

Health Benefits of Scrumptious Water Chestnuts /Water Caltrop (*Trapa natans* L.)

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ABSTRACT

Besides their crunchy texture and sweet mild flavour, water chestnuts possess remarkable nutritional composition, making them an excellent food source. Their medicinal properties have rendered them usable in Ayurvedic and Unani systems of medicines. Water chestnut acts as an excellent coolant for the body. It promotes salivation and quenches thirst. Being cool, sweet, heavy and bitter, it is effective in controlling loose motion. Water chestnuts are a perfect food to form part of a healthy lifestyle. They are high in nutrients and low in calories and almost fatless. This makes them a healthy food option. Due to their detoxifying properties, water chestnuts are beneficial for people suffering from jaundice. Jaundice patients can eat it in raw form or in juice form. It acts as an excellent tonic for removing toxins from the body. Since water chestnut contains useful minerals like K, I and Mn. Singhara has been widely used in Ayurvedic and Unani systems of medicine. Ayurveda says it contains 22 % more mineral compared to buffalo milk. Singhara is indigenous to India and used to cure various diseases. It helps in maintaining proper functioning of the thyroid gland. Being rich in polyphenolic and flavonoid antioxidants water chestnuts possess anti-bacterial, antiviral, anticancer and antioxidant properties. They help in strengthening the stomach and the spleen and remove symptoms of weak spleen such as bad taste, insomnia, feeling sick, cough, fatigue and cancer. The usage of water chestnut either in raw form or in juice form helps to alleviate the problem of bad appetite in children as well as in adults. It helps in treating hypertension during pregnancy and improves fetal growth. The juice extracted from water chestnuts eliminates the humor of bile and phlegm and cures plethora. It also increases virility. K occurring in chestnut is vital for proper muscle and neural functioning. It also regulates water retention and blood pressure by balancing Na.

Keywords: Antioxidant, Flavonoids, Antiviral, Hypertention, Minerals, Salvation, Neurotransmitters

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INTRODUCTION

Water chestnut is an aquatic vegetable, native of Asian continent and generally grown in muddy or marshy area of the land. It is having the shape of tube and its stems are without leaves. Water chestnut, commonly known as 'Paniphal' or 'Singhara' is native to China and is quite common in Chinese households. Unlike its name, it is not related to chestnut in anyway [2].



Fig1: Water Chestnuts

Water chestnut is known by various names in different countries. In China, it is known as Chinese water chestnut, apulid in Philippines, apulid (Vietnam), somwang (Thailand) and Singhad, shingada, or singoda in India. Its biological name or botanical name is *Eleocharis dulcis*. The other names of water chestnut are water caltrop and Trapanatans.

Though, it is a seasonal vegetable, canned water chestnut is available throughout the year. It belongs to the family of plants called sedge, a type of marshy grass with the edible part at the bottom. More than 2/3rd of the plant remains submerged in water whereas the upper leaves float on the surface of water [1-6].

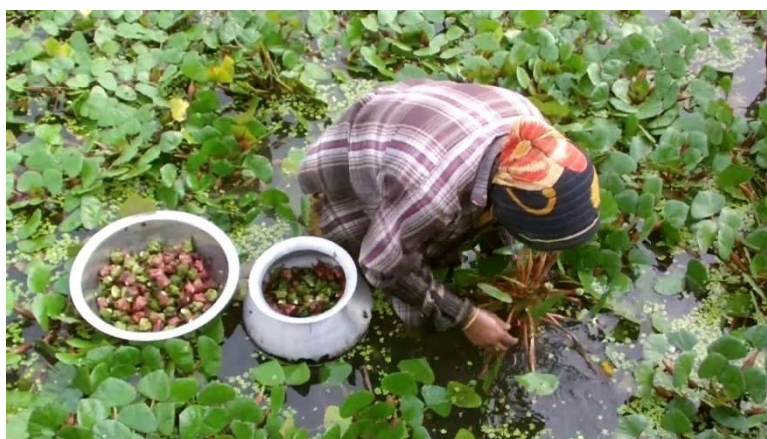


Fig 2: Collection of Water Chestnuts

The fruit or water chestnut is found under the leaves when they mature. Besides their crunchy texture and sweet mild flavour, water chestnuts possess remarkable nutritional composition, making them an excellent food source.

