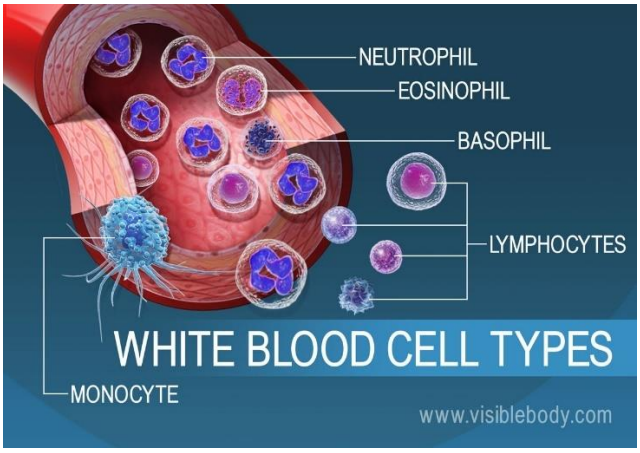
APLGO
Immune Support Kit - GRW, ALT, and AIR
With Amber Carroll and Mary Esther Gilbert
August 10, 2026

1. Most people only think about their immune system when they're sick. What is our immune system actually doing every day when we feel completely healthy?

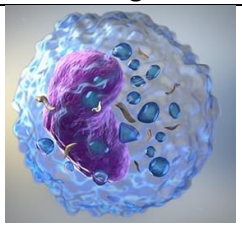
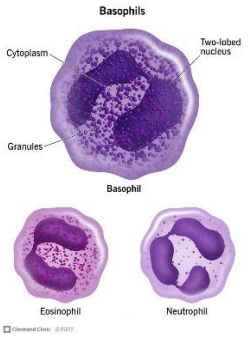
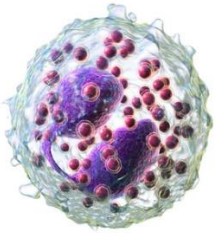
- The system of immune cells constantly monitors the body to:
    - Destroy and eliminate invasive, illness-causing microorganisms.
        - Parasites
        - Bacteria
        - Viruses
        - Fungi
    - Detect the presence of toxic, foreign chemicals and mobilize to eliminate them out of the body.
        - Processed foodstuffs containing chemical dyes, colorants, preservatives.
        - Synthetics in personal care items: cosmetics, hair and skincare, household cleaners that are exposed to the skin, through the lungs.
        - Industrial chemicals, environmental pollutants.
        - Drugs, alcohol, tobacco.
- Different immune cells (white blood cells) do different jobs:
    - Cleanse the system by breaking down and eliminating cellular debris such as spent, old, or sick cells, and destroyed microbial residues.
    - Patrol the body's tissues for abnormal foreign proteins or other antigens (any substance that triggers the body's immune system to make antibodies which destroy antigens).
    - Help regulate blood pressure and nutrients in the gut or lower intestine.
    - Monitor and block points of entry: skin, mucous membranes; and also activate enzymes that neutralize threats.
    - T-cells regulate, suppress abnormal responses such as preventing the immune system from attacking its own health tissues.
    - Staying adaptive in line with the body's circadian rhythms, important for maximizing immune readiness.

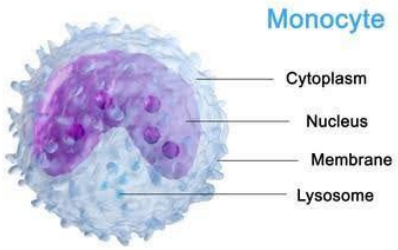
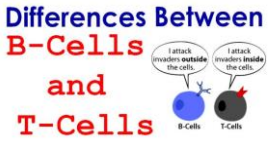
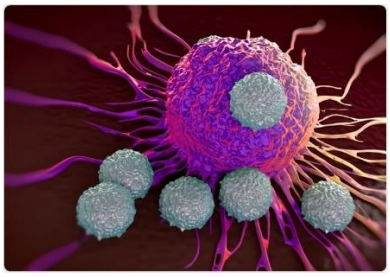
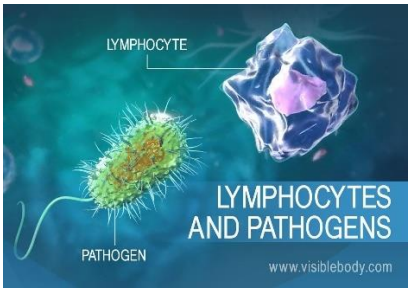
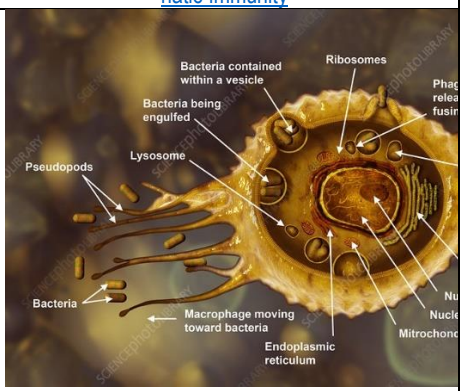
White Blood Cell Types of the Immune System

