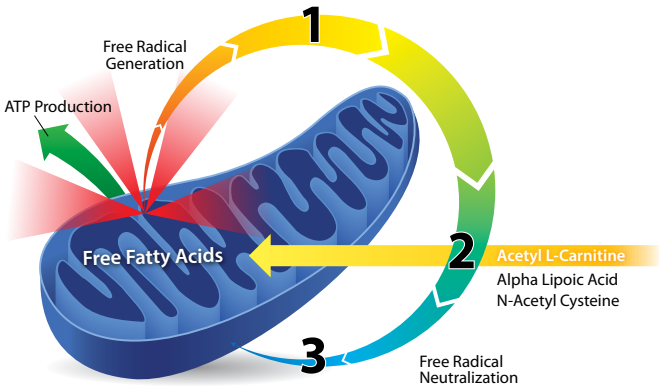
PHARMACIST
FORMULATIONS

CLINICAL APPLICATIONS

- Recharges Cellular Energy Production
- Supports Immune Function
- Increases Antioxidant Protection
- Supports Detoxification Capacity

Mito Multi

This product is a scientifically formulated blend of nutrients specifically designed to recharge cellular energy production, increase antioxidant protection, support detoxification capacity, and support immune function. Based on peer-reviewed, double-blind research, This product provides a unique blend of acetyl L-carnitine, alpha lipoic acid and N-acetyl cysteine. All have shown to support immune function and energy output. This product also includes key micronutrients and phytonutrients, including green tea, broccoli seed extract and resveratrol, to protect the mitochondria and continually recharge the cycle of energy production.



1. Foundation—Micronutrient Essentials
Cellular energy production requires adequate nutritional cofactors. This product provides key micronutrients to ensure the cycle of energy production is established.

2. Ignition—The Power Trio
This product works by combining acetyl L-carnitine, alpha lipoic acid and N-acetyl cysteine to recharge cellular energy production and increase antioxidant protection.

3. Protection—Bioactive Phytonutrients
This product provides plant compound "signals" to stimulate proper mitochondrial function and guard against mitochondrial degeneration.

Overview

The body's cells and organ systems depend on an adequate supply of energy to function optimally. The mitochondria, known as the power house of the cell, contain nutrients and enzymes that are important forrecharging cellular energy production. Some of these enzymes convert food to usable energy in the form of adenosine triphosphate (ATP). ATP functions as the key source of energy for all cells. In order to increase mitochondrial output, there must be adequate fuel supply for combustion and abundant antioxidants to scavenge free radical by-products. Preserving energy reserves and increasing energy output is a critical part of maintaining optimal health.

Lack of sleep, too much stress, poor nutrition and prescription medications can draw on energy reserves, using them up faster than they can be replenished. Even the vital biologic systems can create an energy deficit that needs to be restored.

Some of the most energy demanding systems in the body are:

- Liver detoxification
- Immune function
- Cardiovascular function
- Neurologic function

This product is scientifically formulated, based on published research, to boost mitochondrial reserves and recharge cellular energy production.[1] This product includes the powerful antioxidant trio of alpha lipoic acid, N-acetyl cysteine and acetyl L- carnitine, all shown to recharge cellular energy production and the primary cellular antioxidant pools of vitamins E and C and glutathione.

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Acetyl L-Carnitine†

Acetyl L-carnitine (ALC) is an amino acid that is associated with recharged cellular energy production. It has been shown to increase the flow of free fatty acids, the fuel source for mitochondria, resulting in a significant boost in energy production. With age, free radical production increases oxidative damage to the mitochondria, which can potentially decrease energy production. ALC has been shown to recharge cellular energy production and has been found, in combination with lipoic acid, to lower oxidative stress. [2,3] Studies have also shown that ALC supports immune function by protecting CD4 and CD8 immune cells and by supporting the reproduction of lymphocytes for the identification and elimination of invading antigens.[4,5]

N-Acetyl Cysteine†

N-acetyl cysteine (NAC) is an antioxidant that scavenges free radicals and supports detoxification capacity.[6] NAC has been shown to increase production of glutathione, an important antioxidant found in the body.[6] In addition to its antioxidant activity, glutathione supports immune function by activating T-cells. [7]

Alpha Lipoic Acid†

Alpha lipoic acid (ALA) is an antioxidant and also plays a synergistic role in recharging other antioxidants such as vitamin C, vitamin E, CoQ_{10} and glutathione. Lipoic acid also plays a key role in supporting detoxification capacity.[8] Studies have shown that a combination of ALA and ALC helps minimize oxidative damage.[9,10] Oxidative stress causes damage to DNA, RNA, proteins, mitochondrial membranes and lipids, and contributes to the functional decline of mitochondria, cells, tissues and eventually organs such as the brain. [9,10]

