

# Seasonal Allergies

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**Inflammation** is similar throughout the human physiology. Although it is a complex, living process in and of itself, we can understand it better by focusing on its location, the microscopic tissue changes that take place during inflammation, and the more holistic patterns that occur system-wide.

**LOCATION.** The easiest way to witness inflammation in action is on the skin, in response to a cut, or in a joint, in response to an injury or sprain: the skin swells, reddens, and becomes warm and painful. Very similar events are taking place in the eyes, noses, and respiratory passages of those who suffer with allergies. All of these inflammatory reactions are **local**, or remain in the tissues initially involved. Additionally, there can be more system-wide allergies and sensitivities that can result in widespread reactions such as rashes, fever, and respiratory constriction. In the end, however, both local and systemic inflammatory reactions make **use of the immune system as a whole, and thus to a certain extent always involve the whole physiology** (which is why holistic approaches can be so successful if correctly formulated).

**TISSUE CHANGES.** During inflammation, the damage being inflicted on the tissue initiates a cascade of biochemical changes that ultimately have a key effect: tiny blood vessels (capillaries) in the local tissue begin to swell and leak fluid. This causes the **redness, heat and swelling**. At the same time, **immune cells are attracted to the area**, ostensibly (but not in the case of an allergy) to protect the bloodstream and interior of the body from invasion by bacteria, viruses, or fungi. The immune system recognizes these pathogens by chemical “tags” on their outer surface, known as antigens. Immune cells then stimulate further inflammation, secrete chemicals that cause pain, and work at eliminating the antigen. In the chemical dance associated with seasonal allergies we see consistent players, **such as mast cells, immunoglobulin E (IgE), and histamine**.

**SYSTEMIC CHANGES.** Inflammation doesn’t always have to come from a clearly “offending” substance or event (like a knife, a burn, a corrosive chemical, etc...). In fact, some people seem quite sensitive to substances that would not cause inflammation in others – and this is the definition of an “allergy”, isn’t it? Wheat is a great example, and so is ragweed pollen! Understanding what may predispose some to allergies is best done by taking a broad view of the human physiology, by centering on the idea of **“toxic blood” or “dirty blood”**. Although a bit vague, this concept is actually quite useful in getting an overview of systemic inflammation.

To understand “dirty blood”, think of our bloodstream as having a **certain quota of “toxicity” which, when exceeded, causes symptoms of inflammation to appear**. If you think of “toxins” as entering the body through the gut or through the lungs, you can begin to see what organ systems might be involved in protecting the blood (a deeper level) from these “toxins”: a functional respiratory system will trap most harmful substances and remove them through the expectoration of mucus; a functional digestive system will sterilize food (unless it’s horribly tainted...), digest many proteins, poisons, and other chemicals that can cause inflammation, and eliminate toxic waste quickly and effectively; a **strong liver** will metabolize chemicals absorbed

from the gut, reduce their toxicity, and eliminate them through the bile. Weakness at any of these points can **lead to an increase in “toxins” (really, reactive free radicals) present in the blood**. Finally, the immune system is responsible for the general level of sensitivity to the blood’s “toxicity” (actually sensitivity to the presence of antigens): in effect, it **sets the quota**. Once the threshold is met, the same tissue changes discussed in the context of external surfaces take place internally: on the gut wall; on the heart and blood vessels; in the lungs and respiratory passages; in the eyes; in the joints; in the nervous system. **Those who are allergic to external substances others aren’t sensitive to may have either more “toxic” blood (from exposure to more toxins, or from weakness in a relevant organ system) or a lower quota.**

Symptoms of seasonal allergies can therefore be seen as an inflammatory reaction in the mucous membranes of the eyes, nose, throat, and sometimes bronchial passages. How severe these allergies might be is related to **genetics** (typically, sensitivity to a given antigen is somewhat connected to your family’s), overall **“toxic load”**, and the threshold of **sensitivity** set by the immune system. The manifestations **include itchy, red eyes with tears (sometimes); irritated nasal passages with a clear or milky discharge; perhaps a sore throat; perhaps lung congestion or a “barking” cough. The pressure in the nose and sinuses from discharge may also lead to headaches, neck pain, fatigue and lack of focus.**

