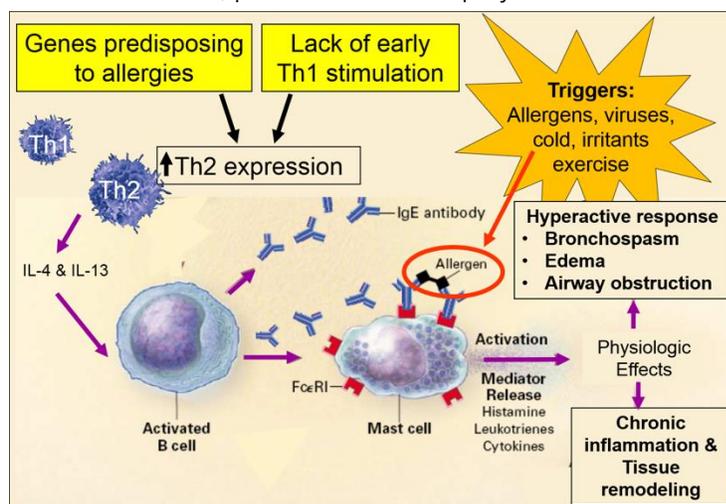


Allergic diseases affect a large portion of the population and can range from seasonal allergies to chronic persistent allergies. An allergy is an overreaction of our immune system to a particular foreign antigen, also called an allergen. Allergens including plant pollens, foods, chemicals, antibiotics, and mold spores are non-pathogenic and not themselves harmful, but they can cause an immune overresponse and result in tissue damage.

The immune response is dependent on the body's two subsets of T-lymphocytes, known as T helper cells, TH1 and TH2. In a normal immune response, TH1 cells release a range of mediators to help the body to defend against invasion from parasites, bacteria, and viruses. In individuals who suffer from allergies, the TH2 cells and their mediators encourage the immune system to recognize allergens as invaders and activate a response against them. In such individual, the antigen is not "learned" by the T cells as tolerable due to their genetics or other factors that have caused Th2 deficiency in antigen recognition.

For an allergic reaction to occur, allergen sensitization must first be initiated. In the allergen sensitization process, antigen-presenting cells, such as macrophages and dendritic cells in the mucosal surfaces of the body, detect the allergen. This can occur in many ways, including inhalation into the nose and lungs, through the skin, and through the gastrointestinal tract. In people predisposed to allergies, the antigen-presenting cells come into contact with the allergen which is perceived to be an invader. The allergen is then absorbed, processed and displayed on the surface of the antigen-presenting cell. This process is known as antigen presentation. This cell then presents the processed antigen to the T cells (TH2 cells) and the T cells may recognize them using cell receptors which then stimulates the B-cell to produce IgE antibodies specific to the allergen. These specific antibodies are then released and attach themselves to high-affinity receptors on the surfaces of mast cells in the mucosal surfaces and on basophils in the blood.



### Mast Cell Activation

Following the period of sensitization described above, there is a period of latency and on subsequent re-exposure to the allergen the allergic response is triggered: allergen cross-links with the IgE on the surfaces of the mast cell or basophil, causing mast cell activation which involves the cell to 'degranulate' or release inflammatory mediators. These include large amounts of histamine and other mediators, including leukotrienes, prostaglandins, and kinins. These chemicals increase vascular permeability, smooth muscle contraction, secretion of mucus, thinning of the blood causing inflammation and tissue damage. These inflammatory mediators have different actions in terms of symptoms in different organs. In the lungs, this can cause wheezing, shortness of breath, and coughing. In the sinus, this can cause itchy and watery eyes, runny nose, and sneezing. In the blood, it can cause hay fever. The release of heparin from the mast cells can thin the blood and patients may experience bloody nose and/or anus bleeding. Pro-inflammatory cytokines can cause spleen inflammation resulting in an increased blood cell disintegration with the platelets being turned over too quickly. Patients may develop internal bleeding such as stomach bleeding as a result of the decreased platelet count.

### **Seasonal Allergies and Allergic Rhinitis**

The symptoms of allergies can occur both seasonally and perennially and are caused by a variety of allergens. Offending allergens can often be identified by matching the timing of symptoms experienced by the patient and the prevalence of allergens at particular times of the year. Hay fever is the most commonly experienced seasonal allergy and can occur in spring, summer, and early fall. These allergies are typically brought on by airborne mold spores or

pollen from trees, grass, or weeds. Symptoms of hay fever include runny and stuffy nose, itchy and watery eyes, sneezing, itchy throat, and fatigue.

