Preventing and Treating URIs
Dr. Christopher Hobbs Ph.D., L.Ac., A.H.G.

• 4th generation herbalist, 3rd generation botanist
• Ph.D. Evolutionary Biology, Phylogenetics (UC Berkeley)
• Licensed acupuncturist
• Author of 22 books on herbs and health, including Peterson’s Field Guide to Medicinal Plants of the Western U.S. (with Steven Foster)
• Ken’s Dad

Herbs for Infections

• Bacterial infections
• Viral infections
• Amoebas
• Worms
• Fungal infections
• STDs

Penicillium

A = Chlamydospores
B = Pseudohyphae
C = Budding yeast cells

Viral Infections

• Respiratory tract infections
  – Influenza
  – Common cold
  – Bronchitis
  – Pneumonia
  – Herpes
  – Warts

Influenza Dx

• Signs and symptoms
  • Flu
  • Fever
  • Myalgia
  • Appetite affected
  • Yellow mucus
  • Tongue is affected

• “Wind-Heat” is excess condition
  • Tongue
    – Body is red
    – Coating is thick, yellow
  • Pulse
    – Fast
    – forceful

Tongue Map

Normal Tongue

• Good “spirit” (shen)
• Few cracks, even surface
• Thin white, rooted coating
• Not swollen or shrunken
• Not too red or pale (uniform pinkish red)
• No scallops on edges
• Not too dry or wet
• Free of red dots
Spleen Qi Deficiency

- Reduced production of digestive enzymes and poor motility
- Tongue: puffy, scallops, shaky
- Western herbs:
  - Gentian root
  - Angelica archangelica
  - Artichoke leaf
  - Ginger, ginseng combo

Kidney Yin Deficiency

- Adrenal insufficiency, low cortisol production
- Immune component; interaction with hormones
- Herbs for strengthening:
  - Panax quinquefolius
  - Arctium lappa rt (burdock)
  - Rehmannia glutinosa
  - Ligustrum lucidum

Tongue with Influenza

- Red tongue body
- Thick yellow coat
- Moist or dry

Materia Medica

Action Types for Treating Respiratory Tract Conditions

- Antibacterial
- Antihistamine/Antiallergic
- Antiinflammatory
- Antipyretic
- Antispasmodic
- Antitussive
- Antiviral
- Demulcent
- Diaphoretic
- Expectorant
- Immune stimulant
- Lung tonic

Respiratory Herbs by Energy

Hot, Warm Herbs
- Ginger
- Yerba santa
- Grindelia
- Cinnamon
- Cayenne
- Eucalyptus
- Thyme
- Ground ivy
- Skunk cabbage
- Yerba mansa
- Osha
- Elecampane

Cool Herbs
- Andrographis
- Usnea
- Iceland moss
- Lungwort
- Baptisia
- Blue vervain
- Life everlasting (Gnaphalium spp.)
- Pleurisy root
- Elder fruit, flowers

Treatment Plan: Flu

- Surface condition (heat pathogen)
- Fever
- Fatigue, prostration
- Tongue may have thick yellow coating
- Severe myalgia
- Thicker mucus discharge, congestion
- Sore throat
- Digestive involvement common (nausea, anorexia); can aggravate immune weakness, low energy

- Action types
  - Same as for colds: Immune stimulant, expectorant, diaphoretic, antispasmodic
  - Natural salicylates for myalgia, fever
  - Use cooling herbs to clear heat and toxins from lungs and blood level: elder, yarrow
  - Cool bitter tonics to clear heat and preserve digestive function: gentian, small amount of berberine-containing herbs
  - Qi regulators (diaphoretics): peppermint, other mints
Antiviral Herbs—Influenza

- Andrographis
- Cedar boughs
- Elder fruit, flowers, bark
- Garlic
- Elecampane
- Asarum rt, rz
- Isatis root
- Baptisa
- Lonicera fl, stems

Symptomatic Relief 1

- Coughs
  - Dry: marshmallow root, licorice, flax, Iceland moss, slippery elm, maidenhair fern, plantain leaf, tricolored violet, hollyhock root and flowers, fenugreek seed tea, evening primrose root
  - Productive: black sage, garden sage, grindelia, elecampane, English ivy shoots, bloodroot, red clover, false Solomon seal, alder shoots, thyme, cottonwood buds
  - Spasmodic: wild cherry bark, bloodroot, California poppy,celandine, horehound, tricolor violet
- Sore throat
  - Usnea, garden sage, black sage, kava, Oregon grape root, goldenseal, kishwoof, osha, slippery elm, plantain, pacific bistort, fenugreek, hyssop, mallow leaf tea, myrrh, pearly everlasting, speedwell, wild ginger

