APLGO Longevity Kit
Q & A with Sherry Denny and Mary Esther Gilbert, MSc HN, BSc NSP
August 11, 2025

1) What are the 15 lozenges included in our Longevity Kit? **BTY, GRW, GTS, LFT, PFT, MLS, AIR, ALT, RLX, HPR, SLD, STP, NRM, BRN, HRT**

2) Would you expand briefly about the main purpose of each one?

AIR: Immune and Detoxification Support: This lozenge provides vital support for a healthy immune system. It also assists your body's natural ability to remove toxins, contributing to a cleaner internal environment.

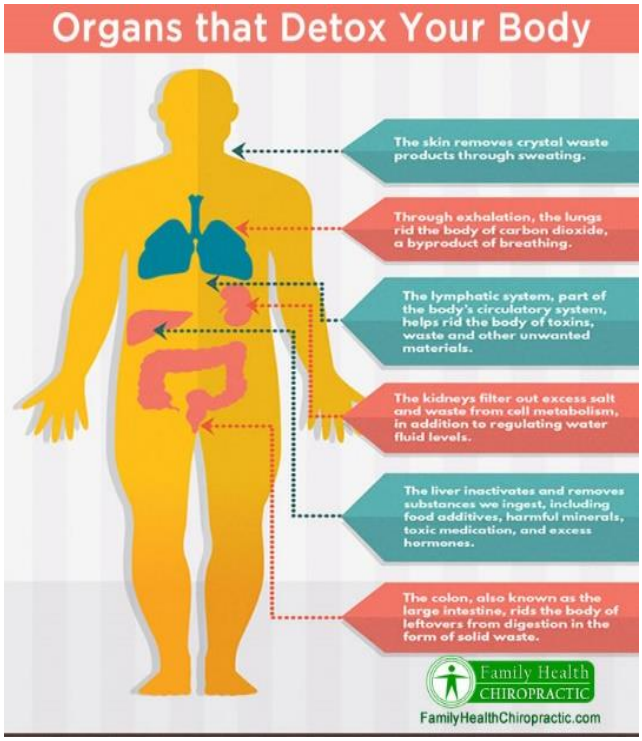
Detoxification is the process of the body clearing itself of toxic metals, pesticides, water and soil pollutants, industrial chemical runoffs, microplastics, drug residues, synthetic chemicals in consumer products, metabolic wastes and the toxic effects of stress.

The body eliminates toxins through its eliminative channels or organs: lungs, skin, lymph nodes and vessels, kidneys, and bowels (Gilbert, 2024).

The **immune system** produces various types of white blood cells or immune cells. All blood cells, including immune cells, are produced beginning with stem cells in the bone marrow (hematopoiesis), where they are differentiated into the various immune cells, which migrate to the specific organs and tissues. Lymphocytes (B and T cells) and phagocytes (T cells) are produced in the bone marrow.

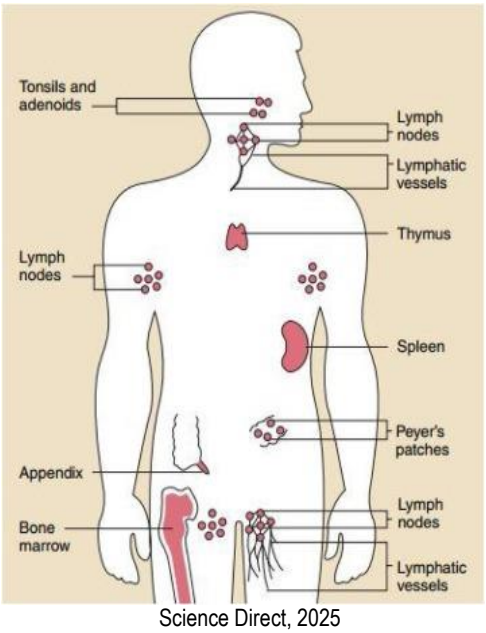
When the immune system senses foreign substances (antigens), the B lymphocytes generate antibodies known as immunoglobulins, proteins that identify and neutralize pathogenic microbials (bacteria, viruses, etc.). Immunoglobulins include: IgG, IgM, IgA, IgE, and IgD (Janeway, 2001).

Detoxification Systems



Family Health Chiropractic 2025

Immune System



Science Direct, 2025

Phytonutrients In AIR Found to Assist the Body's Immune System and Detoxification Channels

Contain Phytonutrients That Help the Body Eliminate Toxins	Contain Phytonutrients That Aid Immune System Actions
Aloe Leaf (Gel)	Ashwagandha Root
Apple	Dandelion Root
Artichoke Leaf	Ginseng, Siberian Root
Avocado	Grape Seed
Chamomile, German, Flower	Green Tea Leaf
Dandelion Root	Lemon
Grape Seed	Licorice Root
Green Tea Leaf	Magnolia Vine Fruit (*Schisandra*)
Licorice Root	Meadowsweet Leaf
Magnolia Vine Fruit (*Schisandra*)	Milk Thistle Seed
Milk Thistle Seed	Pomegranate Seed
Pomegranate	Rowanberry
Turmeric	Strawberry (Wild)
Water Hyssop	Turmeric

ALT: Environmental Defense and Respiratory Health: ALT helps bolster your body's normal ability to defend against environmental factors. It promotes a healthy immune response, fosters a feeling of vitality, and supports healthy upper respiratory function.

When the body is able to clear toxins from its systems on a regular basis, the immune system is better able to rid itself of foreign substances and protect the body from illness and impaired cellular functioning.

When nutrient substances from a variety of botanicals such as contained in the ALT are circulating in the body, their synergistic actions can result in producing more energy, improving mental and physical capacity, and therefore experiencing higher vitality.

Removes Toxins	Supports Immune System, Respiratory Support
Astragalus	Astragalus
Ginger Root	Black Currant
Grape Seed	Eucalyptus
Green Tea Leaf	Ginger Root
Licorice Root	Grape Seed
Mangosteen	Green Tea Leaf
	Licorice Root
	Mangosteen
	Rowanberry
	Skullcap Root

(Gilbert, 2024)

BRN: Cognitive Clarity and Brain Health: Packed with essential nutrients, BRN is formulated to support cognitive clarity and overall brain health. It can assist with everyday learning, thinking, mental alertness, and aid in managing mental stress, helping to alleviate anxious and sad feelings.

A highly nourished brain and nervous system means the accurate delivery of chemical and electrical impulse communications between our body systems. The delivery of proper signaling also means the retaining/storing of information learned.

The biochemicals in BRN's botanicals are shown to improve those communications, through aiding in the proper functioning of our glands in the brain that release the hormones that govern emotions and how we perceive and react to stress.

A properly functioning brain and nerve network in communication/cooperation with the glandular/hormonal system has been shown to help with cognition, self-understanding and introspectiveness, and enhance the capacity for deeper thinking.

Improved cognitive thinking, human qualities of higher awareness, elevated perspectives, and quality interpersonal interactions can be the result of optimal cellular nourishment for the brain, its glands, and the body's vast nerve network.

Brain, Nervous System Protective and Normal Functioning	**Mental Functioning, Cognition, Memory**	**The Brain's Glandular Functioning (Hypothalamic-pituitary-gonadal Axis), Psychological Emotions, Stress**
Apple	Apple	Apple
Ashwagandha Root	Ashwagandha Root	Ashwagandha Root
Asparagus Root	Asparagus Root	Asparagus Root
Bilberry	Bilberry	
Caffeine (Green coffee bean)	Caffeine (Green coffee bean)	Caffeine (Green coffee bean)
Turmeric Root	Turmeric Root	Turmeric Root
Damiana Leaf	Damiana Leaf	Damiana Leaf
Ginger Root	Ginger Root	Ginger Root
Ginkgo Leaf	Ginkgo Leaf	Ginkgo Leaf
Ginseng Root, Asian (*Panax ginseng*)	Ginseng Root, Asian (*Panax ginseng*)	Ginseng Root, Asian (*Panax ginseng*)
Green Tea Leaf	Green Tea Leaf	Green Tea Leaf
Magnolia Vine Fruits	Magnolia Vine Fruits	Magnolia Vine Fruits
Ginseng, Siberian (*Eleutherococcus senticosus)*	Ginseng, Siberian (*Eleutherococcus senticosus)*	Ginseng, Siberian (*Eleutherococcus senticosus)*
Water Hyssop Leaf (*Bacopa monnieri*)	Water Hyssop Leaf (*Bacopa monnieri*)	Water Hyssop Leaf (*Bacopa monnieri*)

(Gilbert, 2024) (Olas, 2024) (Uddin, 2016) (König, 2024) (Francis, 2024) (Spanoudaki, 2024) (Arcusa, 2022) (Saenghong, 2012) (Brüggemann, 2021) (Woelk, 2007) (Akbarialiabad, 2021) (Sowndhararajan, 2018) (Panossian, 2010)

BTY: Skin, Hair, and Cellular Renewal: BTY promotes normal skin and scalp health, enhancing hair vitality. It supports the immune response and cellular renewal, leading to improved skin texture, brightness, and elasticity.

Protecting the integumentary system consisting of skin, hair, nails, and glands can mean providing the cells of those systems with the restorative nutrient factors found in the botanicals of BTY. Those regenerative functions include restoring cell structures back to normal after injury or regenerative impairments due to circulatory obstructions caused by toxins or abnormal, inflammatory conditions preventing proper cell replication.

A properly nourished, alert immune system directs the cleansing and elimination of damaged cellular debris, alleviating causes of inflammation and allowing better nutrient delivery to the cells for healthy tissue regeneration.

Maintaining and renewing cells and their inner structures for youthful elasticity requires proper hydration and normal production of the lubricating skin secretions. This is accomplished with biologically correct dietary fats and proteins with complete amino acid profiles, as well as whole food vitamin and mineral complexes, active enzymes, and the all-important phytochemical complexes such as those found in BTY's botanicals.

Those anti-aging, antioxidant phytochemical plant compounds (aka phytonutrients) are known for aiding in the effective delivery of nutrients and oxygenation. They also help regulate the body's acid/alkaline balance that prevents inflammation, and helps sustain cell pliability and resiliency associated with more firm and youthful skin.

