

# Vital Chi™ Anti-Aging Formula

## Scientifically Confirmed All-Natural Elements help to Maintain a Younger Mind and Body, plus Enhance Vitality

*By Dr. Chris D. Meletis, Naturopathic Physician*

The human body is comprised of 50 to 100 trillion living cells each with specific nutrient and oxygen requirements delivered at the tissue level via **microcirculation**. It is also estimated that every cell within the body is no further than just 50 micrometers (1/500<sup>th</sup> of an inch) from a capillary.

The cellular necessity for continuous delivery of sufficient nutrient and oxygen, plus the cleansing of metabolic waste and toxins, determines the level of success of regeneration (anti-aging), energy and vitality, our immune function, plus overall health and wellness at our cellular level.

### Aging and Microcirculation

There are over 18,000 miles of capillaries within the body, each so narrow that individual red blood cells must pass single file as they provide their life sustaining gifts. It is the ongoing integrity and efficiency of our aging microcirculation system that directly determines the health, vitality and the time frame with which our body ages.

Statistically, 70 percent of North Americans will die from cardiovascular related conditions that are paralleled by degeneration of the microcirculation. Simultaneously, changes in the blood cell size, cellular fluidity and hemodynamics can typically become compromised with the aging process, further diminish vitality and accelerate the degradation of optimal health both physically and mentally.

### The All-Natural Solution

Human aging is directly linked to the effectiveness of the microcirculatory system. Modern researchers have now documented that the regular use of time-tested and scientifically validated medicinal foods can significantly help slow and reduce vascular aging.

For centuries medicinal foods have proven themselves as potent individual tools. Recent scientific knowledge now allows for synergistic blends of traditional medicinal foods that provide dramatically more as a “blended whole” than each herb provides individually when it comes to enriching the human body.

After close review of the past and present scientific and clinical evidence, and with a full appreciation of normal physiology and the noteworthy trends of pathophysiology at the cellular level, a proprietary formula has been created with the intent of providing optimal microcirculation support and protection.

### A Synergistic Anti-Aging Formulation

Cordyceps TCM Extract (*Cordyceps sinensis*)  
LingZhi / Reishi TCM Extract (*Ganoderma lucidum*)  
YunZhi TCM Extract (*Coriolus versicolor*)  
Maitake TCM Extract (*Grifola frondosa*)  
LeucoSelect™ Grape Seed Extract  
Vitamin C

### Formulation development targeted the following Anti-Aging Areas:

1. Increase blood quality and circulation
2. Increase energy and stamina
3. Increase oxygen and nutrients delivery
4. Help reduce inflammation and arthritis
5. Support cholesterol and healthy C-Reactive Protein levels
6. Help reduce blood pressure
7. Support diabetic health
8. Help strengthen vital organ health
9. Enhance immune defenses
10. Help reduce allergy symptoms
11. Provide anti-stress support
12. Help calm and improve sleep
13. Provide antioxidants to fight free radicals
14. Enhance skin health and radiance

A brief review of the scientific literature on each ingredient provides a clear appreciation of the potent effect of each ingredient and the inherent balance and coverage brought to this synergistically blended formula.

### Cordyceps Research and Indications

The popularity of Cordyceps is growing as the traditional therapeutic properties have been validated with modern scientific methods. Research studies have isolated at least 7 unique medicinal constituents:

- Saccharides (Oligo/Polysaccharides & D-mannitol)
- Sterols (ergosterol, ergosterol peroxide, beta-sitosterol, daucosterol, campasterol)
- Peptides and Polyamines (cadaverine, spermidine, spermine, 1,3-diamino propane, putresine)
- Fatty and Organic Acids (Nearly 30 fatty acid compounds have been identified)
- Vitamins
- Nucleotides (adenosine, adenine, deoxyuridine, guanosine, thymidine, uracil, uridine)
- Inorganic Constituents and Minerals (numerous macro and trace minerals, including selenium)

Specific effects of Cordyceps derived saccharides include stimulated macrophage activity and enhanced lymphocyte function.

Human and animal studies have demonstrated that Cordyceps possesses numerous clearly beneficial properties that support both optimized quality and quantity of life.

