

Tender Wheat Grass Powder – an Energy and Immunity Booster Supplement

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SUMMARY

Modern science has already accepted the potential of herbs as a source of new bio-active constituents. Herbal or alternative medicine is gaining popularity and scientific attributes regarding wheatgrass as a “functional food” is becoming more available and popular as a research topic. Wheatgrass seems to be a very promising herbal drug as it has many nutritional and medicinal benefits. It has many therapeutic application in various diseases.

INTRODUCTION

Tender wheatgrass is 8 to 10 days plant grown from bold wheat (*Triticum aestivum*) seeds. (Murphy and Sean, 2002; Kulkarni *et al.*, 2006). Shoot of *Triticum aestivum* Linn. is called as a wheat grass, belonging to family: Gramineae. *Triticum* is a genus of annual and biennial grasses, yielding various types of wheat, native to south west Asia and the Mediterranean region. *T.aestivum* Linn. Tender Wheatgrass, hereinafter, termed as Wheatgrass, is renowned for its therapeutic value since ancient times. Wheatgrass is young grass of a wheat plant. It is a thick, dry grass that looks like hay or straw but is bright green. It plays a role in natural and holistic medicine.

History of Tender Wheat Grass

Wheat grass can be traced back in history over 5000 years in ancient Egypt and perhaps even early in Mesopotamian civilization. It is reported that ancient Egyptians found sacred the young leafy blades of wheat and froze them for positive effect on their health and vitality. The consumption of wheat grass in western world began in the 1930's as a result of the experiments conducted by Charles Schnabel an agricultural chemist on his hens using wheatgrass to nurse them back to health. He found that when supplemented his ill hen's diets with wheatgrass they doubled their egg production. Schnabel also produced dried and powdered wheatgrass for him and his family to supplement their diets (Kumar *et al.*, 2016). The use of WGJ for therapeutic purposes was developed and popularized by Dr. Ann Wigmore, as part of her herbal therapeutic nutritional approach. Wigmore, believed that wheat grass, as a part of a raw food diet, would cleanse the body of toxins while providing a proper balance of nutrients as a whole food. The use of wheatgrass, particularly its fresh juice became popular again in the 1970s, through Ann Wigmore's „The Wheatgrass Book“ which later on became somewhat of a gospel amongst health supplement fanatics. Ann Wigmore also established the famous Hippocrates Centre treating thousands of clients with herbal grasses and wheatgrass juice ([http : // en Wikipedia.org/ wiki/ wheatgrass](http://en.wikipedia.org/wiki/wheatgrass)).

In Asia and Europe wheat grass based products are consumed in the form of juices, powders and extracts for the healthy growth of human body. Wheat grass juice is nature's finest medicine. (Meyrowitz, 1992).

Cultivation of Wheat Grass

After 12 hours of germination, the germinated wheat was sowed in a shady place. Since wheat can grow in all temperatures, shady place is preferred to avoid excess nutrient loss due to exposure to direct sunlight. The sowed seeds started to grow and on the seventh day, the grass reached the length of 15 to 18cm which was then harvested (Ben and Goldin, 2002). 150g of wheat was required to cultivate 100g of wheat grass. (Runjala and Murthy, 2013). Farmers mainly grow wheatgrass for animals to eat, but it has become popular as a supplement and a superfood in recent years. Wheatgrass comes from the family *Triticum aestivum*. People harvest it early in its development before it reaches full size. Some people call wheatgrass green blood because it contains high levels. Trusted Source of chlorophyll, which gives wheatgrass products an unusual green hue. Wheatgrass contains few calories but is rich in vitamins, minerals, proteins, enzymes and 17 amino acids. It also have anticancer properties. Apart from the above mentioned nutrients, tender wheatgrass also contains agropyrene, apigenin, and abundant antibiotic, anti-oxidant and anti-inflammatory properties. Wheat grass, young grass of common wheat plant, is freshly juiced or dried into powder for animal and human consumption- both the forms provide chlorophyll, amino acid, minerals, vitamins and enzymes.