Skin (Integumentary System) Cellular Repair, Wound Healing, Tissue Regeneration, Cell Structure Maintenance, Elasticity, Anti-Aging	**Immune Response Anti-Inflammatory Anti-Microbial**	**Improving Circulation, Clearing Toxins Antioxidant**
Aloe Vera Leaf	Aloe Vera Leaf	Aloe Vera Leaf
Apple	Apple	Apple
Artichoke Leaf	Artichoke Leaf	Artichoke Leaf
Ashwagandha Root	Ashwagandha Root	Ashwagandha Root
Avocado	Avocado	Avocado
Chamomile, German, Flower	Chamomile, German, Flower	Chamomile, German, Flower
Dandelion Root	Dandelion Root	Dandelion Root
Ginseng, Siberian, Root (*Eleutherococcus senticosus)*	Ginseng, Siberian, Root (*Eleutherococcus senticosus)*	Ginseng, Siberian, Root (*Eleutherococcus senticosus)*
Grape Seed	Grape Seed	Grape Seed
Green Tea Leaf	Green Tea Leaf	Green Tea Leaf
Lemon	Lemon	Lemon
Licorice Root	Licorice Root	Licorice Root
Magnolia Vine Fruit	Magnolia Vine Fruit	Magnolia Vine Fruit
Meadowsweet Leaf	Meadowsweet Leaf	Meadowsweet Leaf
Milk Thistle Seed	Milk Thistle Seed	Milk Thistle Seed
Pomegranate Seed	Pomegranate Seed	Pomegranate Seed
Rowanberry	Rowanberry	Rowanberry
Strawberry, Wild	Strawberry, Wild	Strawberry, Wild
Turmeric Root	Turmeric Root	Turmeric Root
Water Hyssop Leaf	Water Hyssop Leaf	Water Hyssop Leaf

(Gilbert, 2024) (Mintie, 2020) (Mierczak, 2024) (Boyer, 2004) (Hyson, 2011) (Porro, 2024) (Mikulska, 2023) (Henning, 2022) (Marra, 2024) (Sah, 2022) (Yang, 2015) (Kos, 2025) (Zhou, 2022) (Gao, 2021) (Chen, 2024) (Ciganovic, 2019) (Cerulli, 2022) (Jia, 2023) (Pannakal, 2023) (Emadi, 2022) (Chakkalakal, 2022) (Sarv, 2020) (Sun, 2024) (Michalak, 2022) (Kasprzak-Drozd, 2024) (Zirmire, 2024)

GRW: Immune Enhancement and Overall Well-being: GRW is designed to enhance the body's natural immune response. It supports healthy hair, skin, and nails, benefits mood, and contributes to an overall sense of well-being. It also assists the body in its healthy inflammatory response and helps support against disease.

The immune system requires the complete range of known essential nutrients to maintain its own intelligence or the correct instructions, which like all cells, are housed in their DNA genetic codes. The hormonal system generates the biochemicals such as signaling proteins and certain enzymes that carry messages to start and stop the body's innumerable cellular processes, including inflammatory reactions.

The phytochemical compounds in GRW's botanicals have been shown to help the immune system attenuate inflammatory responses by neutralizing and eliminating abnormal and foreign molecules (free radicals), while helping the cells in the affected various body systems use those nutrient factors to repair and correct cellular malfunctioning at the DNA level.

The delivery of these biologically correct molecules detected and identified by the DNA and allowed entry into the cells is key to restoring proper functioning associated with improved health. The plant compounds in GRW and other drops have been shown to help provide the fundamental molecules (coenzymes, cofactors, fundamental nutrient building blocks) that support DNA repair as a result of the damage recognition pathways.

With an abundance of nutrient factors, the cells receive what they need to restore correct cell functions and eliminate the adverse impact that occurs in nutrient-deficient conditions. Providing the body with an array of phytonutrients and other essential nutrients through the daily diet includes being able to manufacture the over 10,000 regulating hormones the body requires to function, including hormones that influence growth, repair, and regeneration.

Hormones are the directors for the perpetual generation of new cells, including cells that compose the integumentary system: hair, skin, nails, and glands and their secretions. A highly nourished glandular system is the prerequisite for producing the right balance of hormones, such as those produced by the thyroid, which governs a person's moods, sense of well-being, metabolism, and energy levels, and even the blood sugar regulating hormones insulin and glucagon, produced by the pancreas.

Immune System	**Hormonal System**
Aloe Leaf Gel	Aloe Leaf Gel
Ashwagandha Root	Ashwagandha Root
Astragalus Root	Astragalus Root
Balsam Pear Fruit	Balsam Pear Fruit
Bilberry	Bilberry
Cranberry	Cranberry
Currant	Currant
Husk Tomato, Ground Cherry	Husk Tomato, Ground Cherry
Olive, European, Leaf	Olive, European, Leaf
Pomegranate Seed	Pomegranate Seed
Purple Cone Flower Root	Purple Cone Flower Root
Reishi Mushroom	Reishi Mushroom
Rowanberry	Rowanberry

(Gilbert, 2024) (Rahmani, 2015) (Chu, 2011) (Pires, 2020) (Thimoteo, 2017) (Horie, 2021) (Oi-Kano, 2013) (Novika, 2024) (Lee, 2024) (Uti, 2025) (Higbee, 2022)

GTS: Energy, Vitality, and Stamina: This lozenge is a powerhouse for enhancing energy, vitality, and endurance. GTS supports overall health and well-being, helps maintain the body's natural metabolic balance, and boosts natural physical and mental stamina.

The ongoing energy production process that occurs within our micro cell environment requires that a wide array of essential nutrients be present, including the all-important phytochemical compounds in the plant kingdom, known for their many health-protective benefits.

Those benefits include aiding the immune, hormonal, and nervous systems, as well as clearing circulatory pathways of toxins and cellular debris via the body's eliminative or detoxification channels: the skin, kidneys, lymph nodes and vessels, lungs, and bowels.

In order to consistently have greater physical stamina and mental energy, and to maintain the emotional calm that serves to better meet life challenges, all body systems must be clear of foreign pathogens or substances to fully make use of all nutrients.

Daily habits of regular, adequate sleep, staying constantly hydrated and highly nourished, and staying physically active or fit creates the synergistic result of consistent energy, vitality and true health vibrancy.

Cell Energy Production, Stamina, Anti-Stress, Antioxidant	**Circulation, Metabolism**
Ashwagandha Root	Aloe Leaf (Gel)
Balsam Pear Fruit	Astragalus Root
Cranberry	Currant
Currant	Olive, European, Leaf
Rowanberry	Pomegranate Seed
	Purple Cone Flower Root
	Reishi Mushroom
	Bilberry
	Husk Tomato, Ground Cherry
	Cranberry

(Gilbert, 2024) (Chan, 2020) (Aurori, 2024) (Alam, 2015) (Blumberg, 2015)

HPR: Natural Detoxification Support: HPR supports the body's natural detoxification processes through its various elimination channels. It helps you feel reborn and achieve that healthy, vibrant glow.

Cleansing the body of toxic foreign substances and metabolic byproducts via its circulatory and detoxification channels requires providing it daily with the effective antioxidant nutrient factors present in the plant kingdom; namely, those in the HPR.

The plant phytochemical complexes in HPR botanicals have been shown to bind molecularly to foreign toxic substances, thus neutralizing their cell-damaging effects and making it possible to be eliminated through the body's eliminative channels: skin, lungs, kidneys, lymph, and bowels.

Detoxification, Antioxidant	Improved Metabolism, System Normalization
Artichoke, Globe, Leaf	Artichoke, Globe, Leaf
Avocado	Milk Thistle Seed
Dandelion Root	Raisin
Milk Thistle Seed	Turmeric Root
Peach	
Raisin	
Turmeric Root	

(Gilbert, 2024) (Olas, 2024) (Jabczyk 2021) (de Freitas, 2024)

HRT: Cardiovascular Health and Circulation: HRT enhances your body's response to exercise and assists with maintaining normal blood pressure. It supports the body's natural circulatory process and helps protect heart health.

Protecting the cardiovascular system means providing the critical nutrients known to maintain strong, pliable cell structures of the heart muscle and blood vessels to facilitate fluctuations in blood pressure. With every beat, the heart must be able to pump volumes of oxygenated, nutrient-rich blood throughout the entire network of blood vessels down to the tiniest capillaries.

This requires a full array of nutrient factors shown to facilitate those vital functions, including the array of vital phytochemical compounds in the botanicals contained in the HRT formulation.

Protective Antioxidants, Anti-Inflammatory, Circulation	Blood Vessels, Heart Functions, Blood Pressure
Grape Seed	Grape Seed
Hawthorn Flower	Hawthorn Flower
Mistletoe, White, Leaf	Mistletoe, White, Leaf
Pomegranate Seed	Pomegranate Seed
Raspberry	Raspberry
Strawberry, Wild	Strawberry, Wild

(Gilbert, 2024) (Malheiros, 2022)

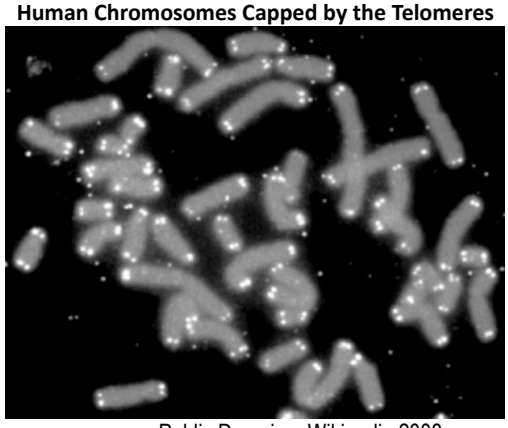
LFT: Cellular Health and Rejuvenation: LFT lozenges deliver essential vitamins and minerals crucial for cellular health. They promote vitality and contribute to a youthful appearance by supporting wellness at the cellular level.

The botanicals in LFT have been shown to improve the condition of the body's telomeres, the protective endcaps of the chromosomes that prevent DNA damage. The length of the telomeres indicates the state of health and functioning of our cells.

Shorter telomeres are linked to aging and increased diseased conditions. The longer telomeres are associated with healthy cell conditions. The abundant antioxidant phytochemical complexes in LFT's botanicals have been shown to prevent the shortening of telomeres resulting from damage caused by oxidative stress or oxidative chemical reactions.

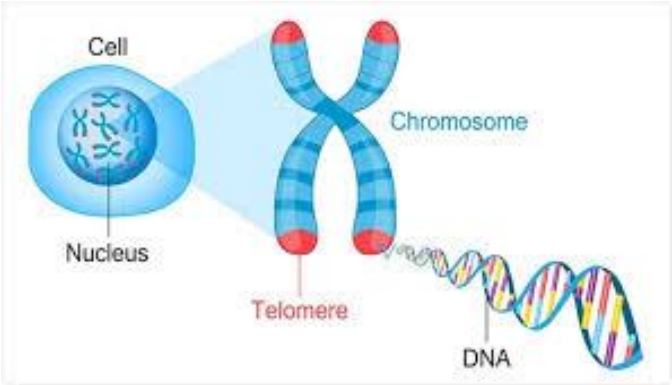
Oxidative stress normally occurs during the body's metabolic processes where free radical molecules produced under nutrient-deficient conditions or psychological stress exert damage on our cells, such as reactive oxygen species (ROS). The antioxidant phytochemicals in LFT have been shown to counteract and stop molecular damage to telomeres (Gilbert, 2024).

