IMMUNE SYSTEM

LESSON 5



Self-Reliance in Health Course

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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 them. 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 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 protection system to do their job.

Eyes, Nose, Mouth, and Throat

- Eyes produce tears which flush out and can even kill certain pathogens.
- The nose contains hair that capture 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 disable 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 7)
- 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
Dandelion

Echinacea
Garlic
Hyssop
Mullein
Oregon grape root
Yellow dock root
Burdock root
Red clover
Thyme (herb, essential oil)
Dr. Christopher's Glandular Formula (recipe)
Massage with Glandular Formula made into an 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 oils, over the chest where the thymus is located can stimulate that gland to produce and send out the "soldier" cells.

Microbiome

As we discussed in Lesson 2 on gut health, the friendly flora that reside in the gut are an important part of the 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 the following:

- 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 the body working to kill or dispose of a toxin, virus or bacteria and bring about balance. It is the immune system in the 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 have different lifestyles. All these factors determine how strong each immune system functions and how each 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
- 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 (recipe)
Four Thieves Blend (recipe)
Elderberry Syrup (recipe)
Dr. Christopher's Plague Remedy (purchase as Super Garlic Immune or recipe below)

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 stimulant herbs will stimulate the immune system and increase its function when taken at the onset of any illness.

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 the number of friendly flora are low and not being replenished, the pathogenic can get a hold on the system resulting in bacterial infection. At this point an antibiotic may be prescribed. New issues have now emerged with *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.

Antibiotic Herbs

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 an herb but still living)
Four Thieves Blend (recipe)

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*.

The immune system is the only thing that will destroy a virus in the body, so working on

building and strengthening the immune system is the best thing you can do so that when a virus invades, the 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 people 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.

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

2. 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 (recipe)
Sprouts - whole grains, nuts, and seeds (recipe)
Raw honey
Kefir
Kimchi/Kraut
Dr. Christopher's Plague Remedy (recipe)

3. Take 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

Usnea
Yarrow
Dandelion
Basil
Garlic
Oregano
Black walnut
Plantain
Thyme
Lemon balm
Lomatium

4. Detox

It is important to help the body remove the waste and toxins produced by the virus through the elimination passageways.

- Herbs that assist the lymphatic system such as mullein, cleavers, and calendula.
- Redmond clay and Epsom salt bath. This could be a full bath or a foot bath. Make the water as hot as you can stand and drink plenty of fluids while soaking. Use 2 parts salt and 1 part clay.
- Drink a quart of Clay Water per day. 1 Tbsp Redmond Clay in a quart of water.
- 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.

5. Symptoms

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 Intermediate Herbal Course
- School of Natural Healing: Family Herbalist
- Immune: A Journey Into the Mysterious System That Keeps You Alive by Philipp Dettmer

Lesson 5 Formulas & Recipes

DR. CHRISTOPHER'S GLANDULAR FORMULA

3 parts mullein
1 part lobelia

I like to blend my mullein leaves in a blender before adding with the lobelia. Keep in an airtight container until ready to use. When treating swollen glands or lung conditions, it is best used as a fomentation. I like to place a hot water bottle over the fomentation and keep on as long as it stays warm. After taking off the fomentation I rub in some herbal oil or salve.

Cleanses and nourishes the glands and lymph organs of the body. Use for swollen glands, sore throat, tonsilitis, mastitis, thyroid malfunction, respiratory congestion, etc. Use as a tea, fomentation, capsule, or tincture. In addition to external application take 2 capsules or 2 droppers of tincture, 2-3 times a day or 2-3 cups of tea a day.

GOLDEN GOODNESS MIX

This blend of herbs can boost the immune system, strengthen and support the heart and digestive system, combat inflammation and joint pain, improve memory and brain function, help keep harmful viruses and bacteria that reside in the body at bay, and may even combat infection.

I like to mix a large amount up and keep a smaller container in my cupboard to whip up Annie's Tonic Brew each day or throw into smoothies, soup, or a batch of pancakes or waffles.

1 cup turmeric powder
¼ cup ginger powder
¼ cup cinnamon powder
4 tsp black pepper
2 tsp allspice
2 tsp nutmeg

ELDERBERRY SYRUP

1 part dried elderberries (or use half elderberries and half rosehips)
2 parts distilled water
raw honey

Bring water to a simmer over low heat and cover with a lid, not quite sealed, you want the steam to be able to escape. Simmer until the liquid has been reduced by half. Strain into a measuring bowl and add the same amount of raw honey as there is liquid. Stir until dissolved. Store in a glass container and keep in the fridge where it should last for 3 months or so.

Dosage:
For preventive measures you can take a tablespoon each day.
At the first sign of illness take a teaspoon every hour.

DR. CHRISTOPHER'S PLAGUE REMEDY (SUPER GARLIC IMMUNE)

Mix together the following herbs in a large bowl or container:
2 parts comfrey
1 part wormwood
1 part lobelia
1 part marshmallow root
1 part oak bark
1 part black walnut hull
1 part mullein
1 part skullcap
1 part uva ursi

Place the following liquids into a blender and blend until fully incorporated:
8 parts apple cider vinegar (use Bragg's brand or any kind with the mother)
5 parts vegetable glycerine
5 parts raw honey

Fill a jar ½ full of the herbal blend and cover with the liquid mixture. Stir well, allowing the herbs to absorb the liquids. Shake it up several times during the first day, adding more liquid as needed. Let the herbal tincture sit for 6 weeks on a counter or in a cupboard, shaking daily - if you remember. Strain the herbs at the end of the 6 week period and add 2 parts garlic juice (run garlic bulbs through a juicer).

Keep stored in a glass container in a cool, dark area. Dosage: The regular dosage for an adult would be 1 teaspoon, 3 times a day for prevention and 1 tablespoon each hour during illness. Although follow your body and take as often as needed.

Dr. Christopher had many stories of people using this remedy for all sorts of problems including colds, flu, congestion, infection, communicable diseases, even menstrual cramps and headache. One family used this remedy only for every ailment or problem with the body they encountered.

ANNIE'S TONIC BREW

This is my favorite way to enjoy the healing benefits of Golden Goodness mix. Dandy Blend offers liver support, cocoa powder antioxidants, and the other herbs are immune strengthening and antimicrobial. The perfect blend for a daily tonic.

Mix the following herbs in a mug:
2 tablespoons Dandy Blend (purchase at health food store or online)
1 tablespoon cocoa powder
1 teaspoon maca powder
½ teaspoon Golden Goodness Mix
½ teaspoon powdered mushrooms
½ teaspoon cinnamon
¼ teaspoon nutmeg or grate a fresh nutmeg on top
dash of Real salt
Pour in 1½ cups hot water and stir well.
Stir in 1 tablespoon of raw honey to taste.
Optional: ¼ cup raw cream

IMMUNE SYSTEM FORMULA

This is a powerful herbal antibiotic formula from Darcy Williamson in *Healing Plants of the Rocky Mountains*. She suggests taking in small frequent doses several times throughout the day. All these herbs are found all over the Rocky Mountain area as foraging plants.

4 parts arrowleaf balsamroot
2 parts lomatium
2 parts gumweed
1 part red clover