Infectious Diseases and Herbal Medicines Role

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DISCLAIMER: This information provided is intended for research purposes only. It is not meant to be used without the help of qualified professional. You should consult a qualified health care provider before using herbs on yourself, or on any other person.
**Holistic Perspective of Immune System**

Microbes are opportunistic and form relationships within their eco-system. Everything is in flux yet everything seeks equilibrium which in itself has ranges and boundaries. As with all things, internal forces work with external forces according the laws of creation. Working with the body so that the immune function remains within its healthy ranges and boundaries are what nature, the ecosystems of the entire planet and one could argue even what the universe had in mind. Disease penetrates into the immune system and we see external forces over powering internal forces and the fight for equilibrium is on. The depth of penetration depends on the aggressiveness of the condition and the weakness of the individual’s constitution.

For an example, from a holistic perspective, fever is a good thing. It is a sign of vitality, internal forces working with external forces of the bacteria, and tells us that there is a problem, but the body is engaging it. It is something to be managed, and supported, not eliminated.

UK herbalist, Christopher Hedley, feels the immune system is more like “an anarchists collective” than an army, and is a “black box” full of all sorts of cells and chemicals. I believe this to be true when the body moves into a strong reactionary mode after experiencing abuse after abuse.
Herbal Treatment of Infectious Diseases

An Overview

Treatment is most effective if started at the very first sign of infection. A moderately hot bath with diaphoretic herbs will induce sweating, followed by a deep, restful sleep may be enough to avert a full-blown attack, though it is a good idea to repeat the bathing for the next two or three days. In cases of extremely debilitated or weak constitutions, using heating and eliminative strategies may be too intense at first. Work up slowly, relying on external treatments such as warm compresses, and bitters internally to aid in digestion and metabolic rate.

I would like to point out that sometimes herbs that we think of as being benign or unfashionable can be our closest and handiest allies. Some examples:

- Raw garlic has been shown to be effective for antibiotic-resistant pneumonia, and (in-vitro) for *Pseudomonas, E. coli, Clostridium, Proteus, Klebsiella, Staphylococcus aureus, Salmonella*, many fungi
- Sage tea is effective for sore throats including strep throat
- Orange Peel showed in-vitro activity against 3 different strains of resistant *S. enterica* and have been used to treat gastric ulcers, respiratory tract infections, and bacteria diarrhea
- Plantain leaf contains baicalin which has strong activity against MRSA & PRSA and has a long history of use for topical infections, gum disease, gastric ulcers, and venomous insect bites
- Thyme contains baicalein, among many other known anti-microbials, which inhibit several different MDR pumps as well as possibly damage the integrity of bacterial cell walls; and thymol which is a powerful antibacterial, antifungal, and antiviral agent
- Elecampane strongly inhibited over 300 strains of *S. aureus* including MRSA
- Oak bark had strong in-vitro inhibitory activity against 35 strains of MRSA and has traditionally been used topically for wounds, cuts, and dysentery
- Immature pine cones of the Black Pine, inhibited MRSA
- Rose petals inhibited the growth of *E. coli, S. aureus, Bacillus cereus*, and *Bacteroides vulgaris*, but did not negatively affect normal bowel flora
- Rosemary has long been used for treating colds, respiratory infections, topical infections, and gastritis and studies confirm it has broad spectrum antibacterial, antiviral, and antifungal effects
- St. John’s wort’s hyperforin, has powerful antibacterial activity against both MRSA and PRSA
- Witch Hazel leaf/bark has potent antibacterial activity and inhibited MRSA

“Nature favors synergies among beneficial, plant-protective compounds within a plant species (with antibacterial, antifungal, antiviral, and insecticidal properties), and selects against antagonisms. When we borrow the antibiotic compounds from plants, we do better to borrow them all, not just the single solitary most powerful among them. We lose the synergy when we take out the solitary compound. But most important we facilitate the enemy, the germ, in its ability to outwit the monochemical medicine. The polychemical synergistic mix, concentrating the powers already evolved in medicinal plants, may be our best hope for confronting drug-resistant bacteria.” ~ J. Duke
Specific Herbal Remedies to Note