Human Chromosomes Capped by the Telomeres



Public Domain – Wikipedia 2008

Telomeres Help Ensure DNA Replication is Accurately Performed



News-Medical.net

Antioxidant, Anti-Inflammatory, Proper Cell Replication	Energy Production, Metabolism, Circulation, Immune Cell Actions
Black Pepper	Black Pepper
Japanese Knotweed (Root)	Japanese Knotweed (Root)
Milk Thistle (Seed)	Milk Thistle (Seed)
Pomegranate (Fruit)	Pomegranate (Fruit)
Red Grape (Fruit)	Red Grape (Fruit)
Rosemary (Leaf)	Rosemary (Leaf)
Siberian Larch (Bark)	Siberian Larch (Bark)
Spirulina	Spirulina
Turmeric (Root)	Turmeric (Root)

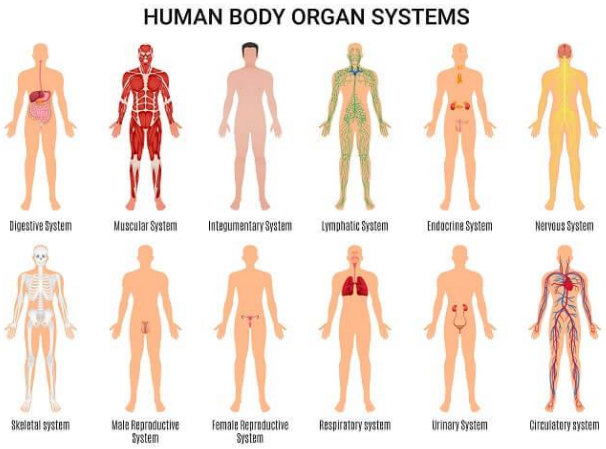
(Gilbert, 2024) (Gilbert, 2024 – LFT Summary - pdf) (Gilbert, LFT Monograph, 2024) (Fallah, 2021) (Laurindo, 2022)

MLS: Gastrointestinal Health and Wellness: MLS supports normal gastrointestinal health and enhances the effects of a healthy lifestyle. It provides a feeling of overall well-being, offers nutritional support, and helps maintain healthy elimination.

The botanicals in MLS contain a vast array of phytochemical compounds shown to prevent cellular malfunctions through their antioxidant, anti-inflammatory, anti-microbial, detoxifying, cell-structure repairing and supporting activities.

The many nutrient factors in the botanicals have been found to improve circulation, metabolism, digestion, improve immune cell functions and neutralize free radicals.

Extensively researched in the scientific community worldwide for many years, these phytonutrient complexes in MLS have been shown to improve cellular functions in virtually every body system.



Metabolism, Detoxification, Immune System, Antioxidant, Anti-Inflammatory	**Digestive System, Respiratory System, Cardiovascular - Circulation, Nervous System**
Artichoke Leaf	Artichoke Leaf
Carnation, Seed (Clove)	Carnation, Seed (Clove)
Chamomile, German, Flower	Chamomile, German, Flower
Cinnamon Bark	Cinnamon Bark
Coriander Seed	Coriander Seed
Cranberry	Cranberry
Currant, Black	Currant, Black
Dandelion Root	Dandelion Root
Fenugreek Seed, Common	Fenugreek Seed, Common
Ginger Root	Ginger Root
Grapefruit	Grapefruit
Licorice Root	Licorice Root
Mandarin	Mandarin
Papaya	Papaya
Pumpkin Seed	Pumpkin Seed
Purple Coneflower Root	Purple Coneflower Root
Sweetie, Oro Blanco	Sweetie, Oro Blanco
Thyme Leaf	Thyme Leaf
Turmeric Root	Turmeric Root

(Gilbert, 2024) (Blumberg, 2016) (Tiwari, 2023) (Fan, 2023) (Shaukat, 2015) (Shi, 2024)

NRM: Metabolic Balance and Energy Levels: NRM supports overall vitality and health, with a particular emphasis on improving metabolic balance. It enhances energy levels and helps support normal blood sugar levels.

In order to maintain normal blood sugar levels, there must be a balance and proper proportions of the whole food macro nutrients, as well as an array of very important plant chemicals known as phytonutrients or phytochemicals. These categories include:

- Complete amino acid profile proteins
- Raw fresh, whole plant foods containing an array of mineral and vitamin complexes.
- A balance of whole food omega-3 fatty acids and animal-derived fats.
- Unaltered, unprocessed whole food carbohydrates:
    - Simple carbohydrates: fresh fruits and berries
    - Complex carbohydrates: starchy root vegetables, 100% whole grains or sprouted, and beans and legumes.

Providing the body with the complete range of all known essential nutrients in the right bioavailable molecular forms, rather than in their chemically or high heat-altered molecular formations, is the foundation for establishing proper cell and therefore organ system functioning.

This means efficiently converting ingested foods into energy, including the correct uptake of glucose out of the bloodstream by pancreatic insulin, and properly utilizing glucose to fuel the cellular work that keeps the body going.

Energy Production, Maintaining Proper Biochemical Balance, Fat and Sugar Metabolism, Cardiovascular System	**Digestive Tract, Accessory Organ Functioning Antioxidant, Anti-inflammatory, Immune System, Nervous System**
Apple	Apple
Balsam Pear Fruit	Balsam Pear Fruit
Fenugreek, Common, Seed	Fenugreek, Common, Seed
Ginseng, Siberian, Root	Ginseng, Siberian, Root
Gumar Leaf	Gumar Leaf
Lychee	Lychee
Malabar Tamarind, Fruit	Malabar Tamarind, Fruit

(Gilbert, 2024) (Hyson, 2011) (Richter, 2023) (Liu, 2021)

PFT: Metabolism and Digestive Function: PFT aids the body's metabolism, which is responsible for burning calories. It promotes slimming and the maintenance of muscle mass, and is designed to help normalize gastrointestinal tract function.

Maintaining or stepping up the metabolic rate, or the rate at which the body utilizes nutrients to efficiently produce energy and carry out the cells' multiple trillions of processes, requires a synergy of regular exercise, and nutrient-rich, balanced nourishment.

In order for the body to continue to produce energy required to fuel the entire body's massive cellular work of building new cells of tissues, fluids, structures and signaling and messenger proteins, a balanced

electrical polarity of negative and positive charges that perpetuate the use of fuel sparked by enzymes in whole foods containing essential nutrient and phytochemical complexes, is vital. The Acumullit SA technology of APLGO increases negative ion actions in its drops, aiding the body's energy production cycle and regenerative actions.

The botanicals in PFT contain the phytochemical complexes that actually have been shown to help the body use its fat stores for converting to energy, thus allowing it to relinquish those body fat stores, including visceral and subcutaneous fat.

Fat and Sugar Metabolism, Energy Production	**Circulation, Digestion, Detoxification, Immune System, Hormonal System, Anti-inflammatory, Antioxidant**
Aloe Leaf (Gel)	Aloe Leaf (Gel)
Barley Seeds	Barley Seeds
Bird Pepper - Pod Pepper	Bird Pepper - Pod Pepper
Brown Algae	Brown Algae
Ginger Root	Ginger Root
Horseradish Tree (Leaf)	Horseradish Tree (Leaf)
Malabar Tamarind, Fruit	Malabar Tamarind, Fruit
Psyllium Husk (From Plantain Seeds)	Psyllium Husk (From Plantain Seeds)
Turmeric Root	Turmeric Root
Beetroot Extract (Root Pulp)	Beetroot Extract (Root Pulp)
Tomato Extract (Fruit Pulp)	Tomato Extract (Fruit Pulp)
Thiamine (Vitamin B1)	Thiamine (Vitamin B1)
Riboflavin (Vitamin B2)	Riboflavin (Vitamin B2)
Niacin (Vitamin B3)	Niacin (Vitamin B3)
Pyridoxine (Vitamin B6)	Pyridoxine (Vitamin B6)
Chromium Picolinate	Chromium Picolinate

RLX: Relaxation and Emotional Wellbeing: RLX supports normal relaxation and healthy sleep patterns. It enhances mental focus and clarity, helps maintain emotional well-being, supports a healthy stress response, and promotes mental calmness.

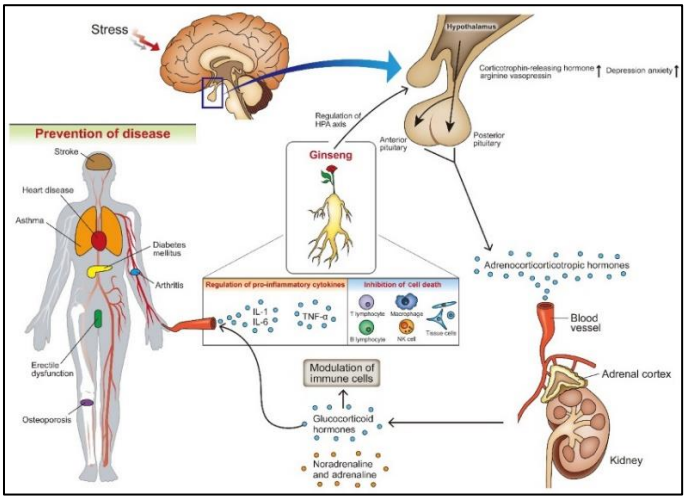
The **glandular systems** that regulate stress responses as well as healthy sleep patterns rely on the proper nutrients required for their functions such as producing and releasing hormones into the system. The pineal gland in the brain, for instance, releases the hormone melatonin, which helps regulate sleep-wake cycles (the Circadian rhythm) and which levels rise in response to darkness, and decrease when light increases.

Endocrine glands involved in releasing hormones under stress reactions:

- Hypothalamic-Pituitary-Adrenal (HPA) Axis - releases inflammatory stress hormones such as cortisol.
- Adrenal glands - release epinephrine (adrenaline), norepinephrine, and cortisol.
- Glands of the liver and spleen (Smalinskiene, 2011).

- Psychological stress leads to reduction in hepatic blood flow, and may result in liver injury of its cell mitochondria and endoplasmic reticulum (Joung, 2019).
- Impaired immune system functions under stress affect anxiety levels and production of stress reactions such as the damaging free radical reactive oxygen species (ROS), an elevation of cytokine inflammatory protein mobilizations, and producing and releasing the stress chemicals norepinephrine and corticosterone (Jiang, 2017).