Resveratrol†

Resveratrol is a polyphenol molecule found in many plant species, including grapes and cranberries, and is found in high concentrations in wine. Polyphenols act as antioxidants that protect plants from damage that can be caused by bacteria, fungi and radiation.[11] Resveratrol is believed to be the dietary factor behind the "French Paradox," which is the high rate of cardiovascular wellness in the French population, despite their high fat intake. In addition to its antioxidant properties and support for cardiovascular function, resveratrol has been shown to support immune function.[11]

Broccoli Seed Extract†

Broccoli seed extract contains a high amount of glucoraphanin, a compound that is a precursor to sulphoraphane. Sulphoraphane is an antioxidant and supports detoxification capacity and immune response. Sulphoraphane has been shown to induce Phase II detoxification enzymes and raise intracellular glutathione levels.[12]

Green Tea (EGCG)†

Green tea polyphenols have demonstrated significant antioxidant, probiotic- and immune-supporting properties.[13] The hydroxyl group of green tea polyphenols increases antioxidant protection by forming complexes with free radicals and neutralizing them, minimizing oxidative damage throughout the body. Green tea polyphenols also stimulate the activity of liver detoxification enzymes, supporting detoxification capacity.[13]

The Micronutrient "Backbone" †

To recharge cellular energy production efficiently, optimal levels of critical nutrients and enzyme cofactors must be achieved. This product provides an optimized backbone of vitamins and minerals necessary for increasing energy output and meeting daily nutritional needs.

Directions

2-4 capsules per day or as recommended by your health care professional.

Does Not Contain

Gluten, yeast, artificial colors or flavors.

Cautions

If you are pregnant or nursing, consult your physician before taking this product.

Supplement Facts

V3

Serving Size 4 Capsules
Servings Per Container 15 & 30

	Amount Per Serving	% Daily Value
Vitamin A (from 5,000 IU as Natural Beta Carotene)	1,500 mcg	167%
Vitamin C (as Ascorbic Acid USP)	250 mg	278%
Vitamin D (D3 as Cholecalciferol)	25 mcg (1,000 IU)	125%
Thiamin (Vitamin B1) (from Thiamine Hydrochloride USP)	15 mg	1,250%
Riboflavin (Vitamin B2 USP)	15 mg	1,154%
Niacin (as Niacinamide USP)	15 mg	94%
Vitamin B6 (as Pyridoxine Hydrochloride USP)	15 mg	882%
Folate (from 800 mcg as Quatrefolic® (6S)-5-Methyltetrahydrofolic acid glucosamine salt)	1,360 mcg DFE	340%
Vitamin B12 (as Methylcobalamin)	250 mcg	10, 417%
Biotin	50 mcg	167%
Pantothenic Acid (as d-Calcium Pantothenate USP)	15 mg	300%
Choline (as Choline Bitartrate)	15 mg	3%
Calcium (as Calcium Citrate USP)	75 mg	6%
Iodine (from Potassium Iodide)	37 mcg	25%
Magnesium (as DiMagnesium Malate)	75 mg	18%
Zinc (as TRAACS™ Zinc Bisglycinate Chelate)	5 mg	45%
Selenium (as Selenium Glycinate Complex)	75 mcg	136%
Manganese (as TRAACS™ Manganese Bisglycinate Chelate)	1 mg	43%
Chromium (as O-polynicotinate)‡	50 mcg	143%
Potassium (as Potassium Citrate USP)	30 mg	<1%
N-Acetyl-L-Cysteine USP	600 mg	*
Acetyl L-Carnitine Hydrochloride (MitoCarn™)	500 mg	*
Malic Acid (as DiMagnesium Malate)	215 mg	*
Alpha Lipoic Acid	200 mg	*
Mixed Tocopherols	50 mg	*
Green Tea Leaf Extract (Standardized to contain 45% EGCg (Epigallocatechin gallate))	45 mg	*
Broccoli Seed Extract (TrueBroc®) (Standardized to contain 13% Glucoraphanin)	40 mg	*
Inositol NF	15 mg	*
trans -Resveratrol (from *Polygonum cuspidatum* (Roots))	10 mg	*

* Daily Value not established.

Other Ingredients: Hypromellose (Natural Vegetable Capsules), Magnesium Stearate, Ascorbyl Palmitate and Silicon Dioxide.

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References

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