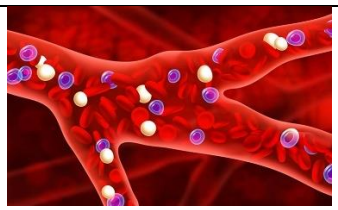


https://www.visiblebody.com/learn/lymphatic/lymphatic-immunity

Most immune cells are generated in the bone marrow, the soft, spongy tissue inside the bones. The soft, spongy tissue inside your bones contains special stem cells that build your immune system (Xu, 2024).

Immune Cell Type	Role in Immunity	Image
Neutrophils	Early responders. Reduce infections by consuming harmful microbials by engulfing and digesting (phagocytosis), unleash toxic enzymes to break down pathogen cell walls, or trap and kill pathogens to prevent their spread. (Nicholson, 2016)	 https://www.beckman.com/resources/cell-types/blood-cells/leukocytes/neutrophils
Basophils	Involved in reactions to allergens, parasitic infections. Release histamine to improve blood flow to damaged tissue. Release heparin to prevent unwanted blood clots. (Nicholson, 2016)	 https://my.clevelandclinic.org/health/body/23256-basophils
Eosinophils	Combat multicellular parasites, help control allergies and asthma. (Poon, 2020)	 Medical gallery of Blausen Medical 2014

Monocytes Mature as Macrophages or Dendritic Cells	Early responder. Are released into the blood in response to infection. Early mobilization slows down the spread of pathogens, trapping them locally, hindering their growth. (Nicholson, 2016)	 https://www.kauveryhospital.com/nightingale/monocytes-the-mysterious-cell-on-the-cbc/
Lymphocyte Sub-divided into T-Cells and B-Cells 	Infections not destroyed through phagocytosis are detected by lymphocytes. They function as adaptation and memory, remembering individual types of infection for faster, more effective subsequent counterattack. (Nicholson, 2016) T-Cells wipe out infected or cancerous cells. Help B cells eliminate pathogens. B-Cells create antibodies, proteins that neutralize and bind pathogens or foreign substances to keep them out of healthy cells to prevent infecting them. (Carter, 2021)	T-Cell  https://www.news-medical.net/health/What-are-T-Cells.aspx B-Cell  https://www.visiblebody.com/learn/lymphatic/lymphatic-immunity
Macrophage (Matured Monocyte)	Early responders. Produce toxic enzymes that kill, engulf, and digest pathogens (phagocytosis), and produce enzymes that disrupt their tissue. (Nicholson, 2016).	 https://www.sciencephoto.com/media/707745/view/macrophage-illustration

Erythrocyte	Red blood cells, contain hemoglobin, an oxygen-carrying protein from your lungs to your body and help transport carbon dioxide back. (Barbalato, 2022)	 https://www.hematology.org/education/patients/blood-basics
Platelets (thrombocytes)	Small cell protein fragments in the blood, help form clots, stop bleeding, heal wounds. Manufactured in the bone marrow. (Garraud, 2015)	 https://www.beckman.com/resources/cell-types/blood-cells/platelets

2. What are some of the early signs that someone's immune system may need more support? Are there clues our body gives us before we actually get sick?

- When under ***chronic stress***, impacts the immune system's ability to function efficiently.
    - Triggers impairments in molecular and immune modulation.
    - Impairs distribution and mobilization of immune cells in various organs and the blood (Alotiby, 2024).
- ***Chronic fatigue and ongoing systemic inflammation***, which exhausts and overtaxes the immune system (Linnros, 2026).
- ***Dysbiosis*** – altered, reduced amounts of beneficial gut microbiota, leading to:
    - Digestive issues of gas, bloating, diarrhea, since *much of the immune response tissues are located in the gut*.
    - Frequent infections.
        - Recurring colds or other, more serious respiratory conditions.
        - Chronic sinus problems.
        - Abscess – usually a bacterial infection, inflamed, painful, swollen pocket of pus indicating presence of white blood cell concentrations fighting the infection (Nouvenne, 2018).
- Slowed healing of wounds when immune cells are unable to repair tissues or eliminate bacteria or other microbes effectively (Davis, 2013).
- Skin outbreaks – rashes, lesions, fungal infections (Narayanan, 2025).