Stress Hormones Released Through the Glandular System

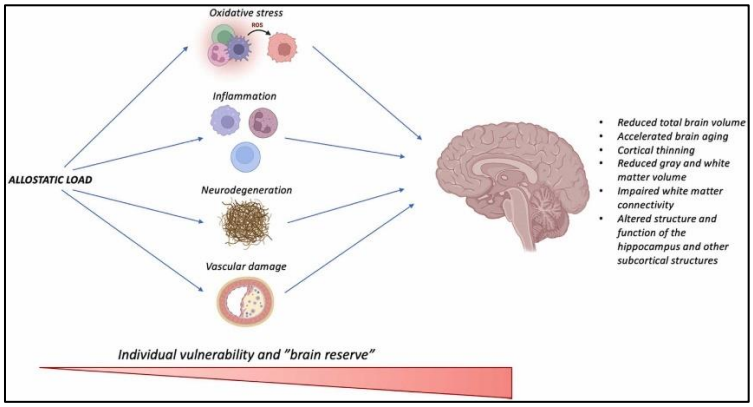


(Lee, 2017)

The **nervous system,** responding to signals from the hypothalamus, thalamus, brainstem, limbic system (amygdala and hippocampus), and prefrontal cortex, plays a role in wakefulness or sleep. In order to better handle stress, the cells in these systems must receive the right nutrients in order to properly communicate and signal in concert.

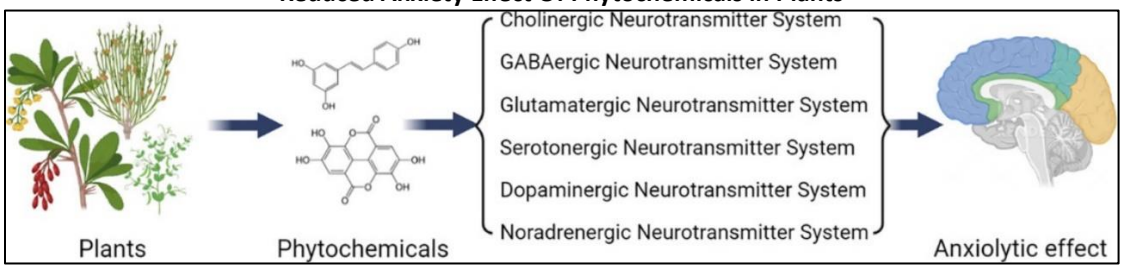
- The central nervous system responds to stressors detected via signals from other systems.
- Autonomic nervous system normally, directly responds via its signals from the sympathetic (fight or flight response) and parasympathetic systems which tasks are to counter stress reactions, yet with prolonged stress conditions, can become overwhelmed.

Stress Affecting the Brain



(Lenart-Bugla, 2022)

Reduced Anxiety Effect Of Phytochemicals in Plants



(Phootha, 2022)

The **immune system** is also involved during stress reactions, but with chronic stress present, it can become suppressed, affecting the cardiovascular, respiratory, gastrointestinal, musculoskeletal, and reproductive systems.

- Studies show that chronic stress may increase risk of infections, heart disease and cardio output, and hypertension, diabetes, obesity, and cancer, and may have an impact on brain health.
- Research also shows that environmental and other pollutants and toxins also impact physiological stress responses (Alotiby, 2024).

The ability to relax involves the homeostasis or biochemical balance that is achieved through full-range nourishment, particularly the nutrients that aid cellular functions in the above aforementioned body systems, and with the aid of relaxation techniques, engaging in pleasant or meaningful activities, stress can be made under control (Chu, 2024).

Endocrine (Glandular-Hormonal) System	Nervous System	Immune System, Anti-Inflammatory
Ashwagandha Root	Ashwagandha Root	Ashwagandha Root
Banana	Banana	Banana
Chamomile, German, Flower	Chamomile, German, Flower	Chamomile, German, Flower
Ginseng, Siberian, Root	Ginseng, Siberian, Root	Ginseng, Siberian, Root
Lettuce	Lettuce	Lettuce
Passion Flower Leaf	Passion Flower Leaf	Passion Flower Leaf

(Gilbert, 2024) (Burns, 2023) (Phootha, 2022) (Smalinskiene, 2011) (Joung, 2019) (Jiang, 2017) (Chu, 2024) (Lenart-Bugla, 2022)

SLD: Joint, Muscle, and Skeletal Support: SLD is a carefully chosen blend of ingredients intended to support the body's joints, muscles, and skeletal system. It can help alleviate discomfort from overexertion or daily aches.

It is of prime importance to nourish the connective tissues since they connect all bones, muscles, and joints. Without them, all of our physical movements would be impossible. Since bones, muscles (including cardiac muscle), joints, and in fact the entire body are composed of cells that compose all tissues, structures, and fluids, all cells need optimal and regular nourishment.

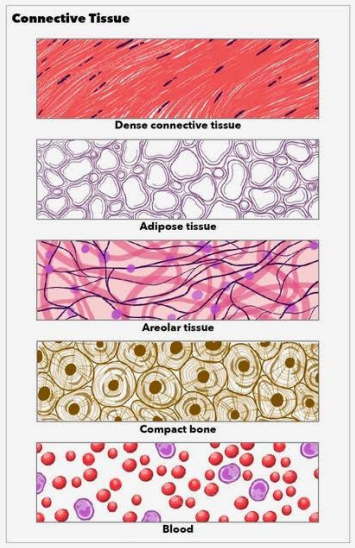
Additionally, exercise along with total nourishment stimulates a growth response in these tissues that keeps their cells replicating properly and maintains structural support and easy movements. Well-

nourished connective tissues results in proper functioning and protection against nutrient-deficient erosion (Gilbert, 2024).

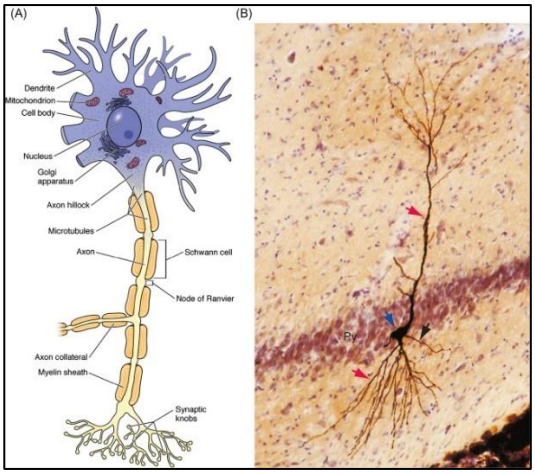
Connective tissues include:

- Dense connective tissues: tendons, ligaments, skin, and elastic walls of arteries.
- Bone: protects vital organs.
- Blood and lymph fluids facilitate the movement of essential nutrients and other vital molecules.
- Cartilage provides cushioning against impact and support.
- Adipose (fat) tissue cushions and insulates.
- Lymph provides movement or transport of immune cells to remove waste and harmful substances.
- Nerve fibers consisting of three connective tissue layers comprise the protective myelin sheath that covers the entire nerve cell.

(Gilbert, 2024) (Kamrani, 2025)

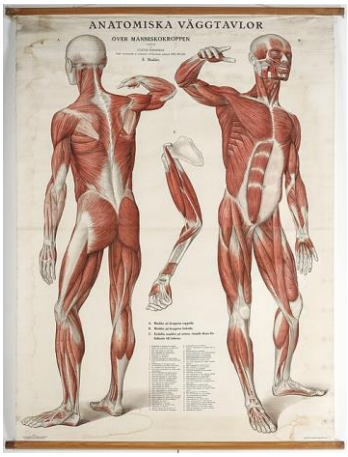


(Kamrani, 2025)



https://byjus.com/biology/nervous-tissue/

Tendons



Creative Commons – Wikimedia 2025
https://commons.wikimedia.org/wiki/Category:Muscular_system#/media/File:Gustaf_Wennman-Anatomical_poster.jpg

Protecting Connective Tissues, Maintenance, Repair	Anti-Inflammatory, Antioxidant, Immune System
Balsam Pear Fruit	Balsam Pear Fruit
Ginger Root	Ginger Root
Grapple Plant Root	Grapple Plant Root
Green Tea Leaf	Green Tea Leaf
Licorice Root	Licorice Root
Strawberry, Wild	Strawberry, Wild
Turmeric Root	Turmeric Root

(Gilbert, 2024) (Abas, 2014) (Seyed, 2024) (Vital, 2024) (Pransanth, 2019) (Wu, 2024)

STP: Repair and Recovery Support: STP is formulated to stimulate the body's natural repair processes and supports recovery from exercise and exertion, helping you bounce back stronger.

The immune system plays a vital role in protecting the processes of repair and regeneration of the body's cells, and therefore its tissues. The various immune cells which specific tasks are to attenuate inflammation and allow regenerative work to occur first require an array of essential nutrients that nourish and promote optimal functioning of the immune system itself.

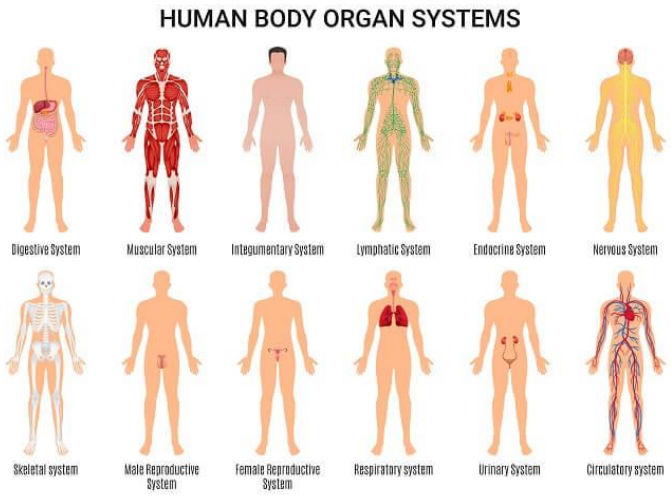
A highly nourished nervous system is vital for detecting inflammation and sending pain signals that alert the person of injury, malfunction, or depletion, while the hormonal system receives the impulse transmissions and proceeds to regulate the cellular processes that signal cells to do the repair and maintenance work for their tissues.

Repair, Regeneration, Restorative	Immune System, Anti-inflammatory, Antioxidant
Ashwagandha Root	Ashwagandha Root
Cherry	Cherry
Ginger Root	Ginger Root
Grapple Plant Root	Grapple Plant Root
Licorice Root	Licorice Root
Pod Pepper (Cayenne)	Pod Pepper (Cayenne)
Raspberry	Raspberry
Turmeric Root	Turmeric Root

(Gilbert, 2024) (Gxaba, 2022) (Fatima, 2024)

3) What is the Synergistic Power of the Longevity Kit?

It provides the most diversified array of vital phytochemical complexes from every single botanical contained in the drops. This means the body receives a thorough amount of nutrient factors it can immediately use to help ensure the proper functioning of cells that compose *all body systems*. Living longer in the higher realms of true health may be accomplished when the entire body is consistently optimized through a vast range of potent, biologically correct, nutrient-dense cellular nourishment.



