

Self-Reliance in Health Course

Lesson 5 – Immune System/Viruses & Bacteria

The purpose of the immune system is to protect the body from disease causing organisms (pathogens) and foreign substances such as dust and chemicals (antigens). Pathogens include harmful viruses, parasites, some types of fungi and some types of bacteria. The immune system is not so much a system as many parts of the body working as a team to identify pathogens, devise a plan of attack and then communicate to other cells to destroy and remove. It works much like our own little military machine to prevent enemies from invading and if they do get past the first lines of defense “soldiers” are deployed to either remove or destroy them. With the combination of good nutrition (Lesson 1) and a healthy gut (Lesson 2), your immune system can work as it was designed to by our Creator.

First Lines of Defense

Skin

The first line of defense is the skin, which is a barrier between the outside world and our internal organs. It even produces certain chemicals that will kill pathogens as they come into contact with it. Antibacterial soap, hand sanitizer and other chemicals can destroy these protections so be mindful of what you put on your skin. You can purchase or make your own products that will only target harmful bacteria and leave your skin's protections to do their job.

- Make your own personal care products.
- Make your own cleaning products.

Eyes, Nose, Mouth, and Throat

- Eyes produce tears which flush out and can even kill certain pathogens.
- The nose contains hair that captures dust and germs and then produces mucus which breaks down and removes the pathogens.
- Saliva in the mouth will break down and kill pathogens which are then carried into the stomach where even more acid mixes with them, killing what may have been left.
- Mucus is also produced in the mouth, throat, lungs, and digestive tract to serve the purpose of capturing, breaking down, destroying where possible and then carrying away pathogens from the body. For this purpose, you should not use cough or mucus suppressant drugs so your body can eliminate the mucus which happens through coughing, blowing it out the nose and even swallowing it.

If pathogens make it through the first two lines of defense the internal components of the immune system are ready to kick in. These include the lymphatic system, white blood cells and friendly flora residing in the gut.

Lymphatic System

This system filters and removes waste, dead cells, toxins and pathogens through vessels and glands all over the body. It also produces hormones that aid in immune function. The lymph vessels do not have a pump like the blood so movement is important to keep this system flowing and preventing clogs, which are swollen nodes.

- Tonsils & Adenoids - trap pathogens and make antibodies which bind to toxins, disables them and aids in their removal. This is why you may get a sore/swollen throat when you aren't feeling well.
- Thymus - produce T-cells which are the "soldiers" that fight and destroy pathogens.
- Bone marrow – produces white blood cells which are the military force behind the immune system. They organize attacks, record invaders as an enemy for instant kill on future attacks, ingest and dispose of pathogens, produce antibodies which can bind to toxins or pathogens and then disables them.
- Spleen - acts as a large lymph node that filters the blood, removes pathogens, and stores half of the pathogen destroying white blood cells.
- Appendix – acts like the tonsils in trapping pathogens and producing antibodies.

Lymph Care:

- Build a strong nutritional foundation (Lesson 1).
- Exercise regularly. Jumping jacks and yoga are good ones for lymph flow.
- Drink purified and distilled water to keep the "pipes" clean.
- Avoid toxins as much as possible (Lesson 10).
- Avoid wearing tight clothing.
- Take deep breaths regularly.

Foods that Promote Lymph Flow:

- Green leafy vegetables
- Cilantro
- Parsley
- Fruits
- Flax and chia seeds
- Avocados
- Garlic
- Nuts

Stimulate and Cleanse Lymphatic System:

A sluggish lymph system can manifest as the obvious swollen or sore lymph nodes but can also show signs in the body as arthritic conditions, skin issues, digestive disorders, frequent headaches, sinus infection, excess weight and chronic fatigue. In addition to following the above suggestions for lymph care there are herbs that can help as well.

- Angelica
- Calendula
- Cleavers/Sweet Woodruff
- Dandelion

- Echinacea
- Garlic
- Hyssop
- Mullein
- Oregon grape root
- Yellow dock root
- Burdock root
- Red clover
- Thyme
- Dr. Christopher's Glandular Formula Lymph
- Massage with Glandular oil or plain olive oil.
- Alternating hot and cold packs.
- Lemongrass essential oil (apply over areas of concern with a carrier oil).
- Tapping or massaging any of the above over the chest where the thymus is located can stimulate that gland to produce and send out the "soldier" cells. Thyme can also stimulate this gland.