Seasonal allergies typically affect the sinus cavities and can also have an early and late phase. In the early-phase reaction, mast cells in the nasal mucosa start degranulation when the allergen is cross-linked with the IgE on the surface of the mast cells on the subsequent re-exposure following the sensitization process. The degranulation involves the release of proinflammatory mediators including histamine which acts upon cells, nerve endings, and the vasculature in the nose. Histamine plays the biggest role in this process, acting upon nerve endings to produce the symptoms of itching and sneezing, and on the small veins and capillaries, causing vascular permeability, which results in nasal blockage, which is one of the primary symptoms of allergic rhinitis.

Inflammatory cells continue to be recruited after the early-phase. These cells and their mediators sensitize the nose to both allergens and non-specific stimuli. This nasal hyperresponsiveness is a characteristic of the late-phase response; sufferers describe allergy-like symptoms on exposure to a range of stimuli, including strong smells such as bleach, hairspray, and tobacco smoke. During this phase 'priming' occurs, where nasal cells are ready to respond to stimuli so that often a smaller amount of allergen is enough to provoke allergy symptoms. Similar to the late-phase asthmatic response, eosinophils play an important role in the late-phase sinus response, with enzymes and proteins being released which cause further tissue damage and inflammation.

According to (Traditional Chinese Medicine) theory, the seasonal allergic symptoms associated with mast cell activation is referred to as Hot Blood or Heat in the blood.

### Chronic Persistent Allergies

Some people may have chronic persistent year-round (Perennial) allergies which become worse over time. This can be caused by indoor exposure to airborne substances that are present throughout the year or chronic immune dysfunction. The most common symptoms of chronic allergies are chronically stuffy, itchy and runny nose as well as itchy mouth and throat. In severe cases, patients may have burning and pain inside their nose. The eustachian tube which connects the middle ear and the back of the nose may become swollen. As a result, hearing can be impaired, especially in children.

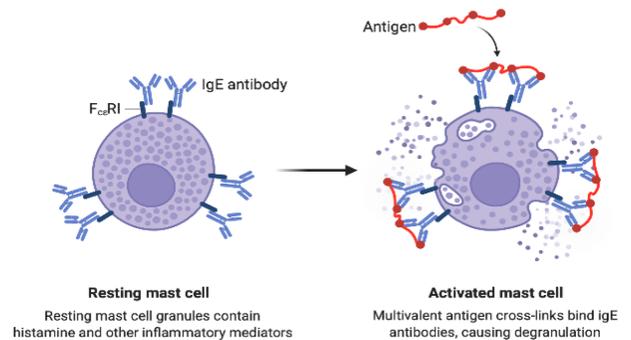
Severe chronic allergies are very damaging to the immune system and the upper respiratory tract. Patient's nasal and upper respiratory tract lining can become very fragile and can't shield pathogens and irritants effectively. The immune response of the upper respiratory tract against pathogens can weaken. Patients will become more susceptible to viruses and other germs because these pathogens can't be removed promptly by the weakened immune system. This leads to easily catching upper respiratory infections, sinusitis, lung infections, common cold / flu, and increased recovery time.

Based on TCM, the weakened immune response to the pathogens caused by chronic allergies is referred to as Lung Qi and Blood Yin deficiencies. The Blood Yin deficiency is due to the Heat in the blood and has consumed too much of the Blood Yin. In the meanwhile, the Blood Yin deficiency may also be the cause at the beginning that set the Blood on the hot side which causes the chronic allergies.

### Sinusitis and Sinus Infections

Sinusitis and sinus infections are common complications of seasonal allergies. The allergic reaction and hay fever can cause nasal cavity and sinus inflammation resulting in sinusitis. The inflammation of the nasal cavity and sinuses can cause nasal passage and sinus congestion which blocks the air from passing through. Such an oxygen-deprived

#### IgE Cross-linking Induces Mast Cell Activation and Degranulation



environment in the nasal cavity and sinuses allows anaerobic bacteria to proliferate causing infections of the sinus and nasal passage by anaerobic bacteria. Patients may experience symptoms of facial pain and pressure, stuffy and runny nose, loss of smell sensation, or cough.