- Improved oxygen consumption
- Enhanced Cardiac oxygen utilization
- Augmented Immune Function
- Increase cold-stress tolerance
- Improved blood flow to brain and heart
- To suppress cough frequency and liquefy mucous
- Antioxidant protection
- Enhanced energy and vitality

A clinical study of 66 elderly patients that took Cordyceps for 3 months experienced increased vitality and increased overall energy scores.

Antioxidant protection was demonstrated in patients, with a resulting increase in the antioxidant superoxide dismutase (SOD) by 16 percent and decrease in plasma malondialdehyde and plasma lipoperoxide by 34 percent.

A study of 35 people with diminished lung function, after only three weeks of taking Cordyceps showed a 40 percent increase in the antioxidant SOD activity and observed clinical improvements of COPD (Chronic Obstructive Pulmonary Disease).

## LingZhi Research and Indications

The LingZhi Mushroom (also known as Reishi and Ganoderma lucidum) has abundant research supporting its many therapeutic properties. Active constituents have been isolated and studied, supporting the numerous traditional uses of LingZhi that has helped sustain countless lives throughout Asia over the past centuries. Modern science (over 4,000 independent studies) has now validated what over 2,000 years of practical use had already indicated.

### Immune Supporting Active Components:

- Polysaccharides:
- Beta-D-Glucan - Immunostimulatory
- LingZhi-8 -Anti-Allergy/Immunomodulator
- Nucleotide:
  - Adenosine - Lessens platelet stickiness
- Alkaloid:
  - Cyclooctasulphur - Can serve as a cardiogenic
- Triterpene:
  - Gandodermediol
  - Anti-hypertensive
  - ACE inhibiting effects to lower blood pressure
- Ganoderic Acids
  - Anti-hypertensives
  - Cholesterol synthesis inhibitor

### - Ganodermic Acid

#### Cholesterol synthesis inhibitor

This brief listing of active LingZhi components provides a brief overview of the diverse health supporting components.

LingZhi is often referred to as an adaptogen (meaning it helps the body cope and adapt to internal and external factors).

Among its many studied beneficial effects and applications, following is a list of target health issues that LingZhi has been shown to help with.

- Immune Stimulant
- Coughs due to Colds
- Allergy Symptoms
- Shingles (Herpes zoster)
- Anti-tumor Support
- Altitude Sickness
- Asthmatic Support
- Fibroids
- High Blood Pressure (Hypertension)
- Help Maintain Normal Cholesterol
- Supports proper enzyme activity within cells

LingZhi stimulates immune defenses including the development of macrophage, that are a vital element change to: components of an change to: the immune system. This property confers meaningful protection against bronchial airway infection and inflammation, such as bronchitis.

Shingles is caused by the same virus that causes chicken pox. One of the many afflictions associated with condition is extreme nerve pain. A study conducted in 1998, showed that daily dosing with LingZhi decreased pain dramatically, including helping patients that were not responding to standard medical therapies.

LingZhi immune supporting properties were reported in the prestigious International Journal of Cancer, to help rally cytokine levels released by specific immune cells called activated macrophage and T lymphocytes.

The applications for LingZhi abound in the medical and scientific literature and entire books have been dedicated to reviewing its' health promoting benefits.

## YunZhi Research and Indications

The YunZhi Mushroom has over 400 scientific-medical research journal articles written about its' multiple therapeutic benefits. The major active constituents include:

- Polysaccharides
- 1-3 beta glucan
- 1-4 beta glucan
- 1-6 beta glucan
- PSK (protein-bound polysaccharide K)
- PSP (polysaccharide peptide)
- Phenols

The polysaccharides in YunZhi possess broad immune stimulatory properties that help to bolster the body's defenses against microbes and an array of cancers as well.

- Wound Healing
- Cancer Support
- Antioxidant
- Immune System Enhancer

In a study of medicinal mushrooms showed that YunZhi demonstrated a 58.56% antioxidant activity. The free radical scavenging effect was shown to be 24.6%. In the same study LingZhi was shown to possess an even higher antioxidant activity and over 67% free radical scavenging effect.

