

Spirulina A Novel Food

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ARTICLE ID: 060

Introduction:

‘Spirulina’ is a unicellular microalga which grows in fresh water or in salt water, as well as in brackish bodies of water. It grows best in a highly alkaline environment of pH 10-12. Spirulina are filamentous blue green algae that have gained popularity in the health food industry and increasingly as a protein and vitamin supplement to aquaculture diets. It has very high content of macro and micro nutrients, essential amino acids, proteins, lipids, vitamins, minerals and anti-oxidants. Spirulina is considered as a complete food supplement to fight against malnutrition deficiencies in developing



countries. Spirulina is deemed safe for human consumption as evident by its long history of food use and latest scientific finding. It has long been used as a dietary supplement by people living close to the alkaline lakes where it is naturally found. Among the various species of Spirulina, the blue green alga *Spirulina platensis* has drawn more attention because it shows an high nutritional content.

Nutritional profile:

Spirulina is the richest source of proteins. Spirulina is abundant in plant protein, which makes up 60 to 70% of its weight. Qualitatively, Spirulina provides complete proteins as it contains the full range of essential amino acids which is 47% of total protein weight. The vitamins naturally found in Spirulina are beta-carotene, B1, B2, B12, E. Its beta-carotene content is unusually high which is about 30 times higher than found in a carrot. Spirulina is

also exceptionally rich in vitamin B12 cobalamin. This vitamin is, most difficult to get from a vegetarian diet. Spirulina has four times as much vitamin B12 than raw liver, which was considered to be the best source of this nutrient. Spirulina is also recognized as an excellent source of vitamin E comparable to those found in wheat gram. The primary antioxidant vitamins contained in Spirulina are beta-carotene, carotenoids, and vitamin E. Spirulina contains mineral such as iron, magnesium, calcium, and phosphorus.

Health benefits of Spirulina.

- ✓ Prevents diabetes and Aids in reducing stress.
- ✓ Prevents depression and Improves memory and mental clarity.
- ✓ Concentrated impressive nutrients to weight loss.
- ✓ Stimulates immune system to destroy invading disease organisms and carcinogens.
- ✓ Enhance the immune system with its antiviral, anti-tumor and interferon inducing effects.
- ✓ Promotes tissue repair in wounds and burns and also has the anti-infectious properties.
- ✓ Decreases cholesterol levels and helps to lower the risk of cardiovascular disease.
- ✓ Functions as an anti-inflammatory agent and Reduce the inflammation characteristic of arthritis.
- ✓ Govern the appetite and helps to stimulate the metabolism.



Conclusions

Spirulina is highly nutritious and shows great diversity and higher concentrations of nutrients compared to other food sources. In fact, it is among the most nutritious, concentrated whole food sources found in nature, contributing to its being known as a super



food. Spirulina also exhibit properties like Immune system modulation; anti-viral activity; cancer preventive properties and cardiovascular benefits.