Microbiome

As we discussed in Lesson 2 on gut health, the friendly flora that reside in our gut are an important part of our immune system. They act like a little Pac Man, gobbling up the pathogens as Pac Man does the ghosts in the video game. Refer to Lesson 2 for how to heal, build and strengthen your microbiome.

Immune Responses in the Body

"Symptoms" that show the immune system is working on healing a problem in the body include:

- Scabs
- Swelling
- Bruising
- Excess mucus in sinus and lungs which would trigger coughing and sneezing.
- Stuffed or runny nose
- Sore throat
- Swollen tonsils and lymph glands
- Fever
- Aching bones and muscles
- Nausea and vomiting
- Etc.

All these symptoms are actually the body working to kill or dispose of a toxin, virus or bacteria and bring about balance. It is the immune system in our body that heals – everything else we do with food, herbs and other remedies are an aid to the body healing itself. If you use drugs to suppress these symptoms you will put a halt to the immune system function.

Individual Constitution

As mentioned in Lesson 1, each person is designed in a unique way and each of us have different lifestyles. All these factors determine how strong our immune system functions and how our body will react to pathogens.

Weakened Immunity:

- Poor nutrition
- Inadequate sleep
- Unhealthy habits – addictive substances.
- Pharmaceuticals
- Stress and anxiety
- Negative thoughts and emotions, including fear and anger.
- Negative, hard and heavy music

Strengthened Immunity:

- Meditation and prayer.
- Positive thinking, gratitude, and love.
- Uplifting, relaxing music (classical, meditation, Enya esc, etc).
- Exercise – reduces stress and strengthens the body.
- Diet full of whole foods, lots of fruits, veggies and herbs.
- Healthy microbiome

“Our thoughts influence our character, shape our attitudes, determine our behaviors, affect our spirituality, and even influence the immune system.” A Better Way to Think by Norman Wright

Build and Strengthen the Immune System

- Follow the factors just mentioned for strengthened immunity.
- Incorporate cultured foods and/or probiotics into the diet.
- Avoid refined sugar, it does the opposite and depresses the immune system.
- Avoid refined and processed foods and fast food. (A good rule to follow is 80% whole foods and 20% other foods).
- Make sure the digestive system is functioning correctly (Lesson 6). Average bowel movement at least once a day, coming out easily.
- Foods: arugula, asparagus, kiwi, mangoes.
- Carotene foods strengthen and protect the thymus and enhance white blood cell function. Dark greens, yellow and orange in color such as carrots, yams, orange squash, red peppers, dark green leafy vegetables.

Herbs & Formulas – take as daily tonics to prevent illness.

- Garlic
- Onion
- Blue fruits such as blueberry, huckleberry, and blackberries
- Elderberry

- Red raspberry leaf
- Alfalfa
- Red clover
- Dandelion
- Turmeric
- Golden Goodness Mix
<http://www.anniesplacetolearn.com/blog/golden-goodness-mix>
- Four Thieves
<http://www.anniesplacetolearn.com/blog/four-thieves-blend-antimicrobial-formula>
- Elderberry Syrup
<http://www.anniesplacetolearn.com/blog/elderberry-syrup-gone-wild>
- Dr. Christopher's Plague Remedy
<http://www.anniesplacetolearn.com/blog/plague-formula>

Adaptogenic herbs – improve immune response, enhances the body to adapt to stress, increase immune function, brings balance to the body.

- Licorice root
- Medicinal mushrooms: shitake, reishi, turkey tail, cordyceps
- Ashwagandha
- Astragalus
- Eleuthero
- Tulsi or Holy Basil
- Rhodiola
- Schisandra
- Turmeric

Immune Stimulants – at the very onset of any illness the following herbs will stimulate the immune system and increase its function.

- Echinacea
- Garlic (also works as an herbal antibiotic, killing pathogens)
- Ashwagandha
- Astragalus
- Medicinal mushrooms

Harmful (Pathogenic) Bacteria

Most of our bodies already contain many pathogenic bacteria, but in small enough numbers that the friendly flora keeps them from causing harm. If we become sick or have a weakened immune system (see list above), or our numbers of friendly flora are low and not being replenished, the pathogenic can get a hold on our system and we will then be dealing with a bacterial infection. At this point an antibiotic may be prescribed. A problem we now have is *antibiotic resistant bacteria*. Because of the overuse of antibiotics, and because they are chemically produced, not living, the bacteria are adapting to resist what once worked. In his book, *Herbal Antibiotics*, Steven Harrod Buhner states: "*Not only have the bacteria spread, not only have they learned antibiotic resistance, but they are increasingly learning how to survive environments that formerly*

would have killed them.” As each generation adapts and increases, they also become stronger and more intelligent.