- Laboratory markers:
    - Low white blood cell count.
    - Elevated inflammatory cytokine proteins:
        - C-reactive protein (CRP) generated by the liver in the presence of inflamed conditions from infections or diseases such as heart disease (Singh, 2026).
        - Interleukin-6 (IL-6) – triggers fevers, involves the liver to aid in producing acute-phase proteins during infections and or injuries (Tanaka, 2014).
        - Tumor necrosis factor alpha (TNF-alpha) – a protein messenger generated by immune cells that triggers inflammation to handle infections, and control cell death (Jang, 2021).
    - Low immunoglobulins (IgG, IgA, IgM) showing deficient amounts of antibodies, Y-shaped proteins white blood cells produce to identify, neutralize or bind to, and eliminate foreign invaders (antigens) such as bacteria and viruses (Cleveland, 2022) (Forthal, 2014).

Five Types of Antibodies and Their Function

Antibody Type	Function
IgA	Found in saliva, tears, mucus, breast milk and intestinal fluid, IgA protects against ingested and inhaled pathogens.
IgD	This antibody is found on the surface of your B cells. Though its exact function is unclear, experts think that IgD supports B cell maturation and activation.
IgE	Found mainly in your skin, lungs and mucus membranes, IgE antibodies cause your mast cells (a type of white blood cell) to release histamine and other chemicals into your bloodstream. IgE antibodies can cause allergic reactions.
IgG	This is the most common antibody, making up approximately 70% to 75% of all immunoglobulins in your body. It's found mainly in blood and tissue fluids. IgG antibodies help protect your body from viral and bacterial infections.
IgM	Found in your blood and lymph system, IgM antibodies act as the first line of defense against infections. They also play a large role in immune regulation.

(Cleveland, 2022)

3. How important are managing stress and getting quality sleep when it comes to supporting a healthy immune system? If those are areas someone struggles with, what APLGO products do you typically recommend?

- Sleep improves immune cells' capacity to defend against infection and chronic inflammation.
- Sleep reduces risk of cardiac, neoplastic (abnormal tissue growth such as cancer), autoimmune, and neurodegenerative conditions (Garbarino, 2021).
- Sleep disruptions impair daily activities, work performance, and affect public safety.

- Sleep is essential for cognitive, affective, and behavioral processing:
    - Executive function, attention, memory.
        - Losing focus quickly, frequent mental lapses.
        - Holding and using new information becomes challenging.
        - Adapting to new plans or rules becomes more difficult.
        - Controlling impulses, avoiding risky choices is compromised.
        - Trouble switching between tasks.
    - Emotional regulation.
        - Feelings of anger, sadness, stress since brain emotional control centers are disrupted.
    - Interpersonal interactions.
      (Hyndych, 2025) (Sen, 2023) (Han, 2012) (Gilbert, 2024).

APLGO Botanicals in the Immune Kit Shown to Help Calm Reactions to Stress and Support Immune Functions for Quality Sleep and Rest