Natural killer cells are susceptible to free radical damage from ROS (reactive oxygen species) and lose effectiveness as a result. A study conducted at the Kitasato University School of Medicine in Japan, showed that "Superoxide dismutase (SOD)-mimicking substances, such as protein-bound polysaccharide of *Coriolus versicolor*... (PSK) can restore the NK-activity of cancer bearing hosts when collaborating with catalase." As stated in the abstract of a scientific review of YunZhi by the Chinese University of Hong Kong, CV (*Coriolus versicolor*) "displays a wide array of biological activities, including stimulatory effects on different immune cells and inhibition of cancer growth."

PSK (polysaccharide-Kureha), also known as krestin has been used in Asia for over 30 years in the treatment of cancer. Several randomized clinical trials have demonstrated the PSK as a supportive cancer therapy with positive results seen in gastric, esophageal, colorectal, breast and lung cancers. Both natural killer cells and lymphocyte stimulation has been demonstrated via increased cytokine levels. In addition, PSK holds promise in some cancers to possess an anti-metastatic property.

In a study that looked at beneficial effects of YunZhi and other substances showed that "the inhibitory effects of polysaccharo-peptide from the mushroom *Coriolus versicolor* on HIV-1 reverse transcriptase and alpha-glucosidase was enhanced after chemical modification with chlorosulfonic acid." This suggests the breadth of the antiviral properties of YunZhi.

## Maitake Research and Indications

*Grifola frondosa*, also known as Maitake has enjoyed a long history of traditional use for supporting the human body. Traditional uses attributed by indigenous cultures over the millennia include: cancer, HIV/AIDS, chronic fatigue syndrome (CFS), hepatitis, hay fever, diabetes, high blood pressure, hyperlipidemia and weight control. Researchers continue their efforts to validate all the reported uses of this medicinal food consumed for thousands of years in Asia.

Active constituents that are particularly prominent include:

- Polysaccharides:  
Beta-glucan

The medicinal portion of Maitake Mushroom are the fruiting body and mycelium. Rich in beta-glucan, research has demonstrated that it possesses anti-tumor activity. The "D-fraction" of beta-glucan appears to be the most active and potent form.

- Immune Support
- Cholesterol Control
- Blood Sugar Balance
- Weight Management

Maitake supports immune system function with its immuno-stimulant effects and ability to activate natural killer cells, cytotoxic T-cells, interleukin-1, and superoxide anions.

Very initial animal research suggests that Maitake Mushroom may help prevent metastasis of experimentally induced tumors as well as prevent tumor occurrence in normal cells. Other research evidence points to the ability of Maitake Mushroom to lower blood pressure and improve the lipid profile in experimental hyperlipidemia. Polysaccharides from the fruiting bodies in Maitake Mushroom appear to have a hypoglycemic effect, possibly by activating insulin receptor. Maitake mushroom also appears to help with weight control.

## Grape Seed Extract (Leucoselect™) Research and Indications

There is solid evidence supporting the importance of bioflavonoids, often referred to as Vitamin P in maintaining human health, particularly connective and cardiovascular tissues. Specific bioflavonoids derived from grape seeds, called polyphenols have been attributed to the robust health of the French despite their diet. So strong is the effect of these polyphenols rich found abundantly in wine, that its protective effect has been called the French Paradox.

A heavily researched proprietary blend of polyphenols called Leucoselect™ has been consistently documented to contain the active ingredients:

- (+) catechin
- (-) epicatechin
- gallic acid (15%)
- (-) epicatechin gallate, dimers, trimers, tetramers and their gallates (80%)
- Pentamers, hexamers, heptamers and their gallates (5%)

Significant animal and human studies have further elucidated the following *in vitro* studies on Leucoselect.

*In vitro* studies have documented this proprietary grape seed bioflavonoid complex as possessing the following properties:

- Free radical scavenging effects
- Hydroxyl radical trapping
- Superoxide anion quenching
- Peroxyl radical scavenging
- Iron and Copper chelating
- Sparing effect of vitamin E
- Regenerating effect on vitamin E
- Inhibition of xanthine oxidase
- Protection of rabbit heart against ischemia / reperfusion injury
- Stimulation of prostacyclin release in isolated rabbit heart.

Both the animal and human *in vivo* studies that follow highlight the effectiveness of the proprietary blend of Leucoselect Grape Seed Extract phytosome. Noteworthy is the delivery of the polyphenols are augmented by being bound to phosphatidylcholine to help cell membrane penetration.

