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Allergic rhinitis

by Paul Bergner

Abstract: Allergies, including allergic rhinitis, atopic eczema, and asthma, are ecological conditions. The status of specific nutrients, the presence of food antigens in the diet, and the balance of the various components of the immune system may each be as important as the antigenic load of pollen, dust, or other allergens in the clinical expression of the allergy. Manipulating these ecological factors collectively in a positive direction may render the patient completely or partially tolerant of a previously aggravating allergen. Traditional symptomatic herbal treatments for allergic rhinitis, consisting primarily of drying astringents, fail to address the roots of the problem, and in some cases can aggravate the symptoms. Materia medica selection for the treatment of allergies may include considerations of effects on the components of the immune system, but must also include humoral considerations, such as the dryness or moistness of the presenting symptoms. The pathophysiology of allergy, nutritional interventions, herbal materia medica, and formulation acute are discussed.

Introduction

The term *allergy* means “changed reactivity.” The reaction of the immune system to substances that would normally be tolerated is exaggerated. An allergic constitution is called *atopic*. Although conventional medicine considers this to be primarily a genetic predisposition, factors in the lifestyle such as nutrition, diet, stress, rest, immunization history, and others are significant modifiable influences on the expression of allergy. Allergic disease, and evidence of the atopic constitution, typically develop in early childhood. The first symptoms are usually skin rash and gastrointestinal disturbances, and the most common triggers are foods. Later inhalant allergy symptoms such as wheezing and allergic rhinitis may appear, and ultimately asthma usually appears in the older child and may continue into adulthood. Atopy is associated with the elevated presence of IgE antibodies and Type I

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Case Report: Staph infection promoted by an herbal salve

by Paul Bergner and Tanya Carwyn

A twenty-two year-old male, morbidly underweight at 5'10" and 135 lbs, came to the NAIMH clinic. His original presenting complaints were celiac disease, with frequent abdominal pain, insomnia, and migraine headache, and he rated his health as 6 on a 10-point scale, with 10 being excellent health. As a secondary complaint he mentioned that he had “jock itch,” a fungal infection around his pubic hair of two years duration, diagnosed by a physician. A prescription of Lotrimin helped at first, then ceased to be effective. He had recently withdrawn dairy from his diet, and also avoided glutenous grains. Both his father and paternal grandmonther were diagnosed with celiac sprue.

Other complaints in his history were chronic sinus infections, allergy to mold, and notably, two urinary tract infections in the previous two years, and a history of kidney stones. His pulse was unusually weak for a man of his age, and was also thin, and somewhat sunken in all positions.

Original treatment

1. Standard gut tea for digestive system and to assist in recovery from food allergy.

Equal parts:

Chamomile (*Matricaria recutita*)

Fennel (*Foeniculum vulgare*)

Licorice (*Glycyrrhiza glabra*)

Calendula (*Calendula off.*)

Marshmallow (*Althea off.*)

2. Antifungal wash

Basil (*Ocimum basilicum*) 2 parts

Thyme (*Thymus vulgaris*) 2

Calendula (*Calendula off.*) 2

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Allergic rhinitis (from p.1)

hypersensitivity reactions. An initial exposure to the antigen promotes the production of antibodies, which bind to mast cells in the surface areas of the body, the airway, or the gut. A second exposure of the antigen to a mast-cell-bound antibody triggers the release of histamine from the mast cell. See the sidebar for a description of the four types of hypersensitivity reactions. Although Type I sensitivity is involved in most reactions in atopic individuals, the reality of the immune response is often more complex, and can involve two or more different types of hypersensitivity simultaneously. This has to be born in mind when selecting herbal treatments herbs affecting lymphatics, mucous membranes, and overall immune balance may all be important additions to a formula.

The Vitalist approach to allergy

Allergy is an expression of immunity, an essential vital function, and effectively suppressing allergy will si-

multaneously suppress natural immunity locally or systemically. The problem with allergy does not lie in the response itself, which is natural, and which can protect the body from antigens, but rather lies with the severity of the response relative to the stimulus. Different segments of the immune system may be variously deficient or hyper-reactive, and allergy usually has elements of both. Allergy is always an expression of a deep systemic and constitutional imbalance, and the full complement of vitalist therapeutics are employed, including diet and nutrition, screening for food irritants and triggers, proper rest, and selection of methods and remedies which enhance rather than suppress immunity.

Diet and nutrition

Nutritional deficiencies and imbalances may promote an exaggerated allergic response via multiple mechanisms. Of the nutrients, *omega-3 fatty acids* are critical in most cases. Our hunter-gatherer ancestors consumed, on average four to five times the quantity of these oils that modern humans do. The

Hypersensitivity reactions

Type I - Allergic

The first reaction may occur within 3 minutes. Antigen exposure to B-cells and T-cells causes IgE antibody production. Antibodies bind to receptors on mast cells over a period of hours to days, and may peak on day 4 after the initial exposure. A second exposure to the sensitized mast cells causes the release of histamine. Mast cells are concentrated especially in the skin, mucous membranes, and bronchi. The effect can be exacerbated by various nutrient deficiencies. The second phase of the reaction may occur within 4-6 hours. This second reaction is prostaglandin-mediated, and made more severe by deficiency of anti-inflammatory nutrients such as the omega-3 fat eicosapentaenoic acid (EPA) or magnesium. Hay fever, asthma, eczema, urticaria. Anaphylaxis. Food antigens may trigger.

