

Conditions:

Stress

Principal Proposed Treatments

- [Ginseng \(*Panax Species*\)](#)

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- [Multivitamin/Mineral Supplements](#), [Eleutherococcus senticosus](#), Rhodiola, [Ashwagandha](#), [Astragalus](#), [Suma](#), [Schisandra](#), [Maitake](#), [Reishi](#), Shiitake, [Tyrosine](#), [Kava](#), [Valerian](#), [Phosphatidylserine](#)

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The effects of stress on your health can be far-reaching. Some of the conditions often associated with stress include insomnia, [high blood pressure](#), [ulcers](#), headaches, [anxiety](#), [depression](#), decreased memory, and drug or alcohol abuse. Stress is known to cause changes in the body's chemistry, altering the balance of hormones in our systems in ways that can lower our resistance to disease. As a result, we can become more susceptible to [flu](#), [colds](#), and other types of illness. Too much stress sometimes brings on outbreaks of [cold sores](#) or genital [herpes](#) for people who carry these viruses in their systems. Other chronic diseases such as [irritable bowel syndrome](#), [asthma](#), [Crohn's disease](#), and [rheumatoid arthritis](#) may also flare up during times of stress.

If it's possible to avoid situations that cause you to feel tense, unhappy, or worn down, that's obviously to your benefit. However, it isn't always possible to live a stress-free existence. Work deadlines, family demands, relationship problems, traffic jams, missed appointments, forgotten birthdays, personality conflicts, college exams—all of these things, and many more, can be sources of stress. Furthermore, though most of us associate stress with unpleasant events, even wonderful events in our lives, like weddings, vacations, and holidays, can be genuinely stressful.

Not everyone responds to these situations by getting "stressed out." There are those apparently unflappable folks whose pulse rate wouldn't even go up during an earthquake, and then there are those for whom being five minutes late constitutes reason for a state of total panic. How you manage the stress in your life can determine the impact it will have on you.

There are many different methods of dealing with stress. The basics for good health that we all know (but often forget) help in coping with stress: Eating a balanced diet and getting adequate rest help your body adapt and respond to the events in your life. Ironically, stress can interfere with your ability to take care of yourself in this way. When you're worrying so much you can't sleep, getting adequate rest becomes impossible. Stress can affect your eating habits too. So what else can you do? Exercise, meditation, and biofeedback are all widely accepted stress management tools that might help you break out of a stress-induced downward spiral.

For some people, stressful circumstances can trigger symptoms severe enough to warrant seeking medical attention. Conditions that are often associated with stress, such as insomnia, [anxiety](#), [depression](#), and [panic attacks](#), are sometimes treated with sedatives, antipsychotic drugs, or antidepressants.

Principal Proposed Treatments for Stress

The primary natural approach to treating stress focuses on the use of so-called *adaptogens*. The term *adaptogen* refers to a hypothetical treatment described as follows: An adaptogen should help the body adapt to stresses of various kinds, whether heat, cold, exertion, trauma, sleep deprivation, toxic exposure, radiation, infection, or psychological stress. Furthermore, an adaptogen should cause no side effects, be effective in treating a wide variety of illnesses, and help return an organism toward balance no matter what may have gone wrong.

Although there is no solid evidence that there really are any such things as adaptogens, there is quite a bit of suggestive evidence that the herb *Panax ginseng* functions in this way.

Other plants that have been called adaptogens by some herbalists include [Eleutherococcus senticosus](#), [ashwagandha](#), [astragalus](#), [suma](#), rhodiola, [schisandra](#), and the Oriental mushrooms [maitake](#), shiitake, and [reishi](#). These are discussed in the section on [Other Proposed Treatments for Stress](#), below.

Ginseng (*Panax* Species): The Most Famous Potential Adaptogen

If any herb is an adaptogen, ginseng is. However, a number of herbs are referred to as ginseng. The original medicinal species of the herb is Asian or Korean ginseng (*Panax ginseng*). American ginseng (*Panax quinquefolius*) contains many of the same chemical compounds, although in slightly different proportions.

Siberian "ginseng" (*Eleutherococcus senticosus*) is actually not ginseng at all, and it's discussed in a separate section (see [Other Proposed Treatments for Stress](#), below).

What Is the Scientific Evidence for Ginseng?

Most of the evidence regarding ginseng as an adaptogen comes from [animal studies](#). However, studies in humans have found effects that are consistent with the possibility of benefits in stressful situations.

Adaptogenic Effects

In animals, ginseng injections have been found to increase stamina, improve mental function, protect against radiation, infections, toxins, exhaustion, and stress, and activate white blood cells.¹ If you put these studies together, injected ginseng truly does appear to be an adaptogen, as reputed.

