



Cell Nutritional
Nourishing cells for life.™

Soothing Greens™

Intestinal Health

Formula

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Soothing Greens® - Heal Your Gut, Heal Your Health

When most folks consider building and maintaining vibrant health, the first thing they consider isn't usually their gastrointestinal (GI) tract – but as home to most of the immune system, it should be. Your GI system is vital to good health, as it's where all the [energy and information](#) (E&I) from your food is processed and absorbed.

Have you ever wondered why someone with your same diet doesn't gain the weight you do? It's no mystery; the answer lies in how your gut metabolizes food, including if key bacteria in your gut support efficient metabolism. With an inefficient gut, you can't absorb vital dietary nutrition. Worse still, your cells can't detoxify properly either. Both scenarios set the stage for GI and immune system disaster.

The Case for a Healthy Gut

Over two-thirds of your immune system is located in your GI tract – and for good reason. All things good *and* bad enter and leave your system through your gut. Gut struggles connect to asthma, arthritis, infections, [autoimmune](#) disorders, thyroid disease, inflammation and much more. By healing the gut, your body can better confront nearly any condition.

Try to visualize the GI tract's massive array of cells as a miniature Holland Tunnel construction project beneath the Hudson River. Throughout your body, healthy cells are neatly arranged into densely packed tissue. Within the GI tract, these dense tissues compose a tube of many millions of perfect little bricks.

Unfortunately, poor nutrition causes gaps between these cellular “bricks” to crack open and begin leaking, thus the term “leaky gut.” Imagine the catastrophe if the Holland Tunnel had leaky bricks. Within the body, these leaking bricks allow toxins to reenter your circulatory system. Normally these toxins are eliminated via a healthy GI tract. When they aren't, big problems soon follow.

Food particles that are poorly digested and too large enter, and thus are improperly handled and can cause allergic responses that formerly weren't present. Toxins enter that would have been filtered out and previously sent on out through the end of the gut and out of the body. Worse still, mechanisms for absorbing important micro-nutrients are impaired, so nutrient deficiencies make the long-term situation worse.

Harmful microbes enter the body across weakened defenses of inflamed and stressed mucosa, wreaking their own varieties of havoc – and thus, the stage is set for chronic disease.

How can you insure your GI tract doesn't develop these awful leaks? Aside from general nutrition to support you in good cellular health, targeting gut-friendly nutrition to protect, soothe, and regenerate your gut will help nourish you inside to out.

How Does Soothing Greens® Work?

We chose each ingredient in Soothing Greens® for its unique nutritional and digestive properties. More important, however, is the way these ten carefully chosen ingredients work together to soothe and heal the intestinal tract.

Soothing Greens® works to close open gaps in the GI tract lining, boost immune system and antioxidant function, and support optimal GI function. Read on and discover how Soothing Greens® can help heal your own GI tract, and start living a healthier, more vibrant life.

Larch Arabinogalactan



Larch Arabinogalactan (Larch-AG) is an ivory-colored powder with a mildly sweet taste and a soft piney odor. In nature, Larch-AG's chief function is to help trees recover from injuries suffered during lightning strikes and freeze-thaw cycles.¹

In human beings, Larch-AG works as a [prebiotic](#) to enhance beneficial [gut microflora](#) growth, particularly [bifidobacterium](#) and [lactobacillus](#). Larch-AG also lowers levels of [clostridium](#), the major cause of [colitis](#) and antibiotic-associated diarrhea.²

Recent human studies show taking Larch-AG provides significant enhancement of [immune system](#) function and overall immune regulation.²

Larch-AG increases production of [short-chain fatty acids](#) (SCFAs), chiefly [butyrate](#) and [propionate](#).^{3,4} Fermentation of carbohydrates into SCFAs by intestinal microflora is essential to efficient large bowel function. Butyrate plays a key role in maintaining overall colon health as the preferred [substrate](#) for generating energy by colonic epithelial cells.⁵ Butyrate also protects the mucosa against a wide variety of other intestinal diseases.⁶

Propionate, the other major product of gut fermentation, works to enhance butyrate

¹ Chemstone. Theoretical Basis for Process Improvement with Chemstone OAE Technology.

