APLGO Nutritional Health Questions on Degenerative Disorders
Sherry Denny and Mary Esther Gilbert, MSc HN, BSc NSP
July 13, 2026

1. What are degenerative disorders?

The impairment or disruption of normal functioning and inability to recover it, resulting in a progression toward diseased conditions, which can include:

- Diminishing physical functioning, originating with malfunctioning at the cellular level.
    - The cellular and gene code breakdown at the DNA level—an ongoing battle as the body undergoes progressive damage while its capacity to repair the damage lessens.
    - The loss of physical body mass, a "wasting away" at both the micro and macro scale or shrinking of cells and therefore, organs, tissues, and their structures, resulting in diminishing normal functioning.
    - DNA damage of gene expressions or the proper ordering or sequences of genes, leading to impaired ability to reproduce or replicate healthy, normally-functioning cells.
- An increasing amount of inflammatory reactions to cellular damages or micro injuries, detected by nerve and hormonal signaling, triggering of immune cells, and leading to pain that can escalate to diseased conditions.
- Affecting more than one interdependent, interactive system, resulting in multiple degenerating health conditions.

Why these conditions are important to understand:

- It's critical to know that degenerative conditions have a fundamental common origin—**missing nutrient factors the body requires in order to maintain proper system functioning**.
- When the body starts to lose its physical abilities or the functioning of one or more systems which malfunctions originate at the cellular level due to chronic nutrient starvation, conditions can become progressively more serious over time as the body is forced to catabolize its own tissues, resulting in more degeneration or wasting away.
- Correcting nutrient deficiencies prevent the worsening of a condition and reverse the degenerative process by correcting cell functions such as repairing damaged DNA and other cell organelles, and therefore correcting the functions of organ and other systems at the macro level.

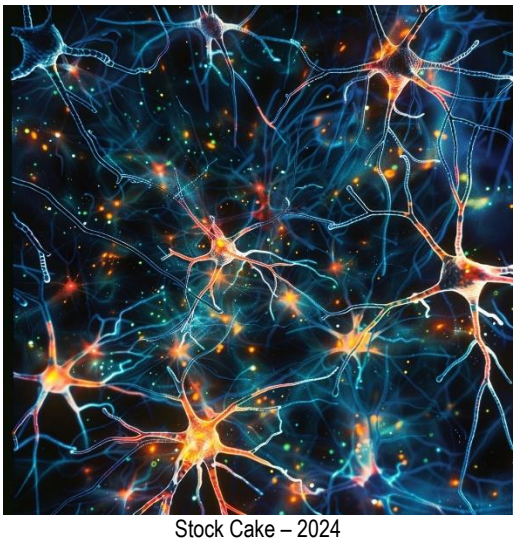
- A correctly nourished body can correct itself back toward proper functioning, but only with the *consistent* daily presence of a full range of all known essential nutrients, in their bioavailable molecular forms (vitamin, mineral, phytonutrient-rich whole food molecular complexes acting in synergy through enzyme catalysts).

- Degenerative conditions are due to:

    - Chronic deficiencies of electrically active essential nutrients that continually spark enzymes into metabolic actions.
    - Nutrient deficiencies that result in lowered levels of electrical impulses or electron transferring within our trillions of interactive cells, impairing vital inter and intra cellular communications such as:

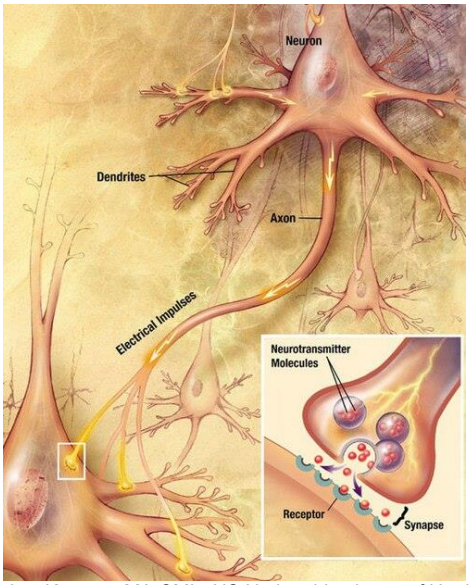
        - Impairing nutrient transport and delivery.
        - Miscommunication or disruption of communications between the hormonal, nervous, and immune systems, which constantly monitor all system processes.
        - Impairment of responses to directions of activating or deactivating normal processes, and producing stress chemicals in response to stress, leading to cellular damage or injury.
        - Impaired ability to complete communication pathways to complete a task or to complete a thought.

