HERBAL MEDICINE

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**Herbal Medicines**

 The use of herbal medicine dates back to early civilizations. It entails the use of plants as medicines to cure illness and improve people's overall health and wellness. Some plants should be used with the same level of caution as pharmaceutical drugs because they contain potent components. In actuality, many pharmaceutical drugs are man-made derivatives of naturally occurring plant components. For instance, the foxglove plant served as the source for the cardiac medication digitalis.

Active components are found in herbal medications. Many herbal medicines' active components are yet unknown. Some pharmaceutical drugs have just one active component that comes from a botanical source. Herbalists hold that if an active element is utilized separately from the rest of the plant, it may lose its effectiveness or become less safe. For instance, the plant meadowsweet contains salicylic acid, which is used to manufacture aspirin. Aspirin can make the stomach lining bleed, however meadowsweet naturally includes other substances that shield the skin from salicylic acid irritants.

Practitioners of herbal medicine think that the complete plant has a bigger impact than the sum of its parts. The nature of herbal medicine, according to its detractors, makes it challenging to administer an accurate dose of an active ingredient. Because they are 'natural' items, people may incorrectly believe that herbal treatments are absolutely safe. This isn't always the case. Herbal medications may have side effects that range in severity from minor to severe. These side effects may include allergic reactions and rashes, asthma, headaches, nausea, vomiting, and diarrhea.

Herbal medicine practitioners believe that the whole plant has a greater effect than the sum of its parts. Detractors of herbal medicine claim that it is difficult to deliver an accurate dose of an active ingredient due to the nature of the medication. People may mistakenly believe that herbal therapies are completely safe because they are 'natural' products. It's not always the case like this. The intensity of the adverse effects that can occur with herbal medicines can range from mild to severe. Asthma, allergic reactions, rashes, headaches, nausea, vomiting, and diarrhea are possible adverse effects.

*ECHINACEA*

The most common phytochemicals found in Echinacea purpurea are alkamides, polysaccharides, lipoproteins, betaine, sesquiterpenes, polyacetylene, saponins and phenolic compounds (echinacoside and other caffeic acid derivatives, and chicoric acid). A genus of flowering plants in the daisy family are referred to as echinacea. They naturally grow in prairies and open, forested places in North America. Only three of the nine species that make up this group—Echinacea purpurea, Echinacea angustifolia, and Echinacea pallida—are utilized as herbal supplements ([Pharm Biol.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6179083/) 2018; 56(1): 485–494.). Tablets, tinctures, extracts, and teas all make use of the plant's leaves and roots. The astonishing range of active substances found in echinacea plants includes caffeic acid, alkamides, phenolic acids, rosmarinic acid, polyacetylenes, and many others. Additionally, studies have connected echinacea and its constituents to a variety of health advantages, including lowered blood sugar levels, enhanced immunity, and reduced inflammation.

*Benefits of Echinacea*

*Rich in antioxidants*

Plants compounds that act as antioxidants are abundant in echinacea plants. The molecules known as antioxidants work to protect your cells from oxidative stress, which has been related to a number of chronic diseases, including diabetes, heart disease, and others (J Food Biochem, 2020). Flavonoids, cichoric acid, and rosmarinic acid are a few of these antioxidants. Compared to other plant parts, including the leaves, these antioxidants seem to be present in higher concentrations in extracts from the flowers and roots of the plants (Pharm Biol. 2018; 56(1): 485–494). Alkamides are a class of chemicals found in echinacea plants that can further boost antioxidant activity.

*Benefit for the Immune System*

The advantages that echinacea has for the immune system are its most well-known. This plant may aid your immune system in fending against viruses and infections, which could hasten your recovery from illness, according to a number of older studies (Phytomedicine, 1994). Echinacea is frequently used to either prevent or treat the common cold because of this. In fact, according to one research, echinacea may cut your chance of getting an upper respiratory infection by 22%. 2014 assessment found that many studies on the subject are ill-conceived and offer no substantial advantages. Because of this, it is challenging to determine whether any benefits on colds are from taking echinacea or simply from chance (Cochrane Database Syst. Rev, 2014). In short, while echinacea may boost immunity, its effects on the common cold are unclear.