Type II - Cytotoxic reactions

Antibodies bind to surface antigens on cells, either in tissue or blood, and then the immune system attacks the complex. Reaction is limited to certain tissues or organs. Transfusion reactions, autoimmune hemolytic anemia, myasthenia gravis, Grave's disease. Food antigens may cause, via molecular mimicry, in which antigenic amino-acid sequences in the food protein are identical to the same sequences in human tissue.

Type III - Immune complex disease

Involves IgG antibodies. Circulating antibody-antigen complexes settle in tissue and cause inflammation. Common sites are kidneys, joints, vessel walls. Serum sickness, infections, lupus and other connective tissue autoimmune diseases. Chronic infection or chronic food antigen overload or overload of materials from a deficient gut barrier may cause. May be a factor in autoimmunity triggered by immunizations. Dominance of the TH-2 type T-helper cells relative to TH-1 cells may be involved in some disorders.

Type IV - Delayed hypersensitivity

T-cell mediated hypersensitivity. Organ transplant rejection. Contact dermatitis. Starts within 12 hours, peak clinical signs at 48-72 hours. Compounds which are not themselves antigenic bind to cells, and the complex is perceived as a foreign cell, eliciting a T-cell response. Rhus poisoning. Many essential oils. Granulomatous form peaks at 21-28 days. May affect internal organs such as the lung. Advanced stage of tuberculosis, leprosy. Food antigens may be involved.

eicosapentaenoic acid (EPA) fraction of oils from fish, wild game, and grass-fed animals is anti-inflammatory and moderates the allergic response. Gross deficiencies may occur in allergic individuals (Yu 1998a, Yu 1998b). Some selected clinical trials have shown improvement in symptoms of asthma (Dunstan et al.; Mickleborough et al.; Mhrshahi et al.), and atopic dermatitis with supplementation with fish oil equivalent to 3.2 grams of EPA.

Magnesium deficiency is the most common mineral deficiency in North America today, affecting at least 80% of the population. Half the population currently consumes less than 50% of the RDA. Magnesium is essential for inherent anti-histamine and anti-inflammatory mechanisms. Selected clinical trials have shown magnesium supplementation effective in reducing the symptoms of both asthma (Bede et al.; Hill et al.) and allergic rhinitis (Cipolla et al.).

Vitamin C plays a role in stabilizing mast cells and moderating the release of histamine. Modest doses of vitamin C (2g) in clinical trials have reduced symptoms in allergic rhinitis (Podoshin et al.; Bucca et al.) and asthma (Cohen et al.; Anah et al.).

Other nutrients which contribute to the health and stability of the connective tissue may be important, and their deficiency may promote allergic symptoms. These include vitamin A, zinc, the trace elements copper and silicon, and bioflavonoids. Broad-spectrum trace mineral supplementation may also be important. Several studies have shown that consumption of either seaweed or sea water can moderate atopic conditions, and one epidemiological study in Japan found seaweed intake independently inversely related specifically to allergic rhinitis (Miyake et al.).

Food allergies

Scientific research is mixed on the acute contribution of food triggers to symptoms in atopic individuals (Sampson et al.). Empirical clinical evidence using complete and prolonged removal of suspected antigens (three to six weeks) with rechallenge demonstrate a profound affect of food intolerances on atopic symptoms. Typically the improvement is gradual, and with reintroduction of the food, the return of symptoms may also be gradual. For example, one patient whose chief complaint was allergic eczema, had reduced her milk intake to only that in her morning coffee. The eczema remained. When she removed the milk from the coffee and used a substitute, the eczema cleared in about three weeks. Later, on reintroduction of milk to the coffee, the eczema reappeared in another three weeks. This author

has seen approximately fifty cases of asthma or allergic rhinitis completely cured with removal of a food allergen, and as many more greatly improved. The offending food is usually milk and its byproducts. When withdrawal of the antigen has been complete and strict, 100% of cases have been successful. The chief reason for failure of this method is the failure of the patient to completely withdraw the food, continuing to consume small amounts or covert sources. Inhalant allergies might be seen as “froth on the ocean” of food allergies and intolerances — the antigenic load from the food is invariably many times greater than that of the inhalant.

Suppressive treatments

Because immunity is a vital function, the suppression of allergy, whether by conventional or alternative methods, will inevitably have deeper or more permanent consequences in the body.

Empirically it can be observed that patients who chronically treat allergic rhinitis with antihistamines develop deeper and more chronic conditions, and often the long term result is chronic fungal sinusitis. Likewise, suppressive treatment of allergy without addressing the root cause may predispose an individual to autoimmunity or the development of chronic fatigue or fibromyalgia. Chronic suppression of asthma with medication may develop dependence, while the constitutional roots of the asthma continue to do their damage on other systems.

Corticosteroid treatments via topical or inhalant administration effectively suppress the inflammatory response at the site of the symptoms. The long-term results are four-fold. First, the antigens remain in place, and the original irritation remains unresolved. Second, when the steroid effect wears off, rebound “house-cleaning” occurs, which must be further suppressed in cycles. Third, the systemic root causes and imbalances are not addressed, and continue to do damage to the organism in other ways. Finally, systemic side effects of the steroid drug may occur, especially with the steroid suppression of asthma.