Nerve Network Glow



Stock Cake – 2024

Nerve-to-Nerve Synapses



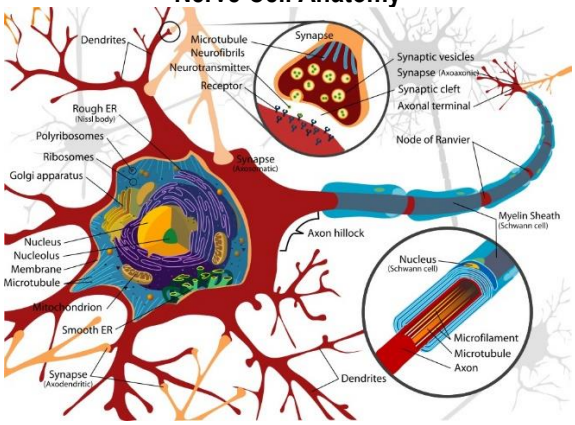
Cell Body – 4 µm to 100 µm in diameter

Axon signal transmitters – 4 ft length, up to 20 µm in diameter.

Dendrites – receivers – branch-like structures receive signals and are usually only about 1 µm thick.

Christy Krames, MA CMI - US National Institutes of Health, Institute on Aging – Wikimedia 2003

Nerve Cell Anatomy



Nerve Cell - Complete Neuron Diagram - Lady of Hats 2007 - Creative Commons Wikimedia

- Degenerative conditions are also due to the habitual intake of molecularly distorted or damaged foodstuffs and non-nourishing/non-hydrating, synthetic beverages:
    - Junk food, i.e. processed, heat and chemically altered foodstuffs with little or no energy and nutrient value.
    - Consuming biologically incompatible molecules promote toxicity, inflammation or oxidative stress, and damage DNA.
    - Disrupt various system functions leading to degenerative conditions.

- It is important to understand that the body must have the correctly structured molecules from the following vital food categories to enable it to halt degenerative processes and begin to restore itself back toward proper functioning:

Vital Fundamental Nourishment – Preventing and Correcting the Degenerative Health Process

Phytochemical Complexes from Botanicals

Detoxification, oxygenation, immune-boosting, repair-aiding, hormone balancing, endurance-building, boosting of and involved in energy production.

Complete Proteins
(Animal-derived, Containing all 9 Essential Amino Acids the Body Cannot Synthesize)

- Cell/tissue repair, growth and maintenance of structures such as skin, bone, cartilage.
- The building of enzymes (biological catalysts that speed up chemical reactions such as for digestion, energy production, generating new hormones and their regulation of functions such as intercellular communications.
- Needed to create critical signaling proteins, and antibodies, proteins that act against foreign invasions (bacteria, viruses, parasites, fungi).
- Some act as delivery systems such as hemoglobin, the oxygen-transporting protein in the blood, or albumin, the protein that carries nutrients and hormones throughout the bloodstream.

Whole Food Carbohydrates

Large sugar molecules, complexes (starches) containing longer chains of simple sugars that are broken down during digestion to provide gradual amounts of glucose, the unit of sugar that fuels the brain, muscles, and all other cellular processes.

An Equal Balance of Omega 3-Dominant Plant Fats and Animal Fats

- Perform anti-inflammatory functions.
- Protect nerve cell structures and therefore nerve cell functions.
- Are precursors for generating thousands of vital hormones.
- Provide cell structure components including nerve and brain cells, blood vessel tensile strength and pliability.