Biology Dictionary 2025

4) In a nutshell, would you concur that the Longevity Kit helps your body achieve a state of optimal balance?

Absolutely. The diversely beneficial plant compounds that are preserved in their active ionic state allows the body's trillions of cells to help the body maintain its biochemical equilibrium or homeostasis so it can perform all life processes without impairment, and to handle any unforeseen disruptions efficiently to bring it back to its normal processes where all systems are functioning in optimal conditions.

5) Would you agree the advanced Acumullit SA® technology ensures that these botanical compounds are delivered in a highly bioavailable form, where their natural negative charge can interact with your cells, helping to neutralize disruptions and support the body's innate ability to heal and thrive?

Yes, it is the storm simulation technology that increases the antioxidant potencies of the light-energy-active plant materials by increasing the negatively charged ions at the sub-molecular level. The body's own dynamic electrical transmissions can always utilize negative ions to increase its own cellular actions of nutrient utilization, fuel production, anabolic and catabolic enzyme actions that perpetuate its trillions of cellular processes that keep us alive and well.

6) So, would you agree that this holistic approach empowers your body to not just function, but to flourish, supporting a vibrant and long-lasting state of health?

Yes. The only way to perpetuate life is to provide the body with molecularly compatible fuel sources that are electrically charged—ingesting viable, energy-enzyme-active, whole food complexes, both through the daily diet and the APLGO drops!

Our living, ever changing biochemistry also requires sunlight, physical movement or regular exercise that increases circulation to optimally distribute oxygen and nutrients and rid the body of pathogens and toxins to which we are regularly exposed.

A holistic approach to health management covers every aspect of what it means to be truly healthful.

Mary Esther, Please take a few minutes and talk about how people can get your book and how to connect with you.

See pages 16-19 of this document.

Reference

Abas R, Othman F, Thent ZC. Protective effect of Momordica charantia fruit extract on hyperglycaemia-induced cardiac fibrosis. *Oxid Med Cell Longev*. 2014;2014:429060. doi: 10.1155/2014/429060. Epub 2014 Oct 13. PMID: 25371774; PMCID: PMC4211142. https://pmc.ncbi.nlm.nih.gov/articles/PMC4211142/.

Akbarialiabad H, Dahroud MD, Khazaei MM, Razmeh S, Zarshenas MM. Green Tea, A Medicinal Food with Promising Neurological Benefits. *Curr Neuropharmacol*. 2021;19(3):349-359. doi: 10.2174/1570159X18666200529152625. PMID: 32469701; PMCID: PMC8033961. https://pmc.ncbi.nlm.nih.gov/articles/PMC8033961/

Alam MA, Uddin R, Subhan N, Rahman MM, Jain P, Reza HM. Beneficial role of bitter melon supplementation in obesity and related complications in metabolic syndrome. *J Lipids*. 2015;2015:496169. doi: 10.1155/2015/496169. Epub 2015 Jan 12. PMID: 25650336; PMCID: PMC4306384. https://pmc.ncbi.nlm.nih.gov/articles/PMC4306384/.

Alotiby A. Immunology of Stress: A Review Article. *J Clin Med*. 2024 Oct 25;13(21):6394. doi: 10.3390/jcm13216394. PMID: 39518533; PMCID: PMC11546738. https://pmc.ncbi.nlm.nih.gov/articles/PMC11546738/.

Arcusa R, Villaño D, Marhuenda J, Cano M, Cerdà B, Zafrilla P. Potential Role of Ginger (*Zingiber officinale* Roscoe) in the Prevention of Neurodegenerative Diseases. *Front Nutr*. 2022 Mar 18;9:809621. doi: 10.3389/fnut.2022.809621. PMID: 35369082; PMCID: PMC8971783. https://pmc.ncbi.nlm.nih.gov/articles/PMC8971783/#ref-list1

Aurori, M., Niculae, M., Hanganu, D., Pall, E., Cenariu, M., Vodnar, D. C., Fiţ, N., & Andrei, S. (2024). The Antioxidant, Antibacterial and Cell-Protective Properties of Bioactive Compounds Extracted from Rowanberry (*Sorbus aucuparia* L.) Fruits In Vitro. *Plants*, *13*(4), 538. https://doi.org/10.3390/plants13040538. https://www.mdpi.com/2223-7747/13/4/538.

Blumberg JB, Basu A, Krueger CG, Lila MA, Neto CC, Novotny JA, Reed JD, Rodriguez-Mateos A, Toner CD. Impact of Cranberries on Gut Microbiota and Cardiometabolic Health: Proceedings of the Cranberry Health Research Conference 2015. Adv Nutr. 2016 Jul 15;7(4):759S-70S. doi: 10.3945/an.116.012583. PMID: 27422512; PMCID: PMC4942875. https://pmc.ncbi.nlm.nih.gov/articles/PMC4942875/#:~:text=A%20limited%20but%20growing%20body,of%20fully%20characterized%20cranberry%20products.

Boyer J, Liu RH. Apple phytochemicals and their health benefits. Nutr J. 2004 May 12;3:5. doi: 10.1186/1475-2891-3-5. PMID: 15140261; PMCID: PMC442131. https://pmc.ncbi.nlm.nih.gov/articles/PMC442131/#:~:text=Apples%20are%20a%20widely%20consumed,and%20processing%20on%20apple%20phytochemicals.

Brüggemann P, Sória MG, Brandes-Schramm J, Mazurek B. The Influence of Depression, Anxiety and Cognition on the Treatment Effects of *Ginkgo biloba* Extract EGb 761® in Patients with Tinnitus and Dementia: A Mediation Analysis. *J Clin Med*. 2021 Jul 16;10(14):3151. doi: 10.3390/jcm10143151. PMID: 34300317; PMCID: PMC8307082. https://pubmed.ncbi.nlm.nih.gov/34300317/

Bugla, M., Szczesniak, D., Bugla, B., Kowalski, K., Niwa, S., Rymaszewska, J., Misiak, B. The association between allostatic load and brain: A systematic review. *Psychoneuroendocrinology*. Volume 145. 2022. 105917. ISSN 0306-4530. https://doi.org/10.1016/j.psyneuen.2022.105917. https://www.sciencedirect.com/science/article/pii/S030645302200258X.

Burns J. Common herbs for stress: The science and strategy of a botanical medicine approach to self-care. *J Interprof Educ Pract*. 2023 Mar;30:100592. doi: 10.1016/j.xjep.2022.100592. Epub 2022 Dec 10. PMID: 36530213; PMCID: PMC9737923. https://pmc.ncbi.nlm.nih.gov/articles/PMC9737923/.

Cerulli, A., Masullo, M., Montoro, P., & Piacente, S. (2022). Licorice (*Glycyrrhiza glabra*, *G. uralensis*, and *G. inflata*) and Their Constituents as Active Cosmeceutical Ingredients. *Cosmetics*, *9*(1), 7. https://doi.org/10.3390/cosmetics9010007

Chakkalakal M, Nadora D, Gahoonia N, Dumont A, Burney W, Pan A, Chambers CJ, Sivamani RK. Prospective Randomized Double-Blind Placebo-Controlled Study of Oral Pomegranate Extract on Skin Wrinkles, Biophysical Features, and the Gut-Skin Axis. *J Clin Med*. 2022 Nov 14;11(22):6724. doi: 10.3390/jcm11226724. PMID: 36431201; PMCID: PMC9699032. https://pmc.ncbi.nlm.nih.gov/articles/PMC9699032/.

Chan SW, Tomlinson B. Effects of Bilberry Supplementation on Metabolic and Cardiovascular Disease Risk. *Molecules*. 2020 Apr 3;25(7):1653. doi: 10.3390/molecules25071653. PMID: 32260262; PMCID: PMC7180827. https://pmc.ncbi.nlm.nih.gov/articles/PMC7180827/#:~:text=It%20was%20demonstrated%20that%20consumption,LDL%20cholesterol%20concentrations%20%5B99%5D.

Chen X, Ding Y, Guan H, et al. The Pharmacological Effects and Potential Applications of Limonene From Citrus Plants: A Review. *Natural Product Communications*. 2024;19(5). doi:10.1177/1934578X241254229. https://journals.sagepub.com/doi/full/10.1177/1934578X241254229.

Chu B, Marwaha K, Sanvictores T, et al. Physiology, Stress Reaction. [Updated 2024 May 7]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK541120/.

Chu W, Cheung SCM, Lau RAW, et al. Bilberry (Vaccinium myrtillus L.) In: Benzie IFF, Wachtel-Galor S, editors. Herbal Medicine: Biomolecular and Clinical Aspects. 2nd edition. Boca Raton (FL): CRC Press/Taylor & Francis; 2011. Chapter 4. Available from: https://www.ncbi.nlm.nih.gov/books/NBK92770/.

Ciganović P, Jakimiuk K, Tomczyk M, Zovko Končić M. Glycerolic Licorice Extracts as Active Cosmeceutical Ingredients: Extraction Optimization, Chemical Characterization, and Biological Activity. *Antioxidants (Basel).* 2019 Oct 1;8(10):445. doi: 10.3390/antiox8100445. PMID: 31581512; PMCID: PMC6826613. https://pmc.ncbi.nlm.nih.gov/articles/PMC6826613/.

de Freitas, J. A., Santamarina, A. B., Otoch, J. P., & Pessoa, A. F. M. (2024). Silymarin: A Natural Compound for Obesity Management. *Obesities*, *4*(3), 292-313. https://doi.org/10.3390/obesities4030024. https://www.mdpi.com/2673-4168/4/3/24.

Emadi SA, Ghasemzadeh Rahbardar M, Mehri S, Hosseinzadeh H. A review of therapeutic potentials of milk thistle (*Silybum marianum* L.) and its main constituent, silymarin, on cancer, and their related patents. *Iran J Basic Med Sci*. 2022 Oct;25(10):1166-1176. doi: 10.22038/IJBMS.2022.63200.13961. PMID: 36311193; PMCID: PMC9588316. https://pmc.ncbi.nlm.nih.gov/articles/PMC9588316/.

Fallah, M., Davoodvandi, A., Nikmanzar, S., Aghili, S., Mirazimi, S.M.A., Aschner, M., Rashidian, A., Hamblin, M.R., Chamanara, M., Naghsh, N., Mirzaei, H. Silymarin (milk thistle extract) as a therapeutic agent in gastrointestinal cancer. *Biomedicine & Pharmacotherapy*. Volume 142, 2021. 112024, ISSN 0753-3322. https://doi.org/10.1016/j.biopha.2021.112024. https://www.sciencedirect.com/science/article/pii/S0753332221008076.

