



# HEALTH

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## Herbals for Health?

no. 9.370

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### Quick Facts...

People take herbs for many reasons and many conditions.

Natural does not mean safe.

The Food and Drug Administration does not test herbs for safety or efficacy.

The best prescription for disease prevention is a healthy lifestyle.

Using herbs and plants for medicinal purposes has a long tradition. In India and China, these traditions date back thousands of years.

Once thought of as “traditional medicine” used by native or ancient cultures, herbal medicine has emerged as a popular alternative or supplement to modern medicine. According to the World Health Organization, 4 billion people, almost 70 percent of the world population, use herbal medicine for some aspect of primary health care.<sup>1</sup>

It is estimated that in the United States alone, botanical dietary supplements exceed \$3 billion per year.<sup>2</sup> Herbal products can be found in grocery stores and on the Web, as well as natural food markets, their traditional source. Forty percent of Americans take dietary supplements. About half of these people take vitamin and mineral supplements, a third take some type of herbal product, and the rest take other ergogenic aids, such as amino acids or protein powders.<sup>3</sup> The herbal market is growing steadily at about 20 percent each year.<sup>2</sup> With this increase, however, come many questions.

The term herbs in this fact sheet refers to plants used for oral medicinal purposes, not herbs for cooking. It includes botanicals, herbs, herbals, herbal products, herbal medicines, herbal remedies and herbal supplements.

### Why Take Herbs?

People take herbs for many reasons and many conditions. One of the biggest reasons is that herbs are considered natural and therefore healthier and gentler than conventional drugs. (Ironically, many prescription drugs are of herbal origin.) They are used for everything from upset stomachs to headaches. Some people take them for overall health and well-being, not for any specific condition. For others, herbal use is grounded in traditions passed down from generation to generation or recommended by folk healers.

### Are Herbs Effective?

Many herbs have health benefits. Research has shown that echinacea cuts the length of colds and that powdered ginger is effective against motion sickness and nausea. Overall research is lacking, especially well-controlled studies. There are many unanswered questions. At this point, our understanding is largely anecdotal. We don't know all of the short-term and long-term benefits and risks of many herbs, let alone all of their active or beneficial ingredients. More studies are currently being conducted.

To address this uncertainty, federal law states that herbs cannot claim to *prevent, diagnose, treat* or *cure* a condition or disease. Herbs may carry health-related claims about effects on the “structure or function of the body” or “general well-being” that may result from the product. This definition is very loose and gives rise to misleading health claims.

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Ultimately, the consumer is responsible for checking their validity and avoiding products with fraudulent claims. See fact sheet 9.350, *Nutrition Quackery*.

The best prescription for disease prevention is a healthy lifestyle. This includes a diet high in whole grains, fruits and vegetables, and low in fat. Physical activity also plays an important role. Finally, there is no data to suggest that herbs are more beneficial than conventional drugs for treating illnesses.

## Are Herbs Safe?

Because herbs are natural, many people believe they are safe. Unfortunately, this is not always the case. While many herbs may be considered safe, some have hazardous side effects. In fact, in the past few years there have been several deaths related to herbal products. In some cases, small amounts of herbs, even those found in teas, have had devastating effects. To date, the following herbs are considered toxic and, given their side effects, should be avoided:<sup>4, 5</sup>

- Chapparal — liver damage.
- Comfrey — liver damage.
- Ephedra/ma huang — rapid heart beat, heart attack. The FDA banned Ephedra in December 2003.
- Germander — liver damage.
- Lobelia — breathing problems, rapid heartbeat, coma, death.
- Magnolia/stephania — kidney damage.
- Kombucha — linked to a possible death.
- Willow bark — Reye's syndrome in children.
- Wormwood — nerve damage, arm/leg numbness, delirium, paralysis.
- Yohimbe — anxiety, paralysis, gastro-intestinal problems, psychosis.

Herbs also may interact with prescription medications, over-the-counter drugs, vitamins and minerals. For example, ginkgo taken with aspirin may lead to spontaneous and/or excessive bleeding.<sup>6</sup> High doses of garlic may enhance the blood-thinning activities of anti-inflammatory medications and vitamin E.<sup>6</sup> Proceed cautiously. Herbs are not tightly regulated like drugs and other medications, even though they often are used for similar purposes. Advise your doctor, pharmacist and other health professionals of all herbs you are taking.

