

Supplement Sampler

Three Holiday Herbs: Frankincense, Myrrh and...Peppermint

It is not uncommon to hear talk of frankincense and myrrh as gifts of the magi. Sure, they also gave gifts of gold, but we'll leave that for a medical management of rheumatoid arthritis. Instead, we'll give tribute to that old-fashioned favorite, candy canes.

Frankincense is derived from the resin of various species of *Boswellia* trees. *Boswellia sacra*, which was used in the ancient Middle East, is not used as widely as *Boswellia serrata*, or Indian frankincense, which we'll feature here. Myrrh is from the gum of *Commiphora myrrha* trees. Peppermint leaf is easy to grow in Wisconsin gardens.

Best Indications

- Indian Frankincense (*Boswellia*) –
 - Inflammation, including that with inflammatory bowel disease and osteoarthritis, possibly asthma and rheumatoid arthritis
- Myrrh
 - Mouth ulcers
 - Oil has antiseptic properties
 - Mummification
- Peppermint
 - Tension headaches (topical use)
 - Dyspepsia (especially combined with caraway oil or with other herbs in Iberogast)
 - Possibly IBS and onychomycosis

Mechanism of Action

- *Boswellia* – components have anti-inflammatory properties, inhibiting 5-lipoxygenase and leukotriene synthesis and leukocyte elastase. May also decrease cartilage damage and stabilize mast cells.
- Myrrh components have antimicrobial, anti-inflammatory, anti-tumor, and astringent effects. Decreases glucose and protects against ulcers in animal studies.
- Peppermint – seems to have calcium antagonist action in bowel smooth muscle, and may inhibit potassium depolarization, decreasing contractility in IBS. Rapidly absorbed in the stomach, so it should be given in enteric coated form. Menthol, a key component, seems to inhibit pain receptors and may alter pain perceptions. Menthol also acts against fungi that cause onychomycosis.

Best Studies

- *Boswellia* – 30 patients with osteoarthritis in a crossover trial showed significant improvement in pain, flexion, swelling, and walking distance. No improvement in x-ray findings. Minor GI effects. Kimmatkar, et al, *Phytomedicine* 2003; 20(1):3-7.
- *Boswellia* – In 44 patients with Crohns, an extract was found to be as effective as mesalazine. Gerhardt, et al. *Aliment Pharmacol Ther* 2004;20:1279-87.



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- Myrrh – Unfortunately studies are limited
- Peppermint – A brand formulation called *Iberogast*, which also contains clown's mustard, German chamomile, caraway, licorice, milk thistle, angelica, celandine, and lemon balm was found in a meta-analysis to significantly improve acid reflux (comparable to cisapride) when taken three times daily for four weeks. *Melzer et al. Digestion 2004;70(4):257-64.*
- Peppermint- in a blinded study (placebo contained just enough oil to give a smell) oil was applied topically for 41 patients, for four headaches per person, or acetaminophen was given. Severity of headache was significantly reduced after 15 minutes by peppermint, and the effect continued for 1 hour. It was as effective as the acetaminophen.

Dose

- Boswellia – 300-350 mg of extract three times daily.
- Myrrh – Natural Medicines Database suggests dabbing the tincture on mouth or throat, or a gargle can be done with 5-10 drops in 2 cups of water.
- Peppermint – for IBS, the dose is 0.2-0.4 ml of enteric coated oil up to three times a day. Half the dose can be safely used in children 8 and older. *Iberogast* is dosed as 1 ml three times a day. For headaches, rub the oil into the forehead and temples. Can also use a water extract (steep leaves in ice water) to make a poultice; dip a washcloth into the water, wring it, and then place it on the back of the neck.

Side Effects

- Boswellia – occasional GI discomfort
- Myrrh – may have abortifacient effects in pregnancy. Large amounts can increase heart rate. Can occasionally cause dermatitis, and more than 2-4 grams daily can lead to GI and urinary problems.
- Peppermint – can cause heartburn, nausea and vomiting if not enteric-coated. May cause anal burning. Too much mint candy can lead to stomatitis. Some concern that it may cause airway spasm in infants if they are exposed to the oil. It is recognized as a food, and it is in candy, after all!

Cost

- Ten dollars will buy 60 Boswellia capsules, 30 ml of myrrh oil, or 180 EC peppermint gels. *Iberogast* costs around \$16 for 100 ml (a one month supply).

Clinical Bottom Line

- It is not a bad idea to try Boswellia in a combination product with other anti-inflammatory herbs, like turmeric, cat's claw, or devil's claw.
- Myrrh oil is, according to those who promote essential oils, to fortify and revitalize the spirit. Not a bad thing to do when the long dark days of January and February loom.
- Consider a trial of enteric-coated peppermint capsules for IBS, which can have a remarkable effect sometimes.

Brought to you by Adam Rindfleisch, MD, and your colleagues in the UW Department of Family Medicine Integrative Medicine Program.

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