Fan, M., Zhang, X., Song, H., & Zhang, Y. (2023). Dandelion (*Taraxacum* Genus): A Review of Chemical Constituents and Pharmacological Effects. *Molecules*, *28*(13), 5022. https://doi.org/10.3390/molecules28135022.

Fatima, L., Sahar, A., Tariq, A., Naz, T., Usman, M**.** Exploring the Role of Licorice and Its Derivatives in Cell Signaling Pathway NF-*κ*B and MAPK. *Journal of Nutrition and Metabolism*, Volume 2-24, Issue 1/9988167. 2024. https://doi.org/10.1155/2024/9988167. https://onlinelibrary.wiley.com/doi/10.1155/2024/9988167.

Francis AJ, Sreenivasan C, Parikh A, AlQassab O, Kanthajan T, Pandey M, Nwosu M. Curcumin and Cognitive Function: A Systematic Review of the Effects of Curcumin on Adults With and Without Neurocognitive Disorders. *Cureus*. 2024 Aug 25;16(8):e67706. doi: 10.7759/cureus.67706. PMID: 39318960; PMCID: PMC11421876. https://pmc.ncbi.nlm.nih.gov/articles/PMC11421876/.

Gao X, Xu D, Zhang X, Zhao H. Protective Effect of Lemon Peel Polyphenols on Oxidative Stress-Induced Damage to Human Keratinocyte HaCaT Cells Through Activation of the Nrf2/HO-1 Signaling Pathway. *Front Nutr.* 2021 Jan 18;7:606776. doi: 10.3389/fnut.2020.606776. PMID: 33585534; PMCID: PMC7874231. https://pmc.ncbi.nlm.nih.gov/articles/PMC7874231/.

Gilbert, M. E. (2024). LFT – Lifetime. Monograph. Product Ingredients. https://www.holisticchoices.com/_files/ugd/eb75db_ccef920ecb2e48d3ab75899fd1bdd1cb.pdf.

Gilbert, M. E. (2024). Summary: LFT Nutritional Health Attributes. https://www.holisticchoices.com/_files/ugd/eb75db_1d7ed4ea15434ecd8c832c2f26d6d90f.pdf.

Gilbert, M. E. (2024). The APL Product Reference Nutritional Health Guide, 2nd Edition, Ageo Product Line, Acumullit SA Technology. AZ: Mary Esther Gilbert, Holistic Choices Publishing. https://www.holisticchoices.com/apl.

Gxaba, N., Manganyi, M. 2022/06/06. SP 3637. Vol. 27. The Fight against Infection and Pain: Devil's Claw (Harpagophytum procumbens) a Rich Source of Anti-Inflammatory Activity. *Molecules*. Doi:10.3390/molecules27113637. https://www.researchgate.net/publication/361147380_The_Fight_against_Infection_and_Pain_Devil's_Claw_Harpagophytum_procumbens_a_Rich_Source_of_Anti-Inflammatory_Activity_2011-2022.

Henning SM, Guzman JB, Thames G, Yang J, Tseng CH, Heber D, Kim J, Li Z. Avocado Consumption Increased Skin Elasticity and Firmness in Women - A Pilot Study. *J Cosmet Dermatol*. 2022

Sep;21(9):4028-4034. doi: 10.1111/jocd.14717. Epub 2022 Jan 17. PMID: 35037373; PMCID: PMC9786235. https://pmc.ncbi.nlm.nih.gov/articles/PMC9786235/#:~:text=Elasticity%20and%20firmness%20were%20increased,firmness%20in%20the%20avocado%20group.

Higbee, J., Solverson, P., Zhu, M., Carbonero, F. The emerging role of dark berry polyphenols in human health and nutrition. *Food Frontiers*. January 14, 2022. https://doi.org/10.1002/fft2.128. https://iadns.onlinelibrary.wiley.com/doi/10.1002/fft2.128.

Horie K, Nanashima N, Maeda H, Tomisawa T, Oey I. Blackcurrant (*Ribes nigrum* L.) Extract Exerts Potential Vasculoprotective Effects in Ovariectomized Rats, Including Prevention of Elastin Degradation and Pathological Vascular Remodeling. *Nutrients*. 2021 Feb 8;13(2):560. doi: 10.3390/nu13020560. PMID: 33567796; PMCID: PMC7915542. https://pmc.ncbi.nlm.nih.gov/articles/PMC7915542/.

Hyson, D.A. A Comprehensive Review of Apples and Apple Components and Their Relationship to Human Health. *Advances in Nutrition*. Volume 2, Issue 5, 2011. Pages 408-420. ISSN 2161-8313. https://doi.org/10.3945/an.111.000513. https://www.sciencedirect.com/science/article/pii/S2161831322009486.

Jabczyk M, Nowak J, Hudzik B, Zubelewicz-Szkodzińska B. Curcumin in Metabolic Health and Disease. *Nutrients.* 2021 Dec 11;13(12):4440. doi: 10.3390/nu13124440. PMID: 34959992; PMCID: PMC8706619. https://pmc.ncbi.nlm.nih.gov/articles/PMC8706619/.

Janeway CA Jr, Travers P, Walport M, et al. Immunobiology: The Immune System in Health and Disease. 5th edition. New York: Garland Science; 2001. The components of the immune system. Available from: https://www.ncbi.nlm.nih.gov/books/NBK27092/

Jia M, Zhou L, Lou Y, Yang X, Zhao H, Ouyang X, Huang Y. An analysis of the nutritional effects of *Schisandra chinensis* components based on mass spectrometry technology. Front Nutr. 2023 Jul 25;10:1227027. doi: 10.3389/fnut.2023.1227027. PMID: 37560060; PMCID: PMC10408133. https://pmc.ncbi.nlm.nih.gov/articles/PMC10408133/.

Jiang W, Li Y, Sun J, Li L, Li JW, Zhang C, Huang C, Yang J, Kong GY, Li ZF. Spleen contributes to restraint stress induced changes in blood leukocytes distribution. *Sci Rep.* 2017 Jul 26;7(1):6501. doi: 10.1038/s41598-017-06956-9. PMID: 28747688; PMCID: PMC5529540. https://pmc.ncbi.nlm.nih.gov/articles/PMC5529540/.

Joung JY, Cho JH, Kim YH, Choi SH, Son CG. A literature review for the mechanisms of stress-induced liver injury. *Brain Behav*. 2019 Mar;9(3):e01235. doi: 10.1002/brb3.1235. Epub 2019 Feb 13. PMID: 30761781; PMCID: PMC6422711. https://pmc.ncbi.nlm.nih.gov/articles/PMC6422711/.

Kamrani P, Marston G, Arbor TC, et al. Anatomy, Connective Tissue. [Updated 2023 Mar 5]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK538534/

Kasprzak-Drozd, K., Niziński, P., Hawrył, A., Gancarz, M., Hawrył, D., Oliwa, W., Pałka, M., Markowska, J., & Oniszczuk, A. (2024). Potential of Curcumin in the Management of Skin Diseases. *International Journal of Molecular Sciences*, *25*(7), 3617. https://doi.org/10.3390/ijms25073617.

König S, Bakuradze T, Jesser S, Sreeja HA, Carlsson MJ, Fahrer J, Kins S, Richling E. Influence of Bilberry Extract on Neuronal Cell Toxicity. *Biology*. 2024; 13(6):376. https://doi.org/10.3390/biology13060376

Kos, G., Czarnek, K., Sadok, I., Krzyszczak-Turczyn, A., Kubica, P., Fila, K., Emre, G., Tatarczak-Michalewska, M., Latalska, M., Blicharska, E., Załuski, D., Şekeroğlu, N., & Szopa, A. (2025). *Eleutherococcus senticosus* (*Acanthopanax senticosus*): An Important Adaptogenic Plant. *Molecules*, *30*(12), 2512. https://doi.org/10.3390/molecules30122512.

Laurindo LF, Barbalho SM, Marquess AR, Grecco AIS, Goulart RA, Tofano RJ, Bishayee A. Pomegranate (*Punica granatum* L.) and Metabolic Syndrome Risk Factors and Outcomes: A Systematic Review of Clinical Studies. *Nutrients*. 2022 Apr 16;14(8):1665. doi: 10.3390/nu14081665. PMID: 35458227; PMCID: PMC9032502. https://pmc.ncbi.nlm.nih.gov/articles/PMC9032502/.

Lee, S., Kim, S. Y., Lee, S.. Jang, S., Hwang, S. T., Kwon, Y., Choi, J., Kwon, O., Ganoderma lucidum extract attenuates corticotropin-releasing hormone-induced cellular senescence in human hair follicle cells. *iScience*. Vol. 27, Issue 5. 2024/05/17. Doi: 10.1016/j.isci.2024.109675. https://doi.org/10.1016/j.isci.2024.109675.

Lee, S., Rhee, D. Effects of ginseng on stress-related depression, anxiety, and the hypothalamic–pituitary–adrenal axis., *Journal of Ginseng Research.* Volume 41, Issue 4, 2017. Pages 589-594. ISSN 1226-8453. https://doi.org/10.1016/j.jgr.2017.01.010. https://www.sciencedirect.com/science/article/pii/S122684531630224X.

Lenart-Bugla, Szcześniak, M. D., Bugla, B., Kowalski, K., Niwa, S., Rymaszewska, J., Misiak, B. The association between allostatic load and brain: A systematic review. *Psychoneuroendocrinology,* Volume 145, 2022. 105917. ISSN 0306-4530. https://doi.org/10.1016/j.psyneuen.2022.105917. https://www.sciencedirect.com/science/article/pii/S030645302200258X.

Liu Z, Gong J, Huang W, Lu F, Dong H. The Effect of *Momordica charantia* in the Treatment of Diabetes Mellitus: A Review. *Evid Based Complement Alternat Med*. 2021 Jan 16;2021:3796265. doi: 10.1155/2021/3796265. PMID: 33510802; PMCID: PMC7826218. https://pmc.ncbi.nlm.nih.gov/articles/PMC7826218/.

Malheiros, J., Simões, D. M., Antunes, P. E., Figueirinha, A., Cotrim, M. D., & Fonseca, D. A. (2022). Vascular effects of *Fragaria vesca* L. in human arteries. *Natural Product Research*, *37*(22), 3851–3856. https://doi.org/10.1080/14786419.2022.2152448.

Marra, A., Manousakis, V., Zervas, G. P., Koutis, N., Finos, M. A., Adamantidi, T., Panoutsopoulou, E., Ofrydopoulou, A., & Tsoupras, A. (2024). Avocado and Its By-Products as Natural Sources of Valuable Anti-Inflammatory and Antioxidant Bioactives for Functional Foods and Cosmetics with Health-Promoting Properties. *Applied Sciences*, *14*(14), 5978. https://doi.org/10.3390/app14145978. https://www.mdpi.com/2076-3417/14/14/5978.