² Slavin J., Feirtag J., Robinson R., Causey J. Unpublished research.

³ Vince A.J., McNeil N.I., Wager J.D., Wrong O.M. *Br J Nutr* 1990;63:17-26.

⁴ Englyst H.N., Hay S., Macfarlane G.T. *FEMS Microbiology Ecology* 1987;95:163-171.

⁵ Roediger W.E. *Gastroenterology* 1989;83:424-429.

⁶ Tsao D., Shi Z., Wong A., Kim Y.S. *Cancer Res* 1983;43:1217-1222.

potency. The ability of Larch-AG to increase concentrations of butyrate and propionate illustrates just a few of the powerful gastrointestinal benefits this multi-faceted [polysaccharide](#) offers.⁷

Larch-AG properties also make it an ideal supplement for cancer protocols. Studies indicate Larch-AG stimulates [natural killer cell cytotoxicity](#), and enhances immune system functions. These other immune-enhancing properties suggest an array of clinical applications: 1) In preventive medicine, to build a more responsive immune system, and, 2) In clinical settings to treat conditions linked to lowered immune function, depressed natural killer cell activity, or chronic viral infection.⁸

Slippery Elm



Slippery Elm (SE) is harvested from the bark of a medium-sized tree growing abundantly in central North America. The tree can live for 200 years and draws its name from its very slippery inner bark.

SE has been used to sooth the raw throats of professional singers for over 160 years. A popular advertisement of the mid-1800s touted, "Sing better with slippery elm!" Indeed, even today throat lozenges contain SE. However, long before vocalists sang its praises, Native Americans used SE for a wide variety of medicinal purposes. Plains Indians used it frequently to treat cuts, abrasions, and burns by molding it into [poultices](#).⁹

Slippery elm's chief property is as a powerful mucilaginous agent. [Mucilage](#) is a substance that swells up in water and becomes slippery, but doesn't dissolve when blended with fluids.¹⁰

Slippery elm coats the entire digestive tract with a soothing film which helps ease tissue irritation. Recent research suggests slippery elm may help treat inflammatory bowel conditions like [Crohn's disease](#) and [ulcerative colitis](#).

Research also indicates slippery elm delivers powerful antioxidant protection. Slippery elm is also one of four natural ingredients forming a very popular natural cancer

⁷ Kiefer, J., Beyer-Sehlmeyer, G.L., Pool-Zobel, B. *Br J Nutr* (2006), 96:803-810

⁸ *Altern Med Rev* 1999;4(2):96-103

⁹ Das, S., Shillington, L., Hammett, T. *Non-timber forest products Fact sheet no. 17 Slippery elm*, www.sfp.forprod.vt.edu/factsheets/elm.pdf (August 2008)

¹⁰ (Author not listed), *Slippery Elm*, www.drugdigest.org/DD/DVH/HerbsWho/0.3923,4100%7CSlippery%2Belm.00.html%2Belm.00.html (August 2008)

treatment therapy called [Essiac](#). This therapy was first used by the [Ojibway Indians](#) of Canada and later popularized by famed cancer nurse, [Rene M. Caisse](#).

Alfalfa Grass



Alfalfa derives from Arabic and means “The father of all foods.” Farm animals, even cats and dogs, instinctively seek out highly nutritious alfalfa when they fall ill.

Alfalfa is rich in iron, calcium, and phosphorus. It also packs potassium, vitamins A and B12, and is one of few vegetable sources of vitamin D. Alfalfa contains a substantial amount of protein, nearly 19%, compared with 16.5% in beef and 13.1% in eggs.

