

## Benefits and Mechanism of Action of Chaga Mushrooms

The health benefits of Chaga are numerous, many of which can be attributed to its immune-boosting ingredients and antioxidants<sup>[1]</sup>.

### Supports Immune System

The immune boosting properties of chaga are mainly attributed to the abundance of Beta-D-Glucans which help balance the body's immune response, allowing it to boost when immune system when necessary, but slows it down when it's overactive.

### Soothing Properties

Chaga supports the integrity of blood vessels and provides soothing properties in times of irritation. This can be helpful for those suffering from pain, neuropathy, and even diabetes. <sup>[3]</sup>

### Normalize Blood Pressure and Cholesterol Levels

Studies have shown that the betulinic acid found in chaga is able to break down LDL cholesterol--bad cholesterol--in the bloodstream. <sup>[4]</sup>

### Antimicrobial Activity

In one study, the chemical characterization and biological activity of extracts of Chaga mushroom were examined and showed high antioxidant and antimicrobial activity. <sup>[5]</sup>

### DNA Damage Protection

In one study, cells were pretreated with a chaga mushroom extract, then treated with H2O2 to induce oxidative stress. The pretreated cells displayed less damage than cells that did not receive the chaga extract. <sup>[6]</sup>

### Antiviral Properties of Chaga Mushroom

A limited amount of studies have been done to learn about the antiviral activity of chaga mushroom. In two recent studies, chaga mushroom showed protective support against harsh skin blemishes. <sup>[7] [8]</sup>

### Antioxidant Properties

So what are the ingredients behind chaga that provide all these health benefits? Let's go through the 6 key ingredients that make chaga so healthy.

#### Polysaccharides

Chaga contains structural polysaccharides within its chitin walls, which provide energy, cardiovascular health, intestinal and liver health, and promote healthy blood sugar levels. It's also said to improve one's mood.

## Beta-D-Glucans

Beta-D-Glucans are known for their ability to modulate the immune system. Beta-D-Glucans also help with normalizing cholesterol levels and blood sugar.

## Phytosterols

Of the phytosterols present in chaga, 45% is Lanosterol, 25% is Inotodiols and the remaining 30% consists of Ergosterol, Fecosterol, and several others. In vivo and in vitro testing shows a direct effect of both Lanosterol and Inotodiols on cancer cells, with lanosterol imparting a positive effect on viral compounds. <sup>[9]</sup>

## Betulin and Betulinic Acid (Triterpenes)

Betulin and betulinic acid are powerful therapeutic agents that are currently being researched for their effects on supporting healthy cholesterol levels. In addition to their favorable benefits for maintaining a healthy cholesterol profile, betulin and betulinic acid are also being studied in relation to cancer and viruses. <sup>[10]</sup>

## Antioxidants

Chaga sclerotium contains massive amounts of the natural black pigment known as melanin, which has high antioxidant levels due to the amount of polyphenols it contains. In fact, chaga has the highest ORAC score (the measure of antioxidant potency) of any superfood.

## SODs

SODs are another important antioxidant present in chaga. SOD refers to a group of enzymes called Super Oxide Dismutase. These enzymes play an important role in protecting our body against the destructive effects of uncontrolled oxidation and free radicals. SOD potency is measured by the S-ORAC score. <sup>[11]</sup>

## REFERENCES

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