Their medicinal properties have rendered them usable in Ayurvedic and Unani systems of medicines. . Water chestnut acts as an excellent coolant for the body. It promotes salivation and quenches thirst. Being cool, sweet, heavy and bitter, it is effective in controlling loose motions . Water chestnuts are a perfect food to form part of a healthy lifestyle. They are high in nutrients and low in calories and almost fatless. Half a cup of water chestnuts contains just 0.1 gram fat. All this makes them a healthy food option. Since water chestnut contains useful minerals like I and Mn it helps in maintaining proper functioning of the thyroid gland [3].

Seed of Water Chstnut



Fig 3: Seed of Water Chestnuts

The seed is the edible portion of this plant. This seed has a triangular shape, is thick and white with a mild sweet taste and flavour. The seed coat is quite hard with 2 or 4 blunt projections and can only be removed either by slicing them into two pieces or by boiling them which makes the seed coat softer .They are highly nutritious as well as low in calories and fat free. Fresh water chestnuts have double the amount of potassium, zinc, B vitamins and vitamin E in comparison to the canned varieties. Indian water chestnut or 'singhara' is generally available in deep green, red and a blend of these colours [3, 7-10].

Culinary Uses

The edible part of the vegetable is the corms, which is whitish in colour. Often, they are eaten raw. They are also used after slightly boiled. They are used to make flour and cake (water chestnut cake). Singhara is

rich in carbohydrate, fiber, vitamins and minerals. They are crispy and crunchy. The crunchy texture and fresh mild flavour of water chestnut sets this vegetable apart. It does not lose its crunchiness on being cooked or canned. It can either be eaten raw or boiled besides being used as a filling addition to dishes. They are used along with coriander, rice, noodles, ginger, sesame oil and bamboo shoots, etc. and give the taste of crunchy and crispy. In Thailand, it is the important component of famous Thai desert 'tabtimkrob'. In the developed countries, it is used along with bacon strips as an hors d'oeuvre and mix with drinks in Indonesia.



Fig 4: Recipes of *Trapa natans*

They are used in many forms such as powder, juice, cake, flour, sliced, eaten raw and steamed. The following recipes can be made from this important vegetable. 12. It helps in treating hypertension during pregnancy and improves fetal growth. Porridge made from the flour of water chestnut is given to a pregnant woman after delivery to check hemorrhage. The dried seeds stop bleeding and treat miscarriage issues in women.

It also promotes mammary gland secretion of milk. The juice extracted from water chestnuts eliminates the humor of bile and phlegm and cures plethora. It also increases virility. Water chestnuts eliminate inflammations and blood impurities. They are energy boosters which drive away tiredness and check the flow of blood from wound.

Water chestnuts are excellent sources of K with one cup providing 362.1 mg. This mineral is vital for proper muscle and neural functioning. It also regulates water retention and blood pressure by balancing sodium. Snow peas with water chestnuts. Water chestnuts are just perfect to beat the scorching heat of the summers, thanks to their excellent cooling properties.

They have numerous curative and supplementary properties as well. The juice of water chestnut is used to control diarrhea and dysentery and the fruits are used in treating sore throat (9), anemia, fractures, bronchitis and in leprosy [3].

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Nutritional Value of Water Chestnut

It contains many bio-chemical compounds such as catechins and epicatechins antioxidants. It is having penicillin like compound called puchin. Besides this, it also contains gallic acids, vanillin, hydrocinnamic acids and pcoumaric acids [1].