Researcher Frank Bower, who spent his life studying alfalfa, uncovered important enzymes in this herb that work as digestive regulators. These enzymes are present in large enough quantities to help digest all four food categories: fats, proteins, starches, and sugars.

These enzymes and their actions are:

[Lipase](#) - fat-splitting enzyme

[Amylase](#) - acts on starches

[Coagulase](#) - aids blood coagulation

[Emulsin](#) - acts on sugars

[Invertase](#) - converts sugar to dextrose

[Peroxidase](#) - supports blood oxidation

[Pectinase](#) - enzyme forming a vegetable jelly from pectin

[Protease](#) - helps digest proteins

Bower also discovered alfalfa contains [chlorophyll](#), a known healing agent in treating many gastrointestinal ailments.

Another key vitamin present in alfalfa is [Vitamin U](#), used by Chinese herbalists for centuries to cure peptic ulcers. Soviet scientists recently began testing Vitamin U on humans suffering from gastric and duodenal ulcers. The test subjects achieved an 80% cure rate, with the remaining 20% showing noticeable improvement.¹¹

¹¹ Christopher, J., *Alfalfa*, www.healthfree.com/dr_jon_christopher_alfalfa.html (August 2008)

Barley Grass



Barley grass has been cultivated for over seven thousand years, making it one of the first plants man harvested. In 2006, the FDA [acknowledged](#) barley reduces coronary heart disease risk by lowering LDL (bad) and total cholesterol levels.¹²

Barley grass boasts one of the most balanced nutrient profiles of all plants. The vitamins, minerals, and enzymes in barley act to protect the body from [free radical damage](#). One enzyme, [Superoxide Dismutase](#) (SOD), is a powerful antioxidant protecting cells against free radical toxicity, a key cause of many diseases.

Barley grass also has important anti-inflammatory properties and works to heal the lining of the intestines. Used for centuries in the Orient to treat numerous GI disorders, barley grass also aids in detoxification of the entire GI tract.

Five grams of barley grass packs more protein and fiber than 114 grams of raw spinach. In addition to vitamins C and E, barley contains significant levels of beta-carotene, folic acid, calcium, and several B vitamins. Barley grass is naturally high in iron and all essential amino acids. It is also rich in copper, potassium, manganese, and zinc.

Barley grass also contains very high levels of [chlorophyll](#). Chlorophyll acts with other nutrients to rid the body of destructive environmental toxins. Interestingly, chlorophyll's anti-bacterial properties work both inside and outside the body. Laboratory studies also show chlorophyll restricts the growth of cancer cells, with further human studies waiting.¹³

University of California at La Jolla research biologist, Dr. Yasuo Hotta, discovered something called P4D1 in barley grass. This substance actually repairs cellular DNA damage. It logically follows P4D1 would then slow most aspects of the aging process. P4D1 also destroys the protein sheath surrounding cancer cells so white blood cells can attack and dismantle them. Dr. Hotta reported at a Japan Pharmacy Science Association meeting that P4D1 suppresses or cures pancreatitis, stomatitis, oral inflammation, as well as minute lacerations of the stomach and [duodenum](#). He further found barley grass to be much stronger than steroid drugs and has fewer, if any, side effects.

¹² Sahelian, R., *Barley and Barley Grass*, www.raysahelian.com/barley.html (August 2008)

¹³ Miller, D., *Barley Grass and its Benefits*, www.articlesbase.com/health-articles/barley-grass-and-its-benefits-522848.html (August 2008)

In his book, *Green Barley Essence*, [Dr. Yoshihide Hagiwara](#) reported barley grass has 775 mg of organic sodium per 100 grams. This means barley grass helps to replenish crucial organic sodium in the gastric lining, which aids digestion by increasing the stomach's production of hydrochloric acid.

