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Siberian Ginseng Benefits

Analysis by Dr. Joseph Mercola Fact Checked | September 23, 2023

STORY AT-A-GLANCE

- For centuries, the therapeutic benefits of Siberian ginseng have been used to boost immunity, longevity and endurance, relieve fatigue and help prevent and remedy colds and flu
- Siberian ginseng, botanical name Eleutherococcus senticosus, is an adaptogen, meaning that with use, your body is better able to adapt to physical, environmental and emotional stress
- While scientists may disagree on the abilities of this root, sometimes called eleuthero, a plethora of studies reveal it to have antioxidant, antibacterial, radiation-shielding and insulin-lowering capabilities
- American and Asian (Korean) ginseng have botanical references of Panax in their names, and the plant chemicals they contain are not the same as those in Siberian ginseng

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Siberian ginseng may be the common term for the versatile root recognized in ancient Eastern cultures as a powerful medicinal, but the botanical term, or at least part of it, is eleuthero. The entire scientific designation is Eleutherococcus senticosus, and it's been used for thousands of years for overall longevity, endurance and to boost immunity.

These and a multitude of other benefits have made the odd-looking root a very expensive commodity all over the world. It's right behind gingko as the most popular herbal supplement, but it's often confused with other roots with "ginseng" on the label.

It doesn't help that other monikers for it around the world include Russian ginseng, devil's shrub, touch-me-not, wild pepper and shigoka. A thorny shrub that can reach 10 feet in height, Siberian ginseng bears yellow or violet flowers that develop in umbrella-shaped clusters and, later, round black berries. But it's the wrinkly, twisted root that gets all the attention. Its active ingredients are phytochemicals known as polysaccharides.

For centuries, healers from Russia, where it originated, to Asia and other Eastern countries and beyond have used it extensively to remedy colds and flu. One of the most effective aspects of Siberian ginseng is that it's an adaptogen, which means your body is better able to adapt to stressors, whether physical, mental or emotional.

Multiple studies on E. senticosus indicate the root is good for a number of diseases and disorders, often rivaling the drugs and medications prescribed by doctors.

Research on Siberian Ginseng: E. Senticosus

While saying scientists aren't sure how it works, Memorial Sloan Kettering Cancer Center (MSKCC)[1] states that compounds from Siberian ginseng stimulate immune cells and protect the nervous system. It also notes, "Siberian ginseng extract was shown to moderately inhibit breast cancer resistance."[2]

The MSKCC website either asserts that claims Siberian ginseng can increase strength and stamina and reduce side effects of chemotherapy are unsubstantiated scientifically, or that "more research is needed." Patented drugs with ginseng components, however, were given much more credence. Acknowledgment of plant chemicals with active ingredients note:

> *"In vitro studies indicate that eleuthero contains chemicals that bind to estrogen, progestin, mineralocorticoid and glucocorticoid receptors. In macrophages, a Siberian ginseng extract suppressed LPS-induced iNOS expression and thus nitric oxide production by possibly inhibiting nuclear factor-kappa B activity or Akt and JNK signaling, and inhibited reactive oxygen species production.*

Eleutheroside B, eleutheroside E and isofraxidin — active constituents of Siberian ginseng — showed protective effects against Aβ(25-35)-induced atrophies of axons and dendrites in rat cultured cortical neurons. Isofraxidin also inhibited cell invasion and the expression of matrix metalloproteinase-7 by human hepatoma cell lines HuH-7 and Hep G-2, possibly through the inhibition of ERK1/2 phosphorylation."[3]

In a 2004 randomized double-blind study,[4] 20 elderly hypertensive participants undergoing digitalis treatment who reported feeling weak and tired with no energy were given either Siberian ginseng or a placebo. At the end of the four-week study, the subjects were tested and found to have higher scores in social functioning and mental health, noticeable after four weeks of therapy and none noted "adverse events" in any of the patients.

Seventy percent of the patients on ginseng supplementation said they received "active therapy" compared to 20% in the placebo group. The same study noted that the definition of "adaptogen" was first referenced in the late 1950s. Subsequent research noted pharmacological results in cell cultures, animal and human subjects, listing improvements in several areas in regard to:

Antioxidant activity	Anticancer action
Immune system stimulation	Lowered insulin levels
Radioprotection	Decreased inflammation
Fever reduction	Antibacterial activity

Studies Reveal Siberian Ginseng Health Benefits

The effect involves the adrenal glands and supports their function, along with stress hormones such as cortisol.[5] Bulletproof lists a number of studies that have explored

different ways Siberian ginseng helps, treats and prevents illnesses and conditions in several ways:

- It produced an immune-boosting effect both in cancer patients and healthy controls, according to one study, resulting in "nonspecific resistance and immunologic vigor in the course of cytostatic and radiation treatment for breast cancer."[6]
- According to Europe PMC, ginseng showed potential for maintaining healthy T4 lymphocytes, which are the specific immune cells that weaken in patients with HIV and AIDS.[7]
- Neuroprotective aspects were improved via hippocampal and microglial cell signaling;[8] one example is its effectiveness in preventing the slow and sometimes lost motor function associated with Parkinson's.[9]
- Antiviral capability of ginseng was measured and found to inhibit the replication of "all RNA viruses studies thus far," which included human rhinovirus (HRV), respiratory syncytial virus (RSV) and influenza A virus in cell cultures.[10]
- Siberian ginseng may also have antidepressive effects[11] and may also help with insomnia and alleviate behavioral and memory problems, according to an animal study.[12]

One study showed that Siberian ginseng improved endurance, initiated through improved oxygen utilization.[13] Further, it may protect DNA[14] and enhance cardiovascular function,[15] and bacterial cultures treated with ginseng compounds were resistant to radiation[16] and even protected study subjects from ionizing radiation exposure.

