



DEVIL'S CLAW

- Date:** May 9, 2008
- Proper name(s):** *Harpagophytum procumbens* (Burch.) DC. ex Meisn. (Pedaliaceae) (USDA 2006)
- Common name(s):** Devil's claw (McGuffin et al. 2000)
- Source material(s):** Secondary root tubers (ESCOP 2003; Blumenthal et al. 2000; Bradley 1992)
- Route(s) of administration:** Oral
- Dosage form(s):** Those suited to the allowable route(s) of administration. This monograph is not intended to include food-like dosage forms such as bars, chewing gums or beverages.
- Use(s) or Purpose(s):**
- ▶ Traditionally used in Herbal Medicine as a bitter to help stimulate appetite (ESCOP 2003; Blumenthal et al. 2000; Bradley 1992).
 - ▶ Traditionally used in Herbal Medicine to help relieve digestive disturbances such as dyspepsia (ESCOP 2003; Blumenthal et al. 2000; Bradley 1992).
 - ▶ Used in Herbal Medicine to help relieve joint pain associated with osteoarthritis (Mills and Bone 2005; ESCOP 2003; Hoffmann 2003).
- Dose(s):**
- For stimulation of appetite: 0.6-1.5 g dried secondary root tubers, per day (Blumenthal et al. 2000; Bradley 1992)

For relief of digestive disturbances:

0.6-4.5 g dried secondary root tubers, per day (Blumenthal et al. 2000; Bradley 1992)

For the relief of joint pain associated with osteoarthritis:

0.6-7.5 g dried secondary root tubers, per day (Mills and Bone 2005; ESCOP 2003; Hoffmann 2003; Bradley 1992)

See Appendix 1 for examples of appropriate dosage preparations, frequencies of use, and directions for use according to cited references. The purpose of Appendix 1 is to provide guidance to industry.

Duration of use:

For the relief of joint pain associated with osteoarthritis:

Use for a minimum of 2-3 months to see beneficial effects (ESCOP 2003).

Risk information:

Statement(s) to the effect of:

Caution(s) and warning(s):

- ▶ Consult a health care practitioner if symptoms persist or worsen.
- ▶ Consult a health care practitioner prior to use if you are pregnant or breastfeeding.

Contraindication(s):

No statement required.

Known adverse reaction(s): No statement required.

Non-medicinal ingredients: Must be chosen from the current NHPD *List of Acceptable Non-medicinal Ingredients* and must meet the limitations outlined in the list.

Specifications:

- ▶ The finished product must comply with the minimum specifications outlined in the current NHPD *Compendium of Monographs*.
- ▶ The medicinal ingredient may comply with the specifications outlined in the Devil's Claw Root Monograph published in the European or British Pharmacopoeias.

References cited:

Blumenthal M, Goldberg A, Brinkmann J, editors. Herbal Medicine: Expanded Commission E Monographs. Boston (MA): Integrative Medicine Communications; 2000.

Bradley PR, editor. British Herbal Compendium: A Handbook of Scientific Information on Widely Used Plant Drugs, Volume 1. Bournemouth (UK): British Herbal Medicine Association; 1992.

ESCOP 2003: ESCOP Monographs: The Scientific Foundation for Herbal Medicinal Products, 2nd edition. Exeter (UK): European Scientific Cooperative on Phytotherapy and Thieme; 2003.

Hoffmann D. Medical Herbalism. Rochester (VT): Healing Arts Press; 2003.

McGuffin M, Kartesz JT, Leung AY, Tucker AO, editors. Herbs of Commerce, 2nd edition. Silver Spring (MD): American Herbal Products Association; 2000.

Mills S, Bone K. The Essential Guide to Herbal Safety. St. Louis (MO): Elsevier Churchill Livingstone; 2005.

USDA 2006: United States Department of Agriculture, Agricultural Research Service, National Genetic Resources Program. Germplasm Resources Information Network (GRIN). *Harpagophytum procumbens* (Burch.) DC. ex Meisn. National Germplasm Resources Laboratory, Beltsville (MD). [Accessed 2008-05-09]. Available from: http://www.ars-grin.gov/cgi-bin/npgs/html/tax_search.pl

References reviewed:

Brien S, Lewith GT, McGregor G. Devil's claws (*Harpagophytum procumbens*) as a treatment for osteoarthritis: A review of efficacy and safety. The Journal of Alternative and Complimentary Medicine 2006;12(10):981-993.

Brinker F. Online Updates and Additions to Herb Contraindications and Drug Interactions, 3rd edition. Sandy (OR): Eclectic Medical Publications; 2008. [Accessed 2008-05-09]. Available from: <http://www.eclecticherb.com/emp/updatesHCDI.html>

Chantre P, Cappelaere A, Leblan D, Guedon D, Vandermander J, Fournie B. Efficacy and tolerance of *Harpagophytum procumbens* versus diacerhein in treatment of osteoarthritis. Phytomedicine 2000;7(3):177-83.

Chrubasik JE, Roufogalis BD, Chrubasik S. Evidence of effectiveness of herbal antiinflammatory drugs in the treatment of painful osteoarthritis and chronic low back pain. Phytotherapy Research: PTR 2007;21(7):675-683.

Chrubasik S, Chrubasik C, Kunzel O, Black A. Patient-perceived benefit during one year of treatment with Doloteffin. *Phytomedicine* 2007;14(6):371-376.

