

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

# FEVERFEW

(*Tanacetum parthenium*)

## SUMMARY

Feverfew is a member of the daisy family; it is used primarily to prevent migraine headaches and to treat rheumatoid arthritis. The active ingredients are sesquiterpene lactones, primarily parthenolide. Case series and randomized controlled trials support its use as a prophylactic agent for migraine, but have not compared it with other medications, biofeedback or hypnosis. No trials support its use in the treatment of arthritis, asthma, skin rashes, fever or menstrual cramps. Allergic reactions have been reported. Oral ulceration has been reported in 10% -15% of those who chew the leaves; rebound headaches have been reported in patients who suddenly stopped taking feverfew. Because of its *in vitro* effects on platelet aggregation, feverfew should be used only cautiously by patients taking anticoagulants or those anticipating surgery; no adverse effects on clotting in humans have been reported. There are no data on its use in children or during pregnancy or lactation.

**POPULAR USES:** Prevention of migraine headaches, treatment of rheumatoid arthritis and menstrual cramps. Also used as an antipyretic and for asthma and dermatitis.

**CHEMICAL CONSTITUENTS:** Sesquiterpene lactones (parthenolides, canin, artemisinin, santamarin), flavonoid glycosides (luteolin, tanetin, apigenin, 6-hydroxy-flavanols), sesquiterpenes and monoterpenes (e.g. camphor, borneol, germacrene, and pinenes), polyacetylenes, pyrethrin, melatonin, tannins

## SCIENTIFIC DATA

*In vitro:* Feverfew has four different physiologic effects that may contribute to its effectiveness in preventing migraine headaches: it reduces inflammation, reduces platelet activation, minimizes damage to endothelium, and modulates vasoconstriction. Sesquiterpene lactones, including

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parthenolide, have demonstrated cytotoxicity against different human (human lymphoma TK6) and animal (mouse fibrosarcoma) tumor lines.

*In animals:* In guinea pigs, pretreatment with feverfew inhibited collagen-induced bronchoconstriction, presumably by interfering with phospholipase A2.

*In humans:* Case series and two randomized controlled trials using fresh or dried feverfew leaves support its effectiveness in preventing migraine headaches, but one controlled trial using an alcoholic extract did not demonstrate any benefit. One randomized controlled trial did not show any benefits for rheumatoid arthritis. No studies have evaluated its effects in treating menstrual cramps, asthma or skin rashes.

### **TOXICITY AND SIDE EFFECTS**

*Side effects:* Allergic reactions may occur. Mouth ulcers and lip and tongue swelling may occur in 10% -15% of those who chew fresh feverfew leaves. Upset stomach, insomnia, tachycardia, and skin rashes have been reported, but other trials have not reported a rate of side effects any greater than that reported with placebo. In one study, rebound headaches were reported when feverfew was discontinued after chronic use; no other studies have reported this effect. No other chronic adverse effects have been noted with up to ten years of use, and no mutagenesis or carcinogenesis has been reported with several months of use in animals.

*Interactions with other medications:* None known. Based on *in vitro* effects on platelet aggregation, caution should be used by patients taking anticoagulants or anticipating surgery.

*Contraindications:* Based on *in vitro* effects, caution should be used by patients with bleeding disorders.

*Pregnancy and lactation:* No clinical studies

*Pediatric use:* No clinical studies

### **ADDITIONAL RESOURCES**

- HOME: <http://www.mcp.edu/herbal/default.htm>
- Complete Monograph: <http://www.mcp.edu/herbal/feverfew/feverfew.pdf>
- Patient Fact Sheet: <http://www.mcp.edu/herbal/feverfew/feverfew.ph.pdf>