Research also strongly suggests that Siberian ginseng has a positive and significant effect on several types of cancer cell cultures, including breast,[17] stomach,[18] lung and colon cancers.[19]

History and Ginseng Types: Siberian, Korean and American

Incidentally, there's something known as Korean ginseng or Asian ginseng, which also contains healing properties, but it presents a perfect example of the phrase "the word is not the thing." In other words, just because it has the word ginseng in its name doesn't mean it's synonymous with Siberian ginseng (which is not considered a "true" ginseng). SFGate notes:

> *"Korean ginseng and Siberian ginseng, despite both being called ginseng, are not from the same family. Siberian ginseng does not belong to the Panax family, so it is not considered a 'true' ginseng … Siberian ginseng contains polysaccharides which are associated with lower blood sugar levels, and eleutherosides are its active ingredient.*
>
> *They are also both associated with increased mental ability and concentration, greater alertness and higher stamina levels. Both are also associated with potentially helping lower triglyceride and blood pressure levels, and may be helpful in treating and avoiding cardiovascular complications."*[20]

There's also American ginseng (Panax quinquefolius), an endangered, wild-growing, shade-loving and widely poached root. While Korean or Asian ginseng is known in Chinese medicine as a "hot" or mild stimulant, the American variety is "cool" or calming, useful for enhancing memory, mood and possibly lowering blood sugar levels.[21]

All have ginsenosides, but in varying levels, Smithsonian.com[22] says. The American type found in moist patches of Appalachian Mountain regions was used by Native Americans and even propagated by the Cherokee tribe as a medicinal. Samples and then boatloads of the roots were shipped from North Carolina, Minnesota, Wisconsin and Canada to Chinese markets as early as the early 1700s.

Precautions Regarding Siberian Ginseng

While adaptogens such as Siberian ginseng are generally fine for most people, don't typically cause allergic reactions and can be taken for extended periods of time, caution is advised with both Siberian and Korean ginseng. If you're on medication, keep in mind

they can interfere with a number of them, including immune system suppressants, blood thinners, heart medications, and any types of sedatives or stimulants.[23]

Precautions should be taken due to a number of potential side effects, including accelerated heartbeat, insomnia, mood swings, sudden changes in blood pressure and feeling dizzy and/or jittery. Anyone with sleep apnea, narcolepsy, heart disease, mental illness such as mania or schizophrenia, autoimmune diseases such as Crohn's disease or rheumatoid arthritis should also pass it up.[24]

Importantly, children should not be given ginseng. The University of Maryland Medical Center (UMMC) notes that women who are pregnant or breastfeeding, as well as those with estrogen-sensitive breast cancer, should avoid ginseng as it can have an estrogen-like effect;[25] women with a history of uterine fibroids may also be vulnerable.[26]

It's imperative that you check your sources when buying ginseng, whether it's in supplement or root form, as one lab reported that only nine of 22 samples met quality and purity criteria. At the same time, harvesting methods, handling techniques and high-heat processing can damage the therapeutic compounds. Livestrong notes:

> *"Supplements are available in liquid and solid extracts, powders, capsules, tablets and tea form. Up to 25 percent of Siberian ginseng supplements sold in the United States do not contain the herb, and it can pose side effects. For these reasons, pharmacist and doctor guidance is recommended."*[27]

Remember That Not All Ginseng Is Created Equal

Ginseng has become one of the most popular additives in multivitamins, energy drinks, teas, chewing gum and snacks, claiming to impart all manner of benefits. But it should be noted that most Americans aren't aware there's any difference between the ginseng varieties, which are so intermingled in advertising their advantages that governmental agencies have stepped in. For instance, Smithsonian.com observes:

> *"'What is most striking about ginseng is the amount of misinformation in ads and on packages,' says nutritionist David Schardt at the Center for Science in*

the Public Interest (CSPI). 'Panax ginseng, the most commonly available type, does not boost energy levels, mood, or memory and doesn't reduce stress.'

After reviewing studies over the past two decades, the CSPI asked the Food and Drug Administration three years ago to halt phony claims. During the past two years, the FDA has sent letters to about half a dozen manufacturers, ordering them to limit product health claims due to the lack of evidence to support them."[28]

For arguably any disease, prevention is a wonderful thing, but don't take advantage of Siberian ginseng by assuming that the compounds that stimulate your immune response can make up for living irresponsibly. As science writer Dave Asprey, known as the father of biohacking, writes:

"Adaptogens are worth exploring, but don't use them to make up for a crappy diet and lifestyle. Making sure to eat good food, get outside and sleep well, and generally take care of yourself will do more for your stress, energy, and longevity than any one herb will do. Pay attention to adaptogens and key supplements, but don't forget the basics."[29]

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