Whole Food-Derived Vitamins and Mineral Complexes

- Vitamins - critical coenzymes, aid in the release of energy, act as antioxidants protecting cells from damage, aid in tissue repair and wound healing, ensuring proper blood clotting.
- Minerals – vital cofactors, support bone and muscle structures and functions, iron is vital for carrying oxygen throughout the bloodstream and the cells of the body, carry electrical charges and transporting of electrons enabling brain and nerve signaling, act as electrolytes to regulate fluid balance.
- Vitamin and mineral complexes are vital for cell-to-cell communications, energy production, repair, cellular replication, aiding the immune system.
- Are critical for the functioning of all cellular processes in every body system.

Raw Foods Holding Captured Light (Biophotons)

Sunlight, absorbed into living cells activates enzymes and maintains optimal electrical transmissions in the body, the catalysts that drive all cellular actions.

Life would cease to exist without the absorption of light into the cells of all organisms, including the human body.

Don't Forget Sunlight and Purified Spring Water

Like all living cells, our own 39 trillion cells must have adequate amounts of sunlight to maintain critical hormone-based functions and prevent vitamin D3 deficiency and chemical imbalances, including:

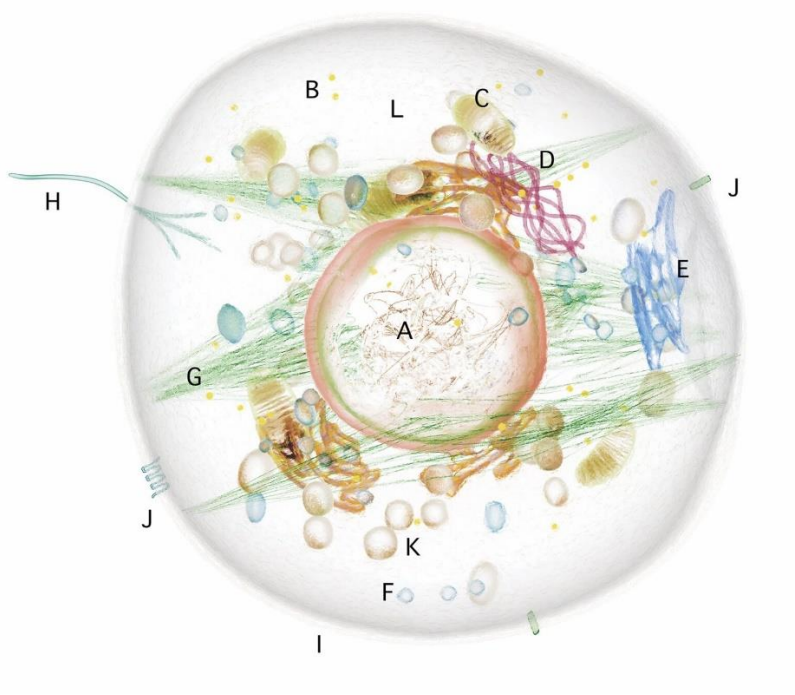
- Vitamin D3 deficiency, a master precursor of vital hormones that regulate mood, circadian rhythms, sleep cycles, calcium absorption, cell growth, immune function (Kennel, 2010).
- Regulating the body's master circadian clock, triggering neuroendocrine responses in the skin and brain, activating the retino-hypothalamic connection for the release of serotonin during daylight, which is converted to melatonin in the evening for deep REM sleep, critical for the synthesis of testosterone and growth hormone.
- Regulating the skin-brain axis when UVB light stimulates the skin to produce and regulate α -Melanocyte-stimulating hormone (α -MSH) for skin pigmentation, appetite, and immune responses (Blume, 2019) (Mead, 2008).

Chronic dehydration leads to shrinking and destruction of the body's cells and therefore prevents the body from functioning well.