## **Wellness Recommendation**

### Allergies & Seasonal Allergies

The wellness recommendation for allergies includes Bitter. Bitter helps clear Heat in the blood and cools down the blood to clear hay fever symptoms through reducing high levels of pro-inflammatory cytokines and histamine due to the overreaction of the immune system to allergens, infections, and metabolic debris. Herbal ingredients in Bitter inhibit the production of pro-inflammatory cytokines, chemokines, and protease. The herbs work through the heme-oxygenase-1 (HO-1). HO-1 is an inducible enzyme expressed in response to various inflammatory stimuli. Patients can experience symptom improvement in one day and two weeks of the product is recommended for significant improvement. For patients with severe seasonal allergies who live in high allergen environments, another round of Bitter may be necessary during the next allergy season although the symptoms will be greatly reduced.

### Chronic Persistent Allergies

The wellness recommendation for chronic persistent allergies includes Bitter Plus. Bitter Plus nurtures Blood Yin, enhances Lung Qi, and clears Heat. Bitter Plus helps to improve the structure of the immune system to differentiate between allergen and pathogen. It enhances the ability to clear pathogens by boosting lung immunity. It helps patients with chronic and persistent allergies by reducing high levels of pro-inflammatory cytokines, histamine, and IgE in the blood. Patients can experience symptom improvement in one to two days. Mild cases require 3-7 days of Bitter Plus while more severe cases require 2-4 weeks for significant improvement.

### Sinusitis and Sinus Infections

The wellness recommendation for sinusitis and sinus infections includes Apro. Apro helps clear Heat in the head to reduce inflammation and infection of the sinuses and nasal passage. Patients can experience symptom improvement in 1- 3 days and 1-2 weeks of treatment is required for significant improvement. If patients would like to have an instant opening of the nasal passage, Apro Nasal Oil is also recommended. Apro Nasal Oil is an externally applied liquid that helps clear nasal Heat and reduce nasal inflammation caused by allergies and sinusitis.

If the patient's allergies are brought on by mold or fungus, a sinus Heat toxin in TCM, Wave, Bitter, Brown, Qi Booster, and LC balancer are recommended. Patients can present with symptoms of chronic sinusitis including facial pressure, headache, nasal stuffiness, discharge, and cough. Thick fungal debris and mucin which is a secretion containing carbohydrate-rich glycoproteins can be accumulated in the sinus cavities and cause sinus congestions which allow anaerobic bacteria to grow causing a green or yellow mucus discharge from the nose. Wave helps clear the Heat Toxin and fungal infections in the sinuses, colon, and lower peritoneal space. Bitter, Brown, Qi Booster, and LC Balancer work together to improve the liver and immune function to help clear the infection and the resulting allergy symptoms. Patients can experience symptom improvement in three days and four weeks of the protocol is recommended for significant improvement.

If the patient is experiencing excessive nose dripping, Rhinocin is recommended. Rhinocin helps clear Damp Heat in the sinuses. The herbal ingredients in Rhinocin help fight off gram-negative bacteria in the sinuses. Infection of the sinuses by gram-negative bacteria can sensitize the host immune system and patients are hypersensitive to environmental allergens with symptoms of sneezing and nasal dripping of clear mucus. Patients can experience symptom improvement within 1 day and 4-6 weeks of treatment is required. If the symptom improvement plateaus, the patient may have other types of infections and will require other formulas.

If the patient is experiencing back dripping, it is likely caused by either a Blood Yin deficiency or a Cold Damp mycobacterial infection. Chronic allergies with Heat in the Blood can cause a Blood Yin deficiency. Patients will develop postnasal drip and Millennium is recommended to nurture the Blood Yin. Millennium nurtures Blood Yin and helps to improve sinus function to clear the excess mucus and phlegm production that is causing the postnasal drip. Patients can experience symptom improvement in 1-3 days and 2-4 weeks of treatment is required for significant improvement.

