

Health Benefit of a Handful of Cashew Nuts (*Anacardium Occidentale* L.) to Prevent Different Disorders Like Diabetes, Heart Disorders, Cancer, Weight Gain, Gallstone, Migraine Headache

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ABSTRACT

Cashew nut is very favourite fruit among us which can be taken through snacks and meal and it is easily found in local market. Nuts played a vital role in diets of many cultures for centuries due to its high energy and nutritional value as well as its number of variety of flavours and taste. In addition a handful of cashew nuts in daily diet have been linked with several health benefits during the last many years due to its particular nutritional composition. Cashew nuts have a high content of unsaturated FA (fatty acids) both mono- and polyunsaturated FA. It also contains variety of vitamins, minerals, amino acids, phytosterols, and fibres. A handful of cashew nuts in daily diet is associated not only to a reduced risk of cardiovascular disease but it also helps in prevention of diabetes, weight gain, Gallstone, migraine headache. The benefits of the addition of Cashew nuts is a healthy diet in front of a low-fat diet have been recently highlighted by Estruch et al [2013](#) confirming that the incidence of major cardiovascular events and mortality is 30% lower for those individuals consuming a Mediterranean diet supplemented with a handful of cashew nuts a day compared to those that are advised to consume a low-fat diet. British Journal of Nutrition published research in which identified various nuts among plant foods having greater antioxidant content, Cashew nuts have high antioxidant content which may lead to their cardio-protective benefits. Nuts' having greater antioxidant category helps to explain results in which risk of death from cardiovascular and coronary heart diseases

showed strong and consistently reductions with increasing nut/peanut butter consumption. Total death rates decreased 11% and 19% for nut and butter intake once per week and 1-4 times per week, respectively. Even more wide variety of results of a review study, taking a handful of cashew nuts have lower risk of coronary heart disease, also published in the British Journal of Nutrition. In the above research study, researchers looked at four large prospective epidemiological studies—the Iowa Women's Study, Adventist Health Study Nurses' Health Study and the Physician's Health Study. Evidence from all four studies was combined the net result will be, Peoples those taking Cashew nuts at least 4 times a week shows a 37% decreased risk of coronary heart disease compared to those who had never or seldom take cashew nuts.

Keywords: *Anacardium Occidentale L, Cashew Nuts, Cancer, Diabetes, Gallstone, Heart Disorders, Migraine Headache, and Weight Gain.*

INTRODUCTION

Cashew nut is one of the most delicious and nutritious nuts have been a product of wide demand all over the world. It is an item of food so rich in protein, fats and vitamins that it is regarded as delicacy even in the advanced countries of the world. Botanically, cashew is a 'Wonder Nut', because it is the only nut which appears outside the fruit. It is funny looking with its nut snuggling close to its plump flesh, like a kangaroo with its young in its pouch; in fact each part of the fruit is useful to man. The Kidney shaped fruit's Kernel is available to the Consumers in its purest and natural form, that is why the saying "cashews care for your health". Cashew Processing Industry is a traditional agro-based industry in India [1].

Cashew is one of the most important Commercial Crops of India which helps to earn considerable amount of foreign exchange through export of its kernels. During the year 1999 - 2000, India exported 96, 805 metric tons of Cashew Kernels valuing Rs.2569 crores.

Presently, India's share in cashew export averaged 60 per cent in the total world export. Cashew industry provides employment for more than 3,200002 workers through 1098 cashew factories in the country during the year 1999-2000 [2]. The estimated demand of raw nuts at present is 10 lakh tones. The present internal production is only 4.30 lakh tones. India imported raw cashew nuts valued Rs. 266 crores in 1991-1992 and increased to Rs. 1186 crores in the year 1999-2000. To minimize the drain of foreign exchange through import of raw nuts and to sustain the cashew industry, it is essential to enhance the production of cashew in the country. The world demand for cashew kernels is rising steadily. Hence, the processing of cashews is now a profitable business. Till the early of 1970s, India was enjoying nearly a monopoly in cashew kernel trade. But, now Vietnam has emerged as a leader [3]. A cashew processing centre produces two types of products. The main product is the nut flesh called cashew kernel, which is creamy white in colour. The other product is

cashew nut shell liquid (CNSL) extracted from the outer shell of the nut. Of course, cashew is a seasonal crop. Harvesting season commences from January and continues up-to May. In the processing units, over 95 per cent of the workers are women belonging to socially and economically weaker communities [4-8].

