# PRODUCT SPECIFICATIONS





Code: 9241 NPN: 80044491 Size: 60 Vegetarian Capsules Actual Size: 22.79 mm x 8.44 mm



# Mito AMP<sup>®</sup>

# **Enhances Cognitive Function and Memory**

- CoQ10 has a beneficial role in the treatment of various chronic disorders that are highlighted by an impairment in mitochondrial bioenergetics and/or increased oxidative stress, such as CHF, Parkinson's, and migraine
- R-alpha-lipoic acid may have greater bioavailability than the synthetic mixture
- In vivo studies have noted that combinations of ALC and R-alpha-lipoic acid act synergistically in preventing mitochondrial decay
- Standardized *Ginkgo biloba* extract promotes cognitive functioning, neuropsychiatric symptoms, and functional abilities in those with vascular and Alzheimer's dementia
- Resveratrol, the potent antioxidant found in Japanese Knotweed, improves muscle mitochondrial respiration in obese humans, as well as several cardiometabolic risk factors
- Clinical trials indicate that administration of grape seed proanthocyanidins stimulated mitochondrial function in the skeletal muscle of obese Zucker rats and improved cognitive function in older adults
- Suitable for vegetarians/vegans

### PRODUCT SUMMARY

Oxidative damage to the mitochondria is a major factor in cellular aging, along with neurological decay. While lifestyle interventions, such as calorie restriction, help improve mitochondrial function in young non-obese adults, certain supplements such as L-carnitine are also of therapeutic benefit. The salt of L-carnitine, called acetyl-L-carnitine (ALC), is the preferred form for conditions of disease and aging as it has better absorption and readily crosses the blood-brain barrier. ALC has been shown not only to improve mood, but also to exert a significant function in the disorders of aging, including fatigue, hypertension, insulin resistance, diabetic neuropathy, and dementia.

Mito AMP also provides *Ginkgo biloba* extract, resveratrol, R-alpha-lipoic acid, and grape seed proanthocyanidins, all of which modulate mitochondrial function, enhance cognitive function, and/or reduce inflammation associated with cognitive decline. Pyrroloquinoline quinone (PQQ) plays a key role in mitochondrial biogenesis via cell signalling (PGC-1 alpha), with clinical trials showing improved cerebral blood flow and brain function, improved memory when combined with CoQ10, as well as increased vigour and a significant reduction in symptoms of fatigue, tension, low mood, and confusion.



**To Place Your Order Email:** customercare@assurednatural.com **Call:** 1.888.826.9625 • **Fax:** 1.844.384.7503







### Serving Size: 1 Vegetarian Capsule Servings per Container: 60

### **Each Capsule Contains:**

Acetylcarnitine (N-acetyl-L-carnitine Hydrochloride)	
Ginkgo Biloba Extract (Ginkgo biloba) (leaf) (24% Flavone Glycosides, 6% Terpene Lactones)	
Japanese Knotweed Extract (Polygonum cuspidatum) (root) (20% Trans-Resveratrol)	
Coenzyme Q10 (Microorganism)	60 mg
R-Alpha-Lipoic Acid	
Grape Seed Extract (Vitis vinifera) (seed) (80% Oligomeric Proanthocyanidins)	
BioPQQ® (Pyrroloquinoline Quinone Disodium Salt)	3.33 mg

**Non-medicinal Ingredients:** Vegetarian capsule (carbohydrate gum [cellulose], purified water), silica, vegetable grade magnesium stearate (lubricant), microcrystalline cellulose.

**Recommended Adult Dose:** 1 capsule 3 times per day with food or as directed by a health care practitioner. Consult a health care practitioner for use beyond 4 weeks.

**Recommended Use:** Helps enhance cognitive function and memory in adults. Helps support peripheral circulation and maintain and/or support cardiovascular health. An antioxidant for the maintenance of good health.

**Caution:** Consult a health care practitioner prior to use in the following cases: if you have diabetes, a seizure disorder, or liver or kidney disease, if you have been instructed to follow a low protein diet, or if you are taking medication for diabetes, high blood pressure, or seizures. Do not use if you are taking health products that affect blood coagulation (e.g., blood thinners, clotting factor replacements, acetylsalicylic acid, ibuprofen, fish oils, vitamin E) as this may increase the risk of spontaneous bleeding. Do not use if you are pregnant or breastfeeding. May cause mild gastrointestinal symptoms (transient nausea, vomiting, abdominal cramps, and diarrhea). Feelings of sleeplessness and overstimulation may occur; discontinue use if such feelings persist or worsen. Keep out of reach of children.

