Ginger - Zingiber officinale

History-long used for food and medicine

Pharmacology
- digestive aid
- flavor
- nausea and vomiting treatment-effect is on the stomach not on the CNS

Chemistry
- volatile compounds
- non volatile compounds
  - gingerol
  - shogaol

Efficacy Studies
- motion sickness
  - most studies “in the field” show benefit but those in a spinning chair are equivocal

- post operative nausea
  - studies are not in agreement on efficacy
• Ginger and Pregnancy

- “morning sickness”
- Fischer-Rassmussen et al
- risks: Backon

Fig. 1. Assessment of Hyperemesis symptoms
n=30

**Extract from the German Commission Monograph**

**Uses:**
- Dyspeptic complaints. Prevention of the symptoms of travel sickness.

**Contraindications:**
With gallstones, to be used only after consultation with a doctor. Warning: not to be used during morning sickness.

**Side effects**
None known.

**Interactions with other remedies**
None known.

**Dosage**
Unless otherwise prescribed: average daily dose, 2 g drug; preparations correspondingly. Externally: 100 g to a full bath; preparations correspondingly.

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**Ginger Summary**

- Possibly worthwhile in preventing motion sickness
- Possibly worthwhile in treating and preventing nausea
- Must weigh risk vs. benefit in treating nausea of pregnancy
- Products and doses
  - 0.5-1 g one hour before travel
  - 2 g/d in divided doses for nausea
  - Dried powdered ginger capsules are OK

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**Yohimbe**

- **Botany:**
  - W. African tree (Pausinystalia yohimbe)
  - Bark used

- **Chemistry:**
  - About 6% alkaloids
  - 2-4% yohimbine (Rx only, 5.4 mg TID)

- **Pharmacology:**
  - Alpha adrenergic receptor blocker
  - Increase excitability in sacral region of spinal cord
  - MAO1
  - Vasodilation

- **Adverse:**
  - CNS stimulation
  - Hypotension, hypertension, insomnia
  - Activation of psychoses
  - Cardiac

- **Herbal/Drug interactions:**
  - MAO1
  - Additive problems with adrenergic and other MAOI

- **Evidence**

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**Yohimbine-Bottom line**

- Adverse effects could be significant but warnings in the literature may be exaggerated
- Reasonable evidence for some improvement in ED
- Studies needed to compare with Viagra
- Rx drug

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**Yohimbe-Bottom line**

- Quality control problems
- Most dietary supplement products have subtherapeutic amounts of yohimbine

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*Ernst and Pittler, J. Urology 159:433-436, 1998*
Feverfew

Botany
- Tanacetum parthenium (daisy family) (Asteraceae) (bachelor button)
- Leaves and flowering tops

History
- Long used for fever, headache, pain, menstruation, childbirth
- 1970s in England publicity on use in migraine

Chemistry
- 0.2% sesquiterpene lactone, parthenolide
- Also has volatile oil, flavonoids

Pharmacology
- Parthenolide blocks serotonin release from platelets
- Decrease vasodilation in brain due to this release
- Parthenolide decreases pain sensation
- Parthenolide inhibits cyclooxygenase to decrease thromboxanes and hence inflammation

Evidence

Migraine
- 3/5 DBPC trials showed positive benefit.
  - One negative trial is an abstract (Kuritzky et al., Neurology 44;supp 2:293P, 1994).
  - One negative trial used an alcohol extract standardized to parthenolide (may be not active?)

Arthritis/inflammation
- Phytomedicine 3:225-230,1996
  - No differences between placebo and feverfew in a RDBPC crossover study (n=48) for 9 months.

Evidence - migraine
- Murphy et al, Lancet II:189,1988
  - n=72
  - Double blind, crossover, placebo controlled
  - 4 months on each
  - Table 1
Feverfew

- **N=59**
- **No attacks**
  - Feverfew: 3.6±0.2
  - Placebo: 4.7±0.3
  - *p* <0.005
- **Duration**
  - Feverfew: 14±1.0
  - Placebo: 14±1.0
  - NS

adapted from Murphy et al., Lancet II:189, 1988

Feverfew

- **Precautions**
  - allergies
  - mouth ulcers if chew leaves
  - contraindicated with aspirin, etc?
  - no special problems noted in the studies
- **Products**
  - quality control is problem
  - pick product standardized to 0.2% parthenolide? Use **whole leaf product**!
  - 100-300mg/capsule; 125mg BID is often used

Hawthorn

- **Botany**
  - Crataegus sp
  - dried flowering twig tips used
- ** Constituents**
  - flavonoids and oligomeric procyanidins (OPC)
  - triterpenes and aromatic acids
- **Pharmacology**
  - increases contractility of myocardium (positive inotropic effect)
  - reduced vascular resistance
  - increased blood flow to heart
  - increased cardiac output

• Use
  - heart disease, chronic heart failure
• Evidence
  - 4/5 PDB trials showed significant positive results
  - all small studies
• Adverse Effects
  - has been studied and hawthorn seems benign; drug interactions? (Schlegelmilch and Haywood, J Am College Toxicol 13:103-111,1994)
  - Recommendations
  - potential of hawthorn is high but more work needed
  - not for self therapy
  - quality control of products is essential
  - use standardized product containing 18-19% OPC and/or 2-3% flavonoids, e.g. 2.2% vitexin
  - dose of extract is 300mg BID or TID