*Could reduce blood sugar levels*

The risk of developing major health issues, such as type 2 diabetes, heart disease, and a number of other chronic disorders, is increased by having high blood sugar levels. Research in test tubes suggests that echinacea plants may aid in lowering blood sugar levels. An Echinacea purpurea extract was demonstrated in a test-tube investigation to inhibit enzymes that break down carbs. This implies that echinacea may, in theory, be able to lessen the amount of sugar that enters your blood (J Med Food., 2017). Echinacea's antioxidants may aid in enhancing insulin sensitivity and blood sugar control, according to additional animal research (Biomed Res Int., 2018). Research on how echinacea affects blood sugar in humans is still inadequate.

*May lessen anxiety*

Nearly 7% of adults in the United States are thought to struggle from anxiety (J. Psychiatry Res., 2020). Echinacea plants have gained recognition as a potential anxiety treatment in recent years. Older studies have found that the chemicals found in echinacea plants may help people feel less anxious. Alkamides, rosmarinic acid, and caffeic acid are a few of these (Phytother Res. 2010). In comparison to a placebo, one study revealed that ingesting 40 milligrams (mg) of echinacea extract twice day for seven days considerably reduced anxiety (Phytother Res. 2020). In a another trial, taking either 40 mg or 80 mg of echinacea extract daily did not reduce anxiety levels when compared to a placebo. Nevertheless, it did result in enhancements to both positive and negative affect and emotional wellbeing (J Affect Disord., 2021). Still, research is limited and more studies are needed before echinacea products can be recommended as a possible treatment.

*Inflammatory-reducing qualities*

The human body naturally promotes healing and defends itself by inducing inflammation. Inflammation can occasionally become out of control and persist longer than intended and necessary. The likelihood of developing chronic diseases and other health issues could increase as a result. Echinacea has been found in numerous trials to help lessen overactive inflammation. Echinacea ingredients reduced significant inflammatory indicators and memory loss brought on by inflammation in a rat research (FASEB J. 2017). Adults with osteoarthritis who took part in a 30-day trial discovered that taking a supplement combining echinacea and ginger extract dramatically reduced edema, chronic pain, and inflammation. It's interesting to note that although these adults did not respond well to traditional NSAIDS, they did benefit from the supplement containing echinacea and ginger extract (Nat Prod Res. 2017).

*May aid in treating skin-related problems*

Echinacea plants may aid in the treatment of common skin issues, according to research. According to one trial, a supplement comprising an echinacea and eggplant botanical extract was superior to a placebo at treating mild to moderate acne. It's unclear, though, how much of this might be credited to echinacea in particular (Dermatol Ther (Heidelb), 2022). Skin care products containing echinacea extract were discovered to enhance skin hydration and minimize wrinkles in a 2010 study with 10 persons (Int. J Cosmet). Similarly, it has been demonstrated that a cream containing Echinacea purpurea extract can lessen eczema symptoms and aid in repairing the skin's thin, outer layer of protection (Dermatol Sci. 2017). However, it appears that echinacea extract has a limited shelf life, making it challenging to use in commercial skin care products.

*Possible negative effects*

For short-term use, echinacea preparations eem to be secure and well-tolerated. Echinacea is frequently used for brief periods, however some study indicates that it may also be safe for long-term use (Planta Med., 2016). Minor stomach problems and skin rashes are the most often reported adverse effects. Echinacea allergies are uncommon, but they can result in unpleasant side effects like hives, swelling, and anaphylaxis, a life-threatening allergic reaction (Bethesda MD; 2012-.)