**Drug Interactions:** ALC may help with opioid withdrawal. *Ginkgo biloba* extract (GBE) significantly influences talinolol (beta 1 adrenoceptor blocker) maximum plasma concentration, likely a result of p-glycoprotein activity. GBE induces CYP3A metabolism and reduces midazolam and tolbutamide concentrations.

Contains no artificial colours, preservatives, or sweeteners; no dairy, starch, sugar, wheat, gluten, yeast, soy, corn, egg, fish, shellfish, animal products, salt, tree nuts, or GMOs. Suitable for vegetarians/vegans. Sealed for your protection. Do not use if seal is broken. For freshness, store in a cool, dry place.

References available at bioclinicnaturals.com



#### · GUARANTEED ·

Bioclinic Naturals<sup>®</sup> products are guaranteed to meet or exceed Good Manufacturing Practices (GMP) of the U.S. Food and Drug Administration (FDA), Health Canada, and the Therapeutic Goods Administration (TGA) of Australia.



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Head office Assured Natural Distribution Inc., 104 – 3686 Bonneville Place, Burnaby, BC, Canada V3N 4T6 | U.S. Distribution office 14224 167<sup>th</sup> Avenue SE, Monroe, WA, USA 98272 Customer Service 1-888-826-9625 · Fax 1-844-384-7503 · Email customercare@assurednatural.com

# Mito AMP<sup>™</sup> – Power to the People



### About Mito AMP

- Mitochondria are small structures primarily responsible for converting food into an energy form (ATP) used by our cells.
- These "cellular powerhouses" are found throughout the body, are especially
  prevalent in our muscle, heart and liver cells and are subject to oxidative
  damage from free radicals.
- Damage accumulated over time is a key factor in cell, tissue and organ aging.
- Lifestyle interventions, such as a lower calorie diet, help improve mitochondrial function. Supplements, such as acetyl-L-carnitine (ALC), help to reverse many age-related cellular changes.
- ALC has shown a beneficial effect in aging disorders including fatigue, high blood pressure, diabetes, and memory disorders such as dementia.
- ALC works in synergistic combination with another other key mitochondrial nutrient, coenzyme Q10. Together they help improve conditions such as heart failure and visual reduction associated with macular degeneration.
- Two grams of acetyl-L-carnitine per day for 6 months lowers blood pressure and improves insulin resistance in those at higher risk for heart disease.
- Acetyl-L-carnitine may help reduce the muscle pain and lower fatigue in those with a chronic disorder called fibromyalgia.
- PQQ, a novel vitamin like compound, may help stimulate mitochondrial growth.
- Researchers believe that R-alpha-lipoic acid and ALC together reduce oxidative stress and thereby improve mitochondrial function.
- R-alpha-lipoic acid may have better absorption in the elderly.
- Resveratrol improves mitochondrial respiration by mimicking the physiological effects of a calorie restricted diet.
- The anti-aging compound resveratrol is able to protect the heart and its blood vessels from oxidative damage and inflammation.
- Ginkgo biloba extract reduces oxidative stress and improves mitochondrial respiration. This is useful in preventing or slowing the progression of dementia associated with vascular and Alzheimer's dementia.
- Standardized grape seed extract may stimulate mitochondrial function in skeletal muscle.
- A recent large scale analysis of grape seed extract concluded that it helps lower systolic blood pressure.

### How To Use Mito AMP

• 1 capsule 3 times per day with meals or as directed by a health care practitioner. Consult a health care practitioner for use beyond 4 weeks.

### PATIENT NAME:

PRACTITIONER NOTES

# **Cautions and Contraindications**

- Consult a health care practitioner prior to use in the following cases: if you have diabetes, high blood pressure, seizures, liver or kidney disease, or if you have been instructed to follow a low protein diet.
- Do not use if you are taking health products that affect blood coagulation (e.g., blood thinners, clotting factor replacements, acetylsalicylic acid, ibuprofen, fish oils, vitamin E) as this may increase the risk of spontaneous bleeding.
- Do not use if you are pregnant or breastfeeding.
- Do not use if there is a known allergy to any of the components.
- Keep out of reach of children.