However, when ginseng is injected into the abdomen or bloodstream, it enters the body directly without going through the digestive tract. This mode of administration is strikingly different from taking ginseng by mouth.

Other studies have administered ginseng orally. The majority of studies examining the effects of ginseng on animals under conditions of extreme stress indicate that ginseng increases physical endurance and causes physiological changes that may help the body adapt to adverse conditions.²⁻⁸ In addition, studies in mice found that consuming ginseng before exposure to a virus significantly increased the survival rate and number of antibodies produced.^{9,10}

Immune System Stimulation

A [double-blind, placebo-controlled study](#) suggests that *Panax ginseng* can improve immune system response.¹¹ This trial enrolled 227 participants at three medical offices in Milan, Italy. Half were given ginseng at a dosage of 100 mg daily, and the other half received [placebo](#). Four weeks into the study, all participants received influenza vaccine.

The results showed a significant decline in the frequency of colds and flus in the treated group compared to the placebo group (15 versus 42 cases). Also, antibody levels in response to the vaccination rose higher in the treated group than in the placebo group.

Two other studies found evidence that ginseng increases the number of immune cells in the blood,^{12,13} although a third did not.¹⁴

Mental Function

Some of the possible effects of stress, as we've mentioned, include impairment of mental functions. Whether or not a given herb is an adaptogen, if that herb might improve your ability to remember things and stay focused, it could be of benefit. Therefore, we're including all of the information on the research about ginseng's effects on mental function here. In some cases, mental function was tested while the participants were under stress, making the studies even more relevant to our topic.

Two human studies suggest that *Panax ginseng* might improve some aspects of mental function. In the more recent investigation, 112 healthy middle-aged adults were given either ginseng or placebo for a 2-month period.¹⁵ The results showed that ginseng improved abstract thinking ability. However, there was no significant difference in reaction time, memory, concentration, or overall subjective experience between the two groups.

An earlier, smaller trial enrolled 16 healthy men who also took either ginseng or placebo for 12 weeks.¹⁶ For most of the tasks measured, there was no statistically significant difference between the men taking ginseng and those taking placebo. The one area in which the ginseng group performed significantly better was in mental arithmetic.

A [double-blind study](#) of the effects of ginseng on the work performance and well-being of nurses on night duty did not find significant differences between the treatment and placebo groups.¹⁷

Sense of Well-being

Among stress' potential symptoms is a general decline in overall sense of well-being.

A double-blind study compared the effects of a nutritional supplement with and without ginseng extract on feeling of well-being in 625 people whose average age was just under 40 years old.¹⁸ Quality of life was measured by a set of 11 questions. People taking the ginseng-containing supplement reported significant improvement compared to those taking the non-ginseng supplement. Similar findings were reported in a double-blind, placebo-controlled study of 36 people newly diagnosed with [diabetes](#).¹⁹ After 8 weeks, participants who had been taking 200 mg of ginseng daily reported improvements in mood, well-being, vigor, and psychophysical performance that were significant compared to the reports of control participants. In addition, a 12-week double-blind, placebo-controlled study of 120 individuals found improvement in general well-being among women aged 30 to 60 years and men aged 40 to 60 years, but not among men aged 30 to 39 years.²⁰ However, a 60-day double-blind, placebo-controlled trial of 83 adults in their mid 20s found no effect on mood or psychological well-being.²¹

Sports Performance

The evidence for *Panax ginseng* as a sports supplement is mixed. An 8-week double-blind, placebo-controlled trial evaluated the effects of *Panax ginseng* with and without exercise in 41 individuals.²² The participants were given either ginseng or placebo, and then underwent exercise training or remained untrained throughout the study. The results showed that ginseng improved aerobic capacity in individuals treated with ginseng who did not exercise, but offered no benefit in those who did exercise. In a 9-week double blind, placebo controlled trial of 30 highly trained athletes, treatment with *Panax ginseng* or *Panax ginseng* plus vitamin E produced significant improvements in aerobic capacity.²³ Another double-blind, placebo-controlled trial of 37 individuals also found some benefit.²⁴

However, no benefit with *Panax ginseng* was identified in an 8-week, double-blind trial that followed 31 healthy men in their twenties.²⁵ Other small trials of *Panax ginseng* have also failed to demonstrate any benefit.^{26,27,28,52}

For more information, including dosage and safety issues, see the full [ginseng](#) article.

Other Proposed Treatments for Stress

Multivitamins Plus Minerals

Surprisingly, a treatment as simple as [multivitamin-mineral tablets](#) may be helpful for stress.