1. Echinacea - a good primary treatment in any case of viral or bacterial infection, as it stimulants the immune system, lymphatics, and is anti-microbial; 2-5 mls of the tincture every 1-2 hours until symptoms subside
2. Boneset (Eupatorium perfoliatum) - excellent diaphoretic; drink as a hot tea
3. Goldenseal (Hydrastis canadensis) and Berberis vulgaris and B. aquilfolium - “anti-bacterial”, anti-inflammatory, immune stimulant; Contraindicated in high fever - wait until it is reduced; as a tincture 2-3 mls 4 times per day
4. Garlic - antimicrobial, antiviral, immune stimulant - freely as food, in honey or syrup, 2-5 mls tinctures 4 times per day
5. Elder berry- anti-viral; as a syrup take freely
6. Wild Indigo - (Baptisia tinctoria) - lymphatic, immune stimulant, anti-microbial; 2-3 mls 3 to 4 times per day
7. Cayenne or Ginger (Zingiber officinalis) - stimulates circulation by heating the affected area; using warm compresses or drinking as hot infusion

Dehydration

Preventing or treating dehydration in people with the flu will save more lives than any other intervention during an influenza pandemic.

Symptoms of dehydration

Weakness, dizziness, headache, confusion, fainting, dryness of the mouth, decreased saliva, lack of or very small urine volume that is dark and highly concentrated, sunken eyes, loss of skin elasticity, low blood pressure, especially upon sitting up or rising from the sitting to the standing position, and fast pulse rate, especially when moving from the lying to sitting or standing positions are all symptoms.

An oral rehydration solution

The amount of sugar can be increased up to 4 tbsp or reduced to 2 tbsp if desired. If too salty tasting, increase the water up to 2 quarts, leaving the rest of the formula unchanged. For flavor, add juice, cinnamon, cloves, or vanilla. Herbal tea may be used instead of water:

1 quart water
1 level teaspoon table salt
3 tbsp table sugar

Other Considerations

1. Diet - eliminate all sugars from the diet; focus on high vitamin and mineral rich foods
2. Manual lymph drainage and therapeutic massage can be helpful
3. If a fever is present, rest and good hydration become even more essential.
4. NOTE regarding infants and children - when the breathe rate increases to over 60 breathes per minute infants, over 40 breathers per minute in toddlers and over 30 breathes per minute in school children, the infection is considered to be severe and in need of prompt attention. There is respiratory distress when there is cyanosis (patients turns blue - note lips), gasping for air and pulse increases to over 180 beats per minute in infants, over 160 beats per minute in toddlers and over 110 beats per minute in school children.

Convalescence and Recovery

Bitter tonics will speed recovery through their metabolic stimulating effects. Appropriate bitters tonics include:

Eupatorium perfoliatum: also diaphoretic and anti-catarrhal
Gentiana spp.: aids the digestion in a number of ways and doesn't taste too bad
Hydrastis canadensis: also anti-catarrhal and generally tonic
Marrubium vulgare: also expectorant and anti-catarrhal
**Fever Management**

A holistic view of fevers is that they are a good thing and a sign of one’s vitality – telling one that there is a problem, but the body is assessing and attempting to handle it. Considering that a fever is a precise inflammation situation as a result of some kind of toxicity or infection in the body, which therefore tends to be systemic. A fever then is a natural immune response, which increases the activity of the immune cells, thus helping the body contain and control the offending matter. It is something to be managed and supported, not eliminated. However, it is necessary to recognize what is going on, as there are beneficial as well as detrimental fevers.

The ideal temperature for a fever is 38 – 39C, and the goal of therapy is to maintain it in this range. If the fever gets higher than this, it can be dangerous. If it is lower than this, it is not hot enough to be useful and is a sign of low vitality. Therefore, one needs to know what the temperature is doing and whether it is going up or down:

a. If a fever is higher than 37C, ones complexion is pale, and they are cold and shivering, this means that their body temperature is still rising. For example, if the temperature is 39C and they are still cold and shivering, then this means that their temperature is climbing and will be too high.

b. If one has a fever and they feel neither hot nor cold (but their forehead will still be hot), then their temperature has likely peaked and is being maintained, but they are still fighting the infection. This is where you want the fever to be and is good.

c. If a one’s temperature is elevated and they are flushed and possibly sweating, it means that the temperature is coming down. The body is sending blood to the periphery surfaces to increase heat loss.