Oxygen deprivation; poor oxygenation or delivery to all cells is the most critical since the body cannot survive more than a very few minutes without it.
(Gilbert, 2021) (Hossain, 2025)

- To summarize, it is critical to understand that:
    - Cells are the smallest units of life that keep the body functioning.
    - The body is composed of different types of cells totaling approximately 39 trillion, which work together to maintain homeostasis in the entire organized system.
    - A malfunction in one system has a chain-reaction or cascade effect that can adversely affect other body systems since a complete range of nutrients act in synergy on multiple systems.
    - When cells malfunction, other than physical injury, it is likely due to missing nutrient factors (especially chronic, long-term nutritional deficiencies) that prevent any number of trillions of cellular processes from carrying on the work of ensuring body systems function correctly.
    - Missing nutrient factors, especially over time (days, weeks, months, years) force the body to consume or catalyze its own tissues to maintain the most critical systems (brain, heart, lungs, kidneys, liver, pancreas) to stay alive. Other tissues are expendable.
    - A state of catabolism can become life-threatening.
    - People cannot afford to be ill-informed about how their bodies function. A better understanding of cell-nutrient functions and interactions go a long way toward making the best health management/preventive/protective/recovery decisions.
    - The more comprehensive one's nutritional health knowledge is, the more likely one can prevent drastic measures that may result in worsened health conditions.
    - It is always advised to discuss your condition with your medical practitioner.

The Anatomy of a Cell



Stanford Medical Magazine, 2024

A – Nucleus
The control center of the cell that contains the cell's genetic material, which is composed of DNA molecules. The DNA in the nucleus is packed into structures called chromosomes.

B – Ribosome
Ribosomes are molecular machines that follow genetic instructions to build proteins. They can sometimes be picky about which genetic instructions they follow.

C – Mitochondrion
Known as the cell's powerhouse, mitochondria generate energy through a process called cellular respiration. More than a billion years ago they were free-living bacteria and were engulfed by an ancestor of an animal cell, leading to a mutually beneficial relationship.

D – Endoplasmic reticulum (ER)
A network of membranes involved in the synthesis of proteins and fats. There are two types: smooth and rough. Smooth ER produces fats, like phospholipids used in cells' membranes, and plays a role in detoxifying drugs and toxins. Rough ER provides a platform for ribosomes to construct proteins. It's rough because ribosomes dot its surface.

E – Golgi apparatus
Groups of flattened membrane-enclosed sacs that process, sort and deliver proteins and lipids to their proper destinations within the cell or for secretion outside of the cell.

F – Lysosome
Membrane-bound sacs containing digestive enzymes that break down and recycle cellular waste and foreign materials. Think of them as the cell's garbage disposal or recycling center.

G – Cytoskeleton
A network of protein filaments that provide structure, support and help in cell movement and division. It can quickly reorganize to change cell shape and enable motion.

H – Primary cilium
A single, unbending hairlike structure that extends from the cell's surface. It serves as a cellular antenna for signal reception.

I – Cell membrane
A flexible and dynamic wall that surrounds the cell's contents and controls what comes in and goes out. It's made of two layers of fat molecules (phospholipids) with their heads facing outward and their tails facing inward.

J – Receptor
Proteins located on the cell membrane or within the cell that bind specific signaling molecules, such as hormones or neurotransmitters, triggering a cellular response. They are highly specific and selective.

K – Vacuole
A sac that stores waste materials and aids in cell digestion and recycling.

L – Cytoplasm
The gel-like substance enclosed by the cell membrane that houses the cell's structures. It's mainly composed of water, salts and organic molecules and is where many cellular activities occur.
(Spector, et. al., 2024)

Impact on individuals, families, and society

- Impacts overall quality of life, loss of independence.
- Is psychologically devastating to the individual, adding to the already biochemical malfunctions by increased stress reactions causing further degenerative health conditions.
- Is a psychological, emotional and often physical burden on family and friend caregivers that can take its toll also on their health and mental well-being.
- Elevates health care costs, strains the caregiving medical system.
- Unequal access to health care in some lower-income communities with neighborhood disadvantages has severe health outcomes.
- Health care costs cause economic strain and adds the stress of personal financial drains.
- Adversely affects productivity, morale, and energy levels in individuals; on a large scale, affects the economy and general state of a nation's wealth and morale.