APLGO Lozenge	Botanical
AIR	**Aiding in Stress Reactions** **Maintaining Calm and System Efficiency** *Lycium* Berry (Goji Berry, Wolfberry) (*Lycium barbarum*) Maca Root (*Lepidium meyenii*) Black Currant (*Ribes nigrum*) Cranberry (*Vaccinium oxycoccos*) **Supporting Immune System Actions** Aloe Vera Leaf Gel (*Aloe vera*) Amla Berry Fruit (*Phyllanthus emblica* L.) Black Currant (*Ribes nigrum* L.) *Lycium* Berry (Goji Berry, Wolfberry) (*Lycium barbarum*) Vitamin C Vitamin D Zinc
ALT	**Aiding in Stress Reactions** **Maintaining Calm and System Efficiency** Astragalus (*Astragalus membranaceus*) Black Currant (*Ribes nigrum*) **Supporting Immune System Actions** Astragalus (*Astragalus membranaceus*) Eucalyptus (*Eucalypti*) Ginger Root (*Zingiber officinale*) Grape Seed (*Vitis vinifera*) Licorice Root (*Glycyrrhiza glabra*) Mangosteen (*Garcinia mangostana*)
GRW	**Aiding in Stress Reactions** **Maintaining Calm and System Efficiency** Ashwagandha Root (*Withania somnifera*) Astragalus Root *(Astragalus membranaceus)* Bilberry (*Vaccinium myrtillus*) Black Currant (*Ribes nigrum*) **Supporting Immune System Actions** Aloe Vera Leaf Gel (*Aloe vera*) Ashwagandha Root (*Withania somnifera*) Astragalus Root *(Astragalus membranaceus)* Balsam Pear Fruit (Bitter Melon) (*Charantia momordica*) Cranberry *(Vaccinium macrocarpon)* Husk Tomato, Ground Cherry (*Physalis pruinosa*) Husk Tomato, Ground Cherry (*Physalis pruinosa*) Purple Cone Flower Root (*Echinacea purpurea*) Reishi Mushroom (*Ganoderma lucedum*)

(Gilbert, 2024)

- Other APLGO lozenges contain many more antimicrobial, anti-inflammatory, antioxidant nutrient factors, and therefore aid in how the body reacts to stress, and positively affect sleep quality:

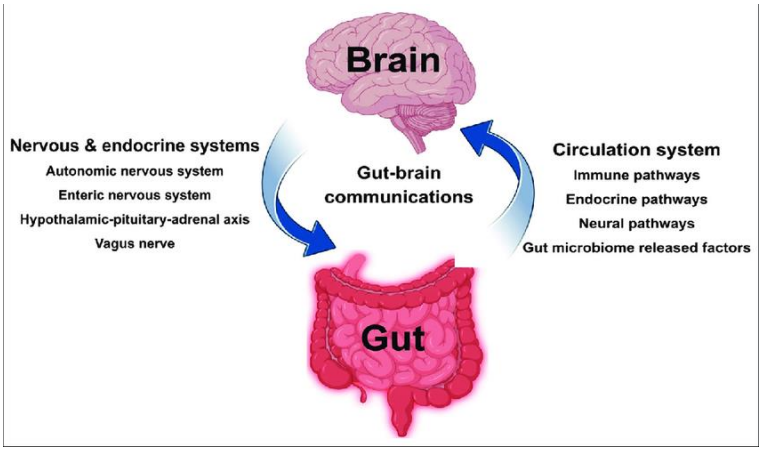
    - BRN – ashwagandha root, asparagus root, bilberry, coffee, turmeric root, damiana leaf, Asian (*Panax ginseng*) root, Siberian ginseng root (*Eleutherococcus senticosus*), water hyssop leaf.
    - BTY – ashwagandha root, Siberian ginseng root, turmeric root, water hyssop leaf.
    - GTS – ashwagandha root, Siberian ginseng root, water hyssop leaf.
    - HPY -- ashwagandha root, banana, hemp seed, passion flower leaf, sea buckthorn berry, turmeric root.
    - HPR – Turmeric root.
    - HRT – hawthorne flower, white mistletoe leaf, grape seed.
    - MLS – cinnamon bark, coriander seed, black currant, mandarin fruit, turmeric root.
    - NRM – Siberian ginseng root.
    - PFT – turmeric root.
    - PWR Apricot – apricot, ashwagandha root, asparagus root, damiana leaf.
    - PWR Lemon – ashwagandha root, damiana leaf, Asian *Panax ginseng* root.
    - RLX – ashwagandha root, banana, Siberian ginseng root, lettuce, passion flower leaf.
    - SLD – turmeric root.
    - STP – ashwagandha root, cherry, raspberry, turmeric root.

    (Gilbert, 2024)

4. One thing I hear all the time, and I've probably even said it myself, is that so much starts with our gut. Is that also true when it comes to our immune system? How closely are the two connected?

The bidirectional communication between the gut and the brain is also influenced by immune, endocrine (glandular/hormonal), and neural pathways, as well as the autonomic nervous system, enteric (intestines) nervous system, hypothalamic-pituitary-adrenal glands axis, and vagus nerve (Sun, 2023).

