

## CHLOROPHYLL

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Here is one of my favorite kitchen remedies thanks to food processing technology.

Liquid chlorophyll, actually extracted as chlorophyllin from green plants, taken in water can be used for strengthening body, mind, and spirit. One teaspoon can be stirred into water. It can be invigorating to the body's energy field after a long day of work.

Research shows that chlorophyll liquid can help in anemia and in wound healing. Chlorophyll is one remedy that has been used for decades in de-odorizing wounds and managing odors associated with incontinence, colostomies, or urostomies as well as everyday intestinal gas odor. Liquid chlorophyll is cooling to the body and is also used externally in bath products such as Olbas bath oil. The green color of liquid chlorophyll is brilliant!

**THE CHLOROPHYLL CONNECTION:** (Excerpt from *The Integrative Herb Guide for Nurses* - by Martha Libster,)

Although humans may have disconnected from the plant world, at the biologic level, the connection has not been severed. Biomedical science confirms what traditional healers know instinctively, that plants and humans are very similar and interdependent. The chlorophyll found in green plants and the oxygen-carrying molecule, hemoglobin, found in human red blood cells are nearly identical in atomic design (Figure 1-2). The most striking difference between the two is that the porphyrin ring of heme is built around iron (Fe), and the porphyrin ring of chlorophyll is built around magnesium (Mg). Although science has found that heme and chlorophyll are not interchangeable, their similarity in structure and respective functions still captures scientific interest. Numerous studies have been done on the health benefits of chlorophyll in humans. Because many of these studies were performed before 1960 and there has been little research since, the research presented here is dated but relevant. It is not just a story that the cartoon character Popeye's claim to

strength was related to his love of the green leafy vegetable, spinach (*Spinacia oleracea* L.). Research for more than 60 years, although still unclear, has provided some data for how chlorophyll seems to help “build blood.” Scientists such as Dr. Arthur Patek (1936) have found from studying patients with iron-deficiency anemia that when patients received iron and chlorophyll treatment together rather than separately, the number of red blood cells and blood hemoglobin level increased more quickly than with iron or chlorophyll alone. Some animal studies have led researchers to hypothesize that chlorophyll's ability to “build blood” is related to its tendency to stimulate bone marrow (Hughes and Latner, 1936). More recently, scientists have found that some porphyrins, the ringlike structures in heme and chlorophyll, stimulate the synthesis of the protein portion of the hemoglobin molecule, enhancing the body's ability to produce globin (Hammel-Dupont & Bessman, 1970).

The ability of chlorophyll to “build blood” been researched for years, and health care practitioners, including nurses, have researched other healing benefits of chlorophyll. Because chlorophyll is insoluble in aqueous solutions, chlorophyllin, the copper-sodium salt, food-grade derivative of chlorophyll, is often used in human trials. Some animal studies with mice have shown that chlorophyll extracted directly from Indian spinach leaves or in commercially purified form demonstrates a strong chromosome-damaging activity (Sarkar, Sharma & Talukder, 1996). The chlorophyll products on the market often contain chlorophyllin instead of chlorophyll.

Research has shown that chlorophyll or its derivatives have been successful in significantly decreasing symptoms of constipation and excessive flatus (Young & Beregi, 1980), decreasing urine and fecal odors related to incontinence (Dory, 1971; Young & Beregi, 1980), and decreasing the odors related to colostomy, ileostomy, and chronically infected skin ulcerations (Golden & Burke, 1956). It has a drying and deodorizing effect on wounds that has been shown to be superior to penicillin (Bowers, 1947). One chlorophyllin ointment, also containing urea and papain, has been shown to increase enzymatic debridement and decrease wound-healing time in patients with decubitus ulcers (Burke & Golden, 1958). Some small human trials have shown that chlorophyll can reduce symptoms of rhinitis, otitis externa, and otitis media in humans (Bowers,

1947). Intravenous chlorophyll a has been shown in human studies to rapidly reduce symptoms associated with pancreatitis (Yoshida, Yokono, & Oda, 1980).

So what has happened to the use of chlorophyll or chlorophyllin? Although these studies seem to indicate that biomedical health practitioners no longer suggest chlorophyll for their patients as they used to, complementary therapy practitioners do. Chlorophyllin continues to be sold in health food stores in liquid or capsule forms. People continue to attest to the health benefits of eating a diet that includes green leafy vegetables. Some practitioners recommend chlorophyll, often referred to as “liquid sunlight,” in the form of wheat grass juice, blue-green algae, barley green, and alfalfa supplements. I prefer chlorophyll extracted from the nettles plant (*Urtica dioica*) whenever possible. Alfalfa may exacerbate inflammation in the body and nettles can alleviate it.