There are claims regular supplementation of barley grass stimulates weight loss, which research indicates may be due to the enhancement of the [cytochrome oxidase enzyme system](#), which is essential for efficient cell metabolism.¹⁴

Brown Rice Protein



Brown rice contains [anthocyanins](#) (powerful antioxidants), [phytosterols](#) (cholesterol reduction and cancer preventative properties), [tocopherols](#) (antioxidants), and [oryzanol](#) (cholesterol fighter and antioxidant). These nutrients help reduce the risk of heart disease, some cancers, Type II diabetes and overweight.¹⁵

Brown rice packs more than a dozen vitamins and minerals, including vitamins B1 and B2, potassium, magnesium, selenium, and iron. It also offers up two grams of fiber in just half a cup of cooked rice.¹⁶ Brown rice is also much more easily digested, better absorbed, and won't cause GI distress like some soy or wheat proteins.

Why Brown Rice?

Whole grain rice possesses several layers, with only the outermost layer removed to yield brown rice. Removing *only* this outer layer does little damage to the considerable nutrients in rice. Unfortunately, most rice is white, and white rice is not nearly as nutritious as the brown varieties.

White rice is achieved by milling away the bran and most of the germ layer, taking with it most of the kernel's nutritional value. At this point rice is machine polished.

Unfortunately, polishing removes the [aleurone](#) layer of the grain, which is loaded with healthy essential fats. Once exposed to air by refining, these fats are highly sensitive to oxidation. Removal of the aleurone layer extends the shelf life of white rice, but leaves behind a starchy food largely deficient in nutritive value.¹⁷

¹⁴ Wigmore, A., *Barley Grass, The Alternative to Wheatgrass*, www.wheatgrasskits.com/barleygrass.htm (August 2008)

¹⁵ Sahelian, R., *Gamma Oryzanol*, www.raysahelian.com/gammaoryzanol.html (September 2008)

¹⁶ Starling, S., *Brown Rice wins FDA Health Claim*, www.foodnavigator-usa.com/Legislation/Brown-rice-wins-FDA-health-claim (September 2008)

¹⁷ Mateljan, G., *Brown Rice*, www.whfoods.com/genpage.php?tname=foodspice&dbid=128 (September 2008)

Spirulina



Spirulina is a powerful nutritional supplement made from blue-green algae. As far back as the Aztecs spirulina was harvested from lakes and dried into nutritious patties.

Spirulina contains very high concentrations of protein, between 50% and 75% by dry weight. It also contains nearly all essential amino acids. While lacking the lysine and cysteine of animal proteins, it is vastly superior to other plant proteins.¹⁸

Spirulina contains an impressive arsenal of vitamins, minerals, and essential fatty acids. Spirulina packs vitamins B1, B2, B3, B6, B9, as well as vitamins C, D, and E. It is a rich source of potassium, calcium, chromium, iron, magnesium, phosphorus, selenium, and zinc. Spirulina also possesses several essential fatty acids: [gamma-linolenic acid](#), [alpha-linolenic acid](#), [linoleic acid](#), [stearidonic acid](#), [eicosapentaenoic acid](#), [docosahexaenoic acid](#) and [arachidonic acid](#).^{19,20}

In a 2007 study, 36 volunteers began taking 4.5 grams of spirulina per day. Over a six-week period, the test subjects exhibited significant changes in four key areas. 1) lower total cholesterol; 2) increased HDL (good) cholesterol; 3) lower triglycerides; and 4) lower systolic and diastolic blood pressures.²¹

Many health organizations believe spirulina is a key food source for ending world hunger and malnutrition. Additionally, both NASA and the European Space Agency (ESA) have proposed spirulina be cultivated as food for long-term space missions.²²

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¹⁸ Ciferri, O. "Spirulina, the Edible Microorganism." *Microbiological Reviews*. 47, 4, Dec. 1983.

¹⁹ Babadzhanov, A.S., et al. "Chemical Composition of Spirulina Platensis Cultivated in Uzbekistan." *Chemistry of Natural Compounds*. 40, 3, 2004.

