

CANCARE

→Cancare is a revolutionary supplement that combines the benefits of Spirulina, Wheat grass, Barley grass, Oats grass, and Alfalfa.

Spirulina

Spirulina is a genus of the phylum *Cyanobacteria*. *Cyanobacteria* are classified as either blue-green algae or as blue-green bacteria. **Spirulina** is a popular food supplement in Asia and is marketed as a nutritional supplement in the United States. Spirulina, wheat grass, barley grass and chlorella are sometimes referred to as “green foods.” There are several species of spirulina. The ones most commonly used in nutritional supplements are *Spirulina platensis* (also called *Arthrospira platensis*) and *Spirulina maxima*.

Spirulina used for the production of nutritional supplements is either grown in outdoor tanks or harvested from lakes in as Mexico, Central and South America, and Africa.

Spirulina is a rich source of protein. It also contains chlorophyll, carotenoids, minerals, gamma-linolenic acid (GLA) and some unique pigments. These pigments, called phycobilins, include phycocyanin and allophycocyanin. The pigments give spirulina their bluish tinge. Phycobilins are similar in structure to bile pigments such as bilirubin. In the spirulina cell, phycobilins are attached to proteins; the phycobilin-protein complex is called phycobiliprotein.

Spirulina has putative antiviral, hypocholesterolemic, antioxidant, hepatoprotective, anti-allergic and immune-modulatory activities.

A sulfated polysaccharide called calcium spirulan isolated from *Spirulina platensis* (*Arthrospira platensis*) was found to inhibit a number of membraned viruses.

The viruses inhibited by the polysaccharide included herpes simplex virus 1 (HSV-1), cytomegalovirus, measles virus, mumps virus and HIV-1. Calcium spirulan appears to

inhibit the penetration of these viruses into host cells. These studies were performed *in vitro*.

The spirulina pigment phycocyanin has demonstrated antioxidant activity. It scavenges peroxy radicals.

Phycocyanin has been found to protect against hepatotoxins in rats. The mechanism may be via its antioxidant activity. An extract of *Spirulina maxima* also protected against carbon tetrachloride hepatotoxicity in rats. The phycocyanin contained in the extract, as well as other antioxidants, probably account for the hepatoprotective effect.

Mast-cell mediated immediate-type allergic reactions were found to be inhibited in rats by spirulina. It is speculated that there are substances in spirulina that may inhibit mast-cell degranulation, possibly by affecting the mast-cell membrane.

Spirulina platensis extracts have been demonstrated to enhance macrophage function in cats and to enhance humoral and cell-mediated immune functions in chickens.

The pharmacokinetics of spirulina in humans have not been studied. However, the proteins, lipids and carbohydrates in spirulina should be digested, absorbed and metabolized by normal physiological processes.

Spirulina has shown some indication of having antiviral effects in preliminary *in vitro* and animal studies. There is also evidence of a preliminary nature that it might favorably affect some immune functions and have some hepatoprotective capability. It has shown some promise of inhibiting some allergic reactions in recent experimental studies. Hypocholesterolemic effects have been reported in some animal studies.

An extract of spirulina inhibited *in vitro* replication of HSV-1 simplex virus type 1. It also significantly prolonged survival time of HSV-1-infected hamsters. It seemed to act, not through direct virucidal effects, but rather through inhibition of viral penetration into cells. Subsequently, further experiments demonstrated that spirulina extract significantly inhibited *in vitro* replication of several enveloped viruses, including human cytomegalovirus, measles virus, mumps virus, influenza A virus and HIV-1. Again, the mechanism of action was said to be selective inhibition of viral penetration into host cells.

More recent still, other researchers have focused specifically on the ability of a spirulina extract to inhibit HIV-1 replication in human T-cell lines, peripheral blood mononuclear cells(PBMC) and Langerhans cells(LC). The researchers stated: "We conclude that

aqueous *A. platensis* extracts contain antiretroviral activity that may be of potential clinical interest.”

Spirulina and some of its constituents have shown an ability to favorably affect various immune functions. In one animal experiment, it boosted phagocytic activity and increased natural killer (NK) cell activity two-fold, compared with controls.

Spirulina has significantly inhibited chemically induced anaphylactic shock and serum histamine levels in rats, leading to the conclusion that spirulina may inhibit mast-cell degranulation. In another animal experiment, spirulina significantly inhibited local allergic reactions induced by anti-dinitrophenyl (DNP) IgE. It demonstrated, more specifically, a significant inhibitory effect on anti-DNP IgE - induced tumor necrosis factor-alpha production, leading the researchers to conclude that spirulina inhibits mast-cell mediated immediate-type allergic reactions both *in vitro* and *in vivo*.