Increased antioxidant capacity and stimulation of physiological antioxidant defenses.

Protection from ischemia/reperfusion cardiac damage.

Improved total antioxidant capacity of plasma in healthy volunteers with controlled dietary supply of polyphenols. (Human study). The combined antioxidant properties, connective tissue and collagen supportive properties of this diverse proprietary bioflavonoid help support the vascular health and vital skin health. Extensive research suggests that grape seed extract is beneficial in many areas of health because of its antioxidant effect to bond with collagen, promoting youthful skin, cell health, elasticity, and flexibility. Other studies have shown that proanthocyanidins help to protect the body from sun damage, to improve vision, to improve flexibility in joints, arteries, and body tissues such as the heart, and to improve blood circulation by strengthening capillaries, arteries, and veins.

Antioxidants in grape seeds have been shown 20 times more potent than Vitamin C and 50 times more potent than Vitamin E. Oligomeric Proanthocyanidin Complexes (OPC) are the most active components of this group. OPC strengthens the heart, stomach and intestinal linings, sinus and respiratory membranes and skin and joint tissues. It inhibits destructive enzymes, reduces excessive histamine release, which constricts blood vessels, and prevents its production. It inhibits blood cells from coming together and becoming thick and "sticky", improves capillary blood vessel resistance and reduces capillary leakage, reduces accumulation of fluid in cells and tissues, possesses anti-inflammatory activity, enhances Interleukin-2 production

and increases Natural Killer Cell activity, strengthening the immune system.

Clinically there is no single more important step to maintaining health than sustain optimal microcirculation and delivering antioxidants to protect the body's cells.

Grape Seed Extract (LeucoSelect) phytosome provides the body the bioflavonoids crucial to meet the demands put on the body by a modern society.

## Vitamins C Research and Indications

Ascorbic acid has long been touted as the single most affordable and potent antioxidant that can be consumed. Vitamin C is an essential vitamin for maintaining connective tissue integrity, antioxidant protection and numerous other functions within the body.

It is also true that vitamin C functions better within the body when combined with bioflavonoids, such as grape seed like Leucoselect.

The clinical applications for vitamin C are nearly limitless, thus a few highlights relative to cardiovascular health have been included for review.

### Atherosclerosis and Peripheral Arterial Disease

Patients with peripheral arterial disease, appear to have lower levels of vitamin C and higher levels of C-reactive protein, a marker of inflammation. This evidence suggests that dietary Vitamin C can decrease the risk of peripheral arterial disease.

### Exercise-induced Respiratory Infections

Some evidence suggests that prophylactic use of vitamin C in doses of 600 mg to 1 gram per day before heavy physical exercise might prevent upper respiratory infections.

### Hypertension (High Blood Pressure)

Taking Vitamin C orally, added to a conventional anti-hypertensive medication regimen, appears to decrease both systolic and mean blood pressure.

In patients with type 2 diabetes, 500 mg of Vitamin C taken daily for 4 weeks, in addition to anti-hypertensive, seems to reduce arterial blood pressure and improve arterial stiffness

## Summary

During the aging process, the microvasculature that delivers life-sustaining oxygen and nutrients begins to fail. The rate of aging directly correlates clinically to the level of anti-oxidant protection, vascular connective tissue integrity and the body's anti-inflammatory capacity. Cordyceps, LingZhi, YunZhi and Maitake confer via their blended medicinal food/plant based constituents with the capacity to support healthy microcirculation and immune enhancement

properties. Additionally the synergistic blend of Leucoselect Grape Seed Extract and vitamin C strengthens the supportive health foundation of the formula providing a comprehensive range of both protective and supportive mechanisms.

Each day thousands of the cells that degenerate and cease to function optimally and will either be replaced by healthy new life sustaining cells or not. Aging is a dynamic process

that occurs regardless of our desire to stay young, yet the rate of aging called “the biological quotient” can clearly be strongly influenced by actively nourishing the body with the building blocks essential to quench the ravages of aging.

The time for action is now, with heart disease, diabetes, immune challenges and diminished mental acuity in the balance with the passing of time, each of us must take the steps to actively resist cellular degeneration and to sustain a young and healthy vital age.

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These elements and product are not intended to diagnose, treat, cure or prevent and disease.