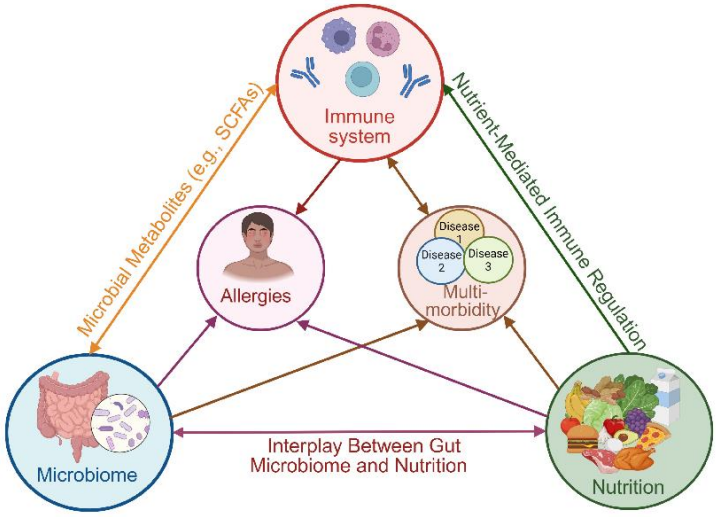
Bidirectional Communication Between Gut and Brain and Other Pathways



Research Gate Creative Commons 2023

The Triad Balance of Health Resilience for the Immune/Gut/Brain Pathway

- There is a critical relationship between nutrition, gut microbiome, and immune system balance.
- Metabolite signaling: gut bacteria break down dietary fiber into short-chain fatty acids (SCFAs) that reduce inflammation and regulate immune functions.
- Disruption in the Triad's interconnected system can lead to immune dysregulation.
- Immune dysregulation can lead to chronic inflammation and allergic disorders (Andreou, 2025).



(Andreou, 2025)

- In their two-way relationship, gut microbes in the digestive tract “train” immune cells, control inflammation, and maintain barrier integrity, while the host immune system oversees the gut microbial balance.

- Dysbiosis or disruptions in this axis can result in systemic disease, resulting in chronic inflammation or immune system disorders.

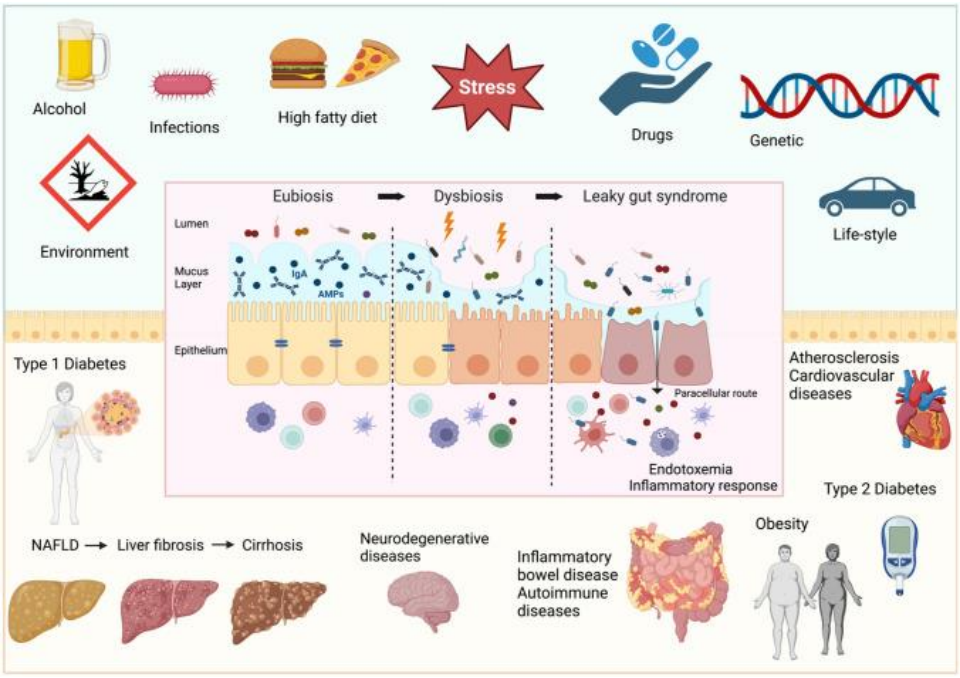
    - Dysbiosis increases vulnerability to infections, allergies, and autoimmune reactions well beyond the gut.

- Immune cell training: beneficial bacteria in the gut guide growth and balance of T-cells that suppress excessive inflammation.

