifestyle⁴⁸. In the UK children are eating only half the recommended amount of fruit and vegetables and more than the maximum amount of fat, salt and sugar prescribed for

adults⁴⁹. Between 1940 and 1991, farmed meat lost 41 per cent of its calcium and 54 per cent of its iron, while vegetables lost an average 50 per cent calcium, 25 per cent iron and magnesium, 76 per cent copper and 59 per cent zinc⁵⁰. To illustrate the kind of problem this presents, the body requires magnesium for 300 different daily enzyme reactions, and zinc for 200.

For these micronutrients alone, there is no better natural source than Seagreens. It is salutary to recall that the benefits of many micronutrients, including those of over half the currently known trace elements, were unrecognised until the 1970s⁵¹. Over the same post-war period the saturated fat content of beef and chicken has risen by more than 400 per cent, while essential omega-3 fats critical to the nervous, immune, cardiovascular, respiratory, digestive and eliminatory systems have declined in the same proportion⁵².

A source of nutrients for many special diets

Many dietary nutrients which have to be avoided because of allergy, intolerance, various health conditions or mere preference, can be obtained from seaweed without problems arising from their normal food source. Seagreens are approved by the British Vegan Society and the British Coeliac Society.

Meat and dairy alternatives.

The full amino acid content of meat protein, and the entire B vitamin group also obtained from meat or dairy products, are present in Seagreens, including fully bioavailable vitamin B₁₂. The B₁₂ in wild wrack seaweed is the predominant cobalamide and an absorbable source for mammals⁴⁵.

Seagreens provide an alternative source of iron (575µg per gram), vitamin E with all its isomers, normally found only in seed oils like wheatgerm (230µg/g), calcium (20mg/g), magnesium (7000µg/g), and a range of other nutrients. But it is likely that it is the relationship between the nutrients, rather than the amounts which are present that may be of greatest value to the body.

Typical nutritional profile of Seagreens

Summarised typical nutritional profile of one gram as Seagreens Food Capsules and Food Granules: Protein 75mg. Carbohydrate fibre 600mg (of which non-starch polysaccharides Algin, Fucose, Fucoidan, Mannitol, Methylpentosans, Laminarin, Mannuronic acid 270mg) and essential fatty acids.

Vitamins: A (antioxidant carotenoids beta carotene, and fucoxanthin, violaxanthin and chlorophyll) 178µg, B group including B₁₂ (Folic and Folinic acid, Thiamine, Riboflavin, Niacin, Pantothenic acid, Pyridoxin, Choline and Cobalamin) 8.9µg, C (antioxidant) 1.25mg, D (Cholecalciferol) 0.01µg, E (antioxidant) including the complete set of isomers 0.23mg, H (Biotin) 0.30µg and K (Menadione) 10µg.

Minerals: Calcium 20mg, Chlorine 35mg, Magnesium 7mg, Nitrogen 10.5mg, Phosphorus 1.5mg, Potassium 25mg, Sodium 35mg, Sulphur 30mg.

Trace elements include Antimony trace, Boron 0.06mg, Cobalt 5.4µg, Copper trace, Fluorine 0.2mg, Germanium trace, Gold trace, Iodine 442µg, Iridium, Iron 575µg, Lithium, Manganese 0.03mg, Molybdenum 0.65µg, Platinum, Rubidium, Selenium 0.15µg, Silicon 1mg, Silver, Tellurium, Titanium, Vanadium 2.3µg and Zinc 0.13mg.

Amino acids: Histidine, Isoleucine 0.53mg, Leucine 5.3mg, Lysine 2.78mg, Methionine 0.68mg, Phenylalanine 0.83mg, Threonine 2.33mg, Tryptophan, Valine 2.63mg, Alanine 4.57mg, Arginine 11.17mg, Aspartic acid 4.88mg, Cysteine 0.90mg, Glutamic acid 5.18mg, Glycine 3.90mg, Proline 3mg, Serine 2.25mg, Tyrosine 1.05mg. Trace betaines Glycine Betaine, Gamma Amino Butyric Acid Betaine, Delta Amino Valeric Acid Betaine, TML (Laminine), L-Carnitine trace, Trigonelline; enzymes and compounds.