Medical professionals suggest taking herbs for only short periods. It is unclear if short-term benefits continue over a longer time or if long-term herb use could actually be detrimental to health. Follow the instructions on the label. If any unusual side effects arise, discontinue immediately. In addition, herbs are not recommended in place of medical treatment or conventional medicine for chronic conditions or diseases, such as severe depression, diabetes, hypertension and heart disease. Herbs also are not recommended for people who may be immunocompromised, such as the elderly or those with HIV; people with kidney damage or liver disease; anyone who may be undergoing surgery or other invasive procedures; and pregnant or lactating women. Herbal products also are not recommended for children under 6.

## How Are Herbs Regulated?

If herbs can be unsafe, why are they so readily available? This is because herbal products — like vitamin and mineral supplements — are classified by the U.S. Food and Drug Administration (FDA) as dietary supplements, not drugs. As a result, they are not tested for safety or efficacy. Thus herbal products can be marketed at any time, without scientific research and without approval from the FDA. Drug companies, on the other hand, must conduct clinical studies to determine the effectiveness of the drugs, safety, possible interactions with other substances, and appropriate

*If you do take herbs:*

- Follow the instructions on the label.
- If any unusual side effects arise, discontinue immediately.

*Medical professionals suggest taking herbs for only short periods. Do not take them in place of medical treatment or conventional medicine for chronic conditions or diseases. They are not recommended for people with certain medical conditions nor for children under 6.*

dosages. The FDA must review the data and authorize the drug's use before the product may be marketed. The FDA can take regulatory action on an herbal product only after it has received a sufficient number of reports of ill effects and can show the product is unsafe. At this point, the FDA can recommend the product be withdrawn from the market and/or labeled to reflect potential side effects. This system of regulation is always after the fact, not before.

Moreover, herbs — unlike drugs — are not standardized. When you buy a drug, even an over-the-counter one, you know that each capsule contains the same amount of active ingredient. Drug companies have to follow strict quality-control measures. Herb companies do not. Doses differ between herb capsules and from product to product. The active ingredients also vary depending on the plant part (flower, root, seeds, nuts, bark, branch), plant form (dried, extract, tincture, tea) and plant species. An independent test by *Consumer Lab* in early 2000 found that nearly a quarter of the 30 brands of ginkgo biloba they tested did not have the expected levels of active ingredients. Furthermore, every single product that failed their test claimed it was standardized.

The herbal industry is taking steps to address standardization. Much work is still needed. Currently, if manufacturers follow certain protocols for extracting or drying herbs, they can include USP (for the United States Pharmacopoeia) or NF (for Natural Formulary) on their label. It does not ensure that doses are the same from one bottle to another, or that the product is safe. It does attempt to eliminate huge differences. The most rigorous stamp of approval is from *Consumer Lab* (CL). CL conducts independent tests of products for identity and potency (proper labeling), purity (any contaminants), and consistency (the same identity, potency and purity from one batch to the next). Products that pass their tests contain a CL stamp of approval. They are listed on CL's Web site.

## Summary

The herb industry is growing. More herbs are available than ever before, and Americans are embracing their use. To date, however, herbs have not been well studied and are not well understood. Until we have a clearer picture, consumers must become informed in order to protect themselves from questionable health products and services. Here are some tips to do so:

- Determine whether you really need an herbal supplement.
- Be an informed consumer. Research the product to determine: safety, validity of claims, dosage, most effective form, plant part, species, how long to use it, side effects, any contraindications with other supplements or medications, and reasonable price.
- Inform your doctor, pharmacist and other health care professionals of any herbs you are considering or that you routinely use. Consult them with any questions.
- Pick brands that have been tested for consistency in dosage by looking for the USP or NF symbols.
- Read the product label and follow the instructions.
- Use herbal products only for minor conditions and only for the short-term. If a condition is serious or chronic, consult your doctor.
- Discontinue herbs if you experience *any* adverse side effects.
- Avoid herbal therapies if you suffer from certain conditions or under certain circumstances. (See *Are Herbs Safe?*, above.)
- Do not take herbal products known to be toxic. The list in this fact sheet may not include all potentially toxic herbs, so regularly check the resources listed in this fact sheet for additional toxic herbs.