Based on this, one can determine a strategy:

a. If the temperature is stable at 39C and one does not feel either hot or cold, the fever does not need to be addressed directly.

b. If the temperature is stable at 37 ½ - 38C but they don’t feel either hot or cold, this means that in most cases you will want to increase the fever by covering them up to reduce heat loss and possibly use circulatory stimulants (e.g. cayenne and ginger) until their temperature rises to and is maintained closer to 39C.

c. If the temperature is elevated and one feels hot and flushed, decrease the temperature by using diaphoretics or tepid baths. Bitters can also help to bring down a fever, but are milder than diaphoretics. If the temperature is coming down naturally, then bitters may be enough. Herbs that contain salicylates (e.g. meadowsweet, wintergreen, willow) interfere with the fever, and aren’t often used. But if the fever is too high (over 39C), they may be considered.

**To increase fever**

- sip freely on cayenne tea (1 tsp per cup water steeped 5 minutes) whilst wrapped in blanket
- drink freely Chai tea (4 parts ginger root (optional), 2 parts cinnamon, 1 part cardamom, ¼ part clove, 1/8 part each of nutmeg and peppercorns)
- if strong constitution ONLY - ½ tsp of each cayenne and ephedra in 1 cup boiling water - NOTE - this is contraindicated with high blood pressure

**To reduce fever**

- 1 part of each peppermint, elderflower and yarrow; 1 tsp of blend per cup of boiling water, steep 10 minutes. drink hot whilst covered up.
- combined or individually elderflower, boneset, catnip or yarrow tea
- wrap individual in warm wet blankets
- if hot head and cold feet, hot foot baths whilst drinking one of the above teas
- 30X Belladonna or Aconite homeopathically every 10 minutes for three doses
- Tilia and lavender tepid sponging
Specific Infectious Diseases

Respiratory Infections
Symptoms may include increased mucus production, cough, sore throat, chest tightness and constriction, headaches, fever and muscle aches.

Herbal Actions indicated for Respiratory Infections

**Anti-microbials** will help the immune system combat the viral and bacterial infection and help avoid secondary infection - *Echinacea, Berberis spp.*, garlic, *Thymus vulgaris, Populus spp*

**Diaphoretics** help with the symptoms of feverishness and support the body cope with the raised temperature - *Achillea millifolium, Eupatorium perfoliatum, Nepeta cataria, Mentha piperita*

**Anti-catarrhals** will ease the symptomatic discomfort so characteristic of this problem. However, avoid trying to `dry up' the overproduction with herbal de-congestants for the reasons explored elsewhere - *Solidago spp.*, *Urtica dioica, Echinacea spp.*, *Salvia off.*

**Expectorants** are called for in one of their varieties if there is the development of secondary problems in the lower respiratory system; *Inula helenium, Populus spp., Thymus vulgaris, Verbascum thapsus,*

**Lymphatics** are indicated if there is any development of swollen glands or known history of such problems - *Echinacea, Baptisia, Phytolacca*

**Bitters** help deal with the debility that often follows such viral infections - *Hydrastis canadensis, Berberis spp.*

**Nervines** can be found useful in dealing with high fevers and associated distress - *Valeriana, Lavendula*

Sample Formula
*Hydrastis canadensis*
*Echinacea spp.*
*Populus spp.*
equal parts
1-5mls of tincture taken every 2 hours

Plus, *Eupatorium perfoliatum* - a strong infusion drunk hot every hour.

These herbs supply the following actions:
Anti-microbials - *Hydrastis canadensis, Echinacea spp, Populus spp.*
Diaphoretics - *Eupatorium perfoliatum*
Anti-catarrhals - *Hydrastis canadensis, Echinacea spp.*
Lymphatics - *Echinacea spp.*
Expectorant - *Populus spp.*
Bitters - *Hydrastis canadensis, Eupatorium perfoliatum, Populus spp.*

Other Treatments

**Steam inhalations**

**Mustard plasters**

**Patting back**
**Generalized Gastrointestinal Infections**

Infections of the gastrointestinal (GI) tract can have a variety of causes, but most exhibit GI upset either in the form of vomiting or diarrhea, and include a fever. They can be viral, bacterial or related to larger organisms (“Giardia”, parasites). Eliminate infection and manage inflammation, manage fever, support GI processes, control diarrhea.

