

Fungus is any group of unicellular, multicellular, or spore producing organism, including yeast, molds, and mushrooms in the domain Eukaryota. Most fungi are harmless, but some are pathogenic and can cause infections in humans. The most common pathogenic fungi include *Candida* and *Aspergillus*.

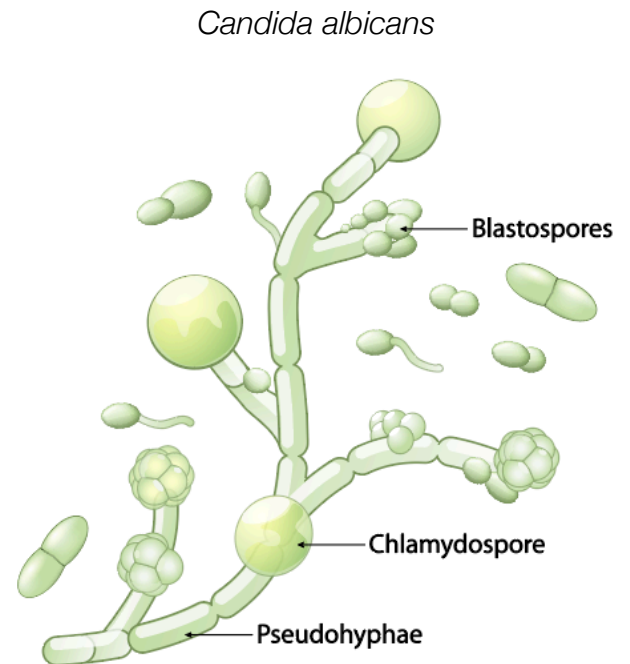
**Candida** is a type of yeast that naturally exists in the human body including the skin, digestive tract, flora of the mucous membranes of the respiratory tract, and female reproductive system. Candida usually coexists with other types of bacteria such as *Lactobacillus acidophilus*, a beneficial bacterium that controls the growth of Candida. Individuals who have an altered natural flora or are immunocompromised are more susceptible to candida overgrowth that cause infections, called candidiasis. There are more than 20 different types of candida that can cause infection however, *C. albicans* is the most common pathogen among the candida species and are classified as an opportunistic fungus. At low populations, Candida is harmless and will be kept in check by the immune system.

### Causes of Candida Overgrowth:

Candida can grow out of control and populate the mouth, throat, genitals, skin, and digestive tract causing yeast or fungal infections in other parts of the body. Several factors can contribute to Candida overgrowth with the most significant factor being the use of antibiotics. Antibiotics can remove bacterial competition, such as *Lactobacillus acidophilus* that controls the growth of Candida and other pathogenic microorganisms by producing lactic acid and hydrogen peroxide. Furthermore, low stomach acidity from low acid production due to stomach lining degeneration, and the use of proton pump inhibitors can't fully sterilize the food before it travels into the intestines, which allows Candida and other pathogenic bacteria to enter, grow, and multiply in the intestines. Other factors include, diet, use of glucocorticoids, poor immune system, and stress.

Various glucocorticoids such as steroid-based drugs including inhalers, anti-inflammatories, contraceptives, etc have the same results as the use of antibiotics in the development of candidiasis. Glucocorticoids are potent anti-inflammatories that suppress cell-mediated immunity, the major defense mechanism against fungal infections, which causes a decrease in the function and numbers of lymphocytes including both B cells and T cells. Glucocorticoids also raise blood glucose which further impairs the cell-mediated immunity. Since glucocorticoids compromise the immune system, they significantly increase the susceptibility of the stomach, esophagus, and intestines to Candida infections.

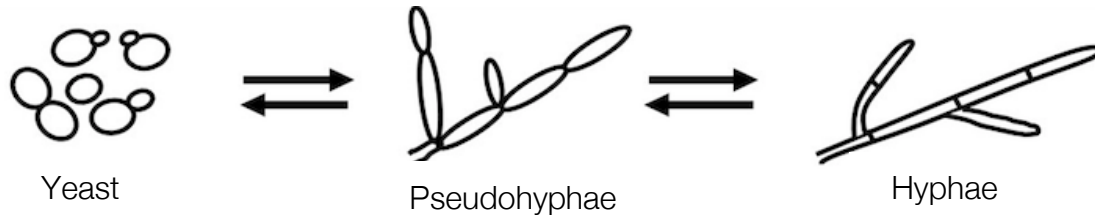
Stress is another important factor for the development of Candida in the digestive tract due to its negative effects on the immune system. In reaction to stress, the adrenal glands release Cortisol, a steroid hormone that belongs to the glucocorticoid family, which can suppress the immune system and increase blood pressure and blood sugar. Continued secretion of steroids by the adrenal glands can exhaust the adrenal glands which can cause low production of adrenaline, the fight or flight hormone. Adrenaline regulates several different systems including the immune system. A decrease in adrenaline can cause chronic fatigue and drain the immune system. Therefore, the immune system is unable to respond properly to pathogens like the Candida yeast.



## Candida Overgrowth Pathogenesis:

Candida overgrowth can cause local carbon deprivation. When local sugar levels become low, Candida can adapt to these nutritional changes by catabolizing amino acids as a carbon source. When this occurs, ammonia is excreted which raises the environmental pH and triggers new gene expression. Candida can then transition from a colonizing yeast form to its hyphal form which behaves like a pathogenic or virulent fungus that can quickly spread and tightly attach to the epithelial cells and begin invasion as a result of the pH shift.

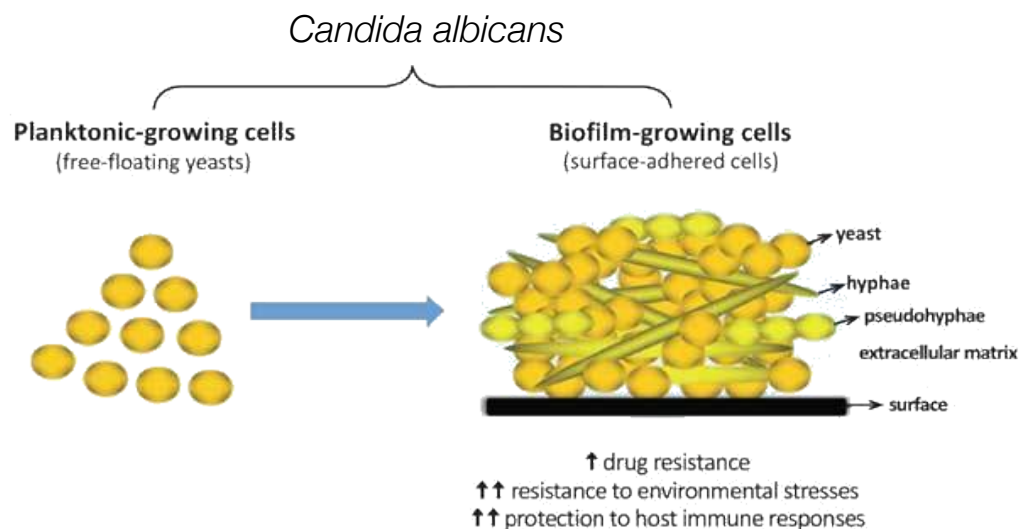
After Candida has adapted to its filament form, there are a number of physiological changes that occur including alterations in the cell wall structure which allows