*My Personal Opinion*

Ethinacea has been associated with a number of health advantages, including lowered blood sugar levels, enhanced immunity, and decreased inflammation. However, there hasn't been much human-based study on these advantages. The usage of echinacea, both short- and long-term, seems to be safe and well tolerated. Despite this, it could not be secure for those who have specific medical issues or are taking specific medications. The wide range of echinacea products makes it challenging to establish a suggested dosage. Depending on the type of echinacea you're using, the dosages change. Echinacea's recommended dosage is currently not known. One explanation is the wide variation in echinacea research results. I personally wouldn't rely on echinacea as a replacement for traditional medication given the scant amount of research that is currently available on it. I find that the risks outweigh the benefits and I am not convinced of its efficacy.

*GINKGO BILOBA*

Ginkgo biloba, often known as maidenhair, is a tree that is native to China and has been cultivated for several purposes over thousands of years. It's frequently referred to as a living fossil because it's the lone survivor of a long-extinct plant order. Modern research mostly concentrates on ginkgo extract, which is derived from the leaves, even though its leaves and seeds are frequently utilized in traditional Chinese medicine. A standardized leaf extract of G. biloba, known as EGb 761, includes 6% terpenoids, 5%–24% flavonoid glycosides, 10% organic acids, and other bioactive compounds that are known to exert a wide range of beneficial health effects. The majority of the health benefits and uses for ginkgo supplements center on improving blood flow and brain function.

*Advantages of Gingko biloba*.

 *Possesses strong antioxidants*

Numerous health benefits attributed to ginkgo may be due to its antioxidant concentration (Int. J Mol. Sci., 2020). Ginkgo is rich in terpenoids and flavonoids, which are substances recognized for their potent antioxidant properties (Evidence Based Complement Alternative Med v.2022; 2022). Free radicals' harmful effects are mitigated or neutralized by antioxidants. Free radicals are extremely reactive particles that the body produces during regular metabolic processes like food conversion or detoxification. However, they also have the ability to harm healthy tissues, hastening aging and the onset of disease (J. Food Bio-chem., 2020). The antioxidant properties of ginkgo are promising. How precisely it functions and how beneficial it might be in treating particular disorders, however, are still unknown.

 *May lessen inflammation*

The body's natural response to harm or invasion by an alien substance includes inflammation. Different immune system cells are enlisted to combat the foreign invader or heal the wounded area during the inflammatory response. Even when no illness or injury is present, several chronic conditions cause an inflammatory response. The DNA and tissues of the body can become permanently harmed over time by this severe inflammation (Nat Med., 2019). Ginkgo extract can lower inflammation-related indicators in both human and animal cells in a variety of illness situations, according to years of animal and test-tube studies (Inflammo-pharmacology, 2018.). Ginkgo extract has been demonstrated to reduce inflammation in a number of specific medical situations, including (Asia Pac J Ophthalmol (Phila). 2020)

*Enhances Heart Health and Blood Flow*

Ginkgo seeds were employed in ancient Chinese medicine to create energy "channels" to various organ systems, such as the kidneys, liver, brain, and lungs. Many of ginkgo's alleged health advantages may have their roots in the plant's apparent capacity to enhance blood flow to different regions of the body. An instantaneous boost in blood flow to numerous body areas was seen in one earlier research of heart disease patients who supplemented with ginkgo. Nitric oxide, a substance that dilates blood vessels, was found to be present at levels that were up by 12% (Phytother Res., 2008). Similar results were observed in another 2008 trial that used ginkgo extract to treat older patients (Phytomedicine, 2008). The benefits of ginkgo for heart, brain, and stroke protection are also supported by additional research. The presence of anti-inflammatory chemicals in the plant is one of several possible explanations for this (Curr Top Med Chem., 2015). To fully comprehend how ginkgo affects blood circulation, heart health, and brain health, more research is required.