The THERAPEUTIC GOALS are based on the previous discussion:

- Microscopic tissue changes are similar for all inflammatory patterns. Flavonoids (a class of chemicals found in plants; specifically, proanthocyanidins) are extremely helpful and well-proven in reversing those changes by **reducing capillary engorgement and permeability, decreasing chemical signals that promote inflammation (like histamine) and increasing those that reduce inflammation**. While most plants contain some flavonoids, some stand out as extremely helpful for allergies: onions (*Allium cepa*), goldenrod (*Solidago canadensis*), fresh stinging nettle (*Urtica dioica*), chocolate (*Theobroma cacao*), green tea (*Camellia spp.*), eyebright (*Euphrasia officinalis*), butterbur (*Petasites hybridus*). **These plants tend to be considered somewhat drying and cooling tonics, helpful for the “boggy” (swollen, hot) tissue.**

Additionally, there are plants that contain chemicals (usually powerful alkaloids) that directly constrict blood vessels and dilate the respiratory passages by stimulating the body’s stress response. Thus, they are strong anti-allergic and anti-inflammatory aids for the respiratory system, but since they mostly **mask the symptoms**, they are best used only short-term or as part of a broader formula. Such plants include ephedra (*Ephedra sinica*) and coffee (*Coffea arabica*).

- If the **gastrointestinal system is involved** (inflammatory patterns follow the consumption of specific foods), or weak (bloating, burping, gas, abdominal cramping or spasms, constipation and/or diarrhea), use bitter herbs such as gentian (*Gentiana lutea*) root, dandelion (*Taraxacum officinale*) root; along with aromatic herbs like anise / star anise (*Pimpinella anisum/Illicium verum*) and fennel (*Foeniculum vulgare*) or angelica (*Angelica archangelica*).

- If the **liver** is sluggish (generally, it is never a bad idea to improve liver function; some signs include **pale stools**, gallbladder colic and strong abdominal pain after eating **fatty, rich foods**, any history of liver **disease** or excessive consumption of **drugs** and/or alcohol, and **skin** complaints), use bitters and cholagogues such as dandelion (*Taraxacum officinale*) root, medicinal mushrooms such as red reishi (*Ganoderma spp.*), and liver tonics such as milk thistle (*Silybum marianum*, also loaded with flavonoids) or schizandra (*Schizandra chinensis*).

- Adjusting immune function (“**raising the threshold**”) should always be considered. To this end, use immune tonics, the best of which are the medicinal mushrooms: red reishi (*Ganoderma spp.*) and shiitake (*Lentinula spp.*) are good examples. During times when allergen exposure is low, you can also consider astragalus (*Astragalus membranaceus*) as an excellent immune tonic for the “off season”.

## Part II: Key herbs for allergies

### **Goldenrod** (*Solidago canadensis*)

Flavonoid-rich, anti-inflammatory, anti-allergic for the upper respiratory system. Best taken as a tea: 3 TBS in one quart of hot water, steeped 30 minutes, daily. Safe.

### **Nettle** (*Urtica dioica*)

Flavonoid-rich, diuretic, tonic, anti-allergic for the eyes and nose. Seems to possess histamine and serotonin-like compounds, which elicit inflammation topically but block histamine receptors when taken internally. Best taken by eating the fresh, wilted leaves daily; or taking a tincture made of the fresh leaves, ½ to 1 tsp. 2 or 3 times a day. Safe.

### **Onions** (*Allium cepa*)

Used in microdoses by the homeopaths, I prefer to take 6-10 yellow onions, chop them coarsely, and cook them in a little butter over low heat, stirring fairly frequently, for an hour or more. The onions become a golden brown, extremely sweet, and form into a paste or “jam” that can be used in any type of cooking, or just spread on toast. Freeze the excess and eat about 2TBS daily.