Candida to adhere to epithelial cells. This adhesive property is one of the key determinants of microbial pathogenesis. In contrast to the colonized yeast form, the filament form expresses glycosylphosphatidylinositol-dependent cell wall proteins called adhesins which mediate the adhesion of Candida to the epithelial cells. Once Candida attaches to the epithelial cells, it can invade through the mucosal membrane, and ultimately, the blood stream to disseminate. Dietary sugars can modify Candida's adhesive property to a great extent. Candida can adhere to a much higher degree when it is supplemented by glucose compared to other types of sugars such as galactose.

*C. albicans* virulence mechanisms also involve its production of proteolytic enzymes, secreted aspartyl proteinases (SAP proteins). SAP proteins are an extracellular protease consisting of a family of 10 secreted aspartyl proteinases which play a central role in Candida pathogenicity that allows *C. albicans* successful colonization and infection of the host. Such proteolytic enzymes from fungi are very potent and widely used in food, leather, detergent industries, and in ecological bioremediation processes. Although SAP proteins are required for survival and growth of both saprophytic and pathogenic species, these enzymes can help *C. albicans* penetrate very deep into the body and enter into every possible system causing severe structural damage to the cell surface proteins once they adapted to the pathogenic hyphal form. Research results demonstrate that these enzymes also induce an inflammatory response, altering the permeability of epithelial barrier, causing asthma and allergies.

Bacterial Biofilms are densely packed communities of microbial cells that grow on surfaces and surround themselves with secreted polymers. Biofilms are the predominant growth state of many microorganisms. 60-80% of microbial infections including Candida overgrowth in the body are caused by bacteria growing as a biofilm, as opposed to planktonic (free-floating) bacteria. The biofilm allows the cells inside to become more resistant to the body's natural antimicrobials as well as antibiotics. Biofilm microorganisms can be up to a thousand times more resistant to antimicrobial stress than free-swimming bacteria or fungus of the same species. Formation of the biofilm of candida in the digestive tract makes it very difficult to get rid of them once they have overgrown.



## Symptoms of Candida

### Overgrowth:

Candida's impact on the body is severe; however, it has often been under diagnosed by the current medical community. Candida overgrowth can be responsible for many chronic illnesses and can have a profound health impact to the entire body even if Candida remains confined in a local area. It is rare for Candida to spread throughout the entire body rapidly and become fatal. This life-threatening situation is usually seen in people with severely compromised immune systems such as AIDS patients. In most cases, Candida just causes discomfort; however, after many years of accumulated effects, Candida can eventually manifest as problems in other organs such as the heart, liver, kidney, blood vessels, and brain which makes it difficult to pinpoint Candida as the cause of the problems.

Depending on the location of the Candida and the patient's health history, patients may have one or more types of symptoms:

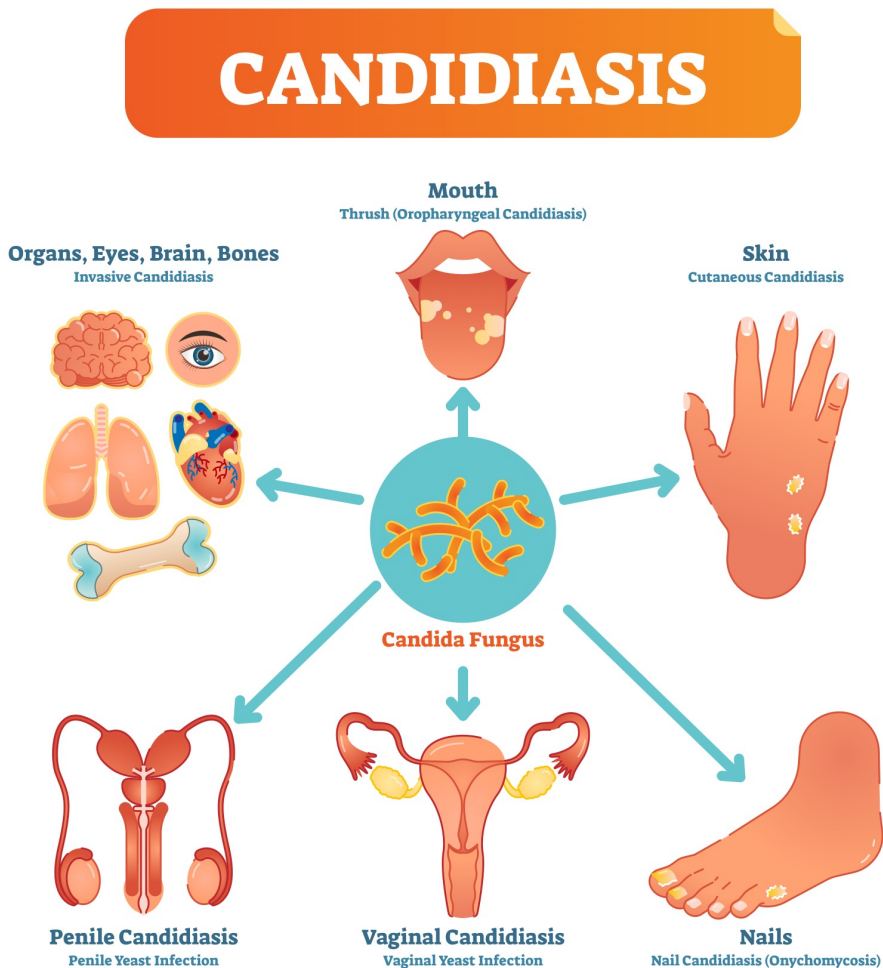
### Reproductive system:

The most common form of Candida overgrowth is genital yeast infections or vaginal candidiasis in women which causes intense vaginal itching, soreness, redness, vaginal dryness, painful intercourse, and a white clumpy discharge. The candida yeast can also spread to the uterus causing uterine fungal infections. Symptoms include itchiness, burning, and irritation from the uterus area. Severe vaginal yeast infections may cause swelling of the vulva resulting symptoms of painful or frequent urination due to the inflammation of the urinary opening. In men, it can cause a red rash on the penis and itching or burning on the tip of the penis. Candida overgrowth in the mouth is called oral thrush, and symptoms include creamy white lesions on the tongue, inner cheeks, roof of the mouth, gums, and tonsils which can cause redness or soreness and difficulty eating or swallowing. Candida can also affect the skin and nails such as the feet causing athlete's foot or toenail fungus.

