

Chamomile (*Matricaria recutia*, *Anthemis nobilis*)

History

- Chamomile is a widely used medicinal herb dating back to ancient Egypt, Greece and Rome when it was used to treat fever, heat stroke, and many other conditions.
- More than one million pounds of chamomile are imported into the U.S. each year, mostly for use in herbal teas.
- Medicinal preparations are made from the flowering heads of the plant.

Most studied uses

Oral: infant colic, childhood diarrhea.

Topical: eczema, cancer-related stomatitis.

Other common uses

Oral: anxiety, insomnia, URI's, indigestion, nausea.

Topical: minor wounds, chicken pox, diaper rash, poison ivy, hemorrhoids, mastitis.

Summary of the evidence

- May reduce somewhat the symptoms of infant colic and childhood diarrhea, although supportive data is minimal.
- Results have been mixed regarding efficacy in eczema and cancer-related stomatitis.
- Chamomile appears to be safe, well tolerated, and without significant drug interactions.

Pharmacology

- The active ingredients are terpenoids (bisapolol, chamazulene and others) and flavonoids (apigenin and others).

Mechanism of action

- Chamazulene: anti-inflammatory, anti-allergic and antispasmodic.
- Bisapolol: spasmolytic for smooth muscle.
- Apigenin: anti-inflammatory, carminative and antispasmodic, binds to GABA receptors.

Clinical studies

- Double blind RCT's using chamomile mouthwash have shown mixed results in the treatment of mucositis due to chemotherapy or radiation.
- RCT's of chamomile's topical anti-inflammatory effects have also been mixed.
- In one prospective double blind RCT of a pectin/chamomile preparation, children with acute, uncomplicated diarrhea had shorter durations of symptoms compared to those given placebo. (De la Motte 1997)
- In a double blind RCT of infants with colic, a multi-herb tea containing chamomile significantly improved colic symptoms and more babies had their colic eliminated (57% vs. 26%, $P < 0.01$) compared to placebo. (Weizman 1993)

Adverse effects

- Allergic reactions are rare. Contact dermatitis has been reported.

Contraindications/cautions

- Those who may be allergic to other members of the *Compositae* family (ragweed, daisies etc.) may also be allergic to chamomile.

Important drug/herb interactions

- No interactions with drugs have been reported.

Formulation and dosage

- Clinical studies on the effectiveness of chamomile have used extracts and flowers standardized to 1.2% apigenin.
- Oral: 2-8 grams 3 or 4 times per day usually prepared in a tea prepared by steeping dried flower heads in 150 mL boiling water for 5-10 minutes and then straining.
- Liquid extract (1:1 in 45% alcohol) can also be dosed as 1-4 mL three times daily.
- For oral mucositis, an oral rinse made with 10-15 drops of German chamomile liquid extract in 100 ml warm water has been used three times daily.

Key Chamomile References

1. De la Motte S, et al. Double blind comparison of a preparation of pectin/chamomile extract and placebo in children with diarrhea. *Arzneimittel Forschung* 1997;1247-49.
2. Weizman Z, et al. Efficacy of herbal tea preparation in infant colic. *J Pediatr* 122:650-2, 1993.
3. Fidler P, et al. Prospective evaluation of a chamomile mouthwash for prevention of 5-FU induced oral mucositis, *Cancer* 1996; 77: 522-525.