Symptomatic Relief 2

- Body aches
  - Peuraria, meadowsweet, wintergreen, willow bark (standardized or not; high salicin content), cayenne liniment, St. John’s wort oil, hot bath with strong yarrow, meadowsweet, rosemary, and/or lavender tea added (consider adding essential oils also)
- Headache
  - Liver/GB (temples and over eyes): blue vervain, centaury, feverfew, fringe tree, blessed thistle, boldo, wormwood tea, mugwort tea
  - Tension (occiput, general): rosemary, willow bark, meadowsweet, wintergreen tea, shepherd’s purse, betony*, greater periwinkle*, hops, kava, birch bark tea or tincture, chamomile (both), skullcap
  - External application: rosemary, lavender essential oils (30-70 with fixed oil), liniment, or tea compress, St. John’s wort oil, liniment

Symptomatic Relief 3

- Fever
  - Diaphoretics: yarrow, elder flower, blue vervain, ma huang, boneset, catnip, mormon tea, life everlasting, lobelia, feverfew
  - Antipyretics: willow bark, meadowsweet, birch bark, dogwood bark (either pacific or streamside), quaking aspen bark
  - With deficiency of yin: coral root (Coralaria spp.), American ginseng
  - With fast pulse: add linden flower, passionflower
- Fatigue:
  - With fever: eat lightly, especially broths made with green leafy vegetables, barley, a little fish or chicken; add herbs like American ginseng, turkey tails, cordyceps, witch’s butter; use gentian or centaury tincture before meals sparingly
  - With deficiency of Kidney yin or Qi or Spleen Qi deficiency: American ginseng, codonopsis, burdock root, false Solomon’s seal

Symptomatic Relief 4

- Runny nose
  - Cichorium macro: magnolia buds, cayenne, sage leaf, eyebright
  - Highly viscous mucus: tannin-containing herbs (violet leaf, evening primrose root, Trillium spp., Smilacina spp., fenugreek, licorice, cayenne, primrose root (cowslip), starflower (Trientalis spp.), shooting stars (Dodecatheon spp.), Eryngium spp., English ivy tips
- Nasal congestion
  - Antihistamines: nettle leaf, goldenseal, Oregon grape root, goldthread, goldenseal, ginger*, lemon, orange, tangerine peel, aged tangerine peel (also contains a sympathomimetic alkaloid, synephrine)
  - Symptomimimetics: ma huang tincture; tea; tangerine or orange peel

Chinese Patents for Colds, Flu

- Lonicera and Forsythia Formula (Yin Qiao San)
- Morus and Chrysanthemum Formula (Sang Ju Yin)
- Ilex and Evodia formula (Gan Mao Ling)
- Jade Screen Powder, Yupingfeng San
**Yin Qiao San**

- Cold & Flu Formula (Yin Qiao San)
  - Forsythia (Lian Qiao)
  - Honeysuckle (Jin Yin Hua)
  - Platycodon (Jie Geng)
  - Mint (Bo He)
  - Bamboo Leaf (Dan Zhu Ye)
  - Licorice (Gan Cao)
  - Schizonepeta (Jing Jie)
  - Soy Bean (Dan Dou Gu)
  - Arctium (Niu Bang Zi)

**Gan Mao Ling—Common Cold**

- Ilex asprella
- Evodia lepta
- Vitex negundo
- Chrysanthemum indicus
- Isatis spp.
- Lonicera japonica

**Morus and Chrysanthemum**

- Morus Folium (Sang Ye)
- Armeniaca Semen (Xing Ren)
- Platycodon Radix (Jie Geng)
- Phragmites Rhizoma (Lu Gen)
- Forsythia Fructus (Lian Qiao)
- Chrysanthemum Flos (Ju Hua)
- Mentha Folium (Bo He)
- Glycyrrhiza Radix (Gan Cao)

**Jade Screen Formula**

- Astragalus
- Atractylodes
- Siler (Siler divaricatum)

**Antibiotics Inappropriate for Many Kinds of Infections**

- Recent reports and studies show some infections can last longer with antibiotics than without them.
- The American College of Physicians recently announced that antibiotics are “almost always inappropriate” for upper respiratory tract infections.