### Digestive Tract:

Candida overgrowth in the stomach can cause irritation to the stomach lining. Patients may experience symptoms of gas, bloating, burping, poor digestion, stomach cramps and excessive gas that does not move downward. Candida overgrowth in the intestine can cause irritation to the intestinal lining and patients may experience diarrhea or constipation, abdominal pain or intestinal cramps, gas, stools that contains mucous substance with a milky or cream-like color, or possess film like materials, or oily mucus that tends to float.

Candida overgrowth can cause the gut wall to develop openings which leads to Leaky gut syndrome due to the destructive enzyme activity of the SAP proteins and their irritation to the intestine. When the candida overgrowth



moves to a more serious stage, the candida yeast grows hyphae in a filament form which spreads the bowel wall cells apart so that acidic, harmful microorganisms and macromolecules are able to pass through (leak) these openings and enter the circulatory system. The body's immune system will react to the invader and develop antibodies leading to food allergy with sensitivity and intolerances to previously harmless foods, such as dairy, eggs, and wheat (gluten) as well as symptoms of constipation, diarrhea, bloating, gas and cramps after eating. Due to the Inflammation of the gut lining and immune reaction to the substance entering to the blood stream, patients may experience symptoms of headaches, poor concentrations, brain fog, and irritability. These symptoms are also the symptoms of irritable Bowel Syndrome.

Candida overgrowth and the resulting leaky gut syndrome can directly lead to many other systemic inflammatory and immune-related symptoms beyond food allergies, including rheumatoid arthritis, ankylosing spondylitis, multiple sclerosis, eczema, fibromyalgia, Crohn's disease, chronic urticaria (hives), and inflammatory bowel disease.

Candida in the upper digestive track can infect the colon causing damage to the colon tissue. Patients can experience symptoms of a burning sensation in the colon and anus area with constipation or diarrhea. Candida can also make its way into the peritoneal cavity causing infection and damage to the peritoneal cavity walls and organs. Patients can experience symptom of tenderness and pain in the abdomen. The abdomen can become very hard and solid when touched.

#### **Liver and Pancreas:**

Candida and toxins from the intestines can get into the portal vein and infect the liver causing symptoms of liver congestion such as poor stress tolerance, a feeling of anger or anxiety, difficulty falling asleep, and constipation with very hard stools due to poor bile production. When the live yeast fungus enters the liver, it can cause liver inflammation and hepatitis. Patients may experience abnormal skin sensations like "pins and needles", severe insomnia, and genital irritation and inflammation. When this condition is combined with stress and the resulting low oxygen supply to the liver, it can cause Non-Alcoholic Fatty Liver Disease (NAFLD) which can cause liver fibrotic tissue formation and can progress into cirrhosis.

Fungal infections in the liver can also cause insulin resistance leading to type II diabetes. This is because SAP proteins produced by Candida can destroy the insulin receptors on the livers cell surface and block insulin signal transduction. Under conditions of insulin resistance, the body requires a higher concentration of insulin to maintain blood sugar levels, which puts higher demand on the insulin-producing beta cells in the pancreas that often sets the stage for diabetes. The fungus can also spread to the pancreas causing pancreas irritation and inflammation. Chronic hyper production of insulin and pancreas inflammation can cause early degeneration of the beta cells. Eventually, the beta cells can no longer produce enough insulin to overcome insulin resistance, as a result, blood sugar levels rise to above normal range and patients become prediabetic. Once a person becomes prediabetic, their beta cell function will continue to decrease leading to type II diabetes.

The fungal toxins can overload Kupffer cells in the liver and cause the cells to become hyperactive. Hyperactivity of the Kupffer cells can cause symptoms related to anxiety attacks, obsessive compulsive disorder, and other psychiatric disorders. When Kupffer cells can't handle the toxins within its capacity, it produces chemokines. Chemokines can enter the brain and cause brain inflammation, and patients can experience symptoms such as mood swings, depression, memory loss, poor mental clarity, focal seizures, tremors, or numbness.

#### **Kidney, Bladder, and Prostate:**

Infection of the kidney by Candida can cause kidney inflammation with symptoms of difficult urination and water retention. Patients may have sense of urination but cannot urinate. Chronic irritation to the kidneys can lead to the development of chronic kidney disease.

Candida fungal infections of the bladder and urinary tract can cause cystitis due to irritation and damage to the bladder and urinary tract lining. Patients may experience symptoms of frequent urination, urination urgency, pain

and burning with urination, and suprapubic pain. The infection can also damage the nervous system and patients may suffer from incontinence.

Candida Fungal infections of the prostate can cause chronic prostatitis due to irritation and damage to the prostate. Symptoms can be similar to prostatitis caused by bacterial infections including difficulty urinating, painful urination, discomfort or pain in the perineum, bladder, testicle, and penis and painful ejaculation.

### **Bloodstream:**

Candida can get into the blood stream and attach to the plasma cells. Depending on the severity, it can be life threatening or the symptoms can be similar to other types of common chronic conditions. Patients may have one or more of the following symptoms: fever or chills, skin rash, generalized weakness or fatigue, low blood pressure, muscle aches, vision changes or signs of an eye infection, headaches and neurological deficits and abdominal pain.

### **Cardiovascular:**

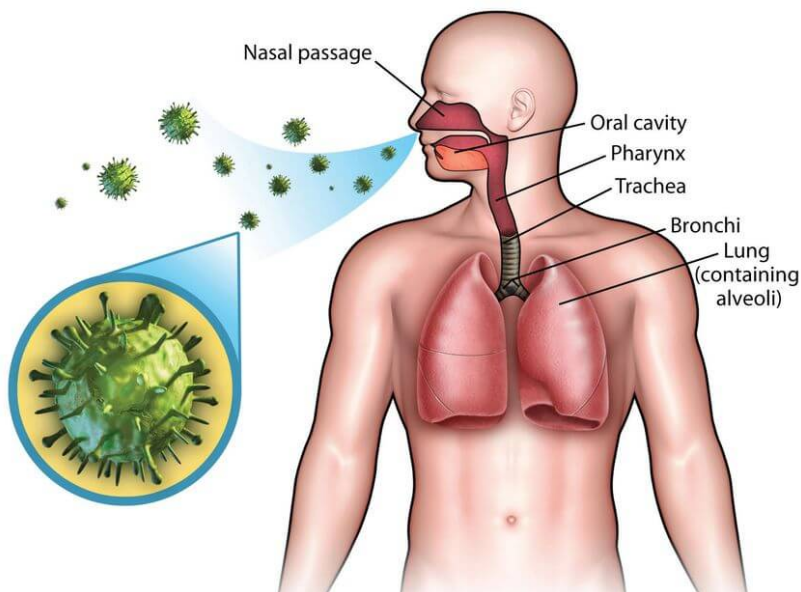
Candida and the toxins can also affect the cardiovascular system including the heart and blood vessels. The main symptom is heart inflammation which can lead to myocarditis or pericarditis. Secondly, is an interruption in heart function which can cause heart palpitations or tachycardia. Thirdly, is the irritation of the blood vessels which can cause arteriosclerosis and thus narrowing the blood vessels and causes blood vessel inflammation such as phlebitis, vasculitis, spider veins and varicose veins. They can also trigger formation of blood clots causing serious cardiovascular disorders including stroke and heart attack.

