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A Review: Wheat Grass and its Health Benefits



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ABSTRACT

The shoot of *Triticum aestivum* Linn. (Hindi Name- gehun, kanak; Sanskrit name- godhuma) is called as a wheat grass, belonging to the family: Gramineae, which possess high chlorophyll content and essential vitamins, minerals, vital enzymes, amino acids, dietary fibers. Wheat grass has been shown to posse's anticancer activity, anti-inflammatory conditions, anti-rheumatoid arthritis anti-ulcer activity, antioxidant activity, anti-arthritic activity, and blood building activity in thalassemia. Wheatgrass has been traditionally used, since ancient times, to treat various diseases and disorders. Presently, there are a number of wheat grass suppliers, in almost all cities of India, supply fresh wheatgrass, on daily basis to their regular customers by the home-delivery system for various ailments and as the health tonic.



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INTRODUCTION

Wheat (*Triticum aestivum* L.) belonging to the family *Gramineae* is an important component of the human diet, particularly in developing countries. Epidemiological studies have shown that the consumption of whole grain and whole-grain products are protective against chronic diseases such as cardiovascular disease, diabetes and cancer. Wheat germinated over a period of 6-10 days is generally called wheatgrass. During germination, vitamins, minerals, and phenolic compounds including flavonoids are synthesized in wheat sprouts, and wheat sprouts reach the maximum antioxidant potential. Wheat Grass refers to the young grass of the common wheat plant, *Triticum aestivum* that is freshly juiced or dried into powder for animal and human consumption. Both provide chlorophyll, amino acids, minerals, vitamins, and enzymes. Wheat grass is a humble weed that is a powerhouse of nutrients and vitamins for the human body.

In the form of fresh juice, it has high concentrations of chlorophyll, active enzymes, vitamins and other nutrients. Wheatgrass is the young grass shoots of the wheat berry. It is considered a complete food because it contains every amino acid, vitamin, and mineral (some in only trace amounts) necessary for human nutrition.

Wheatgrass juice is immediately absorbed into the bloodstream and gives immediate energy. Wheat grass juice is the richest source of vitamins A, B, C, E and K, calcium, potassium, iron, magnesium, sodium, sulfur and 17 forms of amino acids.

The following advantages show that juicing wheatgrass is very beneficial.

1. Wheatgrass energizes and reduces fatigue.
2. It is an appetite suppressant.
3. Wheatgrass juice improves metabolism.
4. It improves digestion.
5. Wheatgrass juice enriches the blood, removes blood disorders & lowers blood pressure
6. Wheatgrass juice is antibacterial and helps cleanse the liver.



1.1 Classification

Kingdom: Plantae-Plants

Subkingdom: Tracheobionta-Vascular plants

Division: Spermatophyta-Seed plants

Class: Magnoliophyta-Flowering plants

Subclass: Liliopsida- Monocotyledons

Order: Cyperales

Family: Poaceae-Grass family

Genus: *Triticum* L

Species: *Aestivum*



1.2 Common names of *Triticum aestivum*

Hindi Gehun

Kannada Godhi

Manipuri Gehun

Sanskrit Arupa, godhuma

Tamil godumai

Telugu godumalu

Urdu Gehun



Picture of Wheat grass



Wheat grass juice

1.3 Importance of Wheat Grass Juice



1. Wheatgrass juice is 70% chlorophyll.
2. Chlorophyll is the first product of light and contains more energy than any other element.
3. Wheatgrass juice is crude chlorophyll and can be taken orally and as a colon implant without toxic side effects.
4. Chlorophyll is the basis of all plant life.
5. Wheatgrass is high in oxygen like all green plants that contain chlorophyll. The brain and all body tissues function at an optimum level in a highly oxygenated environment.
6. Chlorophyll is anti-bacterial and can be used inside and outside the body as a healer.
7. Dr. Bernard Jensen says that it only takes a minute to digest wheatgrass juice and uses up very little body energy.
8. Science has proven that chlorophyll arrests growth and development of unfriendly bacteria.

9. Wheatgrass rebuilds the blood stream. Studies of various animals
10. Have shown chlorophyll to be free of any toxic reaction. The red cell count was returned to normal with 4 to 5 days of the administration of chlorophyll, even in those animals that which was known to be extremely anemic or low in red cell count.
11. Farmers in the mid-west who have sterile cows and bulls put them on wheatgrass to restore fertility.
12. Chlorophyll can be extracted from many plants, but wheatgrass is superior because it is found to have over 100 elements needed by man. If grown in organic soil, it absorbs 92 of the 102 minerals from the soil.
13. Wheat grass has what is called the grass-juice factor, which has been shown to keep herbivorous animals alive indefinitely.
14. Dra Ann Wigmore helped hundreds of people to get well from chronic disorders for 30 years using wheatgrass.
15. Liquid chlorophyll gets into the tissues, refines them, and makes them over.
16. Wheatgrass juice is a superior detoxification agent compared to carrot juice and other fruits and vegetables. Dr. Ear Thomas, Assoc. of Anne Wigmore, says that 15 pounds of wheatgrass are the equivalent of 350 pounds of carrots, lettuce, and celery and so on.
17. Liquid chlorophyll washes drug deposits from the body.
18. Chlorophyll neutralizes toxins in the body.
19. Wheatgrass helps to purify the liver.
20. Wheat grass improves blood sugar issues.
21. Wheat grass juice cures acne and even removes scars after it has been ingested for seven to eight months. The diet must be improved at the same time.
22. In the American Journal of Surgery (1940) Benjamin Gruskin, M.D. recommended chlorophyll use to clear up foul-smelling odours, neutralize infections, heal wounds, hasten skin grafting, cure chronic sinusitis, overcome chronic inner-ear inflammation and infections,