*Reduces Dementia and Psychiatric Disorder Symptoms*

Ginkgo has been tested numerous times for its capacity to lessen stress, anxiety, and other signs of Alzheimer's disease and aging-related cognitive loss. Overall, the findings of this research are mixed. Ginkgo has been shown in some research to significantly slow the rate of cognitive deterioration in dementia patients, however this effect has not been consistently seen in other investigations. Ginkgo extract, for instance, may improve functional abilities in people with moderate Alzheimer's when administered in conjunction with standard treatment, according to one review of 21 trials (Curr Top Med Chem. 2016). Another review that looked at four research discovered that using ginkgo for 22–24 weeks significantly reduced a range of dementia-related symptoms (Int. Psychogeriatr., 2018). These encouraging findings may be explained by the part ginkgo may play in enhancing blood flow to the brain, particularly in relation to vascular dementias. Overall, it's still too early to confirm or deny that ginkgo biloba is effective in treating dementia, but current research is making this point clearer.

enhances mental health and performance

Some people believe that ginkgo may improve cognitive function in healthy people. Ginkgo supplements may improve mental function and perceived well-being, according to a few small, older research (Hum Psychopharmacol,. 2002). According to findings from research like these, ginkgo has been linked to enhanced memory, focus, and attention span. Ginkgo supplementation did not, however, lead to any quantifiable benefits in memory, executive function, or attention ability, according to a 2012 assessment of the literature on this association (Laws, Sweetnam, Tejinder, Kondel, 2012). Ginkgo supplements may boost cognitive function, but additional research is required.

*Can lessen anxiety*

According to some study, taking ginkgo supplements may help with anxiety symptoms. The antioxidant content of ginkgo has been linked to reductions in anxiety symptoms in a few animal studies (Phytother Res., 2018) In a 2007 trial, 240 mg, 480 mg, or a placebo were given to 170 participants who had generalized anxiety disorder. In comparison to the placebo group, the group receiving the highest dose of ginkgo reported a 45% larger reduction in anxiety symptoms (J Psychiatr Res. 2007). Ginkgo supplements may help people feel less anxious, but it's too soon to make any firm conclusions from the current body of knowledge.

*Treatment for Depression*

Ginkgo supplements may help cure the symptoms of depression, according to a review of trials conducted on animals (CNS Neurol Disord Drug Targets, 2015). Ginkgo biloba extract, when taken with an antidepressant, was also found to lessen levels of S100B, a sign of brain impairment, in a clinical research involving 136 elderly people (Medicine (Baltimore), 2018). Another study found that using ginkgo biloba extract coupled with an antidepressant for eight weeks significantly reduced depressive symptoms in older persons with post-stroke depression compared to taking an antidepressant alone (Neuropsychiatr Dis Treat, 2019). However, depression is a complicated disorder that could have a number of underlying reasons. Greater understanding of the connection between ginkgo and how it might impact depression in general requires more investigation.

*Possible Negative Effects*

Before incorporating ginkgo into your routine, it's vital to consult a doctor. Although there are few instances in which ginkgo could cause substantial harm, for the majority of adults, the risk associated with taking it is rather low ( Nguyen, Alzahrani2, 2022). Ginkgo should not be taken if you have an allergy to alkylphenol-containing plants or are on any drugs. Nausea, diarrhea, vertigo, headaches, stomach pain, and rashes or allergic reactions are a few examples of potential side effects.

*My Personal Opinion*

Strong anti-inflammatory and antioxidant properties as well as circulation-improving properties are present in ginkgo biloba. Together, these traits have the potential to influence many bodily functions and diseases, though the research underlying them is still lagging behind. Although ginkgo has been utilized for centuries, its exact mechanism of action is still unknown. Keeping in mind that most of the existing evidence is contradictory or inconclusive is crucial. There are risks with using any herbal supplement. As a result, I am not interested in using ginkgo as a complementary medicine.

*GINSENG*

There are 11 different types of the small, slowly-growing plant known as ginseng, which has fleshy roots. It has an oval-shaped stalk, green leaves that are green in hue, a light-colored, forked root. The ginseng root contains 2–3% ginsenosides of which Rg1, Rc, Rd, Re, Rb1, Rb2, and Rb0 are quantitatively the most important. American ginseng has a higher content of ginsenosides than other ginseng species such as Asian ginseng (Panax ginseng) Both Asian ginseng (P. Ginseng) and American ginseng (Panax quinquefolius, L.) may increase energy, lower blood sugar and cholesterol, lessen stress, encourage relaxation, treat diabetes, and manage male sexual dysfunction.