Luckily, the Lord has provided everything we will ever need to live on earth and so he gave us His medicine – plants. They are also living, and they can think and adapt as well. The resistant bacteria cannot figure out the “code” of an herbal antibiotic because of how complex God designed them. Here is a list of herbal antibiotics that can be used to fight pathogenic bacteria:

- Black walnut hull (the green covering over walnuts on a black walnut tree)
- Cloves
- Echinacea root
- Eucalyptus (used in the form of essential oil)
- Garlic
- Ginger
- Oregon grape root
- Rosemary
- Sage
- Thyme
- Wormwood
- Usnea (algae-fungus that grows on the tops of trees in moist, cool areas)
- Honey (not a plant but still living)

Viruses

A virus is a microscopic pathogen that invades cells and then replicates itself until the cell bursts and spreads to other cells. The Latin meaning of the word virus is toxin or poison, which gives an idea why many diseases today are caused by them. I am giving a very brief overview of what a virus is and if you would like to learn more details, which there are many, I highly recommend the book *Herbal Antivirals* by Stephen Harrod Buhner.

Your immune system is the only thing that will destroy a virus in your body so working on building and strengthening your immune system is the best thing you can do so that when a virus invades, your body can immediately kick into action to attack and remove it.

All viruses are not designed the same but the treatment for them can be. The first step is the prevention mentioned above for a strong immune system. Most healthy persons will not even know they had a virus because the body took care of it before it became a problem. For those that start showing signs that there is a problem (symptoms in the body) I have found the following protocol to be helpful:

- Continue to strengthen the immune system by following preventive measures.
- Break down the protein coat covering the virus with protease enzymes.
- Take antiviral herbs to aid the body in destroying the virus.
- Detox the body to remove dead cell waste.
- Treat individual symptoms.

BREAK DOWN PROTEIN COAT WITH PROTEASE ENZYMES

Some viruses are nastier than others and will take a little more work to get through the protein coat protecting the virus. That is where protease enzymes come in. Protease enzymes break down or change the composition of proteins, which will break down that coat so the immune system can recognize the virus and start the attack process. Some protease enzymes are thought to improve inflammation (anti-inflammatory) and strengthen the immune system, so I highly recommend incorporating them in your diet. The following food contain protease enzymes:

- Pineapple
- Papaya - can also use papaya supplements.
- Kiwi
- Ginger
- Whole grains - sour dough bread
- Rejuvelac
- Sprouts - whole grains, nuts, and seeds
- Raw honey
- Kefir
- Kimchi/Kraut
- Dr. Christopher's Plague Remedy

ANTIVIRAL HERBS

Once the protein coat is dismantled and the virus is revealed, antiviral herbs would then be helpful in fighting the virus. Some of the best antiviral herbs include:

- Ginger
- Elder
- St John's Wort
- Licorice
- Pine tree
- Usnea
- Yarrow
- Dandelion
- Basil
- Garlic
- Oregano
- Black Walnut
- Plantain
- Thyme
- Lemon Balm
- Lomatium

DETOX

It is important to help the body remove the waste and toxins produced by the virus through the elimination passageways. Thus, herbs that assist the lymphatic system such as mullein, cleavers and calendula would be helpful. Drink plenty of fluids,

including distilled water and bone broth. Use the same herbs and remedies from the SWEEP OUT portion of the gut healing protocol in Lesson 2.

SYMPTOM TREATMENT

Viruses affect people differently and some viruses are known to target specific body systems. Once the protein coat has been broken down, antiviral herbs taken, and detox herbs flushing out the waste, it is time to focus on building and supporting the systems being affected. During this course we will be going over each body system and how to strengthen and support them with food, herbs and home remedies.

Assignment:

Evaluate what steps you need to take or changes you need to make in order to strengthen your immune system? Prepare one of the herbal remedies we discussed in this lesson in preparation for cold and flu season.

References

- A Better Way to Think by H. Norman Wright
- Herbal Antivirals by Stephen Harrod Buhner
- Herbal Antibiotics by Stephen Harrod Buhner
- The Herbal Academy
- School of Natural Healing: Family Herbalist