Thyroid and hormonal disorders.

The 'brown' seaweeds are generally a rich source of iodine, but the endocrine system also needs a comprehensive balance of nutrients for its equilibrium.

Seagreens Food Capsules and Food Granules contain about 220µg iodine per 500mg, and a special Everyday 'Iodine' Capsule approximately 350µg per 500mg. In both cases the iodine is naturally chelated, attached to protein ions. None will interfere with thyroxine or suppressant drugs like Carbimazole or radiotherapy and in both hypo- and hyper- thyroidism, provide a sound nutritional basis for hormone regulation.

Salt reduction and replacement.

For those seeking to reduce or eliminate dietary salt, Seagreens Culinary Ingredient, and Salad & Condiment products provide healthy alternatives in which sodium (35mg/g) is balanced by potassium 25mg/g, calcium (20mg/g) magnesium (7mg/g) and all the mineral salts in proportions akin to their ideal ratio in plasma and cells.

In 1986 scientists found that when stroke-prone rats were overfed salt, only those fed wild wrack seaweed powder avoided strokes – the seaweed proved to be an antidote to excess sodium consumption⁴⁶.

Detoxification and weight control

Detoxification with Seagreens is best understood as a broad and continuous process rather than the often harsh but fashionable regimes advocated by lifestyle and media pundits. The benefits of a 'clean' system accrue over six months or longer and appear to deliver their peak at 18 months to two years, when there is no reason why they should not be sustained indefinitely.

Similarly, Seagreens appear to achieve weight regulation rather than merely weight loss, helping the body to return to and maintain its natural homeostasis or equilibrium.

Pregnancy, lactation and recuperation

Seagreens Food Capsules and Food Granules are suitable for use during pregnancy, and in recuperation after childbirth and throughout lactation, because their nutritional profile is well balanced across a mixture of different seaweed varieties (*Pelvetia canaliculata*, *Fucus spiralis* and *Ascophyllum nodosum*).

The capsules became a staple for the author of *The Organic Baby Book*. Her first child received the contents of a single capsule in infant feed from about the age six months⁵³. Also prior to conception, parents-to-be might have something to gain, since although unflattering the comparison may be, well documented improvements in milk quality and yield and the fertility of livestock have long been known to farmers.

No allergenic substances

There are no known allergenic substances in Seagreens and since their introduction in 1998 not a single case of intolerance or biological rejection has been reported.

References

This paper by Simon Ranger is supported by 54 references. To save journal space the references have been omitted, but are available on request to S. B. Ranger, Managing Director,

Conditions for which wild wrack seaweed may be useful

The usefulness of wild wrack seaweed to practitioners and consumers, where there is research or sound anecdotal evidence, is summarised as follows:

- arthritic and rheumatic conditions
- autistic spectrum disorders
- cancer and chemo or radiotherapy
- candidiasis
- carbohydrate metabolism
- cardiovascular problems
- convalescence
- detoxification of heavy metals
- whole body detoxification
- digestive disorders
- electrolyte imbalance
- fat and fatty acid metabolism
- fatigue syndrome disorders and ME
- herpes virus
- hyperlipidemia
- immune disorders
- inflammatory disorders
- mineral imbalance
- nutritional imbalance
- obesity
- pregnancy and in recuperation following childbirth
- protein metabolism
- respiratory infections and conditions
- skin condition, hair and nails
- thyroid disorders
- weight regulation

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The author: *Simon Ranger's passion for international business led him to form International Partnership®, an award-winning brand consultancy in 1983, which distinguished itself for Export Achievement. In 1997 he formed the Anglo-Scandinavian joint venture which now has three small businesses harvesting, manufacturing and distributing wild seaweed products for nutrition, healthcare and horticulture. In 1990 he set up Probono, an international not-for-profit organisation for business and human development – an offshoot of which are monthly public meetings which are announced on the website www.thepublicspace.com.*

This BNJ Supplement is sponsored by Seagreens®.

Further information is available in a Seagreens Summary for Healthcare Practitioners obtainable from 084506-40040, by email from post@seagreens.com, or at www.seagreens.com.