If Millennium alone does not yield improvement in symptoms, the postnasal drip may be caused by a mycobacterial infection and the full mycobacterial protocol is recommended with Newbase, CL, Jade, and Java. CL helps clear inflammation and removes lung heat. Jade helps enhance Lung Qi to boost lung immunity to help the body better fight the infection. Java helps improve lymphatic circulation and clear damp toxins. NewBase helps remove kidney deficiency heat and improves adrenal function to support the filtration of the infection. Patients can experience symptom improvement within 3 days of treatment and 3-4 weeks of treatment is required for significant improvement.

After the bacteria from the nasal passage and sinuses have been cleared, there can be residual damage to the epithelial lining. Symptoms of chronic nasal lining degeneration include excessive phlegm production, burning pain, dryness, and an increase in sensitivity in the nose. ZY and Cellgen are recommended to strengthen the nasal and sinus cavity epithelial cells. ZY helps to enhance body fluid production to coat the damaged lining in healthy fluid while Cellgen promotes tissue regeneration and repairs cellular damage. Patients can experience symptom improvement in 3 days and 1-2 weeks of treatment is required to have significant improvement and sustained results.

Bacteria and germs can also form biofilms inside the sinus and nasal airways. The biofilm allows the cells inside to become more resistant to both the body's natural antimicrobials and to antibiotics. Bodily surfaces covered by biofilms can become ulcerated or necrotic over time. Biofilmin is recommended to help break down and dissolve microbial biofilms. Other germ-killing formulas may also be required to assist in the clearance of the microbes in the biofilm. For chronic conditions in which the passages have become ulcerated, Alpinia-N is also recommended. Alpinia-N repairs damage and ulcerations in the sinuses. Patients can experience symptom improvement in 3-7 days and 10-12 weeks of treatment is required for significant improvement.

#### Chronic Persistent Allergies

The wellness recommendation for chronic persistent allergies includes Bitter Plus. Bitter Plus nurtures Blood Yin, enhances Lung Qi, and clears Heat. Bitter Plus helps to improve the structure of the immune system to differentiate between allergen and pathogen. It enhances the ability to clear pathogens by boosting lung immunity. It helps patients with chronic and persistent allergies by reducing high levels of pro-inflammatory cytokines, histamine, and IgE in the blood. Patients can experience symptom improvement in one to two days. Mild cases require 307 days of Bitter Plus while more severe cases require 2-4 weeks for significant improvement.

#### Bloody Nose, Stomach Bleeding, and Spleen Inflammation

If patients are suffering from bloody noses and/or anal bleeding, it is likely that they have high levels of heparin and pro-inflammatory cytokines in their blood. These patients may not have typical hay fever allergy symptoms of watery and itchy eyes and nose, rather a more systemic response resulting from the blood-thinning effect. The recommended protocol is Bitter. Bitter helps clear heat in the blood by reducing high levels of pro-inflammatory cytokines and histamine due to the overreaction of the immune system to allergens, infections, and metabolic debris. Patients can experience symptom improvement in one day and 4 to 6 weeks of the product is recommended for significant improvement.

### Protocol Summary

Condition	Product Recommendation	Product Summary
Allergies	Bitter	Clears heat in the blood through reducing high levels of pro-inflammatory cytokines and histamine due to the overreaction of the immune system to allergens
Chronic Persistent Allergies	Bitter Plus	Clears Heat in the blood and boosts lung immunity to fight pathogens that cause allergies
Sinusitis / Sinus Infection	Apro, Apro Nasal Oil	Reduces sinus and nasal passage inflammation to decrease the oxygen-deprived environment

Allergies Caused by Fungus/Mold with Sinus Blockage	Wave, Bitter, Brown, Qi Booster, LC Balancer	Clears fungal infections in the sinuses and improves liver and kidney function to help clear the infection
Allergies Caused by Gram-Negative Bacteria with Excessive Nose Dripping	Rhinocin	Helps fight off gram-negative bacteria in the sinuses
Allergies with Post-nasal Drip	Millennium	Improves sinus function to clear the excess mucus and phlegm production
Allergies with Post-nasal Drip Caused by Mycobacteria	Jade, Java, Newbase, CL	Clears lung inflammation, boosts immune function, supports lymphatic and kidney function to clear the infection
Nasal Lining Degeneration	ZY, Cellgen	Strengthens the nasal and sinus cavity epithelial cells
Sinus Biofilm Formation	Biofilmin, Alpinia-N	Breaks down and dissolve microbial biofilms
Bloody Nose/Stomach Bleeding	Bitter	Clears heat in the blood through reducing high levels of proinflammatory cytokines and histamine

## Selected Case Studies

### Case 1: Resolution of Severe Seasonal Allergies

*Jay Marienthal, DC*

A female patient, age 35, came for treatment as she had been diagnosed with severe seasonal allergies including headaches and sinus infections of a chronic nature (for many years). The patient suffered from significant pain and other symptoms such as a running nose. The ENT Specialist had prescribed Flonase (drug) to mitigate the symptoms.