TH-1/TH-2 imbalance

The T-helper (TH) cells are the key players in immune response. Once they are activated they in turn activate both the humoral immunity (B-cells, plasma cells, and antibodies), and cell-mediated immunity (T-cells and macrophages). The TH cells can be of three different types — undifferentiated TH cells can become TH-1 types, which promote cell-mediated immunity, or TH-2 types, which promote antibody pro-

duction. A healthy population of TH cells will have some undifferentiated cells, and a balance of the TH-1 and TH-2 types. A number of lifestyle factors can cause the balance to tip, and either TH-1 or TH-2 can become predominant. Of special concern, and a common immune pathology in chronic allergy or inflammation, is TH-2 dominance, meaning that the body produces many antibodies to tag the antigens, but not many immune cells to actually remove the antigens. The result is a chronically inflamed and hyper-reactive system. Once imbalanced, the system can become hypersensitive to many antigens, and previously tolerated food allergies or minor systemic infections can suddenly produce dramatic symptoms. The most important lifestyle factor that can create TH-2 dominance is chronic stress with hypercortisolemia. TH-1 cells are produced primarily during states of rest, and under the influence of DHEA from the adrenals at night. Some immunizations can produce a prolonged state of TH-2 dominance, and antioxidant depletion, especially the intracellular antioxidant glutathione, may also produce the state. Herbal therapeutics for TH-2

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dominance is controversial, because most of the herbs studied can produce mixed results, possibly worsening the situation. Furthermore, hypersensitivity may occur in the TH-1 dominant individual, and the herbal medicine that would remedy the TH-2 dominant state may aggravate symptoms in such an individual. Of the herbs studied for their influence on the TH balance, clinical trials indicate that reishi mushroom (*Ganoderma lucidum*) may be beneficial in rebalancing a TH-2 dominant system, reducing allergic symptoms, and such a use also matches one of its traditional uses in Asia. For a full review of TH-1/TH-2 pathophysiology and herbal treatments, see Bergner. The fruiting body of the reishi mushroom should be prepared as a long decoction, or a commercial product based on the water extract of the fruiting body should be used.

TCM Liver syndromes

The term Liver in Chinese medicine does not correspond exactly to the functions of the anatomical liver. It has a broader meaning, including the humoral dynamics of the portal venous system and the venous system in general, as well as the balancing and regulating of the flow of energy and blood throughout the various vascular beds in body. Various Liver pathologies are described in Chinese medicine, and several of these may be involved in allergy, and specifically in allergic rhinitis.

Constrained Liver Chi is a syndrome characterized by stuck emotions, frustration, anger, loud voice. It may include right-sided flank pain, heat symptoms in the digestive tract, and menstrual irregularities. *Liver Fire Rising* is a more progressed constrained liver chi state, with heat signs in the face and head. Red itchy eyes, red face, allergies, and headache may be present, and there may be excessive or erratic menstrual bleeding. One type of *False cold* pattern may have a presentation similar to Liver Fire Rising, but the hands and feet may be cold, or the lower body cold, with the other liver symptoms still present at the core and in the head and face. These general patterns indicate a dysregulation of the digestion and the liver as the root of the syndrome, and treating and correcting the digestive symptoms may remove the cause of the allergic symptoms.

These patterns are often treated in TCM with formulas containing *Bupleurum chinense*. The use of Bupleurum is complicated in the treatment of Liver Fire Rising and related syndromes, because the herb,

Table 1 Western herbs that may relax Constrained Liver Chi or correct Liver Fire Rising

Herb	Action	Energy	Temperature	Moisture
Rosemary <i>Rosmarinus off.</i>	diffusive	relaxant	hot	dry
Lavender <i>Lavandula vera</i>	diffusive	relaxant	warm	dry
Field Mint <i>Mentha arvensis</i>	diffusive	relaxant	hot	dry
Citrus <i>Citrus spp.</i>	diffusive	tonic	warm	dry
Peony <i>Paeonia alba</i>	relaxant	relaxant	neutral	neutral
Fennel <i>Foeniculum vulgare</i>	diffusive	relaxant	warm	dry
Rose <i>Rosa spp.</i>	astringent	balanced	cool	dry
Onion <i>Allium cepa</i>	diffusive	balanced	hot	dry

Combine these with a base of liver-cooling herbs, such as *Taraxacum off.*, *Mahonia spp.*, *Berberis vulgaris*.

if not balanced properly with others, or if given in the wrong constitutional type, may worsen the presenting symptoms. I have had consistent success in treating these patterns with formulas based on Oregon grape root (*Mahonia spp.*) and dandelion root (*Taraxacum off.*), combined with herbs such as rosemary (*Rosmarinus off.*), lavender (*Lavandula off.*), *Mentha pulegium*, citrus, and/or peony (*Paeonia lactiflora*). Table 1 gives a list of Western herbs which can relax Constrained Liver Chi. They should be used in combination with lifestyle changes. Cooling and draining bitter liver herbs may provide almost immediate relief in some cases. In all cases, the source of the irritation should be ascertained. Each case of this type in my clinic over the past eight years was the result of food allergens in the diet “heating up” the digestive system, or birth control pills causing liver stagnancy. Removal of one or the other cause, with appropriate herbal support, removed the chronic condition. In one case, after resolution of the acute manifestations of false cold with liver fire, a patient was left with chronically cold hands and feet, which she had experienced for more than twenty years. She had removed a food allergen, and took a combination of *Mahonia repens*, *Taraxacum officinale*, and *Schisandra chinensis*, as a powder, and within three weeks reported that her hands and feet were warm “for the first time she could remember.” It is notable that none of the three herbs is considered warming or stimulating to the circulation, but by shifting the energy dynamics in the digestive tract and liver, they restored normal circulation at the periphery. The herbs rosemary and lavender, traditionally used in Western herbalism for headache, a common presentation of these liver

syndromes, probably act energetically by relaxing the tension and energy constraint in the abdomen.

