



Herbal Supplements

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Objectives

- Definition of Herbs, Nutraceuticals, and Functional Foods
- Reputable Resources
- Guidelines for taking herbs safely
- Top 5 Dangerous Herbs
 - Ginko
 - Ginseng
 - Echinacea

Herbs

- Herb:
 - Medicinal plants
 - Regulated as Dietary Supplements under the Dietary Supplement Health and Education Act of 1994 (DSHEA).
 - **Structure and function claims**
“good for circulation”
 - **No specific health claims**
“prevents atherosclerosis”
 - **Does not regulate quality or purity of supplement**

Herbs

- Quality Assurance Standardization
 - Current Good Manufacturing Procedures
 - As of March 1999
 - name of plant
 - part of plant used

Nutraceuticals

- Any substance that may be considered a food or part of a food and provides medical or health benefits, including prevention and treatment of disease.
 - Soybeans: (fiber can lower LDL)
 - Celery: (fiber can reduce risk of colon cancer)
 - Cranberry juice: (limits the adherence of bacteria to urinary wall)

Functional Foods

- Any modified food or food ingredient that may provide a health benefit beyond the traditional nutrients it contains.
 - Orange Juice with added Calcium
 - Hi C candy enriched with Vitamin C

Safe Use of Herbs

- ✍ Discuss with a professional prior to taking
- ✍ Start with small doses
- ✍ Stick to a single herb product
- ✍ Be alert to side effects
- ✍ Avoid taking herbal supplements if pregnant or nursing
- ✍ **Stop taking herbs two weeks prior to undergoing surgery.**

Hazards of Herbal Use

- Self (mis) diagnosis and treatment
- Patients may neglect conditions
- Symptoms of serious illness may be masked
- Treatment may be delayed in serious cases
- Allergy
- Toxicity

Questions to ask Patients

- Are you taking any herbal supplements?
- Which herbs are you taking?
- How often/how much do you take?
- When did you start taking _____?
- What is _____ supposed to do for you?
- Why did you start taking _____?

Reputable Resources

- Germany's Commission E
 - Similar to our FDA.
 - Has conducted a lot of research on safe use of herbs.
- Recommendations in this class are based on
 - Translated German Research.
 - *PDR for Herbal Medicines*
 - Other clinical studies/trials.

Reputable Resources

- **Books**

- *Herbs of Choice* by Varro E. Tyler
- *American Pharmaceutical Association's Practical Guide to Natural Medicines*
by Andrea Pierce
- *PDR for Herbal Medicines*

- **Magazines**

- *Consumer Reports & Consumer Magazine*
- *Herbal Gram*

Reputable Resources

- Internet Web Sites
 - American Botanical Counsel
 - <http://www.herbalgram.org>
 - phone number 1(800) 373-7105
 - Office of Alternative Medicine
 - <http://www.altmed.od.nih.gov/oam>
 - Quack Watch
 - <http://www.quackwatch.com>

Top 5 Dangerous Herbs

Ephedra/Ma Huang

Chaparal

Comfrey

Lobelia

Yohimbe

Ephedra/Ma Huang

- Used in Germany as a decongestant
- Used in USA in many diet products
 - not a safe and effective weight loss aid.
 - tolerance is built up after 7 days.
 - most weight loss products contain 24 mg Ephedra.

Ephedra/Ma Huang

- Minimum Dose (8mg/day):
 - heart palpitations, dry mouth, insomnia, nausea, vomiting, motor restlessness, irritability, headaches, and tachycardia.
- Higher Dose:
 - drastic increase in blood pressure, cardiac arrhythmia, dependency, coma, death.
- Do not use if you have/are taking:
 - high blood pressure, glaucoma, enlarged prostate
 - MAO Inhibitors, guanethidine, or cardiac glycosides.

Chaparal

- Believed to be an anti-cancer agent.
- Ineffective and totally unsafe for human consumption.
- Causes irreversible liver damage.

Comfrey

- External Use: **treat bruises and sprains**
 - Only use if skin is intact.
 - Do not use more than 100 micrograms/day.
- Internal Use: **gastritis and gastrointestinal ulcers**
 - Not recommended for internal use.
 - Causes liver damage and causes cancer.

Lobelia

- “The natural way to stop smoking”
- Risk of overdose is very high
 - Not recommended.
 - Respiratory failure, sweating, rapid heartbeat, decreased blood pressure, coma, convulsions and death.
 - Should never be used in combination with nicotine patches or by those who smoke.
 - Drastically raises heart rate and blood pressure.

Yohimbe

- Natural Aphrodisiac
- Low Dose Side effects:
 - Anxiety, elevated blood pressure, nausea, sleeplessness, tachycardia, tremor, vomiting.
- Large Dose Side effects:
 - Salivation, lowered blood pressure, kidney failure, cardiac failure (death).
- Not recommended for use.

Ginkgo Biloba

- **Claim:** Improved Memory
- **Research:**
 - JAMA study found improved cognitive performance and social functioning.
- **Dose:**
 - 40 mg 3x/day taken consistently for 12 weeks.

Ginko Biloba

- Possible side effects:
 - headache, dizziness, heart palpitations, allergic reaction.
- Do not take with aspirin, Vitamin E, garlic, ginger, coumadin, or heparin.
 - Inhibits blood clotting
- May increase blood sugar in people with Diabetes.

Ginseng

- **Claims:** Improve stamina
- **Research:** Studied extensively in animals but not in humans.
 - In animals Ginseng improved immune function and prevented stress induced ulcers.
 - Not proven to work in humans based on available research, more long term human studies are needed.

Ginseng

- **Side Effects:**
 - Not usually associated with serious side effects.
 - Most common are: nervousness, excitation, insomnia, and loose stools.
- May have hypoglycemic effect especially with insulin dependent diabetics, but is also seen with Type II Diabetes.

Echinacea

- **Claims:** Treatment of the colds and chronic infections of the respiratory tract.
- **Research:** appears to shorten the duration and frequency of the common cold.
 - Effectiveness of oral capsules and teas questionable.

Echinacea

- **Side Effects:**
 - May cause allergic reaction
- **People with the following medical conditions should not use Echinacea:**
 - TB, leucosis, Multiple Sclerosis , collagen disorders, HIV, or other auto immune diseases.
- **Dose:**
 - 15-20 drops of root extract daily.
 - 6-9 mg/day expresses juice.
 - do not use for longer then 8 weeks.

Reference Handout

- Information from:
 - PDR for Herbal Medicines
 - Institute for Natural Resources Conference on Herbs, Vitamins, and Nutraceuticals
 - Various individual research articles

Reference Handout

- Herb/Supplement Name
- Compound
- Claims
- Research
- Mechanism of Action
- Side Effects and Dosing

Review

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Questions?