Fig 1: Tender Wheat Grass, its juice and Powder

Nutritional Composition of Tender Wheat Grass Juice

Table 1: Levels of Vitamins and Minerals in 100 ml of Wheat Grass Juice. (Bar-sella *et al.*, 1998)

Vitamins & minerals	Amount (mg/100 ml)
Ascorbic acid	25.2
Dehydroascorbic acid	7.6
Vitamin E	8.5
Carotene	2.43
Potassium	57
Phosphorus	8.2
Calcium	2.4
Sulfur	2.37
Magnesium	1.7
Sodium	1.42
Aluminum	0.31
Zinc	0.02
Copper	0.007

Table 2: The Contents of Amino Acids in Wheat Grass Juice (Bar-sella *et al.*, 1998)

Amino acid	Amount ($\mu\text{g/ml}$)
Aspartic acid	510.3
Threonine	105.8
Serine	201.8
Asparagine	3039.6
Glutamine	200.6
Proline	33.6
Glycine	20.6
Alanin	166.4

Valine	272.1
Methionine	14.0
Isoleucine	145.1
Leucine	101.0
Tyrosine	121.8
Phenylalanine	200.9
Lysine	174.5
Histidine	232.2
Tryptophan	160.1
Arginine	252.9

Tender Wheat Grass Powder

Traditionally, Wheatgrass is known to be taken in juice form. In today's modern life most individuals are lacking time, space, manpower and know-how of growing Wheatgrass. It is difficult to transport fresh Wheatgrass economically everyday too far off places as it has very less shelf life. At this junction, making the availability of Wheatgrass in Powder form has proven to be very convenient and effective. Wheat grass powder retains all important nutrients of wheat grass and having higher quantity of dietary fiber, cost effective and higher shelf life than wheat grass juice. Wheat grass in powder form is a method for preserving wheat grass nutrients which consistently achieving protein assays exceeding forty percent and which also has optimally high levels of liver enzymes and readily absorbable minerals as well as trace minerals for use in maintaining good human health and enhanced resistance to disease.

Table 3: The Nutritional Composition of tender wheat grass powder

Nutritional Content	Quantity(100g)
Energy(kcal)	289 Kcal
Fat(g)	0.28 g
Carbohydrate(g)	43.6
Dietary fiber (g)	29 g
Protein(g)	28
Iron(mg)	121
Calcium(mg)	668
Sodium(mg)	26
Vitamin E(mcg)	1890
Magnesium(mg)	300
Chlorophyll(mcg)	12000
Carotenoids(mcg)	1300
Vitamin B1(mg)	76
Folate (mcg)	900

Health Benefits of Tender Wheat Grass

- It has maximum health benefits like an advance therapy for cancer as well as thalasemia disease.
- Stimulates metabolism, restores alkalinity to the blood, its abundance of alkaline minerals helps reduce over acidity in the blood.
- De-toxicant and helps restore healthy cells.
- Facilitate the use of carbohydrates for energy and aid the nervous and digestive system.
- Essential for normal brain and body development.
- Improves immune system and potential anti-aging factor.
- Keeps us alert and awake.

- Essential for building rich red blood, healthy skin, and hair.
- It also helps to calm the nerves & stimulate better digestion. Stimulates smooth digestion, assimilation of foods and overall body metabolism.
- Cancer prevention and treatment
- Fighting infections
- Preventing and treating type 2 diabetes & Obesity other benefits
- Relieving gout
- Wheatgrass juice is an excellent choice for a drink as it helps in blood purification. Drinking wheatgrass on a regular basis will also ensure you of a normal blood pressure.
- Wheat grass juice acts as an excellent mouth wash for sore throats and pyorrhoea. It also prevents tooth decay and tooth aches.

CONCLUSION

In this way, tender wheat grass can be used as energy and immunity booster supplement in daily diet of people to live a healthy life. Wheatgrass juice generally contains no harmful substances with the exception of a possible allergic reaction. Wheatgrass is known to help minimize fatigue, naturally regulate blood pressure and blood sugar, support weight loss, improve digestion and elimination, support healthy skin, teeth, eyes, muscles and joints, improve the function of our heart-lungs and reproductive organs and skin sores, slow cellular aging, improve mental function and is beneficial in arthritis and muscle cramping. It is proven to be beneficial under various conditions, such as anaemia, diabetes, cancer, constipation, and common cold. Thus, it should be made part of daily dietary intake in order to explore its maximum benefits. It consists of several vitamins and minerals. It has higher antioxidant activity.

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