## Resources

The following are reliable resources for information on herbs and other dietary supplements:

Foster S., Tyler V.: *Honest Herbal* (4<sup>th</sup> edition), Binghamton, N.Y., The Haworth Press, Inc. 1999.

Stephen Barrett, Quackwatch:  
[www.quackwatch.com](http://www.quackwatch.com).

Healthcare Reality Check:  
[www.hcrc.org/index.html](http://www.hcrc.org/index.html).

Consumer Lab:  
[www.consumerlab.com](http://www.consumerlab.com).

## References

1. Abramov, V. *Traditional Medicine*. N 134, 1-3. 1996. World Health Organization.
2. *The U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition. Economic Characterization of the Dietary Supplement Industry Final Report*. 1999.
3. *Industry Overview*. Nutrition Business Journal. 1999, 4:1-5.
4. Foster S., Tyler V.: *Honest Herbal* (4<sup>th</sup> edition), Binghamton, N.Y., The Haworth Press, Inc. 1999.
5. *SupplementWatch*:  
[www.supplementwatch.com](http://www.supplementwatch.com). 2000.
6. *Herbal Medicine: Expanded Commission E Monographs*. Blumenthal, M., Goldberg, A., Brinckmann, J., eds. American Botanical Council. 2000.

**Table 1: Top ten most commonly used herbs.**

Common name, source	Main uses	Apparent efficacy	Possible side effects	Comments
Echinacea ( <i>Echinacea angustifolia</i> )	<ul style="list-style-type: none"> <li>Reduce duration of colds.</li> <li>Boost immune system.</li> <li>Heal wounds.</li> </ul>	<p>+</p> <p>+</p> <p>+</p>	<ul style="list-style-type: none"> <li>Minor GI symptoms, chills, short-term fever reaction, nausea and vomiting (uncommon and mild).</li> <li>Allergic reactions (especially people allergic to the daisy/aster family).</li> </ul>	
Evening primrose oil ( <i>Oenothera biennis</i> )	<ul style="list-style-type: none"> <li>Reduce menopausal symptoms, sore breasts.</li> <li>Treat allergic skin rash.</li> <li>Prevent heart disease.</li> <li>Treat rheumatoid arthritis, Raynaud's.</li> </ul>	<p>+/-</p> <p>+/-</p> <p>+</p> <p>+/-</p>	<ul style="list-style-type: none"> <li>Headaches, GI distress at high doses.</li> </ul>	<ul style="list-style-type: none"> <li>Clinical evidence of its safety is inconclusive.</li> <li>Good source of cis-gamma-linolenic acid (GLA).</li> <li>Anticoagulant, so may enhance effect of blood thinners.</li> </ul>
Feverfew ( <i>Tanacetum parthenium</i> )	<ul style="list-style-type: none"> <li>Reduce migraines, headaches.</li> <li>Treat arthritis.</li> </ul>	<p>+</p> <p>+/-</p>	<ul style="list-style-type: none"> <li>Mouth ulcers, inflamed mouth tissues from chewing leaf.</li> <li>GI discomfort and dry mouth.</li> </ul>	<ul style="list-style-type: none"> <li>Do not take with blood thinners – may inhibit platelet activity.</li> </ul>
Garlic ( <i>Allium sativum</i> )	<ul style="list-style-type: none"> <li>Prevent heart disease.</li> <li>Lower high blood cholesterol.</li> <li>Lower high blood pressure.</li> <li>Improve blood clotting disorders.</li> <li>Prevent cancer.</li> <li>Used as antibiotic, antibacterial, antiviral.</li> </ul>	<p>+</p> <p>+</p> <p>+</p> <p>+</p> <p>+/-</p> <p>+/-</p>	<ul style="list-style-type: none"> <li>Breath and skin odor.</li> <li>Possible nausea, heartburn, dizziness.</li> <li>Topical garlic can cause skin irritation, blistering and burns.</li> </ul>	<ul style="list-style-type: none"> <li>Fresh garlic is the best form.</li> <li>Garlic contains allin and allicin.</li> <li>If consuming high doses of garlic, do not take blood-thinning drugs, ginkgo or high-dose Vitamin E.</li> </ul>
Ginger ( <i>Zingiber officinale</i> )	<ul style="list-style-type: none"> <li>Improve motion sickness.</li> <li>Reduce nausea.</li> <li>Used as digestive aid.</li> </ul>	<p>+</p> <p>+</p> <p>+</p>	<ul style="list-style-type: none"> <li>No side effects observed at recommended dosages.</li> </ul>	<ul style="list-style-type: none"> <li>People with gallstones should not take ginger without consulting a doctor.</li> </ul>