2. What are the warning signs?

- The first sign is experiencing pain, caused by inflammatory responses to some form of damage (micro injuries) at the micro cell level.
- Prone to injuries, slowed healing time.
- Poor circulation, tissue death (infarction, necrosis).
- Being more at risk for acquiring various conditions:

    - Abnormal blood pressure (hypertension, hypotension)
    - Swelling, edema
    - Diabetes
    - Heart disease
    - Obesity
    - Cancer
    - Respiratory problems
    - Digestive disorders
    - Arthritis, degeneration of joint tissues.
    - Headaches
    - Chronic fatigue
    - Sleep problems
    - Eye diseases: macular degeneration, cataracts, worsening vision.
    - Prone to infections.

- Unsteadiness, unable to maintain balance when moving about, due to reduced muscle strength, degenerated connective tissues, leading to reduced coordination.
- Diminished physical strength and energy levels, and tasks become more difficult to perform.
- Unable to concentrate, diminishing memory, learning impairments.
- Increased incidence of illnesses due to impaired immunity.

3. What can be done to slow progression and improve quality of life?

A properly functioning system means bringing together and implementing all vital aforementioned components that ensure a properly functioning system. Prevention is the most important, and understanding that the human body, when completely and correctly nourished, has the capacity to restore itself back toward normal functioning.

4. Which of our APLGO Lozenges may help with some or many of these issues?

It depends on which body system is being affected, although the APLGO lozenges contain a vast array of beneficial nutrient compounds found to benefit the various body systems.

One may want to review the following slides in this video on my YouTube channel, which breaks down which drops benefit the different body systems and offer specific health benefits:

https://www.youtube.com/watch?v=ieDBlmr2Cxs

5. What resources and support are available?

- Holistic-minded, whole health advocate professionals. Always check their credentials and years of experience in client successes.

- Medical providers interested in and perhaps becoming more educated about preventive health measures and who recognize the fundamental importance of whole food nourishment.

- Practitioners who understand the causes of degenerative health conditions and recognize that a full range of nutrient complexes are the true answer to real recovery.

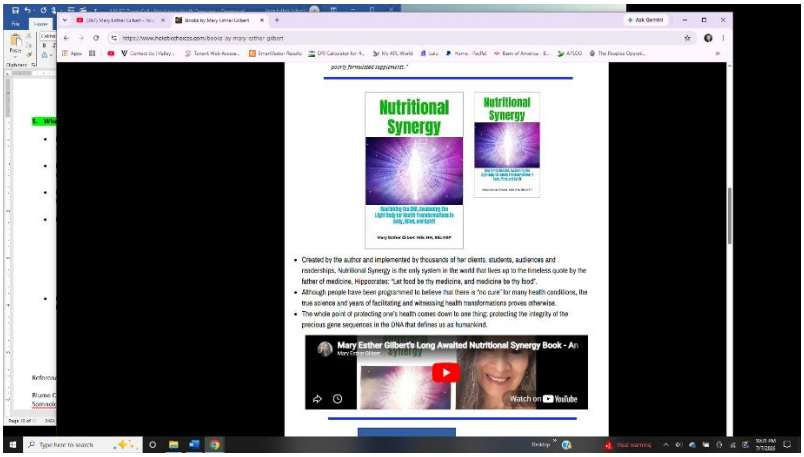
- Mary Esther's YouTube channel.

    - Contains subjects on total nutrition, toxins and other hazards that cause illness, degenerative health, and various diseased conditions.

    - Viewing her channel provides accurate and complete information for successful health management and results in knowing more about holistic health management than many practitioners.