In a double-blind, placebo-controlled study, 300 men and women were given either a multivitamin-mineral tablet or placebo for 30 days.³⁸ The results showed that people taking the nutritional supplement experienced less anxiety overall and an enhanced ability to cope with stressful circumstances. The supplement used in this study supplied the following nutrients and dosages: vitamin B₁, 10 mg; vitamin B₂, 15 mg; vitamin B₆, 10 mg; vitamin B₁₂, 10 mcg; vitamin C, 1,000 mg; calcium, 100 mg; and magnesium, 100 mg.

Benefits were seen in another double-blind, placebo-controlled trial that enrolled 80 healthy male volunteers.³⁹ The supplement used in this trial was similar but not identical.

It's not clear how these nutrients help stress, but considering that many of us would benefit from general nutritional supplementation in any case, it might be worth trying.

Eleutherococcus (*Eleutherococcus senticosus*): Another Possible Adaptogen

In the 1940s, Dr. Brekhman, the same scientist who first dubbed ginseng an adaptogen, decided that a much less expensive herb, [Eleutherococcus senticosus](#), is just as good as ginseng. A thorny bush that grows much more rapidly than true ginseng, this plant later received the misleading name of "Siberian" or "Russian ginseng." Its chemical makeup, however, is completely unrelated to that of *Panax ginseng*. As yet, there is little evidence that oral *eleutherococcus* is an adaptogen.

What Is the Scientific Evidence for *eleutherococcus*?

Although many scientific trials of *eleutherococcus* have involved people (and in some trials, enormous numbers of participants), most were not double-blind and many were not [controlled](#), making the results nearly meaningless. Animal studies of *eleutherococcus* have also been reported, but the use of injections rather than oral doses makes their relevance limited as well.

A suggestion of adaptogenic effects comes from a double-blind, placebo-controlled study of *eleutherococcus*'s effects on the immune systems of healthy volunteers.⁴⁰ Participants took either 10 ml of extract of *eleutherococcus* or placebo 3 times daily for a 4-week period. Blood samples were analyzed to determine changes in immune cells. A very large, statistically significant increase in numbers of cells important to immune functions was observed in the treatment group as compared to the placebo group. This finding supports, but definitely does not prove, that *eleutherococcus* may increase resistance to disease.

More practical data was obtained in another double-blind, placebo-controlled study involving 93 people infected with herpes virus.⁴¹ Use of *eleutherococcus* significantly reduced the severity, frequency, and duration of herpes outbreaks relative to placebo during the 6-month trial.

On the negative side, a double-blind study of 20 athletes over an 8-week period found that a standard *eleutherococcus* formulation produced no improvement in physical performance.⁴² Furthermore, in a small double-blind, placebo-controlled trial of endurance athletes, use of *eleutherococcus* actually increased their physiological signs of stress during intensive training.⁵²

For more information, including dosage and safety issues, see the full [ginseng](#) article.

Other Possible Adaptogens

A double-blind trial of 56 physicians evaluated whether *rhodiola* (*Rhodiola rosea*) could improve mental alertness in physicians working at night.⁴⁴ While the results were somewhat equivocal, they appear to suggest that *rhodiola* might improve mental function under stressful situations. Preliminary evidence from another double-blind, placebo-controlled trial suggests that *rhodiola* may improve physical and mental performance and sense of well-being.⁴⁵

Numerous other herbs are said to be adaptogens as well. These include [ashwagandha](#), [astragalus](#), [maitake](#), [reishi](#), shiitake, [suma](#), and [schisandra](#). However, there is little to no real evidence as yet that they work in this capacity.

Other Options

Preliminary double blind trials suggest that the amino acid [tyrosine](#) may improve memory and mental function under conditions of sleep deprivation or other forms of stress.^{50,51}

One study found that use of vitamin C at doses of 3000 mg daily (slow release) reduced both physical and emotional responses to stress.⁵³

[Insomnia](#) and [anxiety](#) are both common complaints related to stressful circumstances. These symptoms themselves can often make stress worse. It works like this: you feel stressed and worried, so you can't fall asleep. Then because you're starting the next day already fatigued, the stressors you encounter are harder to deal with, making it even harder to sleep the next night. Whether your complaint is anxiety or insomnia, you can easily see how being able to calm down or get some sleep could help in the long run.

There are natural treatments that may help insomnia and anxiety. For more information, see the full articles on [kava](#) and [valerian](#). One study purported to find evidence that these herbs help reduce reactions to stressful situations, but because the study lacked a placebo group, the results mean little.⁴⁶

In stressful situations, levels of the hormone cortisol rise, setting off a chain-reaction of changes in the body. It is believed that lowered immunity, difficulty sleeping, and several other symptoms of stress are directly related to this increase in cortisol. Highly preliminary evidence suggests that the supplement [phosphatidylserine](#) might help reduce this effect.^{47,48,49}

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