Ginkgo biloba ( <i>Ginkgo biloba</i> )	<ul style="list-style-type: none"> <li>Improve memory in Alzheimer's patients.</li> <li>Improve blood flow.</li> <li>Used as antioxidant.</li> </ul>	<p>+/-</p> <p>+/-</p> <p>+</p>	<ul style="list-style-type: none"> <li>Allergic skin reaction.</li> <li>Headaches.</li> <li>Seed ingestion dangerous.</li> <li>GI upset (rare).</li> </ul>	<ul style="list-style-type: none"> <li>Do not take with other blood-thinning drugs or high doses of garlic or Vitamin E.</li> </ul>
Ginseng ( <i>Panax ginseng</i> )	<ul style="list-style-type: none"> <li>Improve fatigue.</li> <li>Enhance physical performance.</li> <li>Reduce stress.</li> </ul>	<p>+</p> <p>-</p> <p>+/-</p>	<ul style="list-style-type: none"> <li>Side effects rare.</li> <li>Menstrual abnormalities, breast tenderness.</li> <li>Insomnia.</li> </ul>	<ul style="list-style-type: none"> <li>Not recommended for people with high blood pressure, hypoglycemia.</li> <li>Do not take with stimulants, including excessive caffeine.</li> </ul>
Kava kava ( <i>Piper methysticum</i> )	<ul style="list-style-type: none"> <li>Lower anxiety, tension, restlessness.</li> <li>Enhance sleep.</li> </ul>	<p>+</p> <p>+</p>	<ul style="list-style-type: none"> <li>Mild GI disturbances.</li> <li>Red eyes, puffy face, muscle weakness.</li> <li>Extended continuous intake can result in temporary yellow discoloration of skin, hair, nails.</li> <li>Enlarged pupils.</li> <li>Rare allergic skin reactions.</li> </ul>	<ul style="list-style-type: none"> <li>Not recommended for depressed people.</li> <li>Do not drive or operate machinery when taking kava kava.</li> <li>Do not take with alcohol, other barbituates.</li> </ul>
St. John's wort ( <i>Hypericum perforatum</i> )	<p>Internally:</p> <ul style="list-style-type: none"> <li>Treat depression.</li> <li>Improve premenstrual depression.</li> <li>Treat seasonal affective disorder (SAD).</li> </ul> <p>Externally:</p> <ul style="list-style-type: none"> <li>Used for wounds (inflammation), muscle aches, first-degree burns.</li> </ul>	<p>+</p> <p>-</p> <p>+/-</p> <p>+</p>	<ul style="list-style-type: none"> <li>Photosensitivity, especially in fair-skinned people.</li> <li>May cause allergic reaction.</li> </ul>	<ul style="list-style-type: none"> <li>Not recommended for severe or chronic depression.</li> <li>May enhance effects of MAO inhibitors.</li> <li>Do not take with anti-depressants or alcohol.</li> </ul>
Saw palmetto ( <i>Serenoa repens</i> )	<ul style="list-style-type: none"> <li>Treat benign prostatic hyperplasia.</li> <li>Improve overall prostate health.</li> <li>Enhance sexual vigor, enhance breast size.</li> </ul>	<p>+</p> <p>+/-</p> <p>-</p>	<ul style="list-style-type: none"> <li>GI disturbances, headaches (rare).</li> <li>Large amounts may cause diarrhea.</li> </ul>	

+ Research supports efficacy/safety of this product when used appropriately. See disclaimer below.

+/- Clinical evidence is inconclusive.

- Research finds that it is ineffective/unsafe.

Except where noted in comments, research indicates these 10 herbs appear to be safe **when used appropriately**.

Disclaimer: What we know about herbs is constantly changing, so take any herb with caution. Herbs generally are not recommended for people suffering from autoimmune disorders or liver disease, people undergoing surgery or other invasive medical procedure, pregnant or lactating women, or infants and small children. Use herbs only for minor conditions and only for the short-term. Discontinue if you experience any adverse side effects.