### **Respiratory:**

Fungal infections occur in the respiratory tract mainly through inhalation. This can occur when fungus has been suspended into the air because its natural habitat, such as soil, has been disrupted or it may be a type of fungus that lives in the air naturally and only affects individuals with compromised immune systems or allergies.

Environmental fungi that is finely dispersed in the air can infect individuals who have allergic rhinitis and cause allergic fungal sinusitis. 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 or blockage which allow anaerobic bacteria to grow causing a green or yellow mucus discharge from the nose. As long as the fungi remains, so will the irritation which causes nasal membrane damage and degeneration. Patients may experience symptoms of nasal airway dryness, burning sensation and prone to have a bloody nose.

Aspergillosis is a lung fungal infection caused by inhaling *aspergillus* spores. These types of spores are found in the environment and frequently occur in airborne dust, making them unavoidable. Aspergillosis is an opportunistic fungus and can cause aspergillomas (clumps of fungus) in the lungs. Although aspergillosis mainly affects the lungs and sinuses, it can spread to other organs.



Fungus in the lung and bronchi can cause tissue damage and symptoms include shortness breath upon exertion, difficulty inhaling or breathing air into the lungs, and breathing difficulty at high altitude or altitude sickness. Toxins due to infections by fungi and bacteria which have thick cell walls in the lungs and respiratory tract can cause symptoms of dry cough, chest discomfort, progressive dyspnea particularly on exertion,

wheezing, tachycardia, tachypnea, focal pulmonary consolidation with reduced lung expansion and/or clasped lung. Chronic severe lung fungal infections can cause lung inflammation and lead to the development of pulmonary fibrosis.

### **Valley fever:**

Valley fever is an infection caused by the fungus found in soil in the southwestern United States. If the soil is disturbed, microscopic fungal spores can enter the air and when inhaled can cause symptoms similar to the flu. It can affect people of any age but most commonly in those over 60 years old. Individuals can have symptoms for a few weeks to a few months but if the infection becomes more severe, entering other organs, than they can last a lot longer.

### **Wellness Recommendations**

#### **Systemic Candida Infection, Candidiasis, Oral Thrush and Skin Fungal Infections**

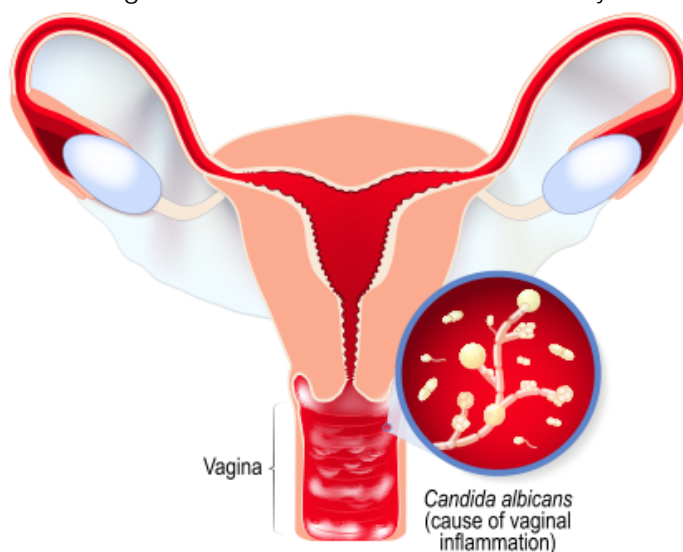
Patients with systemic infection in the blood may exhibit fever, chills, and other symptoms. Even though other symptoms may bother them more, patients should start an initial protocol that focuses on the removal of Candida and their toxins from the blood. Oral thrush and skin fungal infections require the same recommendation.

The recommended formulas include the Plasmin, Bitter, Brown, Qi Booster, and LC Balancer. Plasmin helps fight fungal infections in the blood caused by fungi type of microorganisms. Bitter, Brown, Qi Booster and LC Balancer work together to enhance the body's immune function to help clear Candida in the blood completely. More specifically, Bitter removes the excessive pro-inflammatory cytokines and cleans the endotoxins from the blood. Brown nurtures the liver to assist the immune system. The Qi Booster enhances the immunity directly, and the LC Balancer increases the microcirculation. Bitter, Brown, Qi Booster and LC Balancer are crucial components to support the Plasmin. Patients can experience improvement with a reduction in fever, chills, and other symptoms with one week and 4 weeks is required for significant improvement with sustained results.

This program can also take care of oral thrush and skin fungal infections. For patients who have other systemic infections both in the blood and in a local area such as the intestine or vagina (see recommendation below), the blood and local treatments can be done simultaneously or the blood treatment first and the local treatment afterwards.

### **Vaginal Yeast Infection**

If the infection is confined to the vaginal and/or uterine area, the recommendation is to start with Sissy which helps remove heat to break the biofilm and clean up the overgrown Candida patches lined on top of the vagina and uterine wall. Patients may experience white clumpy patchy discharge with symptom improvement in 1-3 days. It may take 3-4 weeks to clean the Candida from the surface of the vaginal and uterine wall. To clear the yeast filaments that have penetrated deep into the tissue of vaginal and uterine wall, Sissy-F is recommended following the use of Sissy. Sissy-F helps clear fungal infections from the uterus and the surrounding female reproductive organs in the deep tissue. Patients may experience die-off effect in the first initial week after taking Sissy-F due to the irritation of the Candida debris and can experience symptom improvement in the second week. 4-6 weeks of product use is recommended for sustained results. For patients who experience severe die-off effect with symptoms of insomnia, anxiety or headache due to the irritation of toxins to the liver and kidney, Brown, Levera, LC Balancer, KS and BI are recommended. Patients with chronic vaginal and uterine yeast infection may also have infections by other types of microorganism such as mycobacteria and/or gram-negative bacteria. If symptom improvement plateaus, Mycocin is



recommended for mycobacterial infection. U-2 is recommended for gram-negative bacterial infection.