Materia medica for allergic rhinitis

Categories of herbs to consider when treating acute expression of allergies include astringent-tonics, garlic-related plants with heating sulfur compounds (sulfur-glycosides), “surface-relieving” diffusives and diaphoretics, mucous membrane tonics, lymphatic alteratives, and demulcents. Most of the plants in these categories are astringent and drying, and thus match the moist, congested presentation of most cases of allergic rhinitis. The astringency is not curative, however, but is simply a symptomatic masking of the underlying condition, unless other aspects of the particular herb have deeper actions. In this regard, although less suppressive than more powerfully acting pharmaceutical anti-histamines, some of the ill-effects of suppression may also be present with habitual herbal use. The drying plants may also cause aggravation in patients with a dry presentation of symptoms, and overly astringent remedies frequently aggravate the symptoms of allergic rhinitis in dry climates.

Astringent tonics and diuretics

Characteristic of the astringent-tonic category is Eyebright (*Euphrasia off.*). This has traditionally been used topically as an eyewash in catarrhal conditions of the eye. Internally it may have a mild astringent and decongestant effect on the mucous membranes throughout the body. It contains the constituents caffeic acid and ferulic acid, both of which are anti-inflammatory. The caffeic acid has specific antihistamine effects. Eyebright also contains astringent tannins. It has also traditionally been used as a mild diuretic.

Two of the astringent-tonics traditionally used for allergy, ragweed (*Ambrosia spp.*) and goldenrod

Table 2 Astringent tonics

Herb	Action	Energy	Temperature	Moisture
Eyebright <i>Euphrasia off.</i>	astringent/diuretic	tonic	cool	dry
Ragweed <i>Ambrosia spp.</i>	astringent/diuretic	tonic	cool	dry
Goldenrod <i>Solidago spp.</i>	astringent/diuretic	tonic	cool	dry
Stinging Nettle <i>Urtica spp.</i>	astringent/diuretic	tonic	neutral	dry
Yarrow <i>Achillea millefolium</i>	astringent/diuretic	tonic	mixed	dry

(*Solidago spp.*) are also common allergens. There is some speculation that administration of these to individuals in small doses before and during allergy season will desensitize an individual to the pollen of the plants. It is the author's opinion that any benefit they confer is simply from their astringent effects, and that caution must be used in giving these plants to individuals known to be allergic to them, and especially those who may be prone to life-threatening anaphylaxis. We have enough substitutes with identical or similar action at hand.

The acute use of a freeze-dried stinging nettle (*Urtica dioica*) preparation was found in one clinical trial to be more effective than a milk-sugar placebo. The results were only slightly more effective, however, and only about one in four patients in the trial experienced any benefit to the stinging nettles (Mittman).

Although they have not been compared in scientific trials, conventionally dried nettles may be equally or more effective, especially in the higher doses typical of an infusion, which delivers more astringency than the freeze-dried capsules. Some contemporary practitioners recommend that their allergy patients begin consuming modest amounts of nettle tea several months before, and then during allergy season to reduce symptoms, and report lessened symptoms during the season.

Horseradish and related plants

Horseradish (*Armoracia rusticana*) is similar in its effects to the famous sushi condiment, wasabi. *Armoracia* was an early American folk remedy for hay fever. This use has persisted into contemporary times

in naturopathic traditions. The upward-moving burning effect of the plant can clear congestion in the sinuses and nose. The effects are due to its constituent *allyl-isothiocyanate*, which is related chemically to the irritating substances in garlic, onions, and mustard. Scientific studies have shown that allyl-isothiocyanate has decongestant and anti-asthmatic properties. Grated horseradish may be purchased at supermarkets. The dose is one-fourth teaspoon. An alternative method is to take fresh horseradish root. Fill a quart jar half-full with roots ground in a blender. Fill with enough vinegar to just cover the roots, and cover tightly. The patient opens the jar and gently sniffs the fumes for symptomatic relief. The roots lose their potency in about a week with this method. Refrigeration extends the shelf life, and a standard tincture will contain the properties of the horseradish indefinitely. Other plants with related allyl- compounds may also be consumed in the diet, or inhaled in vinegar preparations, to modify allergy symptoms. These include onions and mustards.