### **Drug Interactions**

- This product should be not used by individuals who are employing blood thinning drugs such as Warfarin.
- If you are diabetic and employing prescription medications for your elevated blood sugar, this product may trigger hypoglycemia.

# **Quick Tips**

- Tuna fish, organ meats including liver, kidney and heart, and whole grains including the germ are rich in CoQ10.
- Resistance or weight training in the elderly is associated with an increase in muscle size and mitochondrial density.
- PQQ, an essential micronutrient, is found in many foods including tofu, parsley, green tea, green pepper, kiwi, papaya, spinach and carrots.
- Avoid high fat diets: In sedentary men, a very high fat diet can lead to poor mitochondrial function which triggers a substantial loss of whole-body efficiency and reduced levels of alertness
- Butt out: The compounds in cigarette smoke damage the mitochondria leading to a loss in ATP production and ultimately triggering cell destruction.
- Pinot noir and Cabernet sauvignon contain the highest levels of resveratrol found in red wine
- Found in foods like spinach, lipoic acid is not only a vital component to cellular energy production, but also helps to stop the damage triggered by free radicals.

### PRACTITIONER CONTACT INFORMATION:

59121



# Acute Musculoskeletal Protocol: Reducing Pain

## **Introduction**

Acute pain (present for less than 3 months) can be medically managed through appropriate assessment, patient monitoring, and various integrative modalities, as outlined below.

### Assessment

For musculoskeletal pain history and physical exam, including:

- 1. Pain history: elements include the site, onset, distribution, quality, duration, temporal factors, intensity, aggravating and relieving factors, impact on daily living, associated symptoms, previous similar symptoms, and current and previous treatments.<sup>1</sup>
- 2. Physical functioning and quality of life.
- 3. Emotional functioning:
  - a. Pain is now widely recognized to be a multi-factorial experience and should be understood as part of a biopsychosocial perspective. (See Distress and Risk Assessment Method [DRAM] intake below.)
- 4. Patient ratings of improvement or worsening of the pain.<sup>2</sup>
- 5. Define the involved structure using the following algorithm:<sup>3</sup>
  - a. Watch for referred pain patterns from deep spinal structures.
  - b. Use all necessary clinical skills and imaging.
  - c. Specify location of pain.
  - d. Define clinical process triggering the pain.
  - e. Name the problem: inflammation, degeneration, strain, sprain, etc.
  - f. Look for red flag clues for serious illness and yellow flag clues for psychosocial issues.
  - g. Develop a working diagnosis and management plan in conjunction with the patient.

### **General Recommendations**

- 1. Monitor progress of patients using:
  - a. McGill Pain Inventory: https://bit.ly/39BFsYh
  - b. Oswestry Low Back Pain Disability Questionnaire: https://bit.ly/3eWKm2Z
  - c. PSQI: Pittsburgh Sleep Quality Index: https://bit.ly/3hrICQO
  - Sleep has been shown to influence both acute and chronic pain perception.<sup>4</sup>
  - d. Hamilton Depression Scale: https://bit.ly/39oBTEB
  - Depression has been shown to influence the transition from acute to chronic pain.<sup>5</sup>
  - e. Distress and Risk Assessment Method (DRAM): https://bit.ly/2ZWXxgb

## Specific Treatment Plan

Acute Pain	Mild	Moderate	Severe
Sprain/strain	<ul> <li>RICE</li> <li>Dolor Ease<sup>™</sup>: 1 capsule BID OR Theracurmin<sup>®</sup> 2X: 1 capsule QD</li> <li>Synerase<sup>®</sup>: 2 capsules TID in between meals<sup>o</sup></li> </ul>	<ul> <li>RICE</li> <li>Exercise-based rehabilitation and early mobilization associated with improved outcomes<sup>7</sup></li> <li>Dolor Ease: 2 capsules BID OR Theracurmin 2X: 1–2 capsules QD</li> <li>Synerase: 3 capsules TID in between meals<sup>6</sup></li> <li>PEA: 1 capsule TID<sup>8</sup></li> </ul>	May require the use of prescription medi- cations as part of the integrated protocol
Contusion	<ul> <li>RICE</li> <li>Dolor Ease: 1 capsule BID OR Theracurmin 2X: 1 capsule QD</li> <li>Synerase: 2 capsules TID in between meals<sup>9</sup></li> </ul>	<ul> <li>RICE</li> <li>Dolor Ease: 2 capsules BID OR Theracurmin 2X: 1–2 capsules QD</li> <li>Synerase: 3 capsules TID in between meals<sup>9</sup></li> </ul>	May require the use of prescription medi- cations as part of the integrated protocol