Finally, a constituent of spirulina, administered intraperitoneally, significantly reduced the hepatotoxicity of a carbon tetrachloride challenge. A more recent study confirmed this finding.

Alfalfa

Alfalfa has been used for centuries by people world-wide for overall support and rejuvenation. Because of its deep root system, alfalfa is a rich source of all minerals, nutrients and vitamins.

Good for acid stomach, alcoholism(nutrition support), allergies, anemia, appetite stimulant, arthritis, cancer, cholesterol, diabetes(lower sugar),gout, high blood pressure, jaundice, kidney cleanser, improving lactation, radiation damage, ulcers, urinary tract problems, vitamin and mineral deficiency.

Used as a bitter digestive remedy, general tonic, antipyretic, alternative, for acid conditions in general, inflammations and rheumatism.

Possibly anticholesterolemic (octasanol) and hypoglycemic(lowering blood sugar due to alkaloids present) antithrombotic(due to coumarins), antispasmodic for smooth muscles (flavanoids).

Neutralizes uric acid in cases of arthritis and bursitis.

Used for arthritis, pain and stiffness.

Used for hyperacidity (reduces gastric acid production), good acid balancer and digestive aid. Taken for stomach ailments and ulcerous conditions.

Aids in preventing cholesterol build up in veins.

Benefits digestive and blood systems, bladder and prostate.

Aids in chemical imbalances.

Has beneficial effect on pituitary gland.

Used for water retention.

Used for colds.

Useful for protein allergies (sinus, hay fever, milk, eggs, etc.), anemia, menopause (weak phytoestrogens).

Used for cystitis, bladder inflammations, sluggish appetite, chronic appendicitis, cramps (calcium content), fatigue, fever, glandular problems, hemorrhages, teeth.

Reputed to reduce tissue damage of radiation therapy.

Activity shown against gram negative bacteria.

Anti-tumor activity.

Aids in assimilation of proteins and calcium, will assist in changing body systems from acid to alkaline.

Helps produce saliva.

High in vitamin K to produce clotting of blood.

Saponin content believed to deep clean cells and bind serum cholesterol, radioactive deposits and toxins for elimination.

Alfalfa contains an enormous quantity of nutrients, in a form that is easily digested and assimilated by man. It is up to 50% protein, contains a good quantity of beta-carotene, chlorophyll and octacosanol. Herbalists have used alfalfa for many different purposes. Most of these applications bear one-to-one correspondence to the various nutrients in the plant. The one word that keeps appearing is “tonic”. The plant is a kidney tonic, prostatic tonic, reproductive tonic, musculoskeletal tonic, glandular tonic and so forth. Alfalfa has traditionally been one of the best herbal treatments of arthritis, gout and rheumatism.

Alfalfa has a proven cholesterol lowering effect. Steroidal anti-inflammatory action is suggested by its content of plant steroids, and by some research that found an estrogenic effect on ruminants (grazing animals). Alfalfa has also been shown to possess antibacterial action against gram negative bacteria (such as *Salmonella typhi*), and it contains at least one protein with known antitumor activity.

High in chlorophyll and nutrients. **Alkalizes** the body and detoxifies the body, especially the liver. **Good** for all colon disorders, anemia, hemorrhaging, diabetes, ulcers and arthritis. **Promotes** pituitary gland function. **Contains** anti-fungus agent.

The deep rooting system of alfalfa allows the plant to glean nutrients from deep under the top soil. This nutritional feeding system provides the plant with many nutrients. Alfalfa contains protein, fat beta carotene, vitamin E, vitamins B1, B2, C, D and K, isoflavonoid phytoalexins, isoflavone phytoestrogens, the alkaloids, asparagines, and trigonelline.

The plant is a rich source of chlorophyll and serves as the largest commercial source of chlorophyll.

Alfalfa is one of the most studied plants. Research suggests that it may inactivate dietary chemical carcinogens in the liver and small intestine before they have a chance to do the body any harm. It is commonly used for bladder infections. Used on the skin or in the bath, alfalfa is good for fatigue and muscle tenderness. It is also used to reduce pain and inflammation of rheumatism and arthritis.

Alfalfa is used as an appetite stimulant, vitality augments (tonic), a digestive stimulant, for insomnia, and to relax the nervous system.

Several studies have indicated that the ingestion of alfalfa reduces cholesterol absorption and atherosclerotic plaque formation in animals. Alfalfa plant saponins and fiber have been shown to bind significant quantities of cholesterol *in vitro*. In one study, cholesterol-fed rats actually had a decrease in liver cholesterol accumulation when concomitantly fed alfalfa. By providing a mild antithrombotic effect from its coumarin derivatives, alfalfa further aids the circulatory system.