A combined program composed of cervical adjustments, acupuncture, Bitter from Wei Labs, as well as supplements were prescribed for a total length of 4 weeks. Adjustments and acupuncture were applied twice a week. The patient continued with two more bottles of Bitter afterwards (for preventative reason).

The results of the treatment have been significant. After two weeks into the program the symptoms had become drastically reduced. The patient has felt much better ever since. The results have been sustained. She is very happy with the outcome

### Case 2: Severe Chronic Allergies Resolved with Bitter Plus

*Wei Labs Practitioner, DC, CA*

A 50-year-old male had been suffering from chronic allergies for 7 years. He was constantly sneezing, tearing up, and later on developed headaches and dizziness. His nasal membrane was so degenerated that bath tissue could break it causing bleeding. His tearing up was always present. The patient tried everything available on the market. The patient was recommended to take Wei Lab's Bitter Plus. After 9 days of using the formula, he felt that his head had become a little numb and then all the symptoms had gone.

In the next year's allergy season, he still had some allergic reactions with symptoms of rashes appearing on his chest. He then took three days' worth of Bitter Plus and the rash had cleared completely. The patient is very satisfied with his results.

### Case 3: Resolution of Seasonal Allergies and Hay Fever

*Jack Kucheran, DC*

A male patient, age 32, came in for treatment as he had been diagnosed with seasonal allergies and hay fever. His symptoms included a plugged runny nose which caused sneezing. His eyes were itchy and running. The patient had suffered from the allergies a number of years. It always lasted between spring and the end of the summer. His location in the mountains contributed to the strength of the symptoms.

Dr. Kucheran started an herbal treatment cycle in June 2008 applying two weeks of Wei Laboratories Bitter formula. The program was repeated two more times in 2009 and 2010.

The outcome had been a true relief for the patient. In 2008, the symptoms had been cleared after the two-week treatment (for the entire allergy season). In 2009, the allergy symptoms returned but at a less severe level. After the two weeks of treatment they disappeared again for the remainder of the season. In 2010, the allergy symptoms came back at an even less intense amount. Two weeks of the herbal remedy cleared it for the rest of the season. In 2011, the symptoms returned for two days only. No more remedy has been needed ever since.

Case 4: Successful Resolution of Allergies, Asthma & Sinusitis

*Hasna Tiffany Wood, LAc*

A female patient, age 67, had come for treatment as she had been diagnosed with multiple conditions including severe allergies, chronic pain, obesity, digestive abnormalities (e.g. Candida) as well as cardiovascular disease, corona artery disease, arrhythmia, reduced blood flow in her legs, plaque in her arteries, high cholesterol, hypertension, adrenal fatigue as well as potential thyroid problems. The MDs had prescribed an endless list of medication.

A combined program was prescribed. It consisted of acupuncture, facial massage, dietary changes as well as herbal remedies. More specifically, the patient was treated with Bitter and EZ-Air (against allergies) for two weeks from Wei Laboratories. After another two weeks with B2 and Apro, also from Wei Labs, her sinusitis had been completely cleared. Soup A and LC balancer were applied in the following three weeks (preventative). The total treatment lasted for about 3 months (2-3 times a week). Repairs damage and ulcerations in the sinuses Bloody Nose/Stomach Bleeding Bitter Clears heat in the blood through reducing high levels of proinflammatory cytokines and histamine.

After a few sessions the patient had improved significantly. Her cough had been greatly reduced. The wheezing was practically eliminated. After 6 weeks into the program her sleep apnea had been completely eliminated. The patient's nasal inflammation was gone (no stuffed nose, no wheezing). The patient's energy level had increased dramatically. The results have been sustained ever since and the patients is very happy with the results.