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Myalgia	<ul> <li>RICE</li> <li>Dolor Ease: 1 capsule BID OR Theracurmin 2X: 1 capsule OD<sup>10</sup></li> </ul>	<ul> <li>RICE</li> <li>Dolor Ease: 2 capsules BID OR Theracurmin 2X: 1–2 capsules OD</li> </ul>	
	• Magnesium Bisglycinate: 200 mg BID with food <sup>11,12</sup>	• Ubiquinol CoQ10 200 mg: 1 softgel QD <sup>14,15</sup>	
• Syr in b	• Synerase: 2 capsules TID	<ul> <li>Mito AMP<sup>®</sup>: 2 capsules BID<sup>16,17</sup></li> </ul>	May require the use of prescription medi- cations as part of the integrated protocol
	in between meals <sup>13</sup>	• Magnesium Bisglycinate: 200 mg BID with food <sup>11,12</sup>	
		• Synerase: 3 capsules TID in between meals <sup>13</sup>	
		<ul> <li>OptiMega-3<sup>®</sup>: 1 softgel BID with meals<sup>18,19</sup></li> </ul>	
Arthralgia	RICE	RICE	
	• Dolor Ease: 1 capsule BID OR Theracurmin 2X: 1 capsule QD	<ul> <li>Dolor Ease: 2 capsules BID OR Theracurmin 2X: 1–2 capsules QD</li> </ul>	May require the use of prescription medi- cations as part of the integrated protocol
	• Synerase: 2 capsules TID in between meals <sup>20,21</sup>	• Synerase: 3 capsules TID in between meals <sup>20,21</sup>	
	• PEA: 1 capsule TID <sup>8</sup>	• OptiMega-3: 1 softgel BID with meals <sup>22</sup>	
		• <b>PEA:</b> 1 capsule TID <sup>8</sup>	

QD: daily; BID: two times per day; TID: three times per day; RICE: Rest, Ice, Compression, Elevation; PEA: Palmitoylethanolamide

### Re-Assessment

Repeat clinical and laboratory measurements as indicated. Confirm progress with treatment or re-assess barriers to improvement, including possible red/yellow flags that did not present earlier.

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# Neurological Protocol: Restoring Neurological Function

### **Introduction**

Chronic degenerative neurological concerns are being reported more frequently in everyday clinical practice, including Parkinson's disease, multiple sclerosis, and dementia.

### **Assessment**

For neurological damage or degenerative risk:

- 1. Thorough clinical neurological workup, potentially including CT scan, electromyography, MRI, and PET when diagnosis is uncertain.<sup>1</sup>
- 2. Potential laboratory considerations:
  - a. Insulin resistance assessment, such as an oral glucose tolerance test
  - b. Hemoglobin A1c
  - c. Fasting glucose
  - d. Hs-CRP
  - e. Homocysteine
  - f. Methylmalonic acid (B12)

- g. 25-OH vitamin D levels
- h. Anti-myelin antibodies
- i. AST (aspartate aminotransferase)
- j. Markers for oxidative damage and genetic risk, such as urinary levels of 8-hydroxy-deoxyguanosine and APOE gene testing, respectively

- **General Recommendations** 
  - 1. Monitor progress of patients using:
    - a. Standardized Mini-Mental State Examination at https://bit.ly/2BLAFGU
    - b. Unified Parkinson's Disease Rating Scale at <u>https://bit.ly/2VXwleB</u>
    - c. Standardized neurological exam and EDSS for multiple sclerosis at https://bit.ly/3ffj0pS