Michalak M. Plant-Derived Antioxidants: Significance in Skin Health and the Ageing Process. Int *J Mol Sci*. 2022 Jan 6;23(2):585. doi: 10.3390/ijms23020585. PMID: 35054770; PMCID: PMC8776015. https://pmc.ncbi.nlm.nih.gov/articles/PMC8776015/.

Mierczak K, Garus-Pakowska A. An Overview of Apple Varieties and the Importance of Apple Consumption in the Prevention of Non-Communicable Diseases—A Narrative Review. *Nutrients*. 2024; 16(19):3307. https://doi.org/10.3390/nu16193307. https://www.mdpi.com/2072-6643/16/19/3307.

Mikulska P, Malinowska M, Ignacyk M, Szustowski P, Nowak J, Pesta K, Szeląg M, Szklanny D, Judasz E, Kaczmarek G, Ejiohuo OP, Paczkowska-Walendowska M, Gościniak A, Cielecka-Piontek J. Ashwagandha *(Withania somnifera)*-Current Research on the Health-Promoting Activities: A Narrative Review. *Pharmaceutics*. 2023 Mar 24;15(4):1057. doi: 10.3390/pharmaceutics15041057. PMID: 37111543; PMCID: PMC10147008. https://pmc.ncbi.nlm.nih.gov/articles/PMC10147008/#B41-pharmaceutics-15-01057.

Mintie CA, Singh CK, Ahmad N. Whole Fruit Phytochemicals Combating Skin Damage and Carcinogenesis. *Transl Oncol*. 2020 Feb;13(2):146-156. doi: 10.1016/j.tranon.2019.10.014. Epub 2019 Dec 19. PMID: 31865177; PMCID: PMC6926315. https://pmc.ncbi.nlm.nih.gov/articles/PMC6926315/

Novika, R. G. H., Wahidah N. J., Yunus, A., Sumarno, L., Ilyas, M. F. Clinical effect of Echinacea purpurea as an antiviral and its effect on reproductive hormones. *Journal of Pharmacy & Pharmacognosy Research*. Vol. 12, No. 2, pp. 255-263, Mar-Apr 2024. https://doi.org/10.56499/jppres23.1784_12.2.255. https://jppres.wordpress.com/2024/07/13/clinical-effect-of-echinacea-purpurea-as-an-antiviral-and-its-effect-on-reproductive-hormones/.

Oi-Kano, Y., Kawada, T., Watanabe, T, Koyama, F., Watanabe, K., Senbongi, R., Iwai, K. Oleuropein supplementation increases urinary noradrenaline and testicular testosterone levels and decreases plasma corticosterone level in rats fed high-protein diet. *The Journal of Nutritional Biochemistry*, Volume 24, Issue 5, 2013. Pages 887-893. ISSN 0955-2863. https://doi.org/10.1016/j.jnutbio.2012.06.003. (https://www.sciencedirect.com/science/article/pii/S0955286312001581).

Olas B. A Review of the Pro-Health Activity of *Asparagus officinalis* L. and Its Components. *Foods*. 2024 Jan 16;13(2):288. doi: 10.3390/foods13020288. PMID: 38254589; PMCID: PMC10814860. https://pmc.ncbi.nlm.nih.gov/articles/PMC10814860/

Olas B. An Overview of the Versatility of the Parts of the Globe Artichoke (*Cynara scolymus* L.), Its By-Products and Dietary Supplements. *Nutrients*. 2024 Feb 22;16(5):599. doi: 10.3390/nu16050599. PMID: 38474726; PMCID: PMC10934119. https://pmc.ncbi.nlm.nih.gov/articles/PMC10934119/.

Pannakal ST, Eilstein J, Hubert J, Kotland A, Prasad A, Gueguiniat-Prevot A, Juchaux F, Beaumard F, Seru G, John S, Roy D. Rapid Chemical Profiling of *Filipendula ulmaria* Using CPC Fractionation, 2-D Mapping of ^{13}C NMR Data, and High-Resolution LC-MS. Molecules. 2023 Aug 30;28(17):6349. doi: 10.3390/molecules28176349. PMID: 37687176; PMCID: PMC10489126. https://pmc.ncbi.nlm.nih.gov/articles/PMC10489126/.

Panossian A, Wikman G. Effects of Adaptogens on the Central Nervous System and the Molecular Mechanisms Associated with Their Stress-Protective Activity. *Pharmaceuticals (Basel).* 2010 Jan 19;3(1):188-224. doi: 10.3390/ph3010188. PMID: 27713248; PMCID: PMC3991026. https://pmc.ncbi.nlm.nih.gov/articles/PMC3991026/

Phootha,N., Yongparnichkul, N., Fang, Z., Gan, R., Zhang, P. Plants and phytochemicals potentials in tackling anxiety: A systematic review. *Phytomedicine Plus*. Volume 2, Issue 4, 2022. 100375, ISSN 2667-0313. https://doi.org/10.1016/j.phyplu.2022.100375. https://www.sciencedirect.com/science/article/pii/S2667031322001543.

Pires TCSP, Caleja C, Santos-Buelga C, Barros L, Ferreira ICFR. Vaccinium myrtillus L. Fruits as a Novel Source of Phenolic Compounds with Health Benefits and Industrial Applications - A Review. *Curr Pharm Des.* 2020;26(16):1917-1928. doi: 10.2174/1381612826666200317132507. PMID: 32183662; PMCID: PMC7403651. https://pmc.ncbi.nlm.nih.gov/articles/PMC7403651/.

Porro C, Benameur T, Cianciulli A, Vacca M, Chiarini M, De Angelis M, Panaro MA. Functional and Therapeutic Potential of *Cynara scolymus* in Health Benefits. *Nutrients.* 2024 Mar 17;16(6):872. doi: 10.3390/nu16060872. PMID: 38542782; PMCID: PMC10974306. https://pmc.ncbi.nlm.nih.gov/articles/PMC10974306/

Prasanth, M. I., Sivamaruthi, B. S., Chaiyasut, C., & Tencomnao, T. (2019). A Review of the Role of Green Tea (*Camellia sinensis*) in Antiphotoaging, Stress Resistance, Neuroprotection, and Autophagy. *Nutrients*, *11*(2), 474. https://doi.org/10.3390/nu11020474.

Rahmani AH, Aldebasi YH, Srikar S, Khan AA, Aly SM. Aloe vera: Potential candidate in health management via modulation of biological activities. *Pharmacogn Rev*. 2015 Jul-Dec;9(18):120-6. doi: 10.4103/0973-7847.162118. PMID: 26392709; PMCID: PMC4557234. https://pmc.ncbi.nlm.nih.gov/articles/PMC4557234/.

Richter E, Geetha T, Burnett D, Broderick TL, Babu JR. The Effects of *Momordica charantia* on Type 2 Diabetes Mellitus and Alzheimer's Disease. *Int J Mol Sci*. 2023 Feb 28;24(5):4643. doi: 10.3390/ijms24054643. PMID: 36902074; PMCID: PMC10002567. https://pmc.ncbi.nlm.nih.gov/articles/PMC10002567/.

Saenghong N, Wattanathorn J, Muchimapura S, Tongun T, Piyavhatkul N, Banchonglikitkul C, Kajsongkram T. Zingiber officinale Improves Cognitive Function of the Middle-Aged Healthy Women. *Evid Based Complement Alternat Med.* 2012;2012:383062. doi: 10.1155/2012/383062. Epub 2011 Dec 22. PMID: 22235230; PMCID: PMC3253463. https://pmc.ncbi.nlm.nih.gov/articles/PMC3253463/

Sah A, Naseef PP, Kuruniyan MS, Jain GK, Zakir F, Aggarwal G. A Comprehensive Study of Therapeutic Applications of Chamomile. *Pharmaceuticals (Basel).* 2022 Oct 19;15(10):1284. doi: 10.3390/ph15101284. PMID: 36297396; PMCID: PMC9611340. https://pmc.ncbi.nlm.nih.gov/articles/PMC9611340/.

Sarv V, Venskutonis PR, Bhat R. The *Sorbus* spp.-Underutilised Plants for Foods and Nutraceuticals: Review on Polyphenolic Phytochemicals and Antioxidant Potential. *Antioxidants (Basel).* 2020 Sep 1;9(9):813. doi: 10.3390/antiox9090813. PMID: 32882984; PMCID: PMC7555345. https://pmc.ncbi.nlm.nih.gov/articles/PMC7555345/.

Seyed Mohammad Hosein Hosseini Adarmanabadi, Orod Jalali Khalil Abadi, Amirhossein Amiri, Rozhina Tamannaeifar, Sahar Balanian, Mehdi Rasekhjam, Mohammad Sadra Samiazar, Sara Hasanpour, Samira Peiravi, Dorsa Alijanzadeh, Mohadeseh Poudineh, Hamidreza Amiri, Seyed Amirhossein Mazhari, Reza Khademi, Niloofar Deravi, Mobina Fathi. Pharmacotherapeutic Potential of Bitter Gourd (Momordica

charantia) in Age-related Neurological Diseases. *J. Integr. Neurosci.* 2024, 23(4), 86. https://doi.org/10.31083/j.jin2304086.

Shaukat MN, Nazir A, Fallico B. Ginger Bioactives: A Comprehensive Review of Health Benefits and Potential Food Applications. *Antioxidants (Basel).* 2023 Nov 18;12(11):2015. doi: 10.3390/antiox12112015. PMID: 38001868; PMCID: PMC10669910. https://pmc.ncbi.nlm.nih.gov/articles/PMC10669910/.

Shi M, Guo Q, Xiao Z, Sarengaowa, Xiao Y, Feng K. Recent Advances in the Health Benefits and Application of Tangerine Peel (*Citri Reticulatae Pericarpium*): A Review. *Foods*. 2024 Jun 23;13(13):1978. doi: 10.3390/foods13131978. PMID: 38998484; PMCID: PMC11241192. https://pmc.ncbi.nlm.nih.gov/articles/PMC11241192/.

Smalinskiene, A.; Savickiene, N.; Lesauskaite, V.; Zitkevicius, V.; Ivanov, L.; Rodovicius, H.; and Sadauskiene, I. (2011) "The effect of Eleutherococcus senticosus (Rupr. et Maxim.) Maxim. extract on cadmium-induced toxicity in mice." *Journal of Food and Drug Analysis*: Vol. 19 : Iss. 4 , Article 21. Available at: https://doi.org/10.38212/2224-6614.2217. https://www.jfda-online.com/cgi/viewcontent.cgi?article=2217&context=journal.