The main cashew growing states are Kerala, Andhra Pradesh, Orissa, Maharashtra, Karnataka, Goa and Tamil Nadu. Tripura, Meghalaya and Madhya Pradesh produce small quantities. The processing and exporting activities are concentrated in Kerala followed by Tamil Nadu, Karnataka and Andhra Pradesh. Industries could be classified into large-scale industries, small-scale industries and cottage industries. Small-scale industries play a vital role in terms of growth and immediate large scale employment [9]. They offer means of ensuring a more suitable mobilization of the resources of capital and labour-skill which might otherwise remain unutilized. The development of the small-scale industries sector in the last 50 years has indeed been significant. The small-scale sector today is estimated to produce goods and services which constitute 35 per cent of the country's industrial production. The growth of production is estimated to average over 12 per cent per year. Small-scale industries in India could be brought under two broad categories. They are agro-based industries and power-based industries. Among the agro-based industries, the cashew industry deserves a special mention because of its noteworthy contribution to the generation and growth of rural employment and foreign earnings. The cashew industry concerns itself with production, processing and marketing of cashew kernels [10-13]. The processing of cashew nut was originally started on commercial scale in Mangalore at present in Karnataka State during the beginning of the 20th century. However, after the First

World War, the industry was shifted to Kollam, in Kerala State, which later became the centre of cashew processing and exporting due to the availability of raw nuts, infrastructural facilities such as roads, port, cheap labour, rail service, etc. The first "World Cashew Congress-2001" was held from 23-25 February, 2001 at International Convention Centre, Cochin. About 300 delegates including more than one hundred foreign delegates participated in the World Cashew Congress. This had created a better buyer seller relationship and understanding of international trading standards of cashew [14].

The growth of the processing unit was the reflection of the enormous profits earned by the processors by exporting cashew kernels. The capital requirements of the industry were very low. Raw material was available in plenty mainly because of the large quantities of nuts imported from East African countries viz. Mozambique, Tanzania and Kenya. Despite the high profitability of the industry, the cashew workers did not get their due share. The workers were not organized though the industry was organized on a factory level wage rates were extremely poor and the working condition was sub-human [15]. The industry was not subject to any state legislation other than the provisions of factories act. Consequent on the growth of trade union activities and strike by workers, minimum wage was introduced for the first time in cashew industry in 1953. The rise in the cost of living in the mid-fifties caused further strike by workers for the revision of wages. As the level of labour unrest increased, the Government of Kerala revised the minimum wages in 1960. The 1960 legislation introduced compensation for change in cost of living. To evade payment of the statutory benefits to the workers, the processors began closing down the factories and shifting the processing to Kudils (Cottages) where the payment of

minimum wage was not compulsory. This rendered the organized factory workers jobless. Due to the continued agitation by workers, the Government of Kerala abolished the cottage processing. This, together with the revision of minimum wages in 1967 induced the factory owners to shift the industry to Kanyakumari District of Tamil Nadu. The labour cost in Kanyakumari was less than that of even the cottage processing units in Kollam. The Government of Kerala tried to check the migration of the processing industry to Tamil Nadu by starting its own public sector organization, viz., the Kerala State Cashew Development Corporation (KSCDC) in 1969. It also succeeded in getting the imports of raw nuts analysed through the cashew corporation of India (a subsidiary of the State Trading Corporation) since 1980 and distributing the nuts on the basis of a quota system. All these efforts could not prevent the migration and the Industry in Kanyakumari District expanded rapidly, thanks to the low wage rates in Tamil Nadu and the determination of the processor from Kollam. The revision of Minimum wages in Kerala in 1975 further accelerated the process of migration.

Generally, cashews in the shells are not available in stores. This is due to the nuts which are always sold pre-shelled since the interior of their shells contains a caustic resin; this caustic resin is called as cashew balm. This cashew balm is removed carefully before consumption of cashew in the diet. This cashew balm or caustic resin is used to prepare Varnishes and insecticides in industry [16-20].

Scientifically, Cashews is known as *Anacardium occidentale*, having same family as the mango and pistachio nut.

CASHEWS NUTRITION FACTS

Cashew nuts have been used in traditional medicine systems for since many years

ago to heal various ailments, including poor heart problem and diabetes. Cashew nut is originated from Brazil and today is popular across the globe, especially in Asian cuisine.