    - Poor microbial balance between pro-inflammatory and anti-inflammatory immune T-cells can contribute to inflammatory bowel disease (IBD) and other inflammatory conditions.

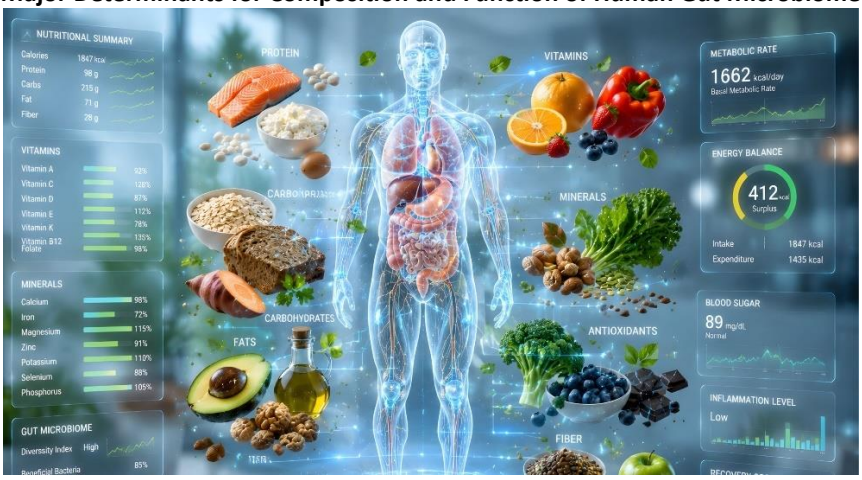
- Barrier defense: a single layer of intestinal epithelial cells protected by a layer of mucus and tight junctions (intestinal permeability) stop harmful microbials from entering the deep tissues.

    - Poor microbial balance damages the tight junctions that can lead to “leaky gut”.



(Di Vincenzo, 2024)

Complete and Biologically Correct Nourishment –
Major Determinants for Composition and Function of Human Gut Microbiome



https://www.gutmicrobiotaforhealth.com/species-level-food-specific-associations-predicted-in-a-cohort-of-10068-people-may-guide-personalized-nutrition/

5. Our Product of the Month is the Immunity Kit, and I think one question people have is, "How do I actually use it?" Should I think of ALT, AIR, and GRW as part of my everyday immune support routine, something to reach for when I'm feeling run down, or a little bit of both?

- First, understand that the body needs a full range of nutrients to function and thrive.
- The Immunity Kit is a highly nourishing set of plant complexes the body's trillions of cells can use to the fullest extent every day to maintain, repair, and continue to make healthy cells.
- ALT, AIR, and GRW can be an important part of your daily nutrient-oriented immune system maintenance.
- The Immunity Kit contains a vast array of phytonutrients or phytochemical complexes the body recognizes as completely biocompatible and therefore are able to integrate into the body's cellular functions toward maintaining a stronger, more capable immune system.
- The Kit contains nutrient factors for aiding and maintaining true cell energy production to be truly energized sustainably.
- Sleep, hydration (purified spring water), exercise, sunlight, and a whole food nutrient-balanced daily diet is critical to fully enjoy the health benefits to which the APLGO drops significantly contribute.
- The Immunity Kit can become an important routine in your nutritional health management.

6. Mary Esther, I've been wanting to ask you this for a while because I kind of stumbled onto what I now call my little "HRT hack." One time I was feeling under the weather and decided to reach for HRT, even though it's not one of my everyday drops. Since then, it's become one of my go-to products anytime I feel like I'm coming down with something. I've even recommended people try reaching for HRT early, and I've heard some really encouraging feedback from associates and customers.

HRT contains very efficient immune-enhancing nutrient factors, especially in its hawthorne flower, white mistletoe leaf, and sea buckthorn berry.

- Hawthorn flower:
    - Found to reduce the excitability of the nervous system while improving its functioning.
    - Tonify heart muscles, improve circulation in blood vessels in the brain, and improve the contractile function of heart.
    - Shown to improve maximal workload and increase exercise tolerance, reduce oxygen consumption by the heart and reduce shortness of breath and fatigue.
- White mistletoe leaf:
    - Found to improve fluid regulation and allow the blood vessels to relax appropriately while lowering levels of C-reactive protein (CRP) molecules (which presence indicate inflammation of some type).
    - Shown to improve functioning of all types of immune cells and be toxic to tumor cells (cytotoxicity).
    - Antioxidant activity of its phenolic compounds is mainly due to their ability to destroy or neutralize free radical molecules by donating single electrons to counter oxidative (degenerative) stress.
- Grape seed:
    - Helps increase the number of red blood cells and oxygen-carrying hemoglobin, important for good energy levels.
    - Grape seeds are 40 times more effective than vitamin C in the fight against free radicals that damage cell structures, which cause premature aging and inflammatory diseases.
    - Rich in omega 3, 9 fatty acids and monounsaturated fatty acids, flavonoids, phytosterols, tannins resveratrol and proanthocyanidins, and phytoncides that enhance immune killer cell functions.