"Surface-relieving" diffusives

Certain diaphoretics are also commonly prescribed for allergies in Western herbalism. Those selected possess *relaxant* properties, in Physiomedical terminology, or *surface-relieving* properties, in Chinese terms. Because they are diaphoretic, and several are also diuretic, they are drying in nature, and are suited to allergic complaints with damp symptoms predominant. They may worsen allergic rhinitis with a dry presentation. Two herbs in this group, lobelia (*Lobelia inflata*) and ephedra (*Ephedra sinensis*), which are commonly

Table 3 Plants containing sulfur-glycosides

Herb	Action	Energy	Temperature	Moisture
Horseradish <i>Armoracia rusticana</i>	diffusive	tonic	hot	dry
Garlic <i>Allium sativum</i>	diffusive	tonic	hot	dry
Onion <i>Allium cepa</i>	diffusive	tonic	hot	dry
Mustard <i>Sinapis spp.</i> (and related)	diffusive	tonic	hot	dry

Table 4 Relaxant diffusives

Herb	Action	Energy	Temperature	Moisture
Lobelia <i>Lobelia inflata</i>	diffusive	relaxant	neutral	dry-diuretic
Ephedra <i>Ephedra sinensis</i>	diffusive	relaxant	warm	dry-diuretic
Anise <i>Pimpinella anisum</i>	diffusive	relaxant	warm	dry
Thyme <i>Thymus off.</i>	diffusive	relaxant	warm	dry
Hyssop <i>Hyssopus off.</i>	diffusive	relaxant	warm	dry
Horsemint <i>Monarda spp.</i>	diffusive	relaxant	hot	dry

These herbs might be combined with licorice root to balance their drying effects.

prescribed for asthma, may also benefit allergic rhinitis. Lobelia is unique in this group in being neutral in temperature rather than warming, and may be an important choice in formulas for patients with dry and hot presentations. For other patients it may be combined with herbs with stronger diffusive action. See the formula section below for some combinations of lobelia and ephedra. See Table 4 for list of herbs in this category that may be useful for allergies. The aromatic herbs in this group may also be used topically or inhaled by breathing or exposing the tissues to the aromatic fumes of a tea. One method is to pour boiling water over a half-ounce of the herb in a jar, seal it, and let it cool for thirty minutes. Then the lid may be lifted and the fumes inhaled. A traditional naturopathic hay fever remedy from Germany uses three to five drops of thyme essential oil added to a cup of hot chamomile tea, and is inhaled in the same manner.

Mucous membrane tonics

Chronically inflamed mucous membranes eventually become boggy and lax, and astringent-tonics with affinity for these tissues may play an important part in formulas for hay fever. The two most important herbs in this class are goldenseal (*Hydrastis canadensis*) and yerba mansa (*Anemopsis californica*). Both firm up and normalize the function of boggy membranes in sub-acute and chronic conditions. Goldenseal works best in doses of fifteen drops of the tincture or less, while higher doses may be overly astringent. A differential between these is in their temperature. *Hydrastis* is cold in energy, while yerba mansa is warm, stimulat-

ing and diffusive. Elecampane (*Inula helenium*) may also be indicated in sub-acute or chronic lax conditions of the membranes. It typically affects the pectoral region, but may affect mucous membranes throughout the body as well, especially where they are the site of crisis. Herbs of this class combine well with lymphatic alteratives for broadened physiological action.

Lymphatic alteratives

Although Type I hypersensitivity and mast cells are classically associated with allergy, allergic reactions may affect more levels of the immune system. Herbs traditionally classified as lymphatic alteratives may affect the activity of white blood cells throughout the system, and may promote the clearance of antigens. They may be useful additions to formulas for allergic rhinitis. Echinacea (*Echinacea spp*) and red root (*Ceanothus spp.*) used singly or as a pair stimulate the white blood cells to greater activity and promote clearance of congested lymphatic tissues. Queen's root (*Stillingia sylvatica*) does the same, and also possesses some expectorant activity on the mucous membranes. Red clover (*Trifolium pratense*) works better in larger doses of the fluid extract or in decoctions, and might be used for its effect on the lymphatics and mucous membranes as a simple in conjunction with more complex formulas taken as tincture.

Demulcents

When an allergic presentation is dry, many of the herbs already mentioned must be avoided or modified with other balancing herbs or delivery media to moderate their drying properties. An overall ap-

Table 5 Mucous membrane tonics

Herb	Action	Energy	Temperature	Moisture
Goldenseal <i>Hydrastis canadensis</i>	astringent	tonic	cold	dry
Yerba mansa <i>Anemopsis californ.</i>	astringent	tonic	warm	dry
Elecampane <i>Inula helenium</i>	astringent	tonic	warm	dry

Table 6 Lymphatic alteratives

Herb	Energy	Action	Temperature	Moisture
Echinacea <i>Echinacea spp.</i>	alterative	tonic	cool	dry
Red root <i>Ceanothus spp.</i>	alterative	tonic	cool	dry
Queen's root <i>Stillingia sylvatica</i>	alterative	tonic	warm	dry
Red Clover <i>Trifolium pratense</i>	alterative	relaxant	neutral	neutral

proach to apply demulcent foods, herbs, and delivery media must be taken. Consider constitutional treatment for dryness with demulcent beverages taken throughout the day. With dry presentations, essential fatty acids taken as fish oils or fish liver oils may be essential. One beverage formula calls for three parts of marshmallow (*Althea off.*) root or leaves, with one part each of slippery elm (*Ulmus fulva*) and licorice (*Glycyrrhiza glabra*). The tea taken straight may be offensively slimy, but a cup may be diluted out to one or two liters, with flavoring such as citrus, honey, rose water, etc added to make pleasant beverages that can be taken throughout the day. A demulcent herb with affinity for mucous membranes is the leaf of the evening primrose plant (*Oenothera spp.*) considered a specific for allergies by the Physiomedicalist physicians of the past. *Oenothera* is generally not available on the commercial herb market, but the tall varieties that grow in clusters and sometimes large stands in the Plains states of the U.S. produce abundant demulcent leaves, readily available to those who know the plant.

