



Mitochondrial Formula

Increases Cellular Energy (ATP) Production
Reduces Symptoms of Fatigue
Supports Endogenous Antioxidant Defence Systems

- Provides a high dose of clinically relevant amounts of key nutrients, including 300 mg of CoQ10 and 1500 mg of acetyl-L-carnitine
- Contains a combination of sustainably made ancient peat and apple extracts shown to increase ATP levels without increasing reactive oxygen species
- Antioxidant protection from superoxide dismutase and Opitac® L-glutathione provides redox balance within the cell
- Stimulant free
- Suitable for vegetarians, with easy dosing and natural watermelon flavour

PRODUCT SUMMARY

Mitochondrial Formula is a unique combination of nutrients designed to enhance mitochondrial function by increasing ATP production, while also providing intracellular antioxidant protection. Mitochondria are the energy powerhouses of the cell, consuming 80–90% of a cell’s oxygen to produce ATP via the oxidative phosphorylation (OXPHOS) process. Impaired mitochondrial bioenergetics underly both the aging process and many chronic cardiovascular, metabolic, and neurological conditions. Acetyl-L-carnitine shuttles fatty acids across the mitochondrial membrane, essential for generating energy via fatty acid metabolism. It has been shown to improve fatigue, neurological and cognitive function, and blood pressure. The antioxidant CoQ10 is a component of the mitochondrial respiratory chain and an essential cofactor in the electron transport system. It has shown clinical benefit for many conditions, including hypertension and migraine.

ElevATP™ is a blend of plant bio-inorganic trace minerals and an apple extract rich in polyphenols such as procyanidins and chlorogenic acid. It has been shown to increase whole blood ATP levels as well as exercise performance and body composition, without an increase in reactive oxygen species. Given that mitochondria are the primary source of free radical production within a cell, the bioavailable Opitac L-glutathione and superoxide dismutase (from Extramel®) are also key components. They are critical to redox balance within a cell and have been shown to reduce perceived stress and fatigue.



MITOCHONDRIAL FORMULA

INCREASES CELLULAR ENERGY (ATP) PRODUCTION

Serving Size: 1 Heaping Scoop = 2.7 g

Servings Per Container: 30

Each Serving (1 Heaping Scoop = 2.7 g) Contains:

Acetyl-L-Carnitine (N-Acetyl L-Carnitine Hydrochloride)	1500 mg
Coenzyme Q10 (microorganism)	300 mg
ElevATP™	150 mg
Ancient Peat Extract.....	148.5 mg
Apple Extract 85:1 (<i>Malus domestica</i>) (fruit).....	1.5 mg
Opitac® L-Glutathione	100 mg
S.O.D Extramel® Complex	
(Cantaloupe (<i>Cucumis melo</i> subsp. <i>melo</i> var. <i>cantalupo</i>) (fruit)).....	10 mg
Superoxide dismutase (S.O.D)	140 IU

Non-medicinal Ingredients: Natural flavour, purified stevia leaf extract.

Recommended Adult Dose: 1 heaping scoop (2.7 g) per day dissolved in 250 mL of water or as directed by a health care practitioner. Take with food. Ensure you drink enough fluid before, during, and after exercise. Use a minimum of 4 weeks to see beneficial effects.

Recommended Use: Helps increase energy production (ATP) at the cellular level. Helps sustain the function of endogenous antioxidant defence systems by providing the antioxidant enzyme superoxide dismutase. Helps support cardiovascular, cognitive, and brain health. Helps reduce the symptoms of stress such as pain, fatigue, sleeplessness, weariness, irritability, and quality of life (physical and mental health conditions). Helps improve strength and power in repetitive bouts of brief, highly intense physical activity. May help increase muscle size when used in conjunction with resistance training. Provides antioxidants that help protect against the oxidative damage caused by free radicals.

Caution: Consult a health care practitioner prior to use if you are pregnant or breastfeeding, have a liver disease, kidney disease or a seizure disorder, or if you are taking blood pressure medication or blood thinners. May cause digestive problems. Keep out of reach of children.

Contraindications: While no specific contraindication exists or is predicted, data is lacking for use during pregnancy, lactation, and in children, and the dosage may need to be reduced for individuals under the age of 18.

Drug Interactions: Although very little evidence supports this interaction, a potential interaction is possible for individuals taking the anticoagulant Coumadin and both CoQ10 and acetyl-L-carnitine. Close monitoring of the INR is recommended in these patients. No other negative drug interactions are known for CoQ10, though a number of medications inhibit CoQ10 synthesis or function in the body, including statin or blood pressure medications, tricyclic antidepressants, and oral hypoglycemic agents, suggesting a potential benefit of combined use.

Contains no artificial colours, preservatives, or sweeteners; no dairy, sugar, wheat, gluten, soy, corn, egg, fish, shellfish, salt, tree nuts, or GMOs. Suitable for vegetarians. 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® 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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Code: 9556 **NPN:** 80116941
Size: 120 Vegetarian Capsules

Mitochondrial Formula

Helps reduce fatigue and improve energy

- Increases cellular energy
- Provides a high dose of clinically relevant amounts of key nutrients, including CoQ10 and acetyl-L-carnitine
- Contains a combination of sustainably made ancient peat and apple extracts shown to increase ATP levels, the primary currency of cellular energy, without increasing reactive oxygen species
- Provides antioxidant protection from superoxide dismutase, and L-glutathione provides redox balance within the cell
- Stimulant-free
- Suitable for vegetarians

PRODUCT SUMMARY

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ElevATP™ is a blend of plant bio-inorganic trace minerals and an apple extract rich in polyphenols such as procyanidins and chlorogenic acid. It has been shown to increase whole blood ATP levels as well as exercise performance and body composition, without an increase in reactive oxygen species. Given that mitochondria are the primary source of free radical production within a cell, the bioavailable Opatac® L-glutathione and superoxide dismutase (from Extramel®) are also key components. They are critical to redox balance within a cell and have been shown to reduce perceived stress and fatigue.



