

The Longwood Herbal Task Force
(<http://www.mcp.edu/herbal/default.htm>) and
The Center for Holistic Pediatric Education and Research
(<http://www.childrenshospital.org/holistic/>)

Clinician Information Summary

DEVIL'S CLAW
(*Harpagophytum procumbens*)

SUMMARY

Devil's claw root is a traditional South African remedy for gastrointestinal disorders and rheumatism which has become popular in Western Europe as an herbal replacement for non-steroidal anti-inflammatory medications (NSAIDs). Scientific studies in animals and humans support the use of enteric coated, standardized products for use as a mild anti-inflammatory. Although it is widely used as an appetite stimulant or liver tonic, there are no studies evaluating its effectiveness for these purposes. The major potential risks and side effects include possible allergies and potential inotropic, chronotropic, anti-arrhythmic and hypotensive effects; it is traditionally contraindicated for patients with gastric and duodenal ulcers, but side effects are rarely reported and tend to be mild. Commercial products are occasionally contaminated with inactive plants and other bitter African plants such as *Elephantorrhiza* and *Acanthosicyos* and there is marked variability in the quantity of active chemical constituents in many commercial preparations. No studies have evaluated safety during pregnancy, lactation or childhood.

POPULAR USES: Anti-inflammatory for degenerative or rheumatic joint disease, tendonitis, back pain, headache, and menstrual pain; antipyretic, antidiabetic, appetite stimulant, liver and gall bladder tonic, vulnerary.

CHEMICAL CONSTITUENTS: Iridoid glycosides (harpagoside, harpagide, procumbide) and others.

(continued)

SCIENTIFIC DATA

In vitro: In isolated animal hearts, Devil's claw extracts exert dose-dependent protection against experimentally induced arrhythmias. In guinea pig jejunum, Devil's claw extracts decrease the contractile response to acetylcholine and other chemical agonists. Devil's claw has no impact on prostaglandin synthesis.

In animals: In rats, low doses exert mildly negative chronotropic and positive inotropic effects, whereas high doses exert markedly negative inotropic effects and reduce coronary blood flow. Devil's claw also causes hypotension in normotensive rats treated with intraperitoneal injections. Harpagoside reduces experimentally-induced inflammation, but is not as effective when given by mouth as when administered by injection, presumably because it is inactivated by gastric acids.

In humans: Case series and randomized controlled trials report that Devil's claw effectively reduces joint pain and low back pain; dosages in these studies ranged from 410 mg TID to 3 grams TID. One case series of adults suffering from a variety of gastrointestinal disorders reported that drinking a cup of Devil's claw tea daily improved diarrhea, constipation, appetite and flatulence.

TOXICITY AND SIDE EFFECTS:

Products are highly variable and may be contaminated with other species.

Side effects are rarely reported. They include early morning headache, tinnitus, anorexia and gastrointestinal upset. Devil's claw has a very bitter taste and appears to be inactivated by gastric acid, suggesting that enteric coated tablets or capsules would be the preferred route of administration.

Interactions with other medications: None reported. Interactions with anti-arrhythmic and antidiabetic medications cannot be ruled out.

Contraindications: In light of its cardiovascular effects in animal studies (chronotropic, inotropic, anti-arrhythmic and hypotensive effects), caution is suggested for patients with cardiac sensitivities. Devil's claw is traditionally contraindicated for patients with gastric or

(continued)

duodenal ulcers, gall stones or diabetes.

Pregnancy and lactation: No clinical studies

Pediatric use: No clinical studies or systematic surveillance

ADDITIONAL REFERENCES OR RESOURCES:

- HOME: <http://www.mcp.edu/herbal/default.htm>
- Devil's Claw Complete Monograph: <http://www.mcp.edu/herbal/devilsclaw/devilsclaw.pdf>
- Devil's Claw Patient Fact Sheet: <http://www.mcp.edu/herbal/devilsclaw/devilsclaw.ph.pdf>