### ***Digestive Tract, Colon, and Peritoneal Candida***

For patients with digestive tract Candida, the recommendation includes Formula F, Formula G, Stomacin, Colomycin, Silver and/or Formula E, Spring, SJ, Formula B and Probiosis. Formula F helps clear heat toxins from the stomach to resolve stomach Candida fungal infection. Formula G helps clear heat toxins from the liver bile duct and intestines to resolve fungal infections. Patients with digestive tract fungal infections usually also have co-infected mycobacteria and gram-negative bacteria. Removal of the fungus may cause a die-off effect due to the presence of the mycobacteria and gram-negative bacteria. Die-off symptoms may vary based on previous organ system weakness. Stomacin and Colomycin are recommended to clear stomach and intestinal mycobacterial infections. Silver and/or Formula E is recommended to clear the gram negative bacterial infections. Spring, SJ and Formula B are recommended to help restore the structure and function of stomach and repair damage to the stomach lining. Probiosis is recommended to reduce digestive tract inflammation.

Patients should experience symptom improvement with less stomach and abdominal pain, gas and bloating within 1 week. As the Candida biofilm breaks, the fungus dies and breaks from the digestive tract lining, patients may notice increased amount of cheese-like substances, or mucus in their stools in about 10 days which may last about 3-5 days. Required treatment time may range from 6 weeks to 3 months depending on the severity of the condition. Since Leaky Gut can be a result of digestive tract Candida. Brown, Formula C and Pearl are also required to help repair damage to the intestinal lining at the 2<sup>nd</sup> or 3<sup>rd</sup> month of treatment.

For candida infection in the colon and peritoneal cavity, Wave is recommended. Patients should experience symptom improvement in 3 days. 4 weeks of treatment is required to have significant improvement and sustained results.

### ***Liver and Pancreas***

The recommendation includes Brown, LC Balancer, Glymycin and Glymycin-R. Glymycin helps to clear liver fungal infections. Glymycin-R helps clear the fungus in the pancreas. Brown and LC Balancer help repair the damage to the liver cells, especially the insulin receptors on the cell surface. Levera may also be required to reduce liver inflammation and clear the die-off effect of the liver fungus. PA may also be required to reduce pancreas inflammation and clear the die-off effect of pancreas fungus. Patients should experience symptom improvements in 3 days with reduced blood sugar levels and 6-10 weeks of the product is recommended for sustained results. If patients can't experience improvement in 2 weeks, Soup A is required to repair pancreas damage.

### ***Respiratory***

Wave is recommended to help clear fungal infections in the sinus cavities. Patients should experience symptom improvement in 3 days and 4 weeks of treatment is required to have significant improvement and sustained results. ZY and Cellgen are recommended to repair nasal membrane damage. If patients still experience yellow or green nasal discharge, Apro is recommended to reduce inflammation and clear gram-positive bacteria. If there is also gram-negative bacteria infection with symptoms of runny nose, Rhinocin is also required.

CL-3 is recommended to help clear lung infections caused by fungus. Patients should experience symptom improvement in 3 days and 4 weeks of treatment is required to have significant improvement and sustained results. Soup A and LC Balancer are recommended to help repair damage to the lung tissue.

### ***Kidney, Bladder, and Prostate***

For kidney fungal infections with symptoms of water retention and difficulty urinating KS-F is recommended. KS is also recommended to reduce kidney inflammation and clear die-off effect for the first 1-2 weeks. LC balancer and Xcel are recommended to repair kidney damage and improve kidney function. For bladder and urinary tract fungal infection with symptoms of frequent urination and incontinence, BI-F is recommended. BI is also recommended to reduce inflammation, clear die-off effect, and repair damage to the bladder and urinary tract for the first 1-2 weeks. The recommendation for prostate fungal inflammation include BI-F and Prostate Formula for

the first 1-2 weeks. BI-F helps clear fungal infection in the prostate and Prostate Formula helps reduce inflammation and clear die-off effect. Patients should experience symptom improvement in 3 days and 4 weeks of treatment is required to have significant improvement and sustained results.

### **Cardiovascular**

In rare cases, fungus can infect the hearts valves and inner lining causing heart inflammation known as endocarditis. M-3 is recommended to clear fungal infections in the heart. To address inflammation and die-off effects, Myogen is also recommended for 1-2 weeks. Patients should experience symptom improvement in 3 days and 4 weeks of treatment is required to have significant improvement and sustained results.

### **Arteries and Veins**

For artery and vein fungal infections, the recommendation includes Artinin-F and Veinacin-F. Artinin-F removes heat toxins and clears fungal infections of the arteries. Veinacin-F removes heat toxins and clears fungal infections of the veins. Patients may experience die-off effects and Enlighten and Blood Tonic are required to reduce blood vessel inflammation and nurture the blood for the first 2 weeks. Resurgen, Surgenin and Surgenin-R are also required to support brain blood vessels. Resurgen helps remove brain blood vessel heat and inflammation. Surgenin will help remove blockages caused by blood clots or thrombi in brain arteries. Surgenin-R will help remove blockages caused by blood clots or thrombi in brain veins. Nova may also be required to help dissolve blood clots and improve blood circulation. After the blood vessel inflammation is reduced, it is recommended to use Peach to repair blood vessel damage. Patients should experience symptom improvement in 1 week. 6 weeks to 3 months of treatment is required.

### **Brain**

Fungus such as Candida can get into the brain through blood circulation if patients have Candidemia. Symptoms of brain fungal infections may not be very typical which include headache, fatigue and dizziness. The fungus can also cross the Blood-Brain-Barrier and invade the central nervous system causing impaired brain function. The recommendation includes P-3 and Plasmin. P-3 helps clear fungal infections in the brain. Plasmin is also required to help clear fungal infections in blood since the cause of brain fungal infections is usually due to Candidemia. For die-off effects, Platinum is recommended to help with symptoms and inflammation. Patients should experience symptom improvement in 3 days and 4 weeks of treatment is required to have significant improvement and sustained results.

Patients with brain fungal infections usually also have co-infections by other types of microorganism including gram positive and negative bacteria, mycobacteria and spirochetes.

