

This edition of **healthbites** is dedicated to look at giving the body a good boost with one of the renowned superfoods - Spirulina. While there is a lot of hype about all sorts of new superfoods, spirulina has stood the test of time and when used in balance has been shown to be beneficial to overall health. The second page takes a broader look at the benefits of blue/green algae which grows in the sea.

Don't forget our **littlebites** column for helpful hints and tips. Full articles can be supplied upon request if you would like to study further.

Spirulina - SuperFood

A name that is becoming more popular in the vocabulary of people looking to boost their health, Dr Gillian McKeith in her book, "You Are What You Eat" even goes so far to label it as one of five green super-foods and that Spirulina is the dieter's friend.¹ Just a brief browse on the internet will show she is not the only doctor and nutritionist that respects it as a super-food with great benefits.

Well, what is this amazing product and what makes it so special?

Scientifically, Spirulina is a cyanobacterium that can be consumed by humans and other animals and is made primarily from two species of cyanobacteria: *Arthrospira platensis* and *Arthrospira maxima*. It is cultivated worldwide; used as a dietary supplement as well as a whole food; and is available in tablet, flake and powder form. It is also used as a feed supplement in the aquaculture, aquarium and poultry industries.²

But in a more practical sense, Spirulina is a cultivated or farmed micro-algae, with one of the richest protein contents of all natural foods. It contains 60-70 percent complete protein containing all essential amino acids, although reduced amounts of methionine, cysteine and lysine when compared to the proteins in meat, eggs and milk. However, meat consists of only about 25 percent complete protein. It is thought Spirulina can help control blood sugar and cravings, so is a key food for dieters and can be used to assist weight loss and as a general nutritional foundation. It is superior to typical plant protein, such as that from legumes.^{1,2}

Historically, Spirulina was a food source for the Aztecs and other Incas up until the 16th century; it was harvested from the surrounding lakes for their own use and in trading for other goods.

Spirulina was found in abundance at Lake Texcoco, Mexico, by French researchers in the 1960's and this is where the first large-scale production plant was established in the early 1970's.

Any dangers of this 'super-food'? Toxicological studies of the effects of Spirulina consumption on humans and animals, including feeding as much as 800mg/kg, and replacing up to 60% of protein intake with Spirulina, have shown no toxic effects. Fertility, pre and post-natal, and multi-generational studies on animals also have found no adverse effects from Spirulina consumption. Spirulina intake has also been found to prevent damage caused by toxins affecting the heart, liver, kidneys, neurons, eyes, ovaries, DNA, and testicles. In a 2009 study, 550 malnourished children were fed up to 10 g/day of Spirulina powder, with no adverse effects. Dozens of human clinical studies have similarly shown no harmful effects to Spirulina supplementation.

The vitamin composition of blue-green algae, including Spirulina, is in perfect harmony and balance with human biochemistry for maximum utilisation. These algae are rich in B vitamins, especially B2, B6 and B12, essential for the production of red blood cells. The vitamin C composition in the algae helps the body to absorb the mineral iron



Quote of the Month

*Nothing
would be
more tiresome
than eating
and drinking
if God had not
made them a
pleasure as
well as a
necessity.*

—Voltaire

healthbites

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Autumn Leaves NZ Ltd
PO Box 654
Rangiora 7440
New Zealand



Ph 03 313 7762
health@autumnleaves.co.nz

www.lifestylematters.co.nz

little bites

Fighting the Blues with Greens

NutritionFacts.org, 27 March 2014

Frequent consumption of vegetables appears to cut one's odds of depression by more than half. It may be from a class of phytonutrients that cross the blood brain barrier into our heads. A recent review suggests that eating lots of fruits and vegetables "may present a noninvasive natural and inexpensive therapeutic means to support a healthy brain."

Trim Kids with High Cholesterol

HealthDay News, 28 March 2014

Obese kids were more likely to have abnormal cholesterol levels, but a pediatric cardiologist says that the reality is that 35 percent of kids who were not obese had abnormal cholesterol as well. Physicians and parents need to teach kids healthy habits, such as eating right and exercising regularly.

Religion, spirituality complement good health

ScienceDaily, 28 March 2014

Religion and spirituality have distinct but complementary influences on health, new research indicates. Religion helps regulate behavior and health habits, while spirituality regulates your emotions, how you feel.

Religious affiliation is associated with better health habits, such as lower smoking rates and reduced alcohol consumption. Spirituality, including meditation and private prayer, helps regulate emotions, which aids physiological effects such as blood pressure.

Plant Compounds May Assist Chemo

ScienceDaily, 27 March 2014

Researchers at Plant & Food Research have identified plant compounds present in carrots and parsley that may one day support more effective delivery of chemotherapy treatments.

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in our diet also.³ While some reports rate it highly for B12 content, some reports don't rate it so high. The American Dietetic Association and Dietitians of Canada in their position paper on vegetarian diets state that Spirulina cannot be counted on as a reliable source of active B12.²

So, with some doctors recommending this great food source as a super-food, is it really that good? Well science must think so, in fact it is such a good food that it is out of this world! In the late 1980s and early 1990s, both NASA and the European Space Agency proposed Spirulina as one of the primary foods to be cultivated during long-term space missions.² Surely that has to say something about the value of this humble algae.

1. Dr Gillian McKeith, *You Are What You Eat*, p 205. 2. Wikipedia.org. 3. *Living Food for Living Health* p 149

Blue-green Algae

Wild blue-green algae (*Spirulina flos aqua*), are non-flowering water plants.

They are unique in sharing characteristics not only with plants and animals, but also with bacteria. Like all plants, they perform photosynthesis, converting sunlight to chlorophyll, but far more efficiently than other plants. This gives them the edge over all other plants as the most chlorophyll-rich organism on earth. They have soft digestible cell walls which our bodies can use as food. This, along with other qualities makes this particular algae easy for our bodies to digest and absorb.



Toby Hudson

We can all ingest food no problem, but it is another thing to absorb it. We can all purchase the best food on and from the earth, prepare it in the best manner and eat it the very best way we can, but if we don't assimilate it, we will ultimately end up undernourished with our efforts wasted. To get the best out of our foods, we need to be functioning at premium performance.

Many nutrient deficiencies can be corrected and helped, especially mineral imbalance, through the regular use of wild blue-green algae of which Spirulina is one. Such algae have a greater than 90 percent assimilation rate. They are so biologically suited to the human digestive system, virtually all their nutrients are absorbed quickly and efficiently – even when the absorption system isn't working properly. They also help the digestive system to absorb nutrients from other foods as well.

— Dr Gillian McKeith, *Living Food for Health* p 147-149

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Recipe of the Month

Dosage of Spirulina

Because of no harmful effects unless taken in massive doses, intake can cover a wide range.

Build up slowly from small beginnings over a six week period.

Start with one quarter of a teaspoon a day and build to 2 teaspoons

With capsules or tablets, build up to six a day.

In general, one heaped teaspoon, or six tablets, will prove beneficial.

