



WASABI DETOX™

Powerful Liver Detoxification

Whether you see the innocent-looking lump of pale green on a plate, or in the wild, its delicate stems and graceful leaves swaying above a stream, don't be deceived by its gentle appearance. Wasabi gives a powerful jolt, both as a fiery condiment beloved by Japanese gourmets as well as a potent detoxifying plant that has been studied by Japanese herbalists since the 10th century.

Wasabi (*Wasabia japonica*) grows naturally in the mountains of Japan in the gravel and sandbars of coldwater streams and rivers. Rare and difficult to grow, it takes three years for a wasabi rhizome to reach maturity. Long stems grow from the rhizome, and when the stems grow above the waterline, a heart-shaped leaf forms.

The rare wasabi plant is a natural, potent aid to a healthy, cleansed liver that in turn affects the detoxification and cleansing of the entire body. Planetary Herbals searches the world for the finest botanicals that support your health.



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Potent Detoxification

What makes wasabi so special? It comes from a good family; the brassica vegetables in the cruciferae family include such health giants as broccoli, horseradish, Brussels sprouts, cabbage, cauliflower and kale. All of these are well-known detoxifying plants, and wasabi appears to be the most amazing of them all, with detox capacities far beyond the others in the family because it is loaded with isothiocyanate precursors. These chemicals not only give wasabi its famous “fire,” they likewise are the source of the plant’s detoxification properties. Isothiocyanates are formed when wasabi cells are ruptured during digestion. They are then available to help remove toxic substances that are stored in the liver’s fatty tissues.

Because of its popularity, wasabi is now cultivated hydroponically and in cold, wet environments outside of Japan, such as in New Zealand and Oregon. Traditionally, the rhizome was freshly grated at the table with a sharkskin grater, popular with dishes such as seafood or udon noodles. Now wasabi is usually dried into powder form and made into the pale green paste familiar to most westerners.

Phase II Detox

The liver detoxifies the by-products of digestion and other harmful substances through a complex series of chemical reactions often referred to as Phase I and Phase II Detoxification. Phase I enzymes begin the process by taking the toxic molecule and changing it into a bioactive form. This process breaks down toxins. A second set of enzymes, Phase II, then neutralizes the toxin and makes it water soluble for elimination. Wasabi, which forms long-chain isothiocyanates when digested, induces the Phase II enzymes. Simply stated, it is the sparkplug that starts Phase II enzymes on their work. This process, all done in the liver, supports the body’s ability to clean itself of impurities.

Wasabi is an herb renowned in Japan and gaining popularity internationally. In the modern world with so many pollutants, our bodies need help cleansing themselves of toxins from the environment. Wasabi, along with a whole food, high-fiber diet and reduction of alcohol consumption, supports a healthy liver—the largest of the vital organs and the key to the digestion and elimination systems and most particularly, the body’s ability to detoxify.

Research

Depree, JA (1999) *Flavour and pharmaceutical properties of the volatile sulphur compounds of Wasabia japonica*. Food Research International: 31(5):329-337.

Morimitsu Y, et al. (2002) A sulforaphane analogue that potently activates the Nrf2-dependent detoxification pathway. *J Biol Chem*: 277:3456-3463.

Munday, R (2002) Selective induction of phase II enzymes in the urinary bladder of rats by allyl isothiocyanate, a compound derived from Brassica vegetables. *Nutrition and Cancer*: 44(1):52-59.

Watanabe, M (2003) Identification of 6-methylsulfinylhexyl isothiocyanate as an apoptosis-inducing component in wasabi. *Phytochemistry*: 62(5):733-739.

Rose, P (2000) 7-methylsulfinylheptyl and 8-methylsulfinyloctyl isothiocyanates from watercress are potent inducers of phase II enzymes. *Carcinogenesis*: 21(11):1983-1988.

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