### **Nails**

Nail fungal infections begin as a white or yellow spot under the tip of the nail. Although it is more common in toenails, fungus can affect the fingernails as well. As the infection goes deeper, the fungus in the nail may cause it to discolor, thicken, and crumble at the edge. If the condition becomes severe, it can cause pain and permanent damage to the nail. Patients may feel pain in the toes or fingertips and detect a slightly foul odor. The recommendation includes Fungmin which helps clear fungal infections in nails. It is recommended to soak the infected finger or toe in 25-30mL of Fungmin liquid for 30 minutes, twice daily. For mild or moderate cases, patients can experience symptom improvement with changes of nail color in 2-3 days. For severe cases, it may take 1 week to have visible improvement. Required treatment time is 6-8 weeks for mild or moderate case and up to 3 months for severe cases.



## Fungal Recommendation Summary

| Locations                  | Fungal Products         | Supporting Products   |
|----------------------------|-------------------------|---|
| Systemic/Blood             | Plasmin                 | Bitter: reduces cytokines and histamine<br>Brown: liver support<br>Qi Booster: immune support<br>LC Balancer: kidney support  |
| Female Reproductive Organs | Sissy-F                 | Sissy: reduces uterus inflammation<br>Brown: liver support<br>Levera: reduce liver inflammation<br>LC Balancer: kidney support<br>KS: reduces kidney inflammation<br>Bl: reduces bladder inflammation<br>Mycocin: clears mycobacteria<br>U-2: clears gram (-) bacteria  |
| GI // Bile Duct            | Formula G<br>Formula F  | Stomacin: clears mycobacteria in the stomach<br>Colomycin: clears mycobacteria in the colon<br>Silver: clears gram (-) bacteria in the colon<br>Formula E: clears gram (-) bacteria in GI tract<br>Spring: enhances blood flow to stomach<br>SJ: repairs stomach damage<br>Formula B: enhances intestinal contractions<br>Probiosis: reduces intestinal inflammation<br>Brown: liver support<br>Formula C: restore connective tissue<br>Pearl: supports small intestine |
| Liver // Pancreas          | Glymycin<br>Glymycin-R  | Brown: liver support<br>LC Balancer: increase microcirculation<br>Levera: reduce liver inflammation<br>PA: reduces pancreas inflammation<br>Soup A: repair pancreas damage (optional)   |
| Respiratory                | Wave<br>CL-3            | ZY: promotes lubrication<br>Cellgen: promotes tissue regeneration<br>Apro: clears inflammation in sinuses<br>Rhinocin: clears gram (-) bacteria in sinuses<br>Soup A: repair lung damage<br>LC Balancer: increase microcirculation  |
| Colon/Peritoneal           | Wave                    |   |
| Kidney                     | KS-F                    | KS: reduces kidney inflammation<br>LC Balancer: kidney support<br>Xcel: kidney support  |
| Bladder/Prostate           | Bl-F                    | Bl: reduces bladder inflammation<br>Prostate Formula: reduces prostate inflammation   |
| Heart                      | M-3                     | Myogen: improves blood flow to heart  |
| Brain                      | P-3<br>Plasmin          | Platinum: reduces brain inflammation  |
| Arteries/Veins             | Artinin-F<br>Veinicin-F | Peach: repairs blood vessel damage<br>Enlighten: reduces vein inflammation<br>Blood Tonic: improves blood circulation<br>Resurgen: reduce brain blood vessel<br>Inflammation<br>Surgenin: removes blood stasis in the brain arteries<br>Surgenin-R: removes blood stasis in the brain veins<br>Nova: dissolves blood clots (optional)   |
| Nail                       | Fungmin                 |   |

## **Selected Case Studies**

### **Case 1: Elimination of Symptoms of a Urinary Tract Infection due to Atypical Bacterial Infections**

Bio-Wellness Center, Baton Rouge, LA

A female patient presented to the Bio-Wellness Center on Oct. 3<sup>rd</sup>, 2018 with a urinary tract infection. The patient experienced a burning sensation during urination with a restricted flow and was frequently urinating throughout the day. She was also suffering from a lack of sleep due to constantly waking up in the middle of the night to urinate, which was not only uncomfortable but painful. The patient had been taking antibiotics prescribed by her primary care physician with no results.

The doctor recommended her to take Wei Laboratories' BI and KS formula to help address the bladder infection and inflammation in addition to her issue of waking up to urinate at night. After one week, the patient reported no changes in her symptomology. Through further analysis, the doctor concluded that the patient may not have a typical bacterial infection. The doctor suggested on Oct. 10<sup>th</sup> for her to take Nefnin, K-2, and Mycocin to address atypical bacterial infections in her kidneys and bladder.

On Oct. 23<sup>rd</sup>, the patient reported her symptoms of burning during urination, restriction, and frequency had all improved by 90%. However, she was still having occasional minimal discomfort and some frequency of urination. The doctor then advised her to continue on her current protocol while adding in KS-F and BI-F to address a fungal infection in the kidneys and bladder. Within 3 days of starting the new protocol, the patient reported that she was completely symptom-free and was now sleeping throughout the night without waking up to urinate. Her urine flow was no longer restricted and her energy levels and mood had greatly improved.

### **Case 2: Improvement of Mold Driven Chronic Respiratory Issue using Natural Methods**

Ron Farotto, DC, EMT-D, FIACA, CCAc Adv, Dipl Ac (IACA), St Louis, MO

A 22-year-old male presented in October 2016 with recurrent lung and sinus infection looking for a second opinion. Initial lab work and blood work highlighted some food sensitivity issues. He started on a diet change to avoid those food groups which seemed to improve his symptomology. He was working out of state in early 2017 and came back in March of 2018 with acute respiratory distress and difficulty taking a full deep breath. He was adjusted for a rib impingement and mid back spasm, which improved the breathing. However, he still had a history of recurrent lung and sinus issues with yellow to green phlegm and chronic congestion with a diagnosis of Asthma from his pulmonologist.

In early March 2018, the patient was put on LC Balancer, Probiosis and Luna to address the food sensitivity and IBS-like issues he had been experiencing. Clearlung was added to clear out the gram-positive bacteria and inflammation in his lungs with yellow sputum. On March 21<sup>st</sup>, 2018, the patient was placed on CL-2 and CL-3 to further address the respiratory infection caused by gram-negative bacteria and fungus. It had been discovered that the patient had been living in a house with known mold exposure. The patient developed a breathing exacerbation and could not catch his breath. Dr. Farotto sent him to the emergency room for acute distress. He was recommended to start antibiotics and was prescribed steroid inhalers and nebulizer treatments 2x a day on March 28<sup>th</sup>. Dr. Farotto decided to increase from 1/3 dose to 1/2 dose of CL-2 and CL-3 while awaiting another consultation with his pulmonologist.

