



P.O. Box 144345 Austin, TX 78714-4345 ■ 512.926.4900 ■ Fax: 512.926.2345 ■ [www.herbalgram.org](http://www.herbalgram.org)

# HerbClip™

Mariann Garner-Wizard  
Jennifer Minigh, PhD

Shari Henson  
Heather S Oliff, PhD

Brenda Milot, ELS  
Marissa Oppel, MS

*Executive Editor* – Mark Blumenthal

*Managing Editor* – Lori Glenn

*Consulting Editors* – Dennis Awang, PhD, Francis Brinker, ND, Steven Foster, Roberta Lee, MD

*Production* – Cassandra Johnson, George Solis

AMERICAN  
BOTANICAL  
COUNCIL

Now in Our  
20<sup>th</sup> Year

**FILE: ■ Pleurisy Root (*Asclepias tuberosa*)**

**HC 100373-353**

**Date: May 30, 2008**

**RE: Review of Pleurisy Root (*Asclepias tuberosa*)**

Charles D. Monograph: *Asclepias tuberosa*. *J Am Herbalists Guild*. 2007;7(2):13-20.

This monograph on pleurisy root (*Asclepias tuberosa*) explains the herb's habitat, constituents, actions, pharmacodynamics, pharmacokinetics, indications and effects, safety and contraindications, classical formulations, methods of preparation, dosage, and ethnobotanical uses.

*Asclepias* is an herbaceous perennial in the milkweed family with stems that are usually 1 to 2 feet high; the plant is hairy with numerous linear leaves. Native Americans considered pleurisy root to be one of the most valuable medicines in treating lung disorders. After the colonists learned of this remedy from the Native Americans, it became a popular folk remedy for respiratory disorders, particularly pleurisy. It quickly became incorporated into the materia medica of almost all the medical schools, including the botanic physicians, eclectics, homeopaths, and physio-medicalists.<sup>1</sup>

The root has an acrid and slightly sweet taste which becomes bitter when dried. It "has strong nutty, malt chocolate-like notes that come through, with an earthy, spicy aftertaste," says the author. A drying and cooling herb, pleurisy root has dispersing, decongesting, restorative, and both relaxing and stimulating properties. It is mainly used for its diaphoretic, expectorant, and antispasmodic actions. The herb is administered to patients suffering from a severe bronchial infection which results in damage to the pleura due to inflammation.

The active constituents in *Asclepias* include cardenolide glycosides, a subgroup of cardiac glycosides containing a five-carbon ring attached to a steroidal backbone.<sup>2</sup> The plant also contains relatively high amounts of flavanoids. According to the author, little is known about the mechanisms by which pleurisy root acts within the body. "Only hypotheses can be formed based on what is known about its individual constituents," she writes. Cardiac glycosides increase the force of heart contractions while decreasing the heart rate; produce anti-arrhythmic effects through decreasing the conduction velocity in the atrioventricular junction.<sup>2</sup> They demonstrate a diuretic effect through inhibition of the renin-angiotensin-aldosterone system.<sup>3</sup> These constituents might play a vital role in easing the burden placed on the heart when fluid in the lungs becomes pooled and congested, says the author. Flavanoids are more clearly indicated in the plant's observed actions. The antioxidant property of flavanoids, which has been shown to be important in the recovery from influenza and other respiratory viruses, may explain the use of pleurisy root for these conditions. Flavanoids may also be involved in the herb's anti-inflammatory action.

The expectorant action of the plant may be related to the saponin content, as saponins have a reflex expectorant action thought to be caused by triggering of the vagus nerve. In addition, many saponins also have immunostimulant effects, also supporting the plant's use in the treatment of upper respiratory infections.<sup>2</sup>

Generally well absorbed through oral administration, cardiac glycosides have a large variety of half-lives and routes of excretion depending upon the structure.<sup>2</sup> The author describes the path of the glycosides as they travel through the body.

Pleurisy root is "a wonderful remedy for respiratory infections," but is best suited for chronic infections with stagnant and dry phlegm, dry cough, and hot, dry skin. It provides relief for those suffering from pleurisy, as well as pneumonia, intercostal rheumatism, asthma, and dry irritated cough. Its benefit to serous membranes extends beyond just the pleura and can also be of benefit in pericarditis, peritonitis, and bursitis.<sup>4</sup> Other authors have reported the herb's beneficial effects on stomach troubles,<sup>5</sup> improvement in heart function,<sup>4</sup> and estrogenic effects.<sup>6</sup>

Pleurisy root is contraindicated in pregnancy because of its uterine-stimulating effects and in patients taking drugs or herbs that contain cardiac glycosides. In addition, caution is advised in patients using diuretic drugs.

History shows that pleurisy root formulas were used to treat colds, smallpox, and influenza. The formulations augmented the effects of the herb in reducing inflammation, promoting expectoration, and "bringing on a sweat." The author lists various herbs that could be paired with pleurisy root to treat congestive-type respiratory infections with a wet cough and low-grade fever, as well as herbs that could be combined with pleurisy root to treat dysmenorrhea.

Preparations are generally made using powdered or finely sliced dried root, prepared as a 1:1-1:5 tincture with 50% alcohol, or as a decoction made with 1 tsp herb per cup of water. Lower dosing is recommended for the convalescent stages or respiratory disorders and for asthma, with full dosing recommended to treat acute catarrhal states of the respiratory and gastrointestinal tracts. Extended use is not recommended.

Pleurisy root is considered endangered in Massachusetts, New Hampshire, New York, and Vermont and is on the United Plant Savers "to watch" list. However, the states in which it is rare are simply the northern extensions of the herb's range. In most of its range, pleurisy root is common and not threatened.

—Shari Henson

## References

<sup>1</sup>Wood M. *The Book of Herbal Wisdom: Using Plants as Medicine*. Berkeley, CA: North Atlantic Books; 1997:159-163.

<sup>2</sup>Yarnell E. *Phytochemistry and Pharmacy for Practitioners of Botanical Medicine*. Wenatchee, WA: Healing Mountain Publishing; 2004.

<sup>3</sup>Bruneton J. *Pharmacognosy, Phytochemistry, Medicinal Plants*. Secaucus, NJ: Lavoisier Publishing; 1999.

<sup>4</sup>Cook W. *The Physiomedical Dispensatory*. 1869. Available at:

[http://medherb.com/cook/html/ASCLEPIAS\\_TUBEROSA.htm](http://medherb.com/cook/html/ASCLEPIAS_TUBEROSA.htm). Accessed January 27, 2007.

<sup>5</sup>Hoffmann D. *Medical Herbalism: The Science and Practice of Herbal Medicine*. Rochester, VT: Healing Arts Press; 2003:531-532.

<sup>6</sup>Wren RC. *Potter's New Cyclopedia of Botanical Drugs and Preparations*. Essex, England: The C.W. Daniel Company Ltd; 1988.

Enclosure: Referenced article reprinted with permission from the American Herbalists Guild.

---

The American Botanical Council provides this review as an educational service. By providing this service, ABC does not warrant that the data is accurate and correct, nor does distribution of the article constitute any endorsement of the information contained or of the views of the authors.

ABC does not authorize the copying or use of the original articles. Reproduction of the reviews is allowed on a limited basis for students, colleagues, employees and/or members. Other uses and distribution require prior approval from ABC.