Formulation

The above groups of herbs can be combined to make patient-tailored formulas, following general principles of combination. The general possible actions in formulas might be:

- Category 1: Relaxant herbs that relieve “constrained liver chi”.
- Category 2: Drying astringent/diuretics

- Category 3: Relaxant diffusives (“surface relieving”)
- Category 4: Mucous membrane tonics
- Category 5: Lymphatic alteratives
- Category 6: Harmonizers/Balancers

The categories may first be selected to match the patient pattern. Then herbs within the categories may be themselves paired or otherwise combined to contribute synergistic effects. Examples follow.

Example 1 Patient with excessive inflammation and copious discharge

Category 1	Lavandula 3 parts Rosmarinus 1 part
Category 2	Solidago 3 parts Achillea 2 parts
Category 3	Pimpinella 1 part Monarda 2 parts
Category 4	Hydrastis 1 part
Category 5	Echinacea 3 parts Ceanothus 1 part
Category 6	Licorice 3 parts

All the herbs above except the licorice are dry in effect. This formula may be easily modified in its parts to match a patient. Increase or decrease the categories according to the patient picture, or substitute other

Table 7 Demulcents

Herb	Action	Energy	Temperature	Moisture
Evening primrose <i>Oenothera spp.</i>	demulcent	relaxant	cool	moist
Marshmallow <i>Althea off.</i>	demulcent	relaxant	cool	moist
Slippery Elm <i>Ulmus fulva</i>	demulcent	relaxant	cool	moist
Licorice <i>Glycyrrhiza glabra</i>	demulcent	relaxant	neutral	moist

herbs in the categories according to what is available in your pharmacy or what matches the patient picture.

Example 2 Patient with lax membranes, chronic condition, and a drier presentation

Category 1	Lavandula 2 parts Paeonia 2 parts
Category 2	not appropriate
Category 3	Lobelia 3 parts Pimpinella 1 part
Category 4	Inula helenium 3 parts
Category 5	Echinacea 2 parts
Category 6	Licorice 4 parts

Different herbs in each category were selected, favoring those with less drying properties. This formula could be delivered in a honey-vinegar medium (oxymel), to add more demulcence while simultaneously decongesting.

Summary treatment table

- Treat atopic conditions as ecological systemic conditions, add deficient nutrients related to allergy, and remove irritants and allergens.
- Consider reishi mushroom water extracts of the fruiting body to correct TH-2 dominance if suspected.
- Consider the humoral effects of herbs, especially warming vs. drying properties, and match these to the patient.
- Formulas which affect many levels of the immune-allergic response may be more effective than simple astringents or diuretics.

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Combinations with Lobelia

Lobelia (*Lobelia inflata*) has primary relaxant properties with some diffusive effects on the circulatory system. It may be combined with other herbs for treatment of allergic conditions.

Lobelia and ephedra Compounds the diffusive, drying, and diaphoretic properties, and amplifies the relaxant effects of lobelia

Lobelia-ephedra-zingiber The ginger adds diffusive power and focuses more on skin and mucous membranes

Lobelia-ephedra-anise-thyme Amplifies relaxant and diaphoretic properties.

Lobelia-ephedra-grindelia-capsicum Directs formula more powerfully to mucous membranes.

Lobelia with inula helenium The inula directs toward the membranes, and adds tonic effects for boggy, lax conditions.

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Staph infection (from p. 1)

Clove (*Eugenia caryophyllum*) 1 part

Infusion: use as a wash

3. Sleep tincture

Equal parts:

California poppy (*Eschscholzia spp.*)

Passion flower (*Passiflora incarnata*)

Scullcap (*Scutellaria lateriflora*)

Pulsed doses, 1 dropper full each at 60 minutes prior to bedtime, 30 minutes prior, and at bed time and as needed when waking up during the night. Not to exceed 6 droppers full in 24 hours.

Two-week follow-up

The subject's health and vitality were greatly improved. He rated his overall vitality at 7-8 on a scale of 10, up from 5-6. His compliance was excellent with the digestive tea, and he was sleeping well with the assistance of the sleep tincture, and digestive pain was greatly reduced. He continues to have minor headaches, but has had no migraine attack since beginning treatment. A nutritional workup showed likely deficiencies in essential fatty acids, magnesium, and B-vitamins.

He did not make or use the anti-fungal wash, but on his own began to use an antifungal salve made with olive oil, beeswax, and unspecified herbs.