²⁰ Tokusoglu, O., Unal, M.K. "Biomass Nutrient Profiles of Three Microalgae: Spirulina platensis, Chlorella vulgaris, and Isochrysis galbana." *Journal of Food Science*. 68, 4, 2003.

²¹ Torres-Duran, P.V., et al. "Antihyperlipemic and antihypertensive effects of Spirulina maxima in an open sample of Mexican population: a prelim. report, www.lipidworld.com/content/6/1/33 (November 2007)

²² Charac. of Spirulina biomass for CELSS diet potential. Normal, Al.: Alabama A&M University, 1988.

Dried Banana Powder



It may be hard to believe, but the elliptically shaped and much loved banana belongs to the same family as orchids and lilies. There are hundreds of edible varieties of bananas, with two distinct species: the sweet banana (*Musa sapienta*, *Musa nana*) and the plantain banana (*Musa paradisiaca*).

Nutritionally, few foods can compete with bananas. The average banana contains roughly 460 mg of potassium. Potassium-rich foods have proven to lower blood pressure, and by connection lower heart disease risk, too. One four-year study tracked over 40,000 male health professionals to determine the effects of diet on blood pressure. The subjects who consumed potassium-rich foods like bananas exhibited a substantially reduced risk of stroke and cardiac disease.²³

The banana's nutritional value doesn't stop with potassium. These little yellow fellows also pack a full complement of A and B vitamins, as well as vitamins C, D, K, and E. Also in abundance are minerals magnesium, phosphorous, and calcium. Bananas also contain 18 essential amino acids and both omega three and six fatty acids.²⁴

Bananas are probably nature's best antacid. They offer significant protection against stomach ulcers. In one animal study, researchers found bananas protected the stomachs of test subjects from several different types of wounds and lesions.²⁵ Other animal studies have shown banana powder helped protect the gastric lining from the damaging effects of stomach acid.²⁶

Bananas work their protective magic on two fronts. First, bananas help activate mucous-producing cells in the stomach lining that then produce a thicker protective barrier against stomach acids. Second, bananas contain [protease inhibitors](#), which help eliminate ulcer-causing bacteria.

[Ayurvedic](#) doctors in India have long used dried banana powder to treat ulcers. Human

²³ Ascherio A., Rimm E.B., Hernan M.A., et al. Intake of potassium, magnesium, calcium, and fiber and risk of stroke among US men. *Circulation*. 1998 Sep 22;98(12):1198-204 1998.

²⁴ Mateljan, G., *Banana: In-depth Nutrient Analysis*, www.whfoods.com/genpage.php?tname=nutrientprofile&dbid=92

²⁵ Dunjic B.S., Svensson I., Axelson J., et al. Green banana protection of gastric mucosa against experimentally induced injuries in rats. *Scand J Gastroenterol* 1993 Oct;28(10):894-8 1993.

²⁶ Hills B.A., Kirwood C.A., Surfactant approach to the gastric mucosal barrier: Protection of rats by banana even when acidified. *Gastroenterology* 1989;97:294-303.

trials showed dried banana powder helps treat peptic ulcers. In those trials, two capsules of dried banana powder taken four times daily for eight weeks led to substantial improvement in ulcer-related symptoms.²⁷

Bananas also contain pectin, a soluble fiber that helps normalize elimination and eases constipation.²⁸

Another interesting feature of bananas is they contain [resistant starch](#), with the amount depending on ripeness. Less ripe bananas rank 30 on the [glycemic index](#), with 50 and under considered low. When ripe, that number rises only into the mid-60s. This makes the humble banana a great choice for people suffering from diabetes.²⁹

Citrus Bioflavonoids



Without bioflavonoids, citrus plants like lemons, limes, and oranges couldn't sport their vivid hues. Citrus plants developed antioxidant bioflavonoids to ward off constant exposure to high doses of ultraviolet (UV) light from the sun. The antioxidants in citrus bioflavonoids work to neutralize [free radicals](#), which are unstable and potentially damaging molecules.