That got me wondering...if someone starts feeling under the weather but doesn't have the Immunity Kit yet, what other DNA Drops could they reach for that may be supportive while they're building their collection? And what is it about the botanicals in HRT that makes it one of the products that comes to mind?

Here are the lozenges that are listed in item 3 above, and as shown in item number 6 above, HRT and all other drops also contain plant compounds (phytochemicals/phytonutrients) in their botanicals known to protect and aid immune system functioning.

- BRN – ashwagandha root, asparagus root, bilberry, coffee, turmeric root, damiana leaf, Asian (*Panax ginseng*) root, Siberian ginseng root (*Eleutherococcus senticosus*), water hyssop leaf.
- BTY – ashwagandha root, Siberian ginseng root, turmeric root, water hyssop leaf.
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- SLD – turmeric root.
- STP – ashwagandha root, cherry, raspberry, turmeric root (Gilbert, 2024).

And the Finale just for fun quick one: Mary Esther, let's end with a fun one. Finish this sentence: "You'll catch a cold if you..." What's one of the biggest myths people still believe, and what's actually happening?

You're more likely to catch a cold if:

1. You eat junk food, hate vegetables, and have too many all-nighters.
2. You try to be a vegan. After a time, your body will scream for a ***complete protein*** that can only be derived from meat and other animal-derived food, i.e., all 9 essential amino acids are present all at once.
3. Your immune system is a weakling and think you can risk it or think you're too tough to put on a jacket.
4. Getting chilled. It really is one way one can catch a cold (or worse) since a lowered body temperature provides an opportunity for cold viruses to make themselves at home.
5. **You have never had APLGO drops!**

Myths (Kind of)

- Going outside when it is cold, although one is more likely to catch a virus during winter since viruses survive best in lower temperatures.

- Going outside with wet hair, getting feet wet, going out in the rain. The cold weather is not the cause itself; it depends on your body's chill tolerance or immune status.
(Brown, 2023)

Facts

- A common cold is an infection of the upper respiratory tract, caused by exposure to one of many viruses on various surfaces and from someone else's infection.

    - Direct contact to a surface that has the virus on it can last a few hours to several days.

        - Influenza virus lasts 24-48 hours on hard surfaces like plastic and stainless steel, and less than 12 hours on soft items like cloth or tissues.
        - A common cold virus (Rhinovirus) lasts up to a full day on hard surfaces, and about 4 hours on soft materials.
        - A stomach virus (Norovirus) may survive on hard surfaces and carpets for days or weeks if not disinfected well.

    - Airborne exposure to droplets from a cough or a sneeze.

    - Sharing items with an infected individual (clothes, utensils, blankets).

- If you do not maintain a **healthy triad balance**, it weakens the immune system and makes catching a cold more probable. Be mindful of doing the following:

    - Eat nutrient-dense whole foods, balancing ***essential nutrients*** from the synergistic food categories.

    - Eat a daily consistent diet of balanced nutrients and potent nourishment to establish a ***healthy gut environment*** that:

        - Maintains billions of aerobic (oxygen-loving) essential bacteria that guide the immune cells and is monitored by the brain-gut-immune system communication pathways.
        - Maintains clear, unobstructed, unimpaired communication pathways for optimal ***immune system efficiency*** (Brown, 2023)

More Facts – Susceptibility, Exposure, Health Status

- Factors influencing susceptibility to a cold due to compromised immune response:
    - Crowding and sociability.
    - Physical and psychological stress.
    - Smoking and alcohol.
    - Lowered immune status.
    - Sex, age.
    - Disrupted or irregular sleep habits.
    - Season
    - Chilling
    - Poor nutrition and lack of exercise.

- Laboratory experiments involving chilling have failed to demonstrate effect of cold weather exposure as a cause of a virus infection. However, experiments are criticized as not representing a "real life" situation.