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MITOCHONDRIAL FORMULA

HELPS REDUCE FATIGUE AND IMPROVE ENERGY

Serving Size: 4 Vegetarian Capsules

Servings Per Container: 30

Each Vegetarian Capsule Contains:

Acetyl-L-Carnitine (Acetyl-L-Carnitine Hydrochloride).....	375 mg
Coenzyme Q10 (Microorganism)	37.5 mg
ElevATP™	37.5 mg
Ancient Peat Extract.....	37.1 mg
Apple 85:1 Extract (<i>Malus domestica</i>) (fruit).....	0.4 mg
L-Glutathione	25 mg
S.O.D Extramel® Complex.....	2.5 mg
Cantaloupe (<i>Cucumis melo</i> subsp. <i>melo</i> var. <i>cantalupo</i>) (fruit)	0.5 mg
Superoxide Dismutase	35 IU

Non-medicinal Ingredients: Vegetarian capsule (carbohydrate gum, purified water), dibasic calcium phosphate dihydrate, *Oryza sativa* (rice) bran extract, *Oryza sativa* (rice) hull powder, vegetable grade magnesium stearate (lubricant).

Recommended Adult Dose: 2 capsules 2 times per day or as directed by a health care practitioner. Use for a minimum of 4 weeks to see beneficial effects. For use beyond 12 weeks, consult a health care practitioner.

Recommended Use: Helps increase energy production (ATP) at the cellular level. Helps sustain the function of endogenous antioxidant defence systems by providing the antioxidant enzyme superoxide dismutase. Helps support cardiovascular, cognitive, and brain health. Helps reduce the symptoms of stress such as pain, fatigue, sleeplessness, weariness, irritability, and quality of life (physical and mental health conditions). Helps improve strength and power in repetitive bouts of brief, highly intense physical activity. May help increase muscle size when used in conjunction with resistance training regimen. Provides antioxidants that help protect against the oxidative damage caused by free radicals.

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Contraindications: While no specific contraindication exists or is predicted, data is lacking for use during pregnancy, lactation, and in children, and the dosage may need to be reduced for individuals under the age of 18.

Drug Interactions: Although very little evidence supports this interaction, a potential interaction is possible for individuals taking the anticoagulant Coumadin and both CoQ10 and acetyl-L-carnitine. Close monitoring of the INR is recommended in these patients. No other negative drug interactions are known for CoQ10, though a number of medications inhibit CoQ10 synthesis or function in the body, including statin or blood pressure medications, tricyclic antidepressants, and oral hypoglycemic agents, suggesting a potential benefit of combined use.

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

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Mitochondrial Formula – Helps Reduce Fatigue and Improve Energy

About Mitochondrial Formula

- Mitochondrial Formula provides key nutrients that help provide anti-oxidant protection and enhance energy (ATP) production in the cell's mitochondria.
- Mitochondria are found in nearly every cell in the body and are critical to a cell's energy production. They convert fuels such as glucose and fat into ATP. ATP has a central role in cellular metabolism, providing an efficient way to store energy. It is used for nearly all enzymatic reactions that require energy.¹
- Nearly every cell relies on mitochondrial activity. For example, roughly one-third of the volume of heart cells is comprised of mitochondria.²
- Dysfunction of mitochondrial activity underlies many cardiovascular, metabolic, and neurological conditions, as well as the aging process itself.³
- Supporting mitochondrial health provides support for muscular, cardiovascular, and brain health. For example, Mitochondrial Formula provides acetyl-L-carnitine (ALC), an amino acid derivative that helps transport fats into the mitochondria. Supplementation of ALC in older adults has been associated with less mental fatigue, physical fatigue, fatigue after exercise, muscle pain, and inflammation, as well as improved sleep and cognitive function, and may slow progression to frailty.^{4,5}
- Clinical trials have shown that ALC also helps support energy levels, as well as cardiovascular and neurological health.⁶⁻⁹
- The formula also provides CoQ10, an antioxidant that is essential to the "electron transport chain," the metabolic steps needed to generate ATP. Declining levels have been observed in many cardiovascular and neurological conditions.^{10,11}
- ElevATP™ is a blend of plant bio-inorganic trace minerals and an apple extract rich in plant polyphenols. It has been shown to increase whole blood ATP levels as well as exercise performance and body composition, without an increase in reactive oxygen species. Supplementation in resistance-trained men was associated with improvements in power output and total strength when combined with resistance training, as well as reduced loss of power during overreaching.^{12,13}
- Mitochondria produce more free radicals than any other organelle of the cell. Mitochondrial Formula provides two key antioxidants, glutathione and superoxide dismutase, to help reduce oxidative stress within cells. Supplementation with superoxide dismutase (from Extrimel®) has been associated with reduced physical and mental fatigue, perceived stress, and improved quality of life over a three-month clinical trial.^{14,15}

How to Use Mitochondrial Formula

- *Powder:* Take 1 heaping scoop (2.7 g) per day dissolved in 250 mL of water or as directed by a health care practitioner. Take with food. Use for a minimum of 4 weeks to see beneficial effects.
- *Vegetarian Capsules:* Take 2 capsules 2 times per day or as directed by a health care practitioner. Use for a minimum of