Nobel Laureate, [Dr. Albert Szent-Gyorgyi](#), discovered the effects of citrus bioflavonoids while researching vitamin C. He established vitamin C from lemon-juice extract was the correct treatment for the fragile condition of blood vessels in patients suffering from [scurvy](#). The improvement in capillary permeability helped reduce bleeding. This led Szent-Gyorgyi to believe another factor was present in the lemon-juice extract, which he called vitamin P.

Dr. Szent-Gyorgyi's research determined the vitamin P factors were related substances derived from a group of natural chemicals called [phenols](#). After further investigation, Szent-Gyorgyi determined the vitamin P factors actually belonged to a class of phenols called bioflavonoids.

Key benefits of citrus bioflavonoids are twofold: health-enhancing effects and therapeutic

²⁷ Sikka K.K., Singhai C.M., Vajpcyi G.N., Efficacy of dried raw banana powder in the healing of peptic ulcer. *J Assoc Phys India* 1988;36(1):65 [abstract].

²⁸ Rabbani G.H., Teka T., Saha S.K., Zaman B., Majid N., Khatun M., Wahed M.A., Fuchs G.J., Green banana and pectin improve small intestinal permeability and reduce fluid loss in Bangladeshi children with persistent diarrhea. *Dig Dis Sci*. 2004 Mar;49(3):475-84. PMID:15139502.

²⁹ Wood, Rebecca, *The Whole Foods Encyclopedia*. New York, NY: Prentice-Hall Press; 1988. PMID:15220.

effects. Health-enhancing effects include improved eyesight, better cardiovascular function, increased capillary strength, improved connective tissue structure, better-looking skin, and a stronger immune system. Citrus bioflavonoids also significantly enhance the already powerful antioxidants, vitamins C and E.³⁰

Therapeutically, citrus bioflavonoids treat a wide variety of diseases, for example: coronary heart disease, inflammation, respiratory diseases, viral infections, some cancers, peptic ulcers, hemorrhoids, and ulcerations of the mucous membranes of the stomach, esophagus, and upper small intestines.

GanedenBC^{30™} Probiotics



GanedenBC³⁰ is a trademarked brand of probiotics providing gut-friendly bacterial strain [*Bacillus coagulans*](#), GGI-30, 6086. Cell Nutritionals™ included this remarkable ingredient in Soothing Greens® because of its amazing capacity to heal the gut.

GanedenBC^{30™} is a [gram-positive](#), [spore-forming](#) bacterium. Once germinated in the gut it produces L+ lactic acid. This acid augurs formation of good bacteria in the gut and forces out non-beneficial bacteria. Further, GanedenBC^{30™} is a high-survivability probiotic and offers characteristics exceeding traditional probiotics like [lactobacillus](#), [acidophilus](#), and [bifidobacteria](#).

As a spore-forming probiotic, GanedenBC^{30™} uses the hardened casing of the spore to surround the bacterial cell and safely transport the genetic information to its destination in the gut. This casing, similar to a seed's shell, is necessary for the cell to withstand the heat and pressure of processing. It also extends the product's shelf life and protects the cell from the acids and bile it must traverse as it passes through the GI tract.

Once safely inside the small intestine, the spore then germinates and fresh, viable bacteria begin to grow. Traditional probiotics aren't able to nurture these protective spores. Weaker probiotics fail because they are more vulnerable to the deleterious effects of processing and GI transit.

GanedenBC^{30™} probiotics help support the immune system and regulate the digestive system by colonizing the intestines with beneficial *Bacillus coagulans* bacteria. This ingredient is also [GRAS](#)-certified by the FDA.³¹

³⁰ Gastelu, D., www.supplementfacts.com/BioflavonoidBook.htm (October 2008)

³¹ (Author not listed) www.ganedenlabs.com/about-ganedenbc30-good-bacteria.php (October 2008)