

## **Black garlic**

Black garlic is put fresh raw garlic on the fermentation box 60 to 90 days, allowed to naturally fermented foods. We know that garlic itself is a very good health food products, while the role of black garlic is really amazing. For diabetes, hypertension, high cholesterol, cancer prevention and treatment have a very significant effect.

Black garlic has a very high nutritious value, the inspection report of inspection agencies shows that: In every 100g of fresh garlic, water containing 63.8g, sugar 7.2g, protein 5.2g, fat 10.2g, Calcium 10mg, Phosphorus 12.5mg, Iron 1.3mg, Vitamin B10.29mg, vitamin B20.06mg, Niacin 0.8mg, Vitamin C 7mg, also contains magnesium and other trace elements, etc. These are the body essential nutrients. The black garlic water in each 100g contains 43.6g, calories 1100KJ, sugar 41.4g, protein 10.4g, fat 5.1g, Calcium 13mg, Magnesium 52mg, Iron 2.1mg, Sodium 36mg, potassium 930mg, zinc 1.4mg vitamin B610.726mg, vitamin B20.126mg, nicotinic acid 10.048mg, etc. It can be seen that , the water and fat in black garlic is lower than the raw garlic ,and trace elements has significantly increased, while the protein, sugar, vitamins and so on is more at least two times than garlic , therefore, the black garlic has rich nutriment which is the human body needed and can even improve the function of essential . Therefore, the black garlic has eliminate fatigue, improve physical strength, resolve constipation, protect the liver, increase prostate activity, promote sleep and other functions.

## **Prevent cancer, control blood sugar, strengthen the function of internal organs.**

Garlic is the best anti-cancer foods from ancient Egypt, the garlic that is nourishing because of the effects of fatigue and physical and the lifting of food products have been respected, in 1990, the National Cancer Institute's "Designer Foods Program" in the garlic for cancer prevention the most effective and was included in the 48 kinds of common anti-cancer foods the first place. At the same time, it can lower the excess cholesterol and sugar in blood, but also adjust the gastrointestinal motility.

The main ingredient of garlic is allicin, garlic allicin and vitamin B1form a combination called a lifting of ingredients garlic thiamine which can resist fatigue, promote the decomposition of the sugar, control blood sugar rise; At the same time, increased precision in garlic is called S - organic sulfides can activate cells, vitamin B1 can help the sugar into energy, with the lifting of fatigue, enhance physical and other effects. In addition, inorganic nutrient selenium can eliminate all sources of lifestyle-related diseases powerfully - the role of reactive oxygen species.

After heating 25-100 °C garlic allicin will generate garlic-ene (Spanish ajoene) of sulfur compounds (of The oils and fats can be melted with the characteristics) component, which has a greater effect in control blood sugar and make sugar into energy

## **Sweet and sour taste, no stimulation.**

Black garlic, no peculiar smell of garlic, but emanate a rich aroma can evoke appetite. To make garlic granule to keep a lot of water, all of the production process to maintain a moist state, it looks similar to preserved fruit. This is because after a long period of fermentation and maturing, the protein contained in garlic have been broken down into amino acids, carbohydrates are broken down into fructose, and contained intact garlic alliin.

Therefore, the black garlic taste sweet and sour, delicious, you can also eat as a snack or dessert. Through the food analysis test results prove that, as a delicious ingredient in amino acids, black garlic than the normal increase of 2.5 times.

After eating garlic black, you can feel it as soft as jelly, and haven't peculiar smell like eaten garlic, at the same time it will not cause adverse gastrointestinal stimulation. By fermentation, the medicinal effects of garlic is more enhanced

After been fermented and cooked, the health effect of the black garlic has a far above common garlic. In particular, its powerful effect of the adjustment of blood flow and anti-oxidation ability. Although these effects common garlic can achieve, but during the process of fermentate mature black garlic can strengthen the original composition of the power inherent on the basis of another rise to new elements, and its health effects have become more powerful.

## **Disinfection, Build disease prevention wall**

Black allicin contained in garlic with a broad-spectrum anti-bacterium effect, it has dozens of pandemic virus and a variety of pathogenic micro-organisms have a killing effect. since the mainly ingredient has bactericidal action are allicin, there is a white oily liquid "curing acrylic"  $[(CH_2CH_2 H_2) 2S]$ . This Allicin diluted 100,000 times even able to kill Salmonella typhi in an instant, dysentery bacillus, influenza virus. Black garlic volatile substances leaching liquid and garlic in vitro for a variety of pathogenic bacteria have a significant role in inhibiting or killing. These fungi are also sulfur-containing compounds of corruption has a strong role in suppression and killing of its role in intensity equivalent to or even stronger than the chemical preservative benzoic acid, sorbic acid, It's found which has the most antibacterial effect in natural plant kind.

## **Anti-oxidant ability**

Anti-aging, antioxidant capacity is stronger 39 times than the normal garlic.

The essence of human aging is oxidated, while the black garlic super antioxidant function is that can have a very good condition for more effective the main reason, while it also has a very good care therapeutic effect to the diseases which cause weak multi-ability.

## **Enhance immune function.**

Experiments show that the fat-soluble volatile oil which in the black garlic can

increase macrophage phagocytic function significantly, and can enhance the role of the immune system. Allicin can activate the cell membrane which is composed of sugar lipids, then increase its permeability, enhance the metabolism of the cell, energy improved, corresponding strengthening of immunity. Lysine, serine have to improve immune function, vitamin C can also enhance the body's immunity. Black garlic contains zinc involved in the synthesis of hormones to improve the body's immune system.

## **Regulate blood glucose levels Strongly**

Black garlic can affect the glycogen synthesis in liver, reduce their blood glucose levels and increase plasma insulin levels. One of the garlic can decrease blood glucose levels, black garlic also contains the S-methyl cysteine sulfoxide and S-allyl cysteine sulfoxide, this sulphide can inhibit G-6 -P enzyme NADPH, to prevent the destruction of insulin, and can lower blood glucose. The allyl disulfide in black garlic also has this effect. Black garlic contains the alkaloids, also have lower blood glucose composition, increase insulin function, the more important is that has no effect on normal blood glucose. Glycine reduces blood glucose, diabetes prevention and treatment. Isoleucine for promoting insulin secretion, regulating blood glucose has a good function.

The researchers in animal experiments using black garlic 25g oral glucose tolerance test in rabbits fed measured the largest group of black garlic decline in blood glucose value of  $12.4\% \pm 1.2\%$ , while the distilled water control group was  $1.8\% \pm 0.5\%$ , which shows that black garlic significant effect on the control of blood glucose. They also give from alloxan-induced diabetes in rats by oral intake of the black garlic extract, garlic has also shown the black hypoglycemic effect, 2h after the ingestion of blood glucose concentration decreased by  $17.9\% \sim 26.2\%$ .

Black Garlic ability to regulate blood sugar is not a simple control, but in the protection of insulin, take the initiative to glucose conversion to energy, so that ordinary people with diabetes have the same ability to break down sugar, rather than hypoglycemic drugs, which determines the non-ordinary black garlic product comparable hypoglycemic effect.