### **Eyebright** (*Euphrasia officinalis*)

A small semi-parasitic plant, it yields a dark and bitter tincture that is helpful for all types of allergic respiratory reactions but most indicated if there are a lot of symptoms in the eyes and the sinuses that surround the orbit. 2 droppers, or about 60 drops, taken two to three times daily.

### **Butterbur** (*Petasites hybridus*)

Best for seasonal allergies that are accompanied by migraine headaches, but good in general. The petasin lactones inhibit the activity of histamine and prostaglandins in the respiratory passages. This plant should be used in supplement form so that the dangerous pyrrolizidine alkaloids are removed. Follow the recommended dose on the capsules – 20mg to 25mg petasins daily.

### **Ephedra** (*Ephedra sinica*)

Source of ephedrine, a potent bronchodilator. Stimulant. Anti-allergic, anti-asthmatic. For allergies, take as a hot tea made with 1 TBS of twigs to 16 oz of water. For asthma, take 15 drops of a tincture, repeating after 5 minutes if necessary. It is important to start at this low dose first, until you know what the particular tincture’s effect is (herbal preparations vary). **CONTRAINDICATED IN PREGNANCY, HYPERTENSION, OR WITH OTHER STIMULANTS. SHORT TERM USE ONLY.**

**Gentian** (*Gentiana lutea*)

Bitter digestive, cholagogue, anti-allergic. This is probably our best bitter for allergies and sensitivities to environmental irritants. Best taken as a tincture, 15 to 30 drops right on the tongue 15 minutes before and/or 5 minutes after eating. CONTRAINDICATED FOR PEPTIC ULCERS, and best avoided during pregnancy.

**Red Reishi** (*Ganoderma spp.*)

Immunomodulant, anti-allergic, anti-cancer, liver protective. Reduces IgE production and balances liver function. A medicinal mushroom traditionally prepared by boiling for long periods of time, can also be taken as an extract with a daily dose between 30 and 60 drops. Generally safe, but can be a bit drying to the upper respiratory passages if overdosed.

**Baikal skullcap** (*Scutellaria baicalensis*)

Immunomodulant, anti-inflammatory, anti-allergic. It reduces the production of pro-inflammatory cytokines, buffering the effects of these chemicals through a range of conditions, including seasonal allergies. Loaded with flavonoids, seems really effective for overactive respiratory responses. Very cooling – USE CAUTION IN CASES OF CHRONIC LOOSE STOOLS, as it could aggravate. 3ml, or about 90 drops, once or twice a day.

**Astragalus** (*Astragalus membranaceus*)

Immunomodulator, lung tonic. Helps reduce the incidence of viral and bacterial respiratory infections, which can contribute to and/or cause asthmatic attacks. Can be taken as a tea of the simmered root, 4 TBS of root simmered in 1 QT of water, covered, for at least 30 minutes and drunk in 1 day. Alternatively, an extract or tincture can be taken at a dose of 30 to 60 drops twice a day on an empty stomach. Safe.

**Sample formulas:**

For allergies with bloating after meals:

Gentian, 2 parts

Goldenrod, 3 parts

Red Reishi, 1 part

*Take ½ to 1 tsp. twice daily before meals*

For allergies with itchy, red eyes and clear discharges:

Fresh Nettle, 2 parts

Eyebright, 1 part

Red Reishi, 1 part

*Take 1 full teaspoon once or twice a day during the allergy season*

History of drug use, liver disease:

Red Reishi, 1 part

Schizandra, 2 parts

Gentian, 1 part

Shiitake, 1 part

*Take 1 full teaspoon twice daily before meals*

To prevent and prepare:

Astragalus, 2 parts

Baikal scullcap, 1 part

Red Reishi, 1 part

Gentian, 1 part

*Take 1 full teaspoon daily, preferably before your biggest meal*