The patient used the inhaler daily with the 1/2 dosage of CL-2 and CL-3. Patient's pulse ox was measured at 82% on April 3<sup>rd</sup> and sputum was changing from yellow to a dark green/brown color. He never filled the prescription for the antibiotics and continued on just the CL-2 and CL-3. As of May 7<sup>th</sup>, the patient's pulse ox was up to 96% and is no longer having any sputum production. Friends have commented that he appears more energetic and engaged. He was able to enjoy his wedding and honeymoon with less respiratory issues and his overall health has improved.

### **Case 3: Relief of Full-Body Rash from Candidemia**

Brooke Jensen, ND, ID

A 75-year-old female presented with a full-body, itchy, hot, red rash that had been manifesting for months. The patient thought it could be due to bug bites because it was during summer, but the rashes never went away. Due to the intense inflammation, she had difficulty sleeping with covers on and she also avoided wearing long sleeve shirts that irritated her skin. It got to a point where she could not sleep or eat without feeling miserable. She was fatigued and lethargic about doing any activities. The patient rated her level of discomfort at a 12/10. In late August of 2017, she went to see Dr. Jensen in hopes of finding a natural remedy to alleviate her itchy rash and find relief for her discomfort.

The patient started taking Wei Laboratories formula, Bitter, at full dose, to address her body's histamine response and cool her blood. After one week, the patient noticed that the redness of the rash and the itchiness had decreased. But, after the 3<sup>rd</sup> week, she noticed that her improvement had plateaued. She went to see Dr. Jensen again to discuss this concern. The patient mentioned that she noticed the severity of the rash increased upon eating certain foods. Dr. Jensen diagnosed her with a systemic candida infection, with most sensitivities coming from foods with sugar, vinegar, and carbohydrates. When she ate those foods, she would feel inflammation in her throat and immediately break out into an itchy rash and it would not go away. On September 14<sup>th</sup>, 2017, Dr. Jensen put the patient on the full chronic infection protocol from Wei Laboratories consisting of Bitter, Brown, LC Balancer, and Qi Booster at full dose. The protocol assisted in supporting the liver and kidney function to help eliminate the endotoxins and mycotoxins due to the candida overgrowth while supporting the immune system to fight the infection. Dr. Jensen also implemented a strict diet plan that cut out carbs and certain meats, like chicken, that she had adverse responses to.

By October 6<sup>th</sup>, 2017, the patient noted that she was able to wear a long sleeve shirt and sleep with the covers on again. She did mention that she felt bouts of nausea and stomach discomfort while on the products as well as developing a vaginal candida infection. Dr. Jensen discovered the patient had many preexisting issues with her digestion and had been previously diagnosed with acid reflux, so she recommended using some digestive products from Wei Laboratories to address those symptoms and help with her food sensitivities. The patient started taking a full dose of Spring Juice, Spring Capsule, Formula B, and Probiosis to restore stomach acidity, repair the GI lining, and reduce GI inflammation. Sissy-F was also recommended to address the vaginal candida. After 3 weeks, the patient reported that her vaginal candida infection had cleared up and noticed a decrease in her acid reflux symptoms.

In February of 2018, after taking a break from the products, she noticed that her symptoms of the rash had returned from eating certain foods after the holiday season. Dr. Jensen recommended the use of LC Balancer and Java at full dose, to help with her body's lymphatic circulation and kidney function to aid in toxin removal, along with Plasmin at full dose to remove the candida from the blood.

After 4 weeks of using Java, LC Balancer, and Plasmin, and following a strict diet, the patient reported feeling drastically better. She noted before treatment when she would eat certain foods that she reacted poorly to, her body would break out immediately and the rash would not go away. Now, when she ate the same foods, if she had a response at all, it would happen much later and would clear up after a couple hours. She also mentioned that she feels her energy has increased dramatically, and she is able to get all her tasks done without feeling lethargic or fatigued. When asked to rate where she was on a scale of 1-10 for her discomfort now, she rated it at a 2. The patient was extremely happy with her results and is continuing to follow a diet plan and maintain a healthy lifestyle.

#### **Case 4: Return of Sensation to Feet due to Toenail Fungus**

Bio-Wellness Center, Baton Rouge, LA

A patient presented to the Bio-Wellness Center on March 27<sup>th</sup>, 2018, complaining of bilateral hip contraction with constant pain above 9 out of 10. The patient also expressed having a total lack of feeling and sensation in his leg, lower back pain in the L4-L5 as well as leg and knee pain, sleep apnea, and macular degeneration in the left eye affecting his vision. The patient was overweight and had GI distress. The patient has his left kidney removed due to cancer 5 years ago.

During an initial evaluation, the doctor discovered overwhelming toenail fungus in both feet, with a majority of the infection in the left foot. Great toe, little toes, medial arch area, and distal plantar surface are all affected by fungus visible to the eye.

The doctor then listened to the patient's heartbeat and the results indicated that the patient's right ventricle had possible problems. The patient revealed at this point that he had 2 previous heart attacks, which then led the doctor to conclude the patient may have scar tissue in the heart. The doctor palpated the thoracic and abdominal areas at the T8-T9 level and found that the pancreas area was tender, which indicated possible pancreatitis. The doctor palpated the descending and transverse colon areas and found that the patient had pain in those areas, which indicated to the doctor that the patient could have possible colon inflammation and dysbiosis. The patient revealed to the doctor at this point that he does have mild acid reflux, where he has to put his bed up on an incline at night when he sleeps.

The doctor requested that the patient complete a comprehensive blood analysis as well as a urinalysis.

The urine indican test revealed no positive microbiome. No calcium was present in the urine, indicating that the body is taking calcium from the skeletal system, which also compromises heart function. The patient's urine pH was perfect at 6.5 since he drinks alkaline water regularly. Chloride levels indicated that he had breathing problems since his O<sub>2</sub> and CO<sub>2</sub> exchange was also problematic, and he does also complain of shortness of breath. The specific gravity was below normal, indicating kidney and digestive problems. The patient also had blood in his urine, further indicating he has renal dysfunction.

The blood work showed that the patient was diabetic since his fasting glucose level was 160, 60 points above normal. His BUN was high since he only has 1 kidney functioning at 61%. Calcium levels were above normal, confirming the findings of the urinalysis. His ALT was high, indicating that the biliary tract is compromised further leading to gallbladder and liver problems. His neutrophils are very high at 72% and his lymphocytes are low, indicating further that he has calcium being removed from the skeletal system. The doctor suspects the body may be using calcium to combat the pain and inflammation. The patient is also anemic based on MCV, MCH, MCH-c levels, as well as RBC Width which were all not normal. The patient's amylase and lipase levels were high, confirming the doctor's suspicion that the patient has pancreatitis. His insulin levels were also high, indicating that his cells are not absorbing glucose properly, most likely due to a poor diet. The patient's TSH levels were low indicating poor thyroid function, his Hemoglobin A1C was high due to diabetes, and homocysteine is high as well which indicates systemic inflammation.

