



Black rice :The forbidden rice

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Black rice (also known as purple rice) is a range of rice types of the species *Oryza sativa* L. some of which are glutinous rice. Varieties include Indonesian black rice and Thai Jasmine black rice. Black rice is known as “Chak-hao” in Manipur an Indian state on the eastern border with Myanmar where desserts made from black rice are served at major feast. Black rice is also called as the forbidden rice but shouldn't stop you from eating it. The rice has its history rooted in ancient china, where the Chinese Emperor or the Royal family was only allowed to eat it, since it was rare, tasty and nutritious. Thus it becomes ‘Forbidden’ to be consumed by the masses. Not very common black rice remains to be rare yet one of the healthiest food types. Black rice is actually a dark purple grain cultivated throughout Asia, black rice is now taking a place on the world stage as a super food with novel and highly beneficial attributes. For those who are on gluten-free diets, black rice is goodnews, as it contains no gluten at all. But the grain is high in dietary fibre antioxidants, Vit. E, some of the B vitamins and minerals. Black rice or the forbidden rice (Chinese) is a rare and a very old variety of rice that has been growing in India for centuries. It is mainly grown in the North East region (called as ChakHao) and the southern parts (called as Kavuni in Tamil) of India. Enumerating the benefits of black rice Macrobiotic Nutritionist and Health Practitioner, says”. It is loaded with anti-oxidants especially anthocyanin which

is great for diabetics, heart patients and helps brain activity. It's great for skin and hair due to its Vitamin E content. It is also loaded with fibre so it does not spike blood sugar levels. Its rich in iron, hence a good source for vegetarians.”

The black rice: The bran hull (outermost layer) of black rice contains one of the highest levels of anthocyanin's found in food. Black rice has a deep black color and usually turns deep purple when cooked. Its dark purple colour is primarily due to its anthocyanin content, which is higher by weight than that of other colored grains.

Forbidden rice: During the days of the Ching and Ming dynasties Forbidden Rice was exclusively reserved for the Chinese Emperors to ensure their longevity and good health. Eventually, common people were allowed to eat the rice. Since then, it has become a nourishing staple that is reputed to promote long life and good health. According to traditional knowledge black rice, a popular super food was once consumed only by royalty known as forbidden rice, emperor's rice or longevity rice.

Nutritional aspects of black rice: Black rice is a source of iron vitamin E and antioxidants. The bran hull (outermost layer) of black rice contains one of the highest levels of anthocyanin's found in food. The grain has a similar amount of fibre to brown rice and like brown rice, has a mild, nutty taste. The variety is a powerhouse of vitamins and minerals. The nutritional value of black rice



is superior to its white and brown relatives present in the market today. Whole grain black rice retains all its original natural properties as it does not go through a polishing process. The various nutritional properties and health benefits of eating black rice are as following :

High protein content : Proteins are very essential in building muscles and cutting down on excess weight. Black rice also offers a minutely increased amount of protein content over other 'healthier variants' of rice. It contains 8.5 g of protein in a 100g serving, while brown and red rice contains 8 g and 7 g of protein, respectively for the same serving. On the other hand, polished white rice contains only 6.8 g of protein.

Low glycemic index : Black rice is higher in antioxidants than brown or white rice. Black rice also has a low Glycemic Index (GI) of 42.3 (Low GI foods are considered those with a GI of 55 or less) compared to white rice, which has an average GI of 89, and brown rice that has an average GI of 50.

High in antioxidants : The deep black or the purple hue of the black rice is a marker of its high antioxidant properties. Similar to blackberries and blueberries, that appears deeper in colour because of their high content of anti-oxidants. The outermost layer of the grain (the bran and the hull), contains immense amounts of the antioxidant-anthocyanin. In fact the amount of anthocyanin contained in black rice is higher than any other grain, including brown rice, red rice, red quinoa, or other colored whole grain varieties. Anthocyanin can help prevent cardiovascular disease, restricting free radical movements which can cause variety of diseases like diabetes and even cancer. It can also help improve brain function and reduce inflammation. Majority of the nutrients of rice are present in the outer layer, the hull and the bran, which are only retained in whole grains. Since black rice doesn't undergo any refining or processing, it is able to retain its antioxidants, vitamins, minerals, and fibre. Black rice also contains important antioxidant- Vitamin E, which is useful in maintaining eye, skin and immune health.

Natural detoxifier : The phytonutrients present in black rice help cleanse the body of disease causing toxins (caused by free radicals). Black rice helps the liver (one of the most significant detoxifiers of the body) eliminate unwanted substances through its antioxidant activity.

Dietary fibre : The black rice has about 3 g of fibre per half cup serving. This rich fibre content helps regulate the bowel movements, prevent constipation, diarrhea and bloating. The fibre helps bind the toxins and waste within the digestive tract, and flush it all out of the system on completion of the cycle of digestion. Fibre also gives your body a satiated feeling after consumption which prevents you from binging into other fatty food, thus aiding weight loss.

Protects against diabetes : To ward off the risk of diabetes and obesity, it is advised to consume whole grains instead of just refined carbohydrates. The entire bran of the grain is where the all the fibre is stored in the black rice. The fibre is able to help glucose (sugar) from the grain to be absorbed by the body over a longer duration of time, (Since fibre take the longest to digest), thereby maintaining consistent sugar levels.

Preventing risk of obesity : For people battling obesity, black rice is the best variant of rice to consume. Full of fibre, black rice not only gives the feeling of being full, thus preventing overeating; studies show that the rice variant can also help prevent insulin resistance, which is often linked to the risk of developing diabetes and obesity.

A new study led by Japanese researches, analyzed the genome of 21 black rice varieties to try to find out more about how some rice ended up black and why. They found that the rice all originates from Japanese rice and found the specific gene that has gone haywire in the black rice triggering the plant to produce large amount of anthocyanin. The theory is now that the black rice is naturally occurring but only as a mutation and that it was kept and made into a reliable source by humans crossbreeding black rice mutants to produce more.

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