23. Reduce varicose veins and heal leg ulcers, eliminate impetigo and other scabby eruptions, heal rectal sores, successfully treat inflammation of the uterine cervix, get rid of parasitic vaginal infections, reduce typhoid fever, and cure advanced pyorrhea in many cases.
24. Wheatgrass juice acts as a detergent in the body and is used as a body deodorant.
25. A small amount of wheatgrass juice in the human diet prevents tooth decay.
26. Wheatgrass juice held in the mouth for 5 minutes will eliminate toothaches and poison from the gums.
27. Gargle with wheatgrass juice for a sore throat.
28. 26 Pyorrhea of the mouth lay pulp of the wheatgrass in the mouth or chew on the wheatgrass and spit out the pulp.
29. Drink wheatgrass juice for skin problems such as eczema or psoriasis.
30. Wheatgrass juice helps the hair from graying.
31. By taking wheatgrass juice one may feel a difference in strength, endurance, health, and spirituality and experience a sense of wellbeing.
32. Wheatgrass juice improves digestion.
33. It is great for blood disorders of all kinds
34. Wheatgrass juice is high in enzymes.
35. Wheatgrass juice is an excellent skin cleanser and can be absorbed through the skin for nutrition. Pour green juice over your body in a bath tub of warm water and soak for 15 to 20 minutes.
36. Wheatgrass implants (enemas) are great for healing and detoxing the colon walls. The implants also heal and cleanse the internal organs. After an enema wait, 20 minutes then implant 4oz of wheatgrass juice, retain for 20 minutes.
37. Wheatgrass juice is great for constipation and keeping the bowels open. It is high in magnesium.

38. Dr. Birscher, a research scientist called chlorophyll "concentrated sun power", he said chlorophyll increases the function of the heart, affects the vascular system, the intestines, the uterus and the lungs.

39. According to Dr. Bircher, nature uses chlorophyll (wheatgrass) as a body cleanser, rebuild and neutralizer of toxins.

40. Wheatgrass juice can dissolve the scars that are formed on the lungs from breathing acid gasses. The carbon monoxide is minimized since chlorophyll increases hemoglobin production.

41. Wheatgrass juice reduces high blood pressure and enhances the capillaries.

42. Wheatgrass can remove heavy metals from the body. This information is derived from the writings of doctors and research scientists and is not meant to replace the services of toy physician but only to offer educational information.

1.4 Chemical Constituents

Lifesaving substances Vitamins A, B, 2, 3, 5, 6, 8 and 12: C, E and K. ascorbic acid, dehydrated ascorbic acid, carotene. Some of them are-

Vitamin A It enhances the skin luster and provides the glow to the outer skin and makes it disease free. It helps to cure the black spots and blemishes below the eyes and improves the eyesight. It is also helpful in checking the eyes, nose, and throat disorders. It nourishes hair and is helpful in fighting the problems of pollution.

Vitamin B It aids digestion. It is helpful in the treatment of digestive disorders, mental, depression, insomnia, premature aging, and anorexia.[5,6,7]

Vitamin C It is a vital substance for healthy gums and teeth and maintenance of bones. It is essential for health and vitality and healing of sores and wounds. It is also a natural source for antibiotic elements.

Vitamin E It dilates the capillaries and enables the free flow of the blood. It is helpful for the women during pregnancy, it prevents abortion and it is a helpful substance in the treatment of sexual impotence, diabetes, cancer, heart disorders, dysmenorrhea, etc.

Proteins and amino acids Proteins are essential for muscular strength and physical elegance.

Plasmas, hormones, and antibodies are obtained through proteins. Amino acids aid digestion, blood formation and provide potency to the heart. Amino acids such as aspartic acid, threonine, asparagines, glutamine, proline, glycine, arginine, alanine, valine, methionine, isoleucine, leucine, tyrosine, phenylalanine, lysine, histidine, tryptophan and serine are present.

Enzymes are the digestive elements. The substances in the WGJ are helpful for dyspepsia. These are helpful for digestion, building a healthy body and counteract the premature aging. Protease, amylase, lipase, cytochrome oxidase, transhydrogenase, superoxide dismutase (SOD) are also present.