- A live test subject could have a subclinical infection that can surface when the body, particularly the pharynx and tonsils, get intensely chilled, leading to resistance to infection (Eccles, 2023).

- The increase in hospitalizations and mortality occur during winter months for respiratory infections.

- Exposure to cold environmental temperatures and hypothermia have been shown to increase the risk of developing upper and lower respiratory tract infections.

- It has been found that the longer the duration of the exposure, the higher the risk of infection.

- Most available evidence from laboratory and clinical studies indicate that inhaled cold air, cooling of the body surface, and cold stress from lowered core body temperature leads to:
    - Vasoconstriction in the respiratory tract mucosa.
    - Suppression of immune responses, increasing infection susceptibility.

  (Mour, 2007)

Nurturing and Nursing Yourself Back to Health
Kicking a Cold to the Curb in 3 Days

- Stay warm.
- Stay hydrated: purified spring water.
- Hot tea.
- Feed a cold; starve a fever
    - Make homemade, nutrient-rich broths, soups, or stews.
    - Eat hearty, nutrient-dense meals containing:
        - Red meat, poultry, Arctic-caught fish.
        - Root vegetables, beans, steamed whole grains.

        - All other vegetables, raw or lightly steamed.
        - Leafy greens, herbs, spices.
        - Fresh fruits and berries.
- Sleep, sleep, sleep.
- **Take your APLGO drops to help arm your immune system and soothe your throat.**

Reference

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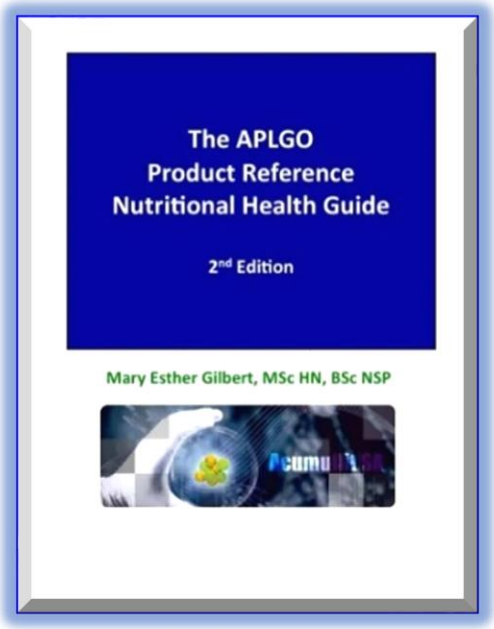

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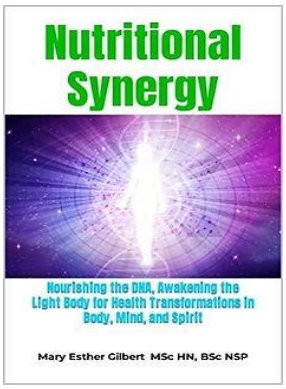

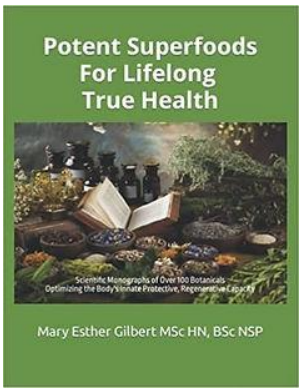

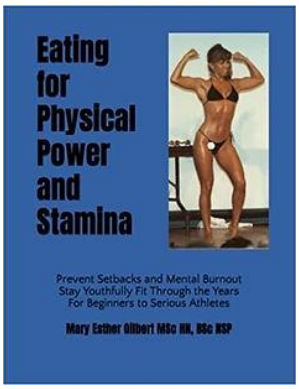

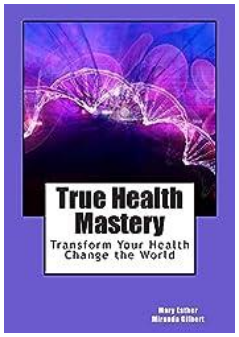

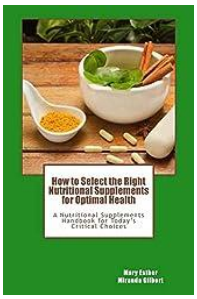

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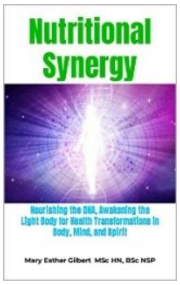

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