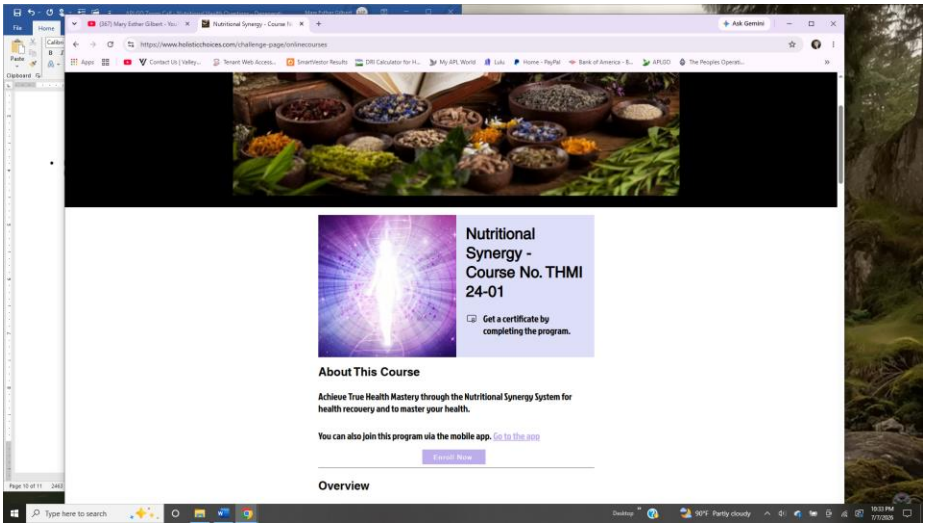
- How to Select the Right Balance of Foods to Ensure a Full Range of Essential Nutrients and Other Health-Promoting Factors:

    - **Nutritional Synergy book:**



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

- **Nutritional Synergy Course Description and Enrollment Page:**



https://www.holisticchoices.com/challenge-page/onlinecourses

Reference:

Blume C, Garbazza C, Spitschan M. Effects of light on human circadian rhythms, sleep and mood. Somnologie (Berl). 2019 Sep;23(3):147-156. doi: 10.1007/s11818-019-00215-x. Epub 2019 Aug 20. PMID: 31534436; PMCID: PMC6751071. https://pmc.ncbi.nlm.nih.gov/articles/PMC6751071/

Hossain MS, Wazed MA, Asha S, Amin MR, Shimul IM. Dietary Phytochemicals in Health and Disease: Mechanisms, Clinical Evidence, and Applications-A Comprehensive Review. Food Sci Nutr. 2025 Mar 19;13(3):e70101. doi: 10.1002/fsn3.70101. PMID: 40115248; PMCID: PMC11922683. https://pmc.ncbi.nlm.nih.gov/articles/PMC11922683/

Kennel KA, Drake MT, Hurley DL. Vitamin D deficiency in adults: when to test and how to treat. Mayo Clin Proc. 2010 Aug;85(8):752-7; quiz 757-8. doi: 10.4065/mcp.2010.0138. PMID: 20675513; PMCID: PMC2912737. https://pmc.ncbi.nlm.nih.gov/articles/PMC2912737/

Mead MN. Benefits of sunlight: a bright spot for human health. Environ Health Perspect. 2008 Apr;116(4):A160-7. doi: 10.1289/ehp.116-a160. Erratum in: Environ Health Perspect. 2008 May;116(5):A197. PMID: 18414615; PMCID: PMC2290997. https://pmc.ncbi.nlm.nih.gov/articles/PMC2290997/