Alfalfa's blood-purifying properties have been attributed to its high chlorophyll content. In fact, it is probably due not only to chlorophyll but also several other components. It appears that alfalfa works on inflammation (arthritis, rheumatism) and as a general tonic by removing toxins from the blood. High molecular weight alcohol (triacontanol, octacosanol) reduces cholesterol and serum lipids while the flavonoids relax the smooth muscles. The alkaloids help reduce blood sugar levels and the saponins support the digestive system by helping to balance the intestinal flora.

The high amount of beta carotene in alfalfa acts to strengthen epithelial cells of the mucous membranes of the stomach, and could be the source for its beneficial effect on ulcers. Extracts of alfalfa have also been shown to produce activity against Gram-positive bacteria.

Alfalfa was first discovered by the Arabs, who named it the father of all foods as it is one of the most complete foods there is. It is more nutritious than almost any other herb, contains many important enzymes, proteins, minerals, vitamins and has been used for food and medicine for thousand of years.

Alfalfa cleans, builds and strengthens the body and rebuilds decayed teeth. The alkaloid in the leaves strengthens the central nervous system, helps prevent cholesterol accumulation in the veins, helps chemical imbalance and neutralizes uric acid, just to mention a few of its many attributes. It has been found helpful for numerous conditions, including arthritis, ulcers, high blood pressure, constipation, infections, asthma, allergies, anemia and many others.

Much of our soil has been seriously depleted by using agricultural chemicals and the surface of the soil no longer is rich in minerals as it used to be, so it is difficult to get the minerals we need in our food. Trace mineral deficiency can act to impair hereditary transmission, as shown by the abnormalcies that are becoming more common.

The ability of nutritional deficiencies to affect genetics via soil depletion, over processed foods, too much sugar and bad fats were first recognized in the 1930's. Nature has been making normal birds, butterflies and animals for millions of years. If wild animals can

do it, why can't we? It is because they, by their instinct, select the right foods and do not meddle with nature's food by changing it? The condition of any civilization's soil is crucial to their health and their very existence.

However, alfalfa has very deep roots, commonly growing to 60 or 80 feet deep and some alfalfa roots have even been found more than 100 feet deep. This is why it is so rich in minerals.

Alfalfa was brought to America around 1850, Peru, and today is the largest crops grown in this country. By nature Alfalfa is very alkaline, which helps to eliminate excess uric acid, and extremely rich in chlorophyll. Chlorophyll promotes healing more than almost anything, as it is more like our blood than anything there is outside of our bodies. Alfalfa has many different compound of calcium in it. It is also rich in potassium, magnesium, vitamins A, E, K, D, B6, and U and protein. It has high amounts of phosphorus, iron, potassium, chlorine, sodium, silicon, magnesium, B1, B2, and B12. Alfalfa is such a good all around herb, that many different animals live on it alone for their diet.

A surprising fact about Alfalfa is that it is higher in protein than beef. Alfalfa is 18.9 % protein, while beef is 16.5, eggs are 13.1, whole wheat is 13.8 and milk is 3.3 % protein. It contains all eight essential enzymes, lipase to break down fat, amylase sucrase which converts cane sugar into dextrose, peroxidase which is an oxidizing aid for blood, pectinase to digest starches, coagulase to coagulate milk and help to clot blood, emulsion to act on sugars, which helps digestion and protease which digests proteins.

Alfalfa is one of the most complete and rich of all foods. In addition to its high content of vitamins and minerals, it is also in proteins. Furthermore, it also contains every essential amino acid. Its detoxification surpasses most of other food tested. Higher resistance to disease and prevention of exhaustion were also reported in tests. Another study showed that Alfalfa contains eight essential enzymes that are important for food digestion. Being more technical, Alfalfa contains vitamin A, D, E, K, U, C, B1, B2, B6, B12, Niacin, Panthothanic acid, Inocitole, Biotin, and Folic acid.

In the mineral range, it contains Phosphorus, Calcium, Potassium, Sodium, Chlorine, Sulfur, Magnesium, Copper, Manganese, Iron, Cobalt, Boron, and Molybdenum. It also contains Fiber, Proteins, and trace elements such as Nickel, Strontium and Palladium.

Wheat/Barley Grass

Cereal grass is the young green plant that grows to produce the cereal grain. Grasses belong to the *Gramineae* family that provides all the world's cereals and most of the world's sugar. Wheat grass and barley grass are popular nutritional supplements. These cereal grasses, along with spirulina, chlorella, oat grass and alfalfa are sometimes referred to as "Green Foods." Wheat grass and barley grass are rich sources of chlorophyll, which is believed to have some health-promoting activities.