The doctor put together a treatment plan to address the liver, kidney, and systemic inflammation and infection. The doctor recommended the patient to begin Wei Laboratories protocol which consisted of Levera to address the liver inflammation, LC Balancer to strengthen the patient's kidney function, Brown to support the patient's liver problems, KS to remove any possible kidney inflammation, Bitter to control the buildup of pro-inflammatory cytokines building up in his blood causing systemic problems, Probiosis to help resolve the gut dysbiosis and inflammation, Mango and EyeBrighter to address the vision problems, PA capsules to resolve his pancreatitis and Fungmin to address the fungus in his toes. The patient began the protocol on May 4<sup>th</sup>. On April 16<sup>th</sup>, the patient reported that his blood sugar had improved by 10 points with diet changes alone.

The primary protocol was focused to address diabetes, the systemic inflammation, the patient's digestive complaints and the patient's toe fungus. In regards to the Fungmin, which is a liquid product, the patient was advised by the doctor to have him soak his foot in bleach (1/4 cup), hydrogen peroxide, and the Fungmin liquid formula to affect pH changes and to start killing the fungus. He was then advised to soak a sock with baking soda water and wear throughout the day to prevent re-exposure to fungal spores. He was advised to do this every morning for 30 mins before he leaves for work and in the evening.

On May 15<sup>th</sup>, the patient reported that his foot and toes were returning back to normal color. The patient also mentioned that he could feel his nerve endings in his feet. Prior to this treatment, he had zero sensation, which is a massive improvement. The patient's pain levels have reduced by 20%. The patient even feels calmer and is able to make better decisions, which indicated to the doctor that his sympathetic nervous system is rebalancing and is no longer over-reactive to inflammation. The patient also reported that he was sleeping much better and is now putting in about 6 hours per night without interruption as opposed to 2 hours per night prior to treatment.

**Before (March 27<sup>th</sup>):**



**After (May 22nd):**



## **Case 5: Reduction of Symptoms of Idiopathic Pulmonary Fibrosis and Chronic Fatigue**

Bio-Wellness Center, Baton Rouge, LA

A female patient presented to the Bio-Wellness Center on September 13<sup>th</sup>, 2018 after being diagnosed with Idiopathic Pulmonary Fibrosis with symptoms of shortness of breath, low energy, constipation, and acid reflux. She was diagnosed with mixed connective tissue disease with Raynaud's phenomenon manifesting symptoms of cold hands and feet. She had difficulty gaining weight due to a severe lack of appetite. Her primary care physician had prescribed her Aspirin, Ativan, Tylenol, Claritin, Mucinex, Flonase, and Vitanol primarily for mucus congestion.

The doctor requested the patient complete a comprehensive blood analysis. The findings revealed the patient is anemic and had possible internal bleeding in the gut. It showed that she had dysbiosis in the gut possibly due to an infection based on a B12, Folate, B5 and Iron deficiency. The patient's blood cells are too large, leading to an inability to deliver oxygen properly based on her MCV levels. Her neutrophils and monocytes were very high, indicating that she has a bacterial invasion. The patient's sodium and calcium levels were low, as were her BUN levels, indicating possible adrenal and kidney dysfunction. The patient's albumin was also low indicating the patient may have liver, bile duct, and gallbladder congestion. The result showed parathyroid and endocrine dysfunction possibly due to an overload of heavy metals.

The doctor developed a treatment plan to address the liver, kidney, GI, and lung-related problems to help improve the patient's energy, shortness of breath, and digestive problems. The doctor recommended the patient begin the Wei Laboratories' protocol which consisted of Soup A to help restore the lung structure, Soup B to help break down scar tissue in the lungs, LC Balancer to enhance kidney function, Brown to support the liver in detoxification, Levera to help remove buildup of toxins due to liver inflammation and KS to help reduce kidney inflammation. In addition, she was recommended to take Probiosis to reduce stomach and intestinal inflammation, PA to reduce inflammation in the pancreas and relieve her constipation, SJ to help repair the stomach lining, Spring Capsule to restore proper stomach acidity to resolve acid reflux, and Formula B to promote proper gastric empty. The doctor also recommended that the patient support the Wei Laboratories' protocol with digestive enzymes and a low-carb diet rich in protein and fat.

On September 24<sup>th</sup>, the patient reported that her hands and feet were not getting as cold anymore. Her hands would previously turn white from being so cold and now would seldom turn white. No other improvements were reported at that time. On October 3<sup>rd</sup>, the patient had reported her overall breathing had improved. She was sleeping better, was more alert during the day and no longer had stomach pain. Her coughing episodes were substantially reduced and her breathing at rest was not labored anymore. The patient did mention that she had been experiencing anxiety and depression, especially before bedtime. The doctor recommended her to start taking Wei Laboratories' Calm formula 1 capsule 3x a day with an additional 2 capsules before bed.

On October 8<sup>th</sup>, the patient reported having fewer episodes of anxiety and depression. She described feeling 180 degrees different and started to make plans to go outside. The coughing had subsided completely with significantly improved breathing. The patient did note that she was having some edema and swelling in the legs in which the doctor suggested her to add in Java formula to support lymphatic drainage.

On October 19<sup>th</sup>, the patient reported finally gaining weight. Her breathing was no longer a nuisance and had allowed her to go grocery shopping with her daughter over the weekend. Although her energy levels were much higher, the patient noticed that she still felt very fatigued at times throughout the day. There was a pattern of having good energy levels until the afternoon. She even had an episode with nausea and threw up. Even though the liver health should be much better at this point, the doctor felt that there may be other gram-negative bacteria in the liver and recommended adding Wei Laboratories' Bilegen, L-2, and L-3 formulas to further strengthen the liver's immunity and clear the liver infection by the gram-negative bacteria. The doctor also thought that there may be fungus in the liver and pancreas and a parasite in the bile duct and advised her to start taking Glymycin, Glymycin-R, Levera-R, and Paramin-R to reduce congestion of the liver and pancreas due to infections related to fungus and/or parasites.

After adding the additional liver support and infection clearing products, the patient reported exercising for 15 minutes in the morning and evening on November 2<sup>nd</sup>. Her energy levels have increased tremendously and she was ready to begin gym exercises. On November 14<sup>th</sup>, the patient noticed she was only experiencing coughing when she drinks cold temperature drinks due to it creating spasms because of her mixed connective tissue disease. The doctor recommended only consuming room temperature drinks. The doctor also increased her Vitamin C intake to 3000 mg per day. For the first time in 2 years, she now feels her energy is stable and has talked with her family to buy a car and start driving again.