It has adequate amount of K and low amount of Na thus good for your blood pressure and heart. Obese people should avoid eating of it because of its more carbs containing. 100 grams of it has nutritional value calories (97), fat (0.1g), K(584mg), Na(14mg), carbohydrate (24g), protein (1.4g), fiber (2g), protein (1g), Ca (1%), vitamin C (6%), vitamin B-6 (15%) and Mg (5%) [13-15].

Health & Medicinal Benefits of Singhara// Indian Water Chestnuts/Water Caltrop

Singhara is used for treating diarrhoea, dysentery, thyroid problem, swelling and bronchitis. It is natural antioxidant, prevents wrinkles, protects from UV rays and helps to cure weakness. It helps to prevent sugar, ulcer, gout and heart diseases. Singhara is very rich in carbohydrate and 100 gm of it gives 115 calories. It helps in proper functioning of thyroid. The fruits are used to treat sore throat, anemia, fractures, urinary disorders, and in leprosy. It is anti oxidant and help to cure cough. Singhara peel can be grind and applied on swelling to get relief. Regular eating of its flour helps to gain weight. For eczema cure, dried singhara should be mixed with lemon juice and applied regularly on affected area. To treat measles, boil chestnuts in water and drink this water to alleviate the infection. It is best given from the 3rd day to 9th day of symptoms. It is rich in polyphenolic and flavonoid antioxidants and therefore possesses antibacterial, antiviral, anticancer and antioxidant properties. The seed has a detoxifying effect on the body and therefore is very useful to those who suffer from jaundice. It helps in removing toxic substances from the body. It cures dehydration in winters and serves as a coolant [3, 9-11].

Water Chestnut Benefits for Hair & Skin

In addition to their numerous health benefits water chestnuts can be beneficial for the skin in the following ways. As stated earlier, water chestnuts purify the blood by removing toxins from the body. This results in the appearance of glowing and youthful skin. Water chestnuts are effective in treating conditions like measles. Water chestnuts boiled in water makes an excellent solution for measles patients. Having this drink on a regular basis for at least 6-9 days of the cycle provides great results.. A paste made from powdered skins of water chestnuts can be applied on the swollen areas of the skin for relief. Water chestnut seed powder mixed with lemon juice helps to cure eczema if applied regularly. Healthy, lustrous and damage free hair is something that all of us wish to achieve. Just like the rest of your body, your hair needs adequate supply of nutrients to maintain its health. Water chestnuts are beneficial for your hair in general as they contain certain essential nutrients such as K, Zn, B vitamins and vitamin E. Moreover, they remove toxins from the body that can damage your hair as well. Thus, their nutritional value has a lot to contribute to healthy hair [7, 16].

CONCLUSION

Water Chestnut has enough amount of K, which helps to counter the effect of sodium and good for lowering blood pressure as well as for your heart. Juice is good for jaundice. It helps to lower down the level of cholesterol and discourages the absorption of carbohydrate. 100 grams of it contains 2 g of fiber. The presence of Vitamin B-6 is good for sleeping as well as alleviating your mood. It produces neurotransmitters that are effective for your mood and sleep. Boiled water of water chestnuts is good for measles patients. Due to the presence of I, it is effective in the proper functioning of thyroid gland. It is also having vitamins B and E. All these nutrients are good for healthy hair. It has cooling effects and acts like as coolant. The presence of anti-oxidants like poly-phenols and flavonoids, it acts as anti-viral, anti-bacterial, anti-cancer and anti-fungal. During pregnancy, it is helpful in the growth and development of fetal. It helps to detoxify the body and gives overall good appearance. The paste of water chestnuts and lemon juice is good to cure eczema. It has the balancing effects in the body due to the presence of enough amount of K and lower amount of Na thus helps in regulation of water retention. Its juice is good in curing of phlegm. It is good in the secretion of milk by stimulating the mammary gland. Eating the vegetable is helpful to cure sore throat.

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