**Herbal Actions indicated for GI Infections**

*Anti-microbials* - will help the immune system combat the viral and bacterial infection and help avoid secondary infection  
*Anti-inflammatories* - *Filipendula ulmaria, Glycyrrhiza glabra, Stellaria media, Plantago spp.*  
*Diaphoretic* - help with the symptoms of feverishness and support the body cope with the raised temperature  
*Achillea millifolium, Nepeta cataria, Sambucus canadensis*  
*Anti-nauseates* - *Mentha piperita, Zingiber officinale*  
*Astringents* - to change the terrain and to help tone the gut lining and reduce diarrhea; *Filipendula ulmaria*  
*Hydrastis canadensis, Quercus spp. Rubus spp. radix*  
*Bitters* - help deal with the debility that often follows such infections as well as help tone the lining

**Sample Formula**

*Hydrastis canadensis*  
*Echinacea spp.*  
*Filipendula ulmaria*  
*Mentha piperita*  

equal parts  

1-5mls of tincture taken every 2 hours

These herbs supply the following actions:  
Anti-microbials - *Hydrastis canadensis, Echinacea spp.*  
Anti-nauseate - *Mentha piperita*  
Anti-inflammatory - *Filipendula ulmaria*  
Astringent - *Hydrastis canadensis, Filipendula ulmaria*  
Bitters - *Hydrastis canadensis,*

** If a fever, substitute *Hydrastis canadensis* with *Glycyrrhiza glabra* drink *Eupatorium perfoliatum* as a strong **hot** infusion every hour.

**Other Treatments**

*Lots of fluids to prevent dehydration - electrolytes*
**Topical Infections**

**Minor Wounds and Scrapes**

If the wound is red, swelling, and/or has red streaking, it is infected. The initial goals in these cases are to disinfect externally, stop bleeding if applicable, and do immune support. Once the infection is eliminated focus can be placed on the regeneration of skin tissue.

**Antiseptics** - to clean and disinfect the area - *Echinacea, Hydrastis canadensis, Calendula off.*

**Astringents** - to disinfect and change the terrain of the skin - witch hazel, *Achillea millefolium, Hydrastis canadensis*

**Anodyne** - pain relieving - *Echinacea*

**Vulneraries** - helps tissues heal and soothes irritations - *Symphytum officinale* (do not use until infection is gone), *Stellaria media, Plantago off., Calendula off.*

**Sample Formula**

*Hydrastis canadensis pwdr*  
*Calendula off.*  
*Plantago off*  
equal parts

Make in infusion using 1 tsp of herb blend in 1 cup boiling water; infusion 15 minutes. Saturate a sterile cloth, absorbent bandage or cotton ball with the strained infusion and apply over the affected area. Change this twice daily.

These herbs supply the following actions:  
Anti-septics - *Hydrastis canadensis*  
Astringent - *Hydrastis canadensis,*  
Vulneraries - *Calendula off., Plantago off*

**Antibiotic Resistant Infections**

Treating antibiotic resistant conditions such as MRSA are serious and should be handled by a qualified medical team. If in the event that such a team is not available, the following treatment protocol should be strictly followed.

**Treatment Protocol**

1. Take 5-10mls of Echinacea tincture every 1-2 waking hours.
2. Saturate a sterile cloth, absorbent bandage or cotton ball with the Echinacea tincture and apply over the affected area. Change this twice daily.
3. Follow instruction for immune building - i.e. - healthy diet, rest, etc.
4. If the condition has shown a positive response, continue taking the Echinacea only 3-4 times daily and change once daily.

Usually after the first day one will experience a significant reduction in pain, swelling and inflammation.

**If Pus is Present…..**

If pus is present or develops, make a paste using equal parts plantain leaf (*Plantago spp.*) powder, honey and *Echinacea* tincture or powder roots. Apply this paste—thickly over infected area, cover with saran/plastic wrap and wrap with an elastic bandage to hold it all in place. Change this poultice daily until improvements, then every few days after that until healed. Internally add *Baptisa* tincture.
Prevention Strategies

*Be Prepared!!*

**Why Three Months of Food, Water, Medicines, and Supplies?**

Infectious diseases hit a community in “waves”. At first, a few people will be sick and then many. The peak of infection is the time that a community is hit hardest, where there will be the most sick people and fewest resources. There can be several waves during a pandemic.

**Immune Building**

**Nutritional Recommendations**

*Fermented foods* - good bacteria provide nutrients, digestive enzymes, organic acids and secret inhibiting substances to suppress undesirable microorganisms; soured foods, kefir, yogurt, blue cheese, probiotics, etc.