Due to their high nutrient density and supply of many important minerals, cashew nuts are often used to improve heart disorder. Unsaturated fatty acids are very rich in Cashew nuts and other important compounds including plant-based dietary fibre, protein, minerals along with this phytosterols and Phenolic compounds as an antioxidant. The composition of the cashew kernel is about Protein, fat and carbohydrate 21%, 46%, 25% respectively. One of the key factors of cashews nutrition is their healthy fat content. Cashews are primarily made up of unsaturated fats in the form of monounsaturated fatty acids (MUFAs that contains oleic acid) plus a smaller proportion of polyunsaturated fatty acids (PUFAS mostly in the form of linoleic acid). Roughly 62 per cent of the cashew's fats are monounsaturated fat, 18 per cent polyunsaturated fats and the rest a mix of saturated fats.

Because of the positive effects of MUFAs and PUFAs on metabolism and other bioactive functions, many studies associate cashew consumption (and nut consumption in general) with a decreased risk for coronary heart disease, cancer, diabetes and obesity [21].

1/4 cup serving of cashews has roughly:

- 196 calories
- 5 grams of protein
- 1 gram of fibre
- 16 grams of fat
- 750 milligrams copper (84 per cent DV)
- 89 milligrams magnesium (33 per cent DV)
- 167 milligrams phosphorus (28 per cent DV)

- 9 milligrams zinc (23 per cent DV)
- 27 milligrams manganese (15 per cent DV)
- 11 milligrams vitamin K (12 per cent DV)
- 2 milligrams iron (11 per cent DV)
- 23 milligrams folate (6 per cent DV)

HEALTH BENEFITS

Heart-Protective

Cashew nuts have very low fat content as compared to other nuts. Cashew has higher proportion of oleic acid which is very important for health. Cashew has very less content of Cholesterol and having higher antioxidant property which reduces various heart disorders. Near about 82% fat is unsaturated which is healthy for heart [22].

Various studies of diabetic patients show that addition of low fat diet in unsaturated fat has reduced the triglyceride level. Triglyceride is one of the form in which fats are carried in the blood. High triglyceride level can increase risk related to heart disease. Due to this, monounsaturated fat must be there in diet of diabetic patient.

Animal studies show that decrease copper level in diet will increase blood cholesterol level.

Similar to that of human being, deficiency of copper level causes increased activity of an enzyme called HMG-CoA reductase. The same enzyme is targeted in treatment associated with Cholesterol medication. Each additional intake of nuts per week was correlated with an average 8.3% reduced risk of coronary heart disease. To decrease risk of cardiovascular and coronary heart disease, take a handful of cashews or other nuts, or a tablespoon of nut butter, at least 4 times a week.

Prevents Cancer

Flavonols like Proanthocyanidins fight against tumour cells by controlling them to

divide further. These Flavonols have high content of copper in cashew which helps to fight against cancerous cells and keep our colon free from cancer. In daily routine we eat food which is very poor for copper content so handful of cashew will fill the deficiency of copper in the diet.

Cashew nuts are one Of the World's Healthiest Foods and are rated as excellent sources of copper. This is one of the major cashew nut benefits. An enzyme containing essential components like copper has wide role in various physiological processes like utilization, elimination of free radicals, development of bones and production of skin pigment like melanin.

For example, copper is an essential component of the enzyme, superoxide dismutase which is important in energy production and antioxidant defences.

Lysyl oxidase is enzymes involved in cross linking of collagen and elastin. Copper can promote the activity of lysyl oxidase enzyme. Collagen and elastin provides the ground substance and flexibility in blood vessels, bones and joints. Low dietary intake of copper may leads to increased fecal free radical production and increased chances of colon cancer. Various types of anaemia, osteoporosis, joint problems, break blood vessels, elevated LDL (bad) cholesterol and reduced HDL (good) cholesterol levels such types of common problems gets easily solved when there is adequate intake of copper in the diet.

Health of Bones

Along with copper Cashew nut also contains Calcium, magnesium which is very important for health of bones. Calcium is necessary for strong bones but magnesium can also play important role in health of bones. About 60 % of magnesium is found in our bones.

