

Rice: Miracle for Cancer Prevention and Control

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INTRODUCTION

Rice

Rice (*Oryza sativa*) is the most important cereal crop and a staple food of half of the world population. Rice is also called as semi-aquatic annual grass plant. About 20 species of the genus *Oryza* are recognized, but nearly all cultivated rice is *O. sativa*L. It appeared in Ganges valley region of northern India as early as 4530 BC and 5440 BC respectively. Rice seems to have appeared around 1400BC in southern India after its domestication in northern plains. It then covered all the fertile alluvial plains and those are watered by the rivers. Some says that the word rice is derived from Tamil word “arisi”. Rice consumption in 2019-20 is estimated at 102 million tonnes, an increase of 3% . Consumption is expected to Increase further in 2020-21 to 108 million tonnes, as said by USDA. So if we supply necessary nutrients, antibodies etc through rice then it will a lot as rice is consumed daily by most of the people worldwide.

Cancer

New cancer cases crossed approximately jumped to over 23 million in 2019 from 18.7 million in 2010. Cancer death reached 10 million in 2019 from 8.29 million in 2010. So if we can recommend anti cancer food like strawberry, carrots, broccoli, nuts, flaxseed, tomatoes etc to people it can help to decrease the rate of cancer spread. But all people cannot afford it but they eat rice every day.

Causes of cancer

Common is caused by some changes in genes. Mutation that is sudden change in chromosome number causes cancer. Oncogenes causes the growth of cancer cells. A gene that is mutated from of a gene involved in normal cell growth is called oncogenes. Mutation in genes that become oncogenes can be inherited or caused by being exposed to substances in the environmental that cause cancer.

Exposure to different chemicals and physical agents like tobacco (25-30% cancer death), environmental pollution, diet and obesity (30-35% death), infection (15-20%) and radiation (10%) are major causes of cancer.

Anti cancer property of rice

Rice components like flavones, tannins, phenolics, sterols, tocopherols, essential oils, amino acid, gamma Amino butyric acid, gamma oryzanol etc shows antitumor, antioxidants, antiallergic etc properties.

Rice bran

Rice bran is the main byproduct of rice processing and contains various nutrients elements like protein, oil, vitamins etc. Rice bran is a promising therapeutic agent for cancer as said by various researchers. It acts as a anti local-inflammatory agent, it can stop cancer cell division, helps in chemo preventive effects, promote cancer cell apoptosis etc.

Brown Rice

Breast cancer is the mostly occurred cancer among the females and brown rice shows an excellent property to inhibit the mammary gland proliferation. Brown rice contain phytic acid which helps to inhibit the growth of cancerous cells. Brown rice phenols like p-coumaric acid, ferulic acid sinapic acid, triclinic etc of which ferulic acid and triclinic helps to

inhibit the colony forming ability of oncogenes.

Basmati rice

It contains 20% more fiber than other rice variety which helps to prevent the formation of cancerous cells.

Gathwan, Maharaji and Laicha variety

According to a research this traditional varieties of rice found in Chhattisgarh have ability to fight against lungs and breast cancer without affecting the normal cells. According to them daily consumption of 200gm of this rice can give an effective result.

CONCLUSION

India is a developing country and most of the people of our beloved nation are unable to have a good dietary food. But rice is an item which they can grow generation after generation by normal germination method and consume it. So by supplying major nutrients, vitamins, anti disease factors to some varieties and recommending them to farmers and supplying the necessary amount for cultivation can help our people to resolve various health issues like cancer as there is no effective treatment of cancer still now and the chemo therapy treatment is so precious for most of the people.