*Variety in diet to maximize nutrient intake* - nutritious herbal infusion, variety of grains and vegetables and fruits; avoid mono-diets

**Herbal Recommendations**

*Herbal smudges* – kills bacteria and/or attaches to smoke particles and drops to floor; viruses too maybe. Recent studies suggest 3/day for protection.

*Gargles and neti pot* – many infectious diseases are commonly acquired by contact with aerosolized droplets, spread by sneezing, coughing, talking, kissing or even singing. Gargling can nib the infection before it sets in; cooled tea of licorice root (*Glycyrrhiza glabra*), goldenseal (*Hydrastis canadensis*), Oregon grape root and leaf (*Berberis* species), thyme, sage, oregano, elderberry fruits (*Sambucus* species).

**Immune stimulants**

*Astragalus membranaceous* - astragalus - warming - builds overall immunity, strengthens the lungs, and improves the digestion; vitalizes the non-specific immune defenses and wards off infections; add to soups

*Panax quiquifolium* - Canadian ginseng - help cool, calm, moisten and strengthen a run down system; specifically strengthens the lungs; takes up to 6 weeks to get its full benefit; in a capsule

*Eleuthrococcus senticosus* - Siberian ginseng - increases resistance to stress, colds, and flu; more immediate tonic effects than Canadian ginseng; as an extract or powder in capsule

Licorice root - *Glycyrrhiza glabra* - for building the resistance for respiratory illnesses, digestive problems, inflammatory conditions, auto-immune diseases, can enhance resistance to the effects of stress. As a tea or tincture

*Ganoderma spp.* - immune-stimulant, building resistance to infection and tumors. for chronic bronchitis, a sedative for nervousness, restlessness, and insomnia; add to soups or decoction.

Nettle seed - *Urtica dioica* - adrenal tonic, helps body cope with stress, nutritive; local weed; eat as food, tincture or tincture

**Other Recommendations**

*Wash hands frequently avoiding antibacterial agents* - poor sanitary hygiene allow bacteria to become recalcitrant, but powerful disinfectants and antibiotics only encourage bacteria to maintain virulence and
resistance. When virulent strains of bacteria settle on surfaces such as a catheter, protheses, ventilator or on live tissue such as nasal passages, these resistant bacteria form biofilms that protect the colony under a tough layer, making the bacteria extremely difficult to eradicate(3).

*Saunas* – don’t overheat and drink lots of fluids with them

*Stress management* - adrenaline feeds bacterial biofilms - i.e. worry and fear

*Sleep, happiness and laughter* - melatonin and serotonin inhibit bacterial biofilms

*Vitamin D3* – 1,000 I.U. per 30 lbs.; Doctors can prescribe 50,000 IU/day, but supervision is necessary.

*Avoid close contact with people who are sick.*

*Stay home when you are sick.*
How to do a Mustard Plaster

Mustard plaster, also known as sinapisms, consist of a mixture of dry mustard powder and flour, mixed with water or egg white to form a paste, and applied to the chest or abdomen to stimulate healing. It is a common belief that mustard plasters stimulate the immune system, treat congestion, relieve pain and also have an anti-inflammatory effect. Applied externally, they are often used to treat coughs, rheumatism and respiratory system ailments such as bronchitis, bronchial pneumonia and pleurisy. They often offer immediate relief to discomfort in the chest and can actually help to treat infectious conditions by increasing circulation, perspiration and heat in the afflicted area.

Leaving a mustard plaster on for too long can lead to burning and blisters. A mustard plaster should be left on for approximately 30 minutes. The actual mustard paste never comes in direct contact with the skin, just the cloth on which it is spread. This application is likely to promote perspiration and reddening of the chest. Give the individual plenty of hot herbal teas during the procedure. A warm shower afterward can also be relaxing then rest is important.

To Make:

1-3 Tablespoons flour
1 Tablespoon dry mustard
Mix with enough hot water to make a paste

To Apply:

1. Have the individual sit or lay down in a warm comfortable place and position.
2. Expose chest/back and apply a thin layer of salve or oil to entire chest/back and area expected to be covered by the plaster.
3. Place on the chest/back a layer of cotton or thin flannel cloth that has been soaked in hot water.
4. Spread paste onto cloth being careful to not get any on the bare skin.
5. Cover with a piece of cloth or wax paper followed by a towel.
6. Keep individual warm, wrapping in blankets if necessary.
7. It is important to keep it moist so adding warm water may be necessary.

* Remove immediately if individual experiences pain or burning.

Onion poultices can also be used especially for younger children and babies.