Minerals

Sulfur, sodium, aluminum, copper, calcium, iodine, phosphorus, magnesium, alkaline earth metal, potassium, selenium, Iron, Zinc, boron, and molybdenum. Some of them are mentioned below:-

Iron: Iron is an essential element for life. Iron deficiency creates the shortage of hemoglobin in the blood. It is helpful in pregnancy, for excessive sweating, pale complexion, laziness and lethargy, and insomnia.

Calcium: Calcium is the prime instigator of vital activity. It strengthens the bones, it provides alkaline for the children and vitality for old. It is helpful in the treatment of the diseases like hemorrhage, distension of body, slow movements, coldness, varicose veins, etc.

Potassium: Helpful for the radiance and luster of youth, hypertension, dementia, palpitation, tiredness, suicidal instincts, depression, etc.

Zinc: Helpful in the prostate gland disorders and nourishes hair

Sodium: Sodium regulates the extracellular fluid volume. It also regulates the acid-base equilibrium and maintains proper water balance in the body.

Nutrients and other substances these provide nutrition to the tendons. These are the elements

Which are resistant to the disorders related to jaundice, menstruation, hydrocele, dysentery, mental debility, tooth problems, evacuation of bowels, and the cold- related problems.

Chlorophyll as green blood: Chlorophyll resembles hemoglobin in the blood. The

Structures of both compounds possess tetra pyrrole ring structure but they differ only in their

Central metal atom that is magnesium (Mg) is present in chlorophyll and iron (Fe) is in

Hemoglobin. Due to the apparent resemblance, chlorophyll shows therapeutic effects in case of hemoglobin deficiency

1.5 Wheat Grass Health Benefits

Nutraceutical is a food or food product that provides health and medical benefits, including the prevention and treatment of disease. Nutraceuticals are the products typically claim to prevent chronic diseases, improve health, delay the aging process, and increase life expectancy. Let us know something about one such nutraceutical. Wheatgrass is a commonly found herb in India contains enzymes like protease, cytochrome, amylase, lipase,

Transhydrogenase and SOD (super oxide dismutase). Besides these enzymes, it also contains all the essential amino acids especially alanine, aspartic acid, glutamic acid, arginine, and serine, which are helpful in providing a good amount of protein in the body which builds and repair tissues. Wheatgrass contains chlorophyll and flavonoids in good amount. It also contains vitamins like vitamin A, vitamin C, and vitamin E and minerals like iron, calcium, and magnesium. Chlorophyll has been shown to build red blood cells quickly, cures anemia, normalize blood pressure by dilating the blood vessels. Chlorophyll has been shown to produce an unfavorable environment for bacterial growth in the body and therefore effective in increasing the body's resistance to illness. Probably the most important benefit of wheatgrass is, it is a cancer-fighting agent. Many people strongly believe that the benefits of wheatgrass on cancer are real and that consuming wheat grass can help in the treatment and even in the prevention of cancer. Wheatgrass produces an immunization effect against many dietary carcinogens. Additional benefits of wheatgrass are better complexion and a healthy glow. The slowing of graying hair is also a benefit believed to come from wheatgrass. We

Can grow wheat grass in small cups, pots, and trays very conveniently in our homes so that we will have fresh juice and powder with minimum cost.

1.6 How to use it?

You can either make a juice out of the raw wheatgrass plant or opt to use wheatgrass powder. If you use wheatgrass powder, add one spoonful of the powder in a glass of water stir well and have it every day. To ensure better result also follow a healthy diet consisting of green veggies, salads, soups, rice, sprouts, rotis, fruits and dry fruits.

Avoid intake of bakery products, fried foods, spicy foods, non-vegetarian stuff, alcohol, tobacco etc.

1.7 Where do you get wheatgrass?

If you have space and want to nurture a hobby of gardening, you can grow wheat grass in your backyard too. It takes only seven days for the seeds to germinate and grow to an extent ready to be consumed. Else, buy wheatgrass powder from a reputed naturopathy retailer or ayurvedic shop. Before you pick the product to learn to read the label correctly to ensure you do not end up with a fake one. Check if the package says 'organic' if it is sealed and airtight. Many wheatgrass suppliers might grow the grass indoor where the amount of sunlight received is limited. Read the label to find if the grass was grown organically on the farm. If it does not meet these criteria, you should probably give it a miss and check for a genuine one.

1.8 Does it have any side effects?

Not enough is known about the safety and long-term use of wheatgrass. However, it is observed that wheatgrass can cause nausea, appetite loss or even constipation in some people. It's advisable for pregnant woman and breastfeeding mothers to stay off its consumption unless advised by the practitioner.

CONCLUSION

Plant based foods and their products are widely used in Indian diets to cure many of the body ailments. Wheat grass is one of the products having many of the therapeutic properties. It is a powerhouse of the nutrients like proteins, essential amino acids, vitamins, minerals, chlorophyll and active enzymes. Consumption of wheat grass in the form of juice or powder is beneficial in keeping away many of the health problems like ulcerative colitis, cancers, diabetes, obesity, skin problems, high blood pressure etc.

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