At four weeks

Since the last visit, the man had applied the antifungal infusion, and also shaved his pubic area in order to apply the salve to the irritated area. Three weeks after the previous visit, the man's partner called in the middle of the night, saying that the man's pubic area was inflamed and infected, and that his penis was also infected, and swollen to more than double its normal circumference. He was advised to go immediately to a hospital, which he did, and was admitted to an infectious disease unit and put in quarantine. The infection in the area of the jock-itch was cultured and was found to be a common strain of *Staphylococcus aureus*. Subsequently he was diagnosed with a systemic staph infection, systemic strep infection, secondary testicular infection and "fluid in the testicle." He was treated with three different antibiotics and one antifungal medication intravenously, as well as topical anti-inflammatories

(hydrocortisone) and antifungals on the area of the jock-itch.

Analysis

This man's general depleted state, secondary to celiac disease and malnutrition, contributed to the severity of the infection. His history of two previous urinary tract infections in recent years may also indicate lowered immunity, or constitutional proneness to infection in the urinary tract. Shaving the pubic area over a fungal infection very likely caused micro-tears in the infected area, opening an easy route of infection. He was likely exposed to staph in his profession, which put him in regular contact with homeless men. Finally, the salve very likely promoted the infection. The culprits in the salve were likely the beeswax, which sealed the area of oxygen, a hospitable environment for the staph; while the olive oil may have provided ready nourishment for the microorganism.

In clinical correspondence with several professional herbalists about this case, at least four other cases of salves promoting staph infection were discovered. In one typical case, a salve was put on a larger area which included a small staph infection. The staph then spread to the entire area where the salve was applied, but did not go beyond it.

Tanya Carwyn, Certified Herbalist, was the chief clinician on this case.

Clinical Correspondence

Grapefruit Seed Extract

by 7song

I recently read Todd Caldecott's letter on Grapefruit Seed Extract (GSE) and wanted to add a few personal notes about my experiences with this product. In practicing herbal first aid in a range of situations, I work with a large number of people who use GSE on a regular basis and so I have had the opportunity to witness its effects over the years. I have read the articles that Todd points out in his article and they seem compelling, but I do not have the knowledge to gauge their value. What I have seen is the "energy" (chi) lowering effect of GSE. By this I mean that the people who use this product on a regular basis sometimes (and especially those with a constitutional type prone to this) seem to be tired and have their vitality diminished. This seems especially true at medium and above doses over a period of time. Antiparasitics in general are

strong medicines, be they wormwood, sagebrush, southernwood (*Artemisia spp.*), or Chaparro amargosa (*Castela stewartii*) and tend to lower energy levels taken over time. Still the GSE seems to have a more profound impact this way, and when the person stops taking this product, their general health levels seem to rise.

I also have seen GSE help people with confirmed and/or obvious parasites, and so whatever its mechanism of action, it can be a useful product. That it also has the advantage of being concentrated and relatively inexpensive, so it is easy to travel with. And it can be added to one's water bottle to help kill any organisms harbored there (Anecdotal evidence points to this use, though I have not seen any studies on this aspect yet).

On an observational gut level, I feel that GSE is often detrimental to those taking it. And that it burns soft tissues (lips) that it comes into direct contact with makes me uneasy too.

On a concluding note, working with parasitical invasions is difficult. The parasites (*Giardia*, *Shigella*, various worms, etc.) themselves often drain people's energy and most of the antiparasitics can contribute to this pattern. But I feel that GSE does so in a more incapacitating manner.

Disclosure my personal bias in herbal products is for the types that one can generally prepare at home (given the right knowledge, materials etc.) and while GSE is considered a 'natural' it is a highly concentrated laboratory-produced product.

7Song is Director of the Northeast School of Botanical Medicine in Ithaca, NY.

Antiviral Herbs

by Matthew Alfs

Re: your main article on Antiviral Botanicals in Herbal Medicine, thank you for your skilled outline of this subject, with the well explicated physiology and the careful summary of botanical use. A few thoughts on some of the herbs: Regarding boneset, this is an herb I have spent a lot of time and energy with over the years, as it is such a wonder. (In fact, I made more converts to herbal medicine—including several medical doctors, a couple of pharmacists, and scads of nurses—with boneset and plantain than with any other herbs!). You're certainly right that the nineteenth-century literature stresses that it should be used by way of a strong and hot infusion—some writers even going so far as to imply that the tincture would not even produce

diaphoresis. That, however, is patently untrue. Having used the tincture over 500 times myself since 1985, I can assure that it also creates a copious diaphoresis. The brand of tincture has made no difference—I've used HerbPharm, Herbalist & Alchemist, Nature's Answer, and a homemade tincture with 100-proof vodka and no water. Like you, I generally prefer teas to tinctures for my own use, though I find the latter more convenient for my hectic schedule and tend to use them for clients a bit more than teas owing to the same reason compliance. When I start to get a cold/flu, though, I prefer to use a tea combo of wildcrafted boneset, wildcrafted wild cherry bark, wildcrafted elderberries, and wildcrafted anise hyssop (*Agastache foeniculum*). It's never failed me yet!