Chrubasik S, Conradt C, Black A. The quality of clinical trials with *Harpagophytum procumbens*. *Phytomedicine* 2003;10(6-7):613-623.

Chrubasik S, Conradt C, Roufogalis BD. Effectiveness of *Harpagophytum* extracts and clinical efficacy. *Phytotherapy Research: PTR* 2004;18(2):187-189.

Chrubasik S, Model A, Black A, Pollak S. A randomized double-blind pilot study comparing Doloteffin and Vioxx in the treatment of low back pain. *Rheumatology* 2003;42(1):141-148.

Chrubasik S, Thanner J, Kunzel O, Conradt C, Black A, Pollak S. Comparison of outcome measures during treatment with the proprietary *Harpagophytum* extract Doloteffin in patients with pain in the lower back, knee or hip. *Phytomedicine* 2002;9(3):181-194.

Gagnier JJ, vanTulder M, Berman B, Bombardier C. Herbal medicine for low back pain: a Cochrane review. *Spine* 2008;32(1):82-92.

Grant L, McBean DE, Fyfe L, Warnock AM. A review of the biological and potential actions of *Harpagophytum procumbens*. *Phytotherapy Research: PTR* 2007;21(3):199-209.

Gregory PJ, Sperry M, Friedman Wilson A. Dietary supplements for osteoarthritis. *American Family Physician* 2008;77(2):177-184.

Laudahn D, Walper A. Efficacy and tolerance of *Harpagophytum* extract LI 174 in patients with chronic non-radicular back pain. *Phytotherapy Research* 2001;15(7):621-4.

Leblan D, Chantre P, Fournié B. *Harpagophytum procumbens* in the treatment of knee and hip osteoarthritis. Four-month results of a prospective, multicenter, double-blind trial versus diacerhein. *Joint, bone, spine : revue du rhumatisme* 2000;67(5):462-7.

McGuffin M, Hobbs C, Upton R, Goldberg A, editors. *American Herbal Products Association's Botanical Safety Handbook*. Boca Raton (FL): CRC Press; 1997.

Mills S, Bone K. *Principles and Practice of Phytotherapy*. Toronto (ON): Churchill Livingstone; 2000.

Appendix 1: Examples of appropriate dosage preparations, frequencies of use and directions for use

For stimulation of appetite:

Dried secondary root tuber:

1.5 g, per day (Blumenthal et al. 2000)

Decoction: 0.5 g dried secondary root tubers, 3 times per day (Blumenthal et al. 2000; Bradley 1992)

Directions for use: Place dried secondary root tubers in 150 ml of water, bring to a boil, and simmer (Blumenthal et al. 2000).

Fluidextract: 0.5 g dried equivalent, 3 times per day (1:1, 0.5 ml) (Blumenthal et al. 2000)

Tincture: 0.2 g dried equivalent, 3 times per day (1:5, 25% alcohol, 1 ml) (Bradley 1992)

For relief of digestive disturbances:

Dried secondary root tuber:

4.5 g, per day (Blumenthal et al. 2000)

Infusion: 1.5 g dried secondary root tubers, 3 times per day (Blumenthal et al. 2000)

Directions for use: Pour 300 ml of boiling water over 4.5 g dried secondary root tubers and steep for 8 hours. Drink 100 ml, 3 times per day (Blumenthal et al. 2000).

Decoction:

- ▶ 1.5 g dried secondary root tubers, 3 times per day (Blumenthal et al. 2000)
- ▶ 0.5 g dried secondary root tubers, 3 times per day (Bradley 1992)

Directions for use: Place dried secondary root tubers in 150 ml of water, bring to a boil, and simmer (Blumenthal et al. 2000).

Fluidextract: 1.5 g dried equivalent, 3 times per day (1:1, 1.5 ml) (Blumenthal et al. 2000)

Tincture: 0.2 g dried equivalent, 3 times per day (1:5, 25% alcohol, 1 ml) (Bradley 1992)

For the relief of joint pain associated with osteoarthritis:

Dried secondary root tuber:

- ▶ 1.5-6 g, per day (Mills and Bone 2005)
- ▶ 2-5 g, per day (ESCOP 2003)
- ▶ 4.5 g, per day (Blumenthal et al. 2000)

Infusion: 1.5 g dried secondary root tubers, 3 times per day (Blumenthal et al. 2000)

Directions for use: Pour 300 ml of boiling water on 4.5 g dried secondary root tubers and steep for 8 hours. Drink 100 ml, 3 times per day (Blumenthal et al. 2000).

Decoction:

- ▶ 1.5-6 g dried secondary root tubers, per day (Mills and Bone 2005)
- ▶ 1.5 g dried secondary root tubers, 3 times per day (Blumenthal et al. 2000)
- ▶ 1.5-2.5 g dried secondary root tubers, 3 times per day (Bradley 1992)

Directions for use: Place dried secondary root tubers in 150 ml of water, bring to a boil, and simmer (Blumenthal et al. 2000).

Fluidextract:

- ▶ 1.5 g dried equivalent, 3 times per day (1:1, 1.5 ml) (Blumenthal et al. 2000)
- ▶ 1-2 g dried equivalent, 3 times per day (1:1, 25% ethanol, 1-2 ml) (Bradley 1992)

Tincture: 0.2-0.4 g dried equivalent, 3 times per day (1:5, 40% alcohol, 1-2 ml) (Hoffmann 2003)