

## **Reduces effects of radiation by Spirulina**

Years after the Chernobyl disaster, four million people in Ukraine and Belarus live in dangerously radioactive areas. The water, soil and food over an 11,000 square mile area is contaminated. Over 160,000 children are victims of radiation poisoning, with birth defects, leukemia, cancer, thyroid disease, anemia, loss of vision and appetite and depressed immune system, now called "Chernobyl AIDS." Doctors reported spirulina's health benefits for child victims of Chernobyl radiation. Spirulina reduced urine radioactivity levels by 50% in only 20 days. This result was achieved by giving 5 grams a day to children at the Minsk, Belarus Institute of Radiation Medicine. The Institute program treated 100 children every 20 days. [1] In a 1991 study of 49 kindergarten children aged 3 to 7 years old in Beryozova, spirulina was given to 49 children for 45 days. Doctors found T-cell suppressors and beneficial hormones rose, and in 83% of the children, radioactivity of the urine decreased. [1]

A comprehensive evaluation was done in 162 patients-liquidators of the Chernobyl accident. Of these, 80 percent were diagnosed as having stage I and II dyscirculatory encephalopathy (DE), 20 percent were in stage III. It is shown that DE progression is caused by great strain on and breakdown of auto-regulatory mechanisms of different biological systems (vascular, central nervous and vegetative, hormonal), and of central regulatory mechanisms as well. Under certain conditions there may occur their breakdown, with syncopal states, crises, and even insults developing in its wake. Treatment and rehabilitation of DE liquidators with pyracetam, vinpocetine, cerebrolysine with magne B6, and phytosorbents (spirulina, quercitrol, and vitapeptine) lead to reconditioning of central and autoregulatory compensatory-and-adaptive mechanisms, long-lasting remission, provide complication prophylaxis and promote work activity. [2]

An unpublished 1993 report confirmed 1990-91 research, concluding "spirulina decreases radiation dose load received from food contaminated with radionuclides, Cesium-137 and Strontium-90. It is favorable for normalizing the adaptive potential of children's bodies in conditions of long-lived low dose radiation." [3]

Based on testing in 1990, the Belarus Ministry of Health concluded spirulina promotes the evacuation of radionuclides from the human body. No side

effects were registered. The Ministry considered this food was advisable for the treatment of people subject to radiation effects, and requested additional donations from the Earthrise Company of California and Dainippon Ink & Chemicals of Japan. [4]

Previous research in China in 1989 demonstrated a natural polysaccharide extract of spirulina had a protective effect against gamma radiation in mice. [5]

A Russian patent was awarded in 1994 for the use of spirulina as a medical food to reduce allergic reactions from radiation sickness. The patent was based on a study of 270 children living in highly radioactive areas. They had chronic radiation sickness and elevated levels of Immunoglobulin (IgE), a marker for high allergy sensitivity. Thirty five were prescribed 20 tablets per day (about 5 grams) for 45 days. Consuming spirulina lowered the levels of IgE in the blood, which in turn, normalized allergic sensitivities in the body. [6]

Research continuing through 1999 in Belarus showed immune building, normalization of peroxide lipid oxidation and detoxifying effects of spirulina supplements in children and teenagers. Scientists theorized spirulina may form non-absorbable complexes of radionucleides through analogues such as calcium or potassium and promotes their excretion. [7]

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