## **Specific Treatment Plan**

	Mild	Moderate	Severe
Week 1: Initiation Phase	<ul> <li>Mediterranean-style diet<sup>2,3</sup></li> <li>Aerobic and resistance exercise training<sup>4,5</sup></li> <li>Calligraphy therapy<sup>6,7</sup></li> <li><b>BioFoundation-G<sup>®</sup>:</b> 2 tablets TID with meals<sup>8,9</sup></li> </ul>	<ul> <li>Mediterranean-style diet<sup>2,3</sup></li> <li>Goal of 10,000 steps per day as assessed by pedometer, with individualized targets<sup>10</sup></li> <li>Age-appropriate yoga: Three 55-minutes sessions per week<sup>11,12</sup></li> <li>BioFoundation-G: 2 tablets TID with meals<sup>8,9</sup></li> </ul>	<ul> <li>Mediterranean-style diet<sup>2,3</sup></li> <li>Tai Chi: 60 minutes twice weekly<sup>13,14</sup></li> <li>BioFoundation-G: 2 tablets TID with meals<sup>8,9</sup></li> </ul>
Week 2–7: Intensive Therapy Phase	<ul> <li>BioFoundation-G: 2 tablets TID with meals<sup>8,9</sup></li> <li>Mito AMP<sup>®</sup>: 1 softgel per day<sup>15-17</sup></li> <li>PQQ-10<sup>®</sup>: 1 softgel per day<sup>18,19</sup></li> <li>OptiMega-3<sup>®</sup>: 1 softgel BID with meals<sup>20-22</sup></li> <li>Vitamin D3: 1000 IU QD<sup>23,24</sup></li> </ul>	<ul> <li>BioFoundation-G: 2 tablets TID with meals<sup>8,9</sup></li> <li>Mito AMP: 2 softgels per day<sup>15-17</sup></li> <li>PQQ-10: 2 softgels per day<sup>18,19</sup></li> <li>OptiMega-3: 1 softgel BID with meals<sup>20-22</sup></li> <li>Theracurmin<sup>®</sup> 2X: 1 capsule BID<sup>25</sup></li> <li>Vitamin D3: 2000 IU QD<sup>23,24</sup></li> </ul>	<ul> <li>BioFoundation-G: 2 tablets TID with meals<sup>8,9</sup></li> <li>Mito AMP: 3 softgels per day<sup>15-17</sup></li> <li>PQQ-10: 3 softgels per day<sup>18,19</sup></li> <li>OptiMega-3: 1 softgel BID with meals<sup>20-22</sup></li> <li>Theracurmin 2X: 1 capsule BID<sup>25</sup></li> <li>Vitamin D3: 2000 IU QD<sup>23,24</sup></li> <li>N-Acetyl-L-Cysteine: 1 capsule TID<sup>26</sup></li> <li>Melatonin: 3–5 mg at night<sup>27</sup></li> </ul>



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Week 8: Maintenance Phase	<ul> <li>Mediterranean-style diet<sup>2,3</sup></li> <li>Aerobic and resistance exercise training<sup>4,5</sup></li> <li>BioFoundation-G: 2 tablets TID with meals<sup>8,9</sup></li> </ul>	<ul> <li>Mediterranean-style diet<sup>2,3</sup></li> <li>Aerobic and resistance exercise training<sup>4,5</sup></li> <li>BioFoundation-G: 2 tablets TID with meals<sup>8,9</sup></li> <li>Mito AMP: 1 softgel per day<sup>15-17</sup></li> <li>PQQ-10: 2 softgels per day<sup>18,19</sup></li> <li>OptiMega-3: 1 softgel BID with meals<sup>20-22</sup></li> <li>Theracurmin 2X: 1 capsule QD<sup>25</sup></li> <li>Vitamin D3: 1000 IU QD<sup>23,24</sup></li> </ul>	<ul> <li>Mediterranean-style diet<sup>2,3</sup></li> <li>Aerobic and resistance exercise training<sup>4,2</sup></li> <li>BioFoundation-G: 2 tablets TID with meals<sup>8,9</sup></li> <li>Mito AMP: 2 softgels per day<sup>15,17</sup></li> <li>PQQ-10: 2 softgels per day<sup>18,19</sup></li> <li>OptiMega-3: 1 softgel BID with meals<sup>20-22</sup></li> <li>Theracurmin 2X: 1 capsule BID<sup>25</sup></li> <li>Vitamin D3: 1000 IU QD<sup>23,24</sup></li> <li>N-Acetyl-L-Cysteine: 1 capsule BID<sup>26</sup></li> </ul>
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QD: daily; BID: two times per day; TID: three times per day.

### Re-assessment

### Repeat clinical and laboratory measurements.

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