**Many Herbs Have Significant Antimicrobial Properties**

- Used for thousands of years
- Varied action because of complex chemistry
- Many herbs additionally enhance host immune function (i.e. garlic)
- Unlike pharmaceutical antibiotics, herbs are not usually hepatotoxic and immunosuppressive
**Bacterial Infections**

- Types of infections: Of the mouth, stomach, colon, urinary tract, upper respiratory tract, reproductive tract, skin

Main compound Groups:
- Phenolic compounds
- Alkaloids
- Monoterpenes (thymol)
- Sulphur compounds (alicin)

**Lichen Acids**

- Usnic acid and related compounds are found in *Usnea* spp., *Cetraria islandica, Lobaria pulmonaria*
- More potent against gram positive bacteria than penicilin
- Effective against *Streptococcus* spp., *Staphylococcus* spp., *Pneumococcus*

- Weak action against *E. coli*
- Popular in creams, salves (salts) in Europe
- Useful for upper respiratory tract infections, especially Pneumonia and strep throat
- Some effectiveness as part of a program for cystitis

**Usnea, Lungwort, Iceland Moss**

- All contain lichen acids; all cool in nature
- Iceland moss
  - Acrid, expectorant
- Lungwort
  - Doctrine of signatures
  - Demulcent, simmer in milk or marshmallow and licorice
- Usnea
  - Demulcent, immune-activating
  - Look for inner core

**Essential Oils**

- Essential oils are volatile, b.p. 130–180 °F
- Contain esters, monoterpenes, sesquiterpenes
- Families: Lamiaceae, Apiaceae, Rutaceae, Lauraceae, Myrtaceae
- Potent plants containing essential oils: Thymus, Eucalyptus, Salvia, Rosmarinus

**Production**

Essential oils also have antimicrobial, sedative, antiinflammatory effects, among others

**Phenolic Compounds**

- Many types, such as phenolic acids (salicylates), monoterpenes (thymol) naphthaquinones (arbutin from uva-ursi…2 rings), anthraquinones (emodin from senna)

**Berberine-Containing Herbs**

- *Berberidaceae* (*Mahonia*)
- *Ranunculaceae* (*Coptis*)
- *Rutaceae* (*Phellodendron*)

- *Coptis chinensis*
- *Mahonia* spp.
- *Berberis* spp.
- *Phellodendron amurense*
- *Hydrastis canadensis*

**Rumex crispus** or yellow dock has anthraquinone glycosides
# Thyme and Thymol

- Effective against a wide variety of pathogenic bacteria and fungi, especially S. aureus, Vibrio parahaemolyticus, Salmonella typhimurium, etc.
- Effective against C. albicans, Tinea spp., Aspergillus spp.
- Dilute 1:10 in olive oil for external use; or use 1:5 tincture of recently-dried herb.
- Can cause skin irritation.
- Toxic internally.


---

# Thyme

- Spasmolytic, antimicrobial, expectorant.
- Bronchitis, colds, pneumonia.
- Coughs in syrups, mouthwashes, toothpastes.
- Easily toxic with overdose.
- 1-2 drops in syrup or lozenges; tincture, 10-25 drops several times daily; tea, ½ tsp dried herb/cup (infusion).
- As a tea, tincture for worms.

---

# Eucalyptus globulus

**Eucalyptus oil**

- *E. globulus* native to Tasmania, widely planted as wind breaks, etc.
- Essential oil contains about 85% 1,8-cineole.
- Essential oil and 1-8-cineole has proven antibacterial activity (*E. coli*, *Streptococcus*, *Mycobacterium*, etc.)
- Also antiinflammatory (prostaglandin-inhibitory), antiseratory, expectorant.
- Dose: 1-3 drops (diluted) or in steam.

---

# Rosemary

**Rosmarinus officinalis**

- Native of Mediterranean area.
- Essential oil contains mainly camphor; 1,8-cineole, pinene.
- Besides antibacterial effects, effective against *Candida albicans*, and also a good blood-mover (emmenagogue).
- Also mild nervous system stimulant (camphor), antiinflammatory.
- Dose: up to 10 drops/day (diluted).

