

Propolis

The bees use propolis to cover cracks in their hive, to line interiors of a honeycomb to ensure sterile environment in preparation for the queen to lay eggs, thanks to its antimicrobial properties. At the same time, the bees are lining propolis around entrance to the hive, so they can clean themselves before entering a house. It is also used to mummify any enemies killed in the hive, which are too big for the bees to throw out.

When scientists have looked closer at the exact chemical composition of propolis, they have found that it actually contains over 300 natural compounds, including amino acids, coumarins, phenolic aldehydes, polyphenols, sesquiterpene quinines and steroids. In general, raw propolis is made up of approximately 50 percent resins, 30 percent waxes, 10 percent essential oils, 5 percent pollen and 5 percent of various organic compounds. The interesting thing about propolis, which is also true for honey, is that its composition is always going to vary depending upon the exact collection time, collection location and plant sources.

Propolis usage is said to date all the way back to the time of Aristotle circa 350 B.C. Ancient Egyptians were also known for using propolis in their mummification process while the ancient Greeks and Assyrians loved it for its wound- and tumor-healing abilities. Science and personal experience continue to show that bee propolis remains an incredibly medicinal substance today.

Helps Combat Cancer:

One of my favorite bee propolis benefits is that it appears to possess anti-tumoral and anticancer properties. There are currently over 300 scientific studies and articles focusing on propolis and cancer treatment. Two propolis polyphenols in particular seem to be the most potent anti-tumor agents. They are caffeic acid phenethyl esters from poplar propolis and Artepillin C from Baccharis propolis. Scientists believe that the ability of propolis to prevent cancer from developing in both animal models and human cell cultures is likely the result of its ability to inhibit DNA synthesis in tumor cells as well as its capability to induce apoptosis (programmed cell death) of tumor cells.

A 2016 study evaluated the effects of propolis extracts from the northern region of Thailand on cancer cell growth. All of the extracts showed high antioxidant activity as well as high phenolic and flavonoid content. Overall, the propolis extracts showed anticancer activities and extended the survival of animal subjects who already had tumors. This study concludes, "From these findings, it is evident that propolis extracts can be considered as a naturally obtained agent extremely useful in cancer treatment.

Treats Candida Symptoms:

Candida or candidiasis is an infection caused by *Candida Albicans*, a yeast-like fungus. This is the most common type of yeast infection found in the mouth, intestinal tract and vagina, and it may affect skin and other mucous membranes. If the immune system is functioning optimally, this type of yeast infection is rarely serious. However, if the immune system is not functioning properly, the candida infection can migrate to other areas of the body, including the blood and membranes around the heart or brain.

A study published in the journal *Phytotherapy Research* found that propolis extract inhibited oral candidiasis in 12 patients with denture-related inflammation and candidiasis. Other research published in 2011 in the *Journal of Medicinal Food* revealed that propolis seems to be the bee product with the highest antifungal activity as demonstrated by its effect on 40 different yeast strains, including *Candida Albicans*. Other bee products tested included honey, bee pollen and royal jelly.

Stops Herpes (Cold Sores) Reproduction:

Herpes simplex virus (HSV) infections are extremely common. HSV-1 is the main cause of herpes infections on the mouth and lips, which are commonly known as cold sores and fever blisters. The herpes virus can live dormant inside a person's immune system for a lifetime, periodically causing blisters that burst and turn into open cold sores or ulcers before healing. When left alone, herpes cold sores usually last about 10 to 14 days and are uncomfortable for a variety of reasons — causing redness, pain, burning and often embarrassment. HSV-1 can also cause genital herpes, but HSV-2 is the main cause of genital herpes.

Prevents and Treats Common Cold and Sore Throats:

Scientific studies have shown that propolis extracts may naturally prevent as well as shorten the duration of the common cold, which can often include a dreaded sore throat. One study administered an aqueous propolis extract to a group of very young school children for the entire duration of a year's "cold season." The exact daily dose is not given, but the children treated with propolis had fewer colds with acute or chronic symptoms. The propolis extract was also tolerated well.

In another scientific evaluation of the effects of bee propolis on the common cold, the group taking propolis extract (amount not indicated) became free of symptoms faster than the placebo group. Specifically, the cold symptoms for the propolis takers went away two and half times quicker than the subjects who took a placebo.

Fights Parasites:

Giardiasis is a parasitic infection that can occur in the small intestine and is caused by a microscopic parasite called *Giardia lamblia*. You can contract giardiasis from contact with infected people or by eating contaminated food or drinking water. A clinical trial looked at the effects of propolis extract on 138 giardiasis patients, both adults and children. The researchers found that the propolis extract resulted in a 52 percent cure rate in children and a 60 percent elimination rate in adults.

Improves Fertility for Females with Endometriosis:

A pilot randomized controlled trial looked at the effects of propolis supplementation on women with infertility and mild endometriosis. The researchers found that taking bee propolis at a dose of 500 milligrams twice a day for six months resulted in a pregnancy rate of 60 percent compared to only 20 percent in the placebo group. Studies have yet to show if propolis can also benefit infertile women without endometriosis.

Wounds:

Propolis has a special compound called pinocembrin, a flavonoid that acts as an antifungal. These anti-inflammatory and antimicrobial properties make propolis helpful in wound healing. One study found that propolis can help people who have had traumatic burns heal faster by speeding up new healthy cell growth. Another study found that a topical propolis alcoholic extract was more effective than a steroid cream in reducing mast cells in oral surgery wounds. Mast cells are associated with inflammation and slowed wound healing.