

## Herbals

### Subcommittee

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<b>Herbals</b>	
<b>Recommended Curriculum Equivalent: 0.75 hr</b>	
<b>PRIMARY DRUGS</b>	<b>SECONDARY DRUGS</b>
BITTER ORANGE/ EPHEDRA ECHINACEA FLAXSEED GINGER GINKGO GLUCOSAMINE CHONDROITIN GREEN TEA SAW PALMETTO ST JOHN'S WORT TURMERIC/CURCUMIN	aloe vera black cohosh chamomile evening primrose oil feverfew guarana hoodia kava milk thistle valerian yohimbe
<b>Learning Objectives</b>	
<b>Actions on Organ Systems</b> Know mechanisms of herbal action and similarity to prescription medication, eg bitter orange contains synephrine, Saw Palmetto block testosterone, St John's Wort inhibits 5-HT, MAO. Know that some herbal products have demonstrated effectiveness in some areas, but most have not	
<b>Adverse Effects, drug interactions and contraindications</b> Know that serious drug interactions may occur, including: <ul style="list-style-type: none"><li>• Bitter orange with MAOIs</li><li>• Ginkgo with anticoagulants</li><li>• St John's Wort with protease inhibitors, calcineurin inhibitors, oral contraceptives, antidepressants, general anesthetics, digoxin, warfarin, phenytoin</li><li>• Yohimbe with clonidine, MAOIs, tricyclic antidepressants and phenothiazines</li></ul> Know that adverse effects include allergy (chamomile, echinacea, milk thistle, feverfew, ginkgo), increased blood pressure and possible stroke (bitter orange, ephedra), liver damage (concentrated green tea extracts, kava). Know that use of many herbal products is contraindicated in pregnancy.	
<b>Notes</b> Be aware that there is little regulation of herbal products, and although FDA does try to remove fraudulent and unsafe products, there is no guarantee that the labeling is accurate. Know that some products are monitored by independent laboratories such as <a href="http://www.consumerlab.com">www.consumerlab.com</a> .	

**Clinical Pharmacology**

There is no acceptable high quality evidence for efficacy of Ginkgo biloba, and its use should be discouraged. Saw palmetto is marginally effective as a treatment strategy for benign prostatic hypertrophy.

Although demonstrated clinically effective for the treatment of mild to moderate depression, St. Johns Wort has considerable potential for drug interactions, due mainly to its induction of CYP 3A4 and P-glycoprotein. This herbal preparation is not to be used concurrently with SSRI's due to increased risk of inducing the serotonin syndrome.

Ginger has demonstrated clinical efficacy in reduction of nausea and vomiting. However, its use concurrently with prescribed drug therapy for this problem has not been adequately evaluated.

Use of Echinacea to stimulate immunity is of concern in patients who already have pathology related to autoimmunity. Use by patients receiving concurrent immunosuppressive drug therapy is a concern but remains to be rigorously evaluated in clinical studies. Such clinical studies are unlikely due to ethical issues that would arise from their proposal.

**Relevance**

**USMLE topic**

Complementary and alternative therapies

**Principles of therapeutics**

Multisystem processes

**AAMC Medical School Objectives**

**Project Report X Patient Safety – Table 1**

**Topic C**

Drug treatment of common conditions and diseases