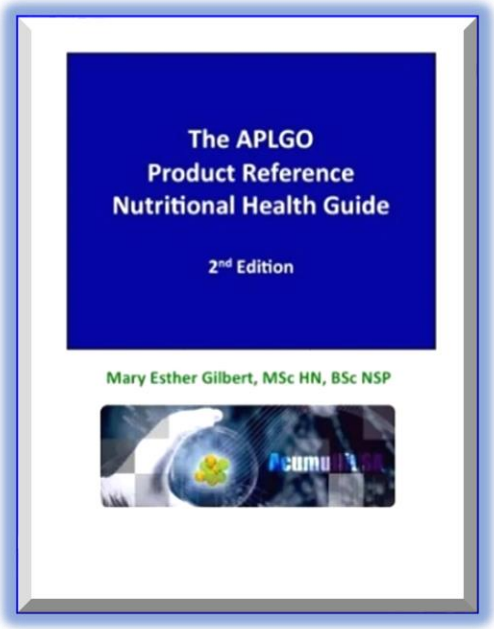
Spector, R., Frances, V. Graphic: A unit of life. *Stanford Medical Magazine*. Issue 2. 2024. https://stanmed.stanford.edu/cell-components-building-blocks-life/

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]

[Publishing Editor, The True Health Journal Newsletter – Free With Membership]



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

https://www.holisticchoices.com/apl

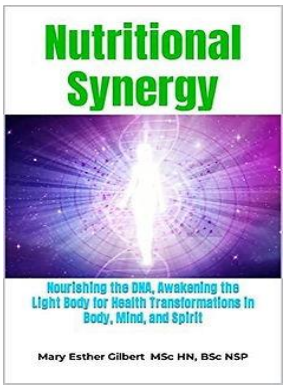
- **Scientific monographs describing extensive health benefits of every botanical ingredient.**
- **Stunning photographic illustrations.**
- **About APLGO's proprietary, unprecedented, production technology.**
- **Extensive dictionary-encyclopedia section.**
- **Complete phytonutrient database describing 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.**

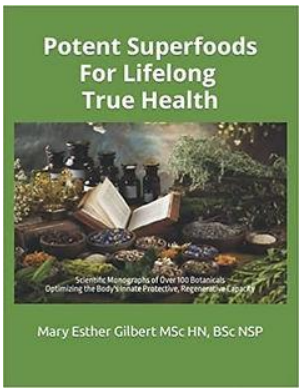
Free Download - LFT (Lifetime) Scientific Monograph (Not in the book).

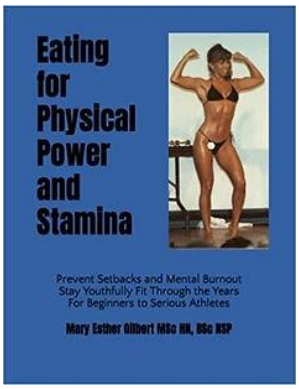
Other Books by Mary Esther Gilbert

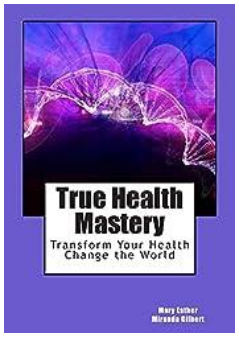
Book Video Descriptions, Book Summaries

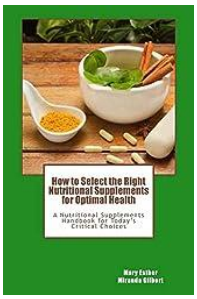
https://www.holisticchoices.com/books-by-mary-esther-gilbert











Subscribe to Mary Esther's YouTube and Rumble Channels (it's free) and stay informed about protecting your health with the right knowledge.

Subscribe

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

rumble

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

Become a Subscriber Member of

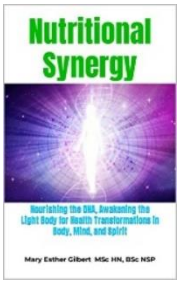
The True Health Mastery Institute of Holistic Personal Health Management

Building Optimal Health Through the Power of the Right Information

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

---

Master the Powerful Food Choices for Optimal Health Vibrancy



Enroll in the Nutritional Synergy Online Self-paced Course

Earn a Certificate of Completion

Based on Mary Esther's Book Nutritional Synergy™

Master Her Proven, Health-Transformational System

For Health Recovery, Higher Quality of Life, and Youthful Longevity