Magnesium can also regulate nerve and muscle tone. In many nerve cells magnesium acts as natural calcium channel blockers, blocking calcium from entry into the nerve cells and activating nerve. Due to blockages of calcium, entry magnesium keeps our nerves cell relaxed. If our diet has too less magnesium the calcium gets free entry into the nerve cell and nerve cell becomes overactive and causes excessive contraction. Insufficient magnesium can thus contribute to high blood pressure, muscle spasms (including spasms of the heart muscle or the spasms of the airways symptomatic of asthma) and migraine headaches as well as muscle cramps, tension, soreness and fatigue. Given these effects, it is not surprising that studies have shown magnesium helps reduces the frequency of migraine attacks, lowers blood pressure, helps prevent heart attacks, promotes normal sleep patterns in women suffering from menopausal sleep disturbances and reduces the severity of asthma.

Major structural proteins like collagen are prepared from copper in the body. When copper deficiency becomes severe, tissue integrity-particularly bones and blood vessels-can begin to break down. Luckily, it appears at the present time that a very severe and prolonged dietary deficiency of copper is necessary to lead to overt problems. For example, premature babies with immature gastrointestinal tracts can develop bone problems related to copper deficiency. At least one recent author has speculated that the marginal copper status of the diets of about one-quarter of adults in the U.S. is related to eventual development of osteoporosis in some members of this group. For adults with borderline copper intake from food, deficient intake of nutrients like calcium and vitamin D is still likely to put them at greater risk than borderline intake of copper.

Help to Prevent Gallstones

Daily intake of cashew nuts can reduce the risk of developing gallstones (6) up to 25%. Twenty years of dietary data collected on 80,000 women from the Nurses' Health Study concludes that those women who take 1 ounce of nuts each week have a 25% lower risk of development of gallstones. 1 ounce is near about 2 tablespoons can easily prevent gallbladder disease. So taking little bit of cashew nuts in our diet can potentiality prevents development of gallbladder disease.

Lowers Risk of Weight Gain

Cashew nuts are considered as fat but it contains HDL (Good) Cholesterol, so those people who take cashew at least twice a week they can gain less weight compared to who can take less or seldom. Cashew nut provides variety of health benefits like cardio protective benefits but some people fear about weight gain. A study published in Journal of obesity shows that such type of fears are groundless while taking cashew nuts in diet. Those people who take cashew nuts twice a week they are less likely to weight gain than those who never or seldom take in diet.

A research study of Spain which involves 8,865 adult men and women found that those who take nuts at least twice in a week had 31% less chances of weight gain than those who never or seldom ate cashew nuts. From the above research, study authors of research concluded that frequent cashew nut consumption causes reduction of risk of weight gain which is near about 5kg or more.

Healthy Eyes

Lutein and Zeaxanthin are two powerful antioxidants. When we consume these antioxidants in our regular diet it can protect our eyes from light damage. Cashew nut contains above two antioxidants. Cashew nuts also prevent age

related muscular degeneration. So taking cashew nuts twice a week is healthy for our eyes.

Prevents Breast cancer

Cashew nuts have one important substance called Anacardic acid which can keep balance in between estrogen and other hormone. Eating a handful of cashew twice in a week provides 20 micrograms of Anacardic acid. In earlier research scientists found that Anacardic acid can inhibit hormone sensitive to breast cancer cells. So taking handful of cashew can cause relief from breast cancer and other hormone related disorders.

Provides trace minerals

Various trace minerals can keep us healthy every day. Large amount of trace minerals are present in cashew nuts. Cashew nuts includes copper (152% recommended daily intake) which can helps for proper cognitive functions. Also it lowers the risk of infection. Other trace minerals like magnesium prevent muscle spasm and regulate blood pressure. Other trace minerals like calcium and phosphorus helps to keep our bones and teeth strong. Other trace minerals like zinc help to boost immunity and help injuries to heal quickly.

OBSERVATION AND CONCLUSION

From the above observation we can easily conclude that consumption of a handful of cashew nuts daily is very useful in prevention of Cancer, diabetes, weight gain, Gallstone, Migraine, and various heart disorders. It also helps in maintaining eye health, hair remains black. Cashew nut has various trace minerals which is very helpful for our body. It also maintains bone health. A handful of cashew nuts increase High density lipoprotein (HDL) which is also called good cholesterol. It decreases Low density lipoprotein (LDL) which is known as bad cholesterol for body health. Copper present in the cashew nuts plays important role as an antioxidant.

Presence of copper helps to prevent cancer. Hence Cashew nuts are very useful in our diet for maintaining good health.

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