*Benefits of Ginseng*

*Enhanced energy*

Ginseng may encourage mental and physical activity in individuals who feel lethargic and frail. In a research of 21 men and 69 women, it was discovered that ginseng was effective in treating chronic fatigue. According to a study conducted in 2014 on cancer patients, ginseng can help lessen weariness brought on by the disease. The effects of ginseng on raising energy, however, have only been studied in patients who are currently receiving therapy. In those who had already stopped receiving cancer therapy, ginseng did not produce statistically significant gains.

*Improved Mental Acuity*

Ginseng may enhance cognition and thought processes. Based on tests done on both humans and animals, this report came to the conclusion that some cognitive deficiencies may be treated with ginseng components. These studies demonstrated that ginseng could lessen oxidative stress, which might improve cognitive performance. A 2016 investigation into Korean red ginseng's impact on Alzheimer's disease patients' cognitive function also revealed encouraging results. Three males and 11 women made up the study's 14 participants, with a median age of 74.93. For 12 weeks, the patients got 4.5 grams of Korean red ginseng. The investigation came to the conclusion that Korean red ginseng enhanced frontal lobe function.

*Erectile dysfunction medication*

Ginseng can help men with erectile dysfunction. Systematic examination Red ginseng's effects on erectile dysfunction were investigated by Trusted Source. The analysis showed that the quantity of trials, overall sample size, and standard of the experimental techniques were insufficient to show sustained clinical benefit. During the 8-week trial, some of the participants received an extract from Korean ginseng berries, while others received a placebo. If ginseng is an effective treatment for erectile dysfunction, more research is required.

*Preventing the Flu*

A probable connection between ginseng and the treatment and prevention of influenza and the respiratory syncytial virus (RSV) has been suggested by research on the effects of ginseng on mice. According to the results of another study, red ginseng extract may increase the viability of influenza-infected human lung epithelial cells. Based on the aforementioned studies, it is unknown precisely how the anti-viral mechanisms in ginseng function.

*Reduction of Blood Sugar*

According to a 2014 study, ginseng may help treat diabetes by lowering blood sugar levels. Ginsenosides may influence the pancreas' ability to produce insulin and reduce insulin resistance by means of several pathways. Another study from 2014Trusted Source demonstrated comparable advantages of ginseng for decreasing blood sugar. While some individuals took a placebo, others took 2.7 grams of fermented red ginseng daily. In comparison to a placebo, researchers discovered that ginseng was beneficial at reducing blood sugar and raising insulin levels after a meal. If ginseng is a potential supplemental treatment for diabetes, more clinical research and ginseng root standardization are required. Researchers must also look into the potential efficacy of different doses.

*Negative Effects*

Despite the fact that ginseng is generally considered to be safe to consume, some people have complained of the following adverse effects: headaches, difficulty sleeping, digestive issues, changes in blood pressure and blood sugar, diarrhea, rapid heartbeat, and severe skin reactions.

*My Personal Opinion*

The numerous potential health advantages of ginseng supplements have not yet been shown or proven, although taking the herb in moderation is usually harmless. It does appear to have some major adverse effects, though, which I do not ignore. Since I am risk-averse when it comes to medication, I would not take it myself. I wouldn't consider it until further human research on its effectiveness and adverse effects were conducted. I have little faith in its healing ability.

CONCLUSION

One should be aware of the following if you now use or intend to use any herbal medications: If you also use other medications, there could be issues. They can reduce the effectiveness of the other medication or bring on unanticipated adverse effects. After using herbal medication, you can have a negative reaction or encounter side effects. Not every herbal remedy is governed. The evidence supporting the efficacy of herbal medications is typically relatively scant. Even while some people find them useful, their use frequently draws more from traditional usage than from scientific studies.

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