Wheat grass and barley grass have putative anti-carcinogenic activity.

Wheat sprout extracts have demonstrated anti-mutagenic activity *in vitro*. Wheat sprouts and wheat grass are rich in chlorophyll, and the anti-mutagenic activity of wheat sprouts may be accounted for by the presence of this substance, which is known to have anti-mutagenic and anti-carcinogenic activities. Other substances, including flavonoids, may also play a role in these possible activities.

Barley grass extracts have been found to protect human fibroblasts against carcinogenic agents. Again, chlorophyll may, in part, account for this effect. Barley grass contains several substances other than chlorophyll that have antioxidant activity and that may contribute to its possible anti-mutagenic and anti-carcinogenic activities.

The proteins, lipids, and carbohydrates in wheat grass and barley grass are digested, absorbed and metabolized by normal physiological processes.

Wheat grass/Barley grass supplements are promoted for multiple uses. Claims have been made that they help prevent and fight cancer, lower cholesterol, detoxify many pollutants, protect against solar and other forms of radiation, boost energy and immunity, enhance wound healing, help with digestion, fight tooth decay and bad breath, promote healthy skin, reverse graying of hair and lower blood pressure, among other things.

Research is lacking on the possible effects of wheat grass and barley grass. Given that they contain chlorophyll, it is possible that they might have some of the activities exhibited by that substance, including anti-mutagenic and anti-carcinogenic activities.

Wheat grass juice contains abscisic acid known to inhibit growth of tumors in studies. Abscisic acid regulates and influences plant growth and promotes dormancy in leaves. It affects plant transpiration, stress responses, germination of seeds, and embryonic genesis.

“Cancare is the father of all natural foods.”

“Cancare is the real source of life.”

Just one tablespoon of **Cancare** provides a daily boost of many vital nutrients necessary to maintaining a healthy body. This nourishing green super food is a highly assumable source for antioxidants, alkaline, complete protein, chlorophyll, E.F.A.'s, trace minerals, natural flora and enzymes, helping the body cleanse, detoxify, and promote cell regeneration.

Cancare also helps the immune system, increases energy, combats fatigue and most importantly balances highly stressed over-acidic body systems.

Cancare has become a world wide favorite for its amazingly simple yet powerful effect on the body. If you have any physical challenge from acne to arthritis, indigestion to diabetes, **Cancare** might just be the last natural remedy you ever try.

Summary of Comparative Analysis between Dried Green Juices (Green Magma, Barley Green, Pines Wheatgrass/Tablets)

Cancare tested 140% higher in Chlorophyll than Pines Wheatgrass,
145% higher in Chlorophyll than Green Magma,
147% higher in Chlorophyll than Barley Green.

Cancare (227mg/g) tested 25% higher in Protein than Pines Wheatgrass (222mg/g),
145% higher in Protein than Green Magma (94.8mg/g),
126% higher in Protein than Barley Green (106mg/g).

Cancare (1,370 IU/g) tested 78% higher in Beta Carotene than
Pines Wheatgrass (814 IU/g),
369% higher in Beta Carotene than
Green Magma (293 IU/g),
705% higher in Beta Carotene than
Barley Green (170 IU/g).

Cancare (17.17 Hrs.) showed Antioxidant Activity
49% longer than Pines Wheatgrass (11.55 Hrs.),
302% longer than Green Magma (4.27 Hrs.),
258% longer than Barley Green (4.79 Hrs.).

Cancare (49.7mg/g) tested 90% higher in Potassium than Pines Wheatgrass
(26.2mg/g),
85% higher in Potassium than Green Magma
(27.2mg/g),
97% higher in Potassium than Barley Green
(25.4mg/g).

Cancare (11.1mg/g) tested 148% higher in Calcium than Pines Wheatgrass (4.48mg/g),
275% higher in Calcium than Green Magma (2.82mg/g),
255% higher in Calcium than Barley Green (3.15mg/g).

Cancare (0.37mg/g) tested 214% higher in Iron than Pines Wheatgrass (0.14mg/g),
428% higher in Iron than Green Magma (0.7mg/g),
428% higher in Iron than Barley Green (0.7mg/g).

Testing Method:

Protein: 20-hour 6N-HCL/0.05% mercaptoeth and /0.02%
pherol hydrolysis @ 115° C

Beta Carotene: AOAC 16ed

Antioxidant Strength: Lard was spiked at the 1% level, with
extracts of each sample. The antioxidant potential of these samples was compared with untreated lard and lard spiked with 0.02% BHT, an FDA approved synthetic antioxidant.

Potassium, Calcium, Iron: DCP