Sowndhararajan, K., Deepa, P, Kim, M., Park, S. J., Kim, S. An overview of neuroprotective and cognitive enhancement properties of lignans from Schisandra chinensis. *Biomedicine & Pharmacotherapy.* Volume 97. 2018, Pages 958-968. ISSN 0753-3322. https://doi.org/10.1016/j.biopha.2017.10.145 https://www.sciencedirect.com/science/article/pii/S0753332217346243

Spanoudaki M, Papadopoulou SK, Antasouras G, Papadopoulos KA, Psara E, Vorvolakos T, Solovos E, Chrysafi M, Psallas M, Mentzelou M, Ourda D, Giaginis C. Curcumin as a Multifunctional Spice Ingredient against Mental Disorders in Humans: Current Clinical Studies and Bioavailability Concerns. *Life (Basel).* 2024 Apr 5;14(4):479. doi: 10.3390/life14040479. PMID: 38672750; PMCID: PMC11050944. https://pmc.ncbi.nlm.nih.gov/articles/PMC11050944/

Sun, X., Cui, B., Zheng, K., Xuening An, Y.U., Nie, Y., Song, Z., Li, Z., Shimizu, K., Li, B., Tan,H. Mechanism study on the inhibitory effect of strawberry (Fragaria×ananassa Duch.) leaves on advanced glycation end-products formation. *Food Bioscience*, Volume 58, 2024. 103691, ISSN 2212-4292. https://doi.org/10.1016/j.fbio.2024.103691. https://www.sciencedirect.com/science/article/pii/S2212429224001214.

Thimóteo, N.S.B., Scavuzzi, B.M., Simão, A.N.C. *et al.* The impact of cranberry (*Vaccinium macrocarpon*) and cranberry products on each component of the metabolic syndrome: a review. *Nutrire* 42, 25 (2017). https://doi.org/10.1186/s41110-017-0048-8.

Tiwari, Dr, Talreja, Shreya. Health Benefits of Cranberries: An In-Depth Overview 2023/09/30. Vol. 17, SP 1057. *Health Science Journal*. DO - 10.36648/1791-809X.17.9.1057. https://www.researchgate.net/publication/374700260_Health_Benefits_of_Cranberries_An_In-Depth_Overview.

Uddin MS, Asaduzzaman M, Mamun AA, Iqbal MA, Wahid F, et al. (2016) Neuroprotective Activity of Asparagus racemosus Linn. Against Ethanol-Induced Cognitive Impairment and Oxidative Stress in Rats Brain: Auspicious for Controlling the Risk of Alzheimer's Disease. *J Alzheimers Dis Parkinsonism* 6:245.

doi:10.4172/2161-0460.1000245. https://www.omicsonline.org/open-access/neuroprotective-activity-of-asparagus-racemosus-linn-against-ethanolinduced-cognitive-impairment-and-oxidative-stress-in-rats-brai-2161-0460-1000245.php?aid=78731

Uti DE, Atangwho IJ, Alum EU, Egba SI, Ugwu OP-C, Ikechukwu GC. Natural Antidiabetic Agents: Current Evidence and Development Pathways from Medicinal Plants to Clinical use. *Natural Product Communications*. 2025;20(3). doi:10.1177/1934578X251323393

Vital Júnior AC, da Silva MB, Monteiro SS, Pasquali MAB. The Therapeutic Potential of *Harpagophytum procumbens* and *Turnera subulata* and Advances in Nutraceutical Delivery Systems in Neurodegenerative Diseases. *Pharmaceuticals (Basel).* 2024 May 20;17(5):660. doi: 10.3390/ph17050660. PMID: 38794230; PMCID: PMC11125440. https://pmc.ncbi.nlm.nih.gov/articles/PMC11125440/.

Woelk H, Arnoldt KH, Kieser M, Hoerr R. Ginkgo biloba special extract EGb 761 in generalized anxiety disorder and adjustment disorder with anxious mood: a randomized, double-blind, placebo-controlled trial. *J Psychiatr Res*. 2007 Sep;41(6):472-80. doi: 10.1016/j.jpsychires.2006.05.004. Epub 2006 Jun 30. PMID: 16808927. https://pubmed.ncbi.nlm.nih.gov/16808927/

Wu, L., Ma, T., Zang, C., Xu, Z., Sun, W., Luo, H., Yang, M., Song, J., Chen, S., Yao, H. Glycyrrhiza, a commonly used medicinal herb: Review of species classification, pharmacology, active ingredient biosynthesis, and synthetic biology. *Journal of Advanced Research*. 2024. ISSN 2090-1232, https://doi.org/10.1016/j.jare.2024.11.019. https://www.sciencedirect.com/science/article/pii/S2090123224005381.

Yang Y, Li S. Dandelion Extracts Protect Human Skin Fibroblasts from UVB Damage and Cellular Senescence. *Oxid Med Cell Longev*. 2015;2015:619560. doi: 10.1155/2015/619560. Epub 2015 Oct 20. PMID: 26576225; PMCID: PMC4630464. https://pmc.ncbi.nlm.nih.gov/articles/PMC4630464/.

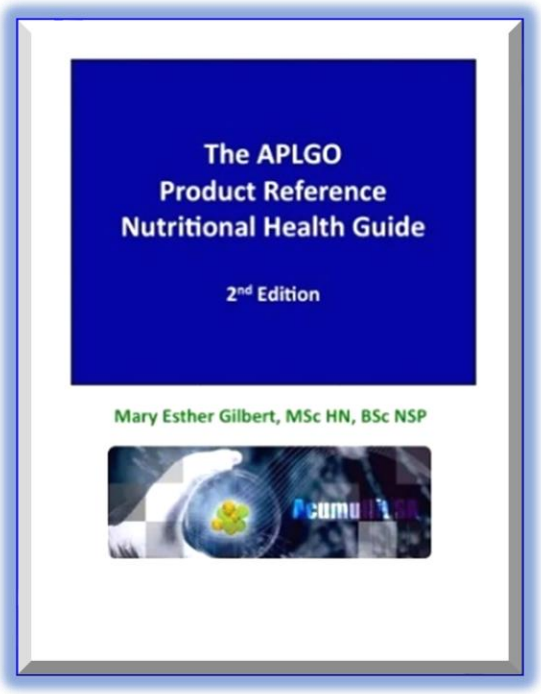
Zhou DD, Li J, Xiong RG, Saimaiti A, Huang SY, Wu SX, Yang ZJ, Shang A, Zhao CN, Gan RY, Li HB. Bioactive Compounds, Health Benefits and Food Applications of Grape. *Foods.* 2022 Sep 7;11(18):2755. doi: 10.3390/foods11182755. PMID: 36140883; PMCID: PMC9497968. https://pmc.ncbi.nlm.nih.gov/articles/PMC9497968/.

Zirmire, R.K., Saha, D., Dey, R., Tanimu, H., Zaarour, R., Bird, D., Cherian, P., Rana, I., Roy, N., Sanyal, A., Misra, N., Jamora, C. Bacopa monnieri phytochemicals regulate fibroblast cell migration via modulation of focal adhesions. *Science*, Volume 27, Issue 4, 2024. 109489, ISSN 2589-0042. https://doi.org/10.1016/j.isci.2024.109489. https://www.sciencedirect.com/science/article/pii/S2589004224007107.

APLGO Product Reference Nutritional Health Guide
2nd Edition

By Mary Esther Gilbert, MSc, BSc HN, BSc NSP
Founder, True Health Mastery Institute of Holistic Personal Health Management
https://www.holisticchoices.com/true-health-mastery-institute

Science-Backed Product Knowledge Desk Reference
The Essential Reference Source for Your Success

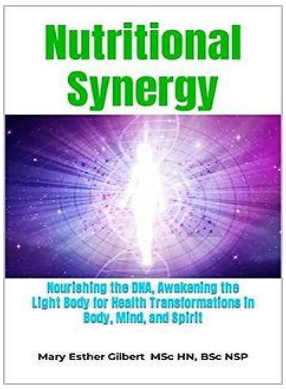


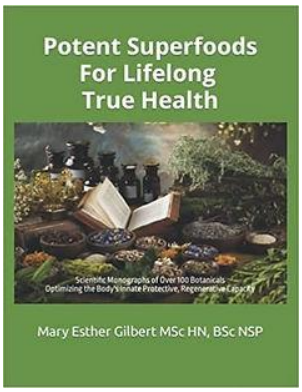
https://www.holisticchoices.com/apl

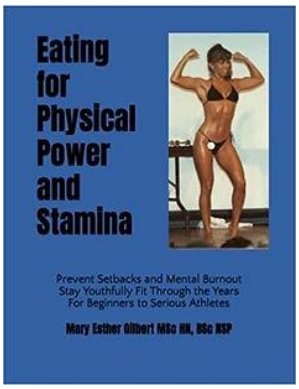
- **Scientific monographs describing extensive health benefits of every botanical ingredient.**
- **Stunning photographic illustrations.**
- **About APLGO's proprietary, unprecedented, production technology.**
- **Extensive dictionary-encyclopedia section.**
- **Complete phytonutrient database describing health benefits in APLGO drop botanicals.**
- **Convenient, quick-reference charts.**
- **APLGO's "natural" "other ingredients" information section.**
- **Comprehensive nutrition section – understanding the critical role essential nutrients play in the body.**
- **Extensive scientific references for unquestionable credibility.**

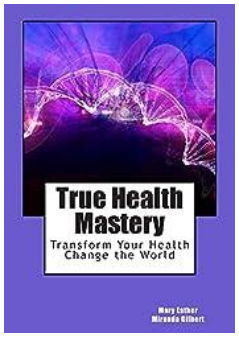
Other Books, Descriptions, Book Summaries

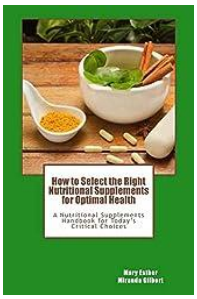
https://www.holisticchoices.com/books-by-mary-esther-gilbert











Subscribe

https://www.youtube.com/@holisticchoices

rumble

https://rumble.com/c/c-679245

Become a Subscriber Member of

The True Health Mastery Institute of Holistic Personal Health Management

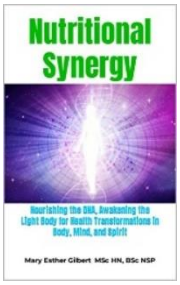
Building Optimal Health Through the Power of the Right Information

The Only True Pathway to Higher Health, Human Potential, and Quality Longevity

---

Master the Powerful Food Choices for Optimal Health Vibrancy

Enroll in the Nutritional Synergy Online Self-paced Course
And Earn a Certificate of Completion



Based on Mary Esther's Book Nutritional Synergy™

Master Her Proven, Health-Transformational System

For Health Recovery, Quality of Life and Perpetual Youthfulness