---

# Essential Oil Production

- Enfleurage (flower extraction with cold fat).
- Steam distillation.
- Solvent extraction.

---

# Garlic: Clinically Useful for Infections

- Weak activity was noted against *Escherichia coli*, *Micrococcus roesii*, *Proteus mirabilis*, *Pseudomonas aeruginosa*, *Salmonella typhi*, *Salmonella typhimurium*, *Streptococcus*, *Staphylococcus albus*, *Staphylococcus aureus*, and *Staphylococcus epidermidis*.
- Garlic inhibited the common pathogens found in foods, *Staphylococcus aureus*, *Salmonella typhi*, *Escherichia coli*, and *Listeria monocytogenes*. *Listeria monocytogenes* was least sensitive, and *E. coli* was the most sensitive.

Garlic Preparations

- Syrup with honey
  - Crush 5-10 cloves in ½ pint of honey
  - Take ¼ to ½ tsp per dose, every few hours
  - Too much at once—nausea
- Tincture (highest in ajoene)
- Enteric-coated caps
- Cool-dried powder
- Aged ineffective for infections, but may be effective for cardiovascular and immune system
- Aged garlic loses antimicrobial power

Always crush garlic cloves first!

Garlic for Gastric Ulcers

- Macerate fresh-crushed garlic cloves in 70% EtOH, 30% H2O for 2 days
- Alcoholic medium creates maximum ajoene, a breakdown product of allicin
- Extremely potent against Helicobacter pylori, associated organism for gastritis, gastric ulcer; may increase stomach cancer risk

Garlic for Gastric Ulcers

- Macerate fresh-crushed garlic cloves in 70% EtOH, 30% H2O for 2 days
- Alcoholic medium creates maximum ajoene, a breakdown product of allicin
- Extremely potent against Helicobacter pylori, associated organism for gastritis, gastric ulcer; may increase stomach cancer risk

Berberine

- Not very absorbable from GI tract. Best for superficial infections of GI tract, URI, UTI
- Effective against E. coli, Mycobacterium phlei, Staphylococcus aureus (methicillin-resistant) (equiecal), at the concentration of 20.0 microliters/disc (J. Ethnopharm. 1992; 37(3):213-223.
- Effective against H. pylori (Biol Pharm Bul 21:990. 1998.)
- As effective as sulfadiazine or chloramphenicol for bacterial dysentery with fewer side effects
- Strong antiviral and antifungal effects
- Strong effect in vitro against hemolytic Streptococcus pneumoniae, Staphylococcus aureus, Shigella dysenteriae, S. flexneri: More effective than sulfadiazine, but less so than streptomycin or chloramphenicol against some of these pathogens. Sometimes effective against bacteria that have developed resistance to streptomycin, chloramphenicol, and oxytetracycline hydrochloride.

Coptis chinensis (huang lian)

- Coptis is a good source of berberine because it is cultivated
- Huang lian is indicated especially for infections of the gut, urinary tract, liver
- Clears “Heart” heat for insomnia, mania
- Externally for conjunctivitis
- Huang lian su is berberine sulfate tablet from Coptis

Mahonia and Berberis

- Both from Berberidaceae, barberry family
- Mahonia genus has prickly, holly-like leaves; Berberis has smooth, thin and spatulate leaves
- All contain berberine in roots, stem bark; very small amount in leaves
- Native to east and western North America, China, Europe
- Oregon grape root is M. aquifolium, M. repens: known for psoriasis, acne, other skin conditions
**Phellodendron amurense**

**Huang Bai**

- Bitter, cold; Kidney, bladder
- Vaginitis, dysentery, kidney infections (deficient-type)
- Dose: 3-12 grams/day

**Goldenseal (Hydrastis canadense)**

- Traditional native American Indian remedy for irritation of eyes, flu, other infections
- Contains berberine, hydrastine
- Best indication is for acute rhinitis, conjunctivitis
- Dose: 20 drops to 1 ml, 3-4 x daily

**Respiratory Wellness**

- Deep belly “Qi” breathing
- Clean air to breathe
- Singing for breath support and building lung Qi
- “Haw” breaths and woodchoppers
- Respiratory tonic herbs
  - Codonopsis
  - American ginseng
  - Mullein
  - Solomon’s seal root

**Solomon’s seal**

**The End**

Thanks for watching!