As for lomatium, I've never had a patient experience the dreaded lomatium rash and I use the tincture a lot, but always as part of a larger formula and never at a percentage greater than 12% (usually 6%) of the formula. I find it most useful for cervical dysplasia with HPV infection and for mononucleosis. (I also use monolaurin, echinacea, red root, and vitamins A and C for the latter). For the former, I generally use it as part of a tincture formula that includes (with some variation for the individual energetics) boneset or echinacea, white pond lily, goldenseal, licorice, St. Johnswort, and one or two others depending on circumstances. In seven years of working heavily with gals with CIN II and III, I've never had a case that didn't revert back to a non-CIN status and have had very few where HPV could still be detected. But I also use mixed carotenoids (the cryptoxanthin being crucial for cervical protection), indole-3-carbinol at 400 mg. a day (to maximize their

2-hydroxylation of estrogen), and the activated forms of B6, B12, and folic acid (usually Highland's Essential Trio formula) to bypass any enzymatic deficiencies they may have in an attempt to improve their methylation (I sometimes add separate lozenges of methylcobalamin as well)—since, as you no doubt know, homocysteine is a big factor in this condition.

Matthew Alfs is the Owner and Director of the Midwest School of Herbal Studies.

Medicines from the Earth

Cilantro, Chlorella, and Heavy Metals

by John Millet, NAIMH, C.Hom.

In recent years, concerns over environmental toxicity have spawned a wide array of herbal detoxification products designed to promote the excretion of heavy metals from body tissues. Many of these products contain cilantro (*Coriandrum sativum*), and green algae of the Chlorella genus. Cilantro purportedly “mobilize(s) mercury and other toxic metals,” while chlorella allegedly “enhances mobilization of mercury compartmentalized in non-neurologic structures” and “facilitates fecal mercury excretion” (Mercola). Given that these claims appear in a peer-reviewed medical journal, *Journal of Nutritional & Environmental Medicine*, one would expect them to be scientifically sound. The pervasiveness of similar statements on the Internet and in product literature attests to this expectation. However, a closer look at the source of these claims reveals some significant scientific shortcomings.

The theory that cilantro promotes heavy metal excretion first appeared in two case reports published in *Acupuncture and Electro-Therapeutics Research* in 1995 and 1996 (Omura 1995, 1996). The researcher stated that he noticed an increased amount of mercury in organs following the injection of radioactive Thallium for cardiac SPECT imaging. Following a meal of Vietnamese soup containing cilantro, he claimed “successful elimination” of the mercury deposits. Further research supposedly confirmed his initial observations and demonstrated cilantro’s efficacy in promoting the excretion of lead and aluminum as well. The researcher then claimed that cilantro aided the excretion of heavy metals putatively associated with persistent chlamydia and herpes infections (1995), and facilitated the excretion of mercury following the removal of dental amalgam fillings (1996).

Surprisingly these case reports have become the foundation for subsequent cilantro and heavy metal literature, despite their evidentiary paucity, and without subsequent replication of their results in peer-reviewed literature. First, the concentration and location of mercury and other heavy metals were assessed using a Bi-Digital O-Ring Test, a highly unorthodox and unreliable method of diagnosis via muscle testing. Second, the reports lack controls. In both reports cilantro was administered in conjunction with electroacupuncture and antibiotic or antiviral medications. In the absence of legitimate diagnostic tests or the use of controls en-

abling sound conclusions, these reports do not warrant the biochemical claims about cilantro that have been extrapolated from them.

Another article investigates the effects of cilantro on the deposition of lead in the bones of mice (Aga). While significantly more refined in its design, this study still offers little in the way of solid evidence. Mice were administered cilantro for twenty-five days in conjunction with lead-laced water. The cilantro group showed a significant decrease in the amount of lead deposited in femurs, as well as a decrease in markers of lead excretion through their kidneys. The authors concluded that cilantro was effective at reducing the injury caused by lead poisoning, and that it could prove to be a successful treatment for lead intoxication. This conclusion could only be remotely significant for humans if cilantro products were intended to be ingested in conjunction with lead. However, heavy metal “detox” products are designed to aid the excretion of metals already built up in body tissues. To date, this study is the only other article related to the topic available in the PubMed database of the National Library of Medicine.

The claims for chlorella are even less scientifically supported than those of cilantro. To date, no human studies evaluating the use of chlorella in promoting heavy metal excretion are available in the PubMed database. In a 2003 study, mice that were administered chlorella extract in conjunction with lead exhibited reduced blood lead levels (Queiroz). However, like the cilantro study on mice, this study does not suggest that chlorella would benefit humans without the simultaneous ingestion of significant amounts of lead. Although bioremediation studies have shown that living chlorella absorbs heavy metals (Aktar 2003, 2004, Matsunaga, Yoshida), they do not imply that lead and processed chlorella achieves the same results in humans. Indeed, if chlorella tends to absorb heavy metals, then ingesting it might actually introduce them into the body.

Despite all of this, some practitioners swear by cilantro and chlorella for aiding heavy metal excretion, and are skeptical of orthodox methods aimed at measuring their efficacy. We cannot disregard the clinical observations of these practitioners, for it is upon clinical observations accrued over time that herbal medicine is largely based. However, even if their observations can truly measure heavy metal status, those observations are still in their infancy, and the biochemical claims from which they draw strength are

Continued on back page

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Cilantro (from p. 17)

scientifically unsound. Until these claims are scientifically validated, or until enough time has passed for credible clinical assessments to amass a compelling body of evidence, the efficacy of cilantro and chlorella in promoting heavy metal excretion from body tissues remains an "herban" legend.

John Millet is a certified clinical herbalist, nutritionist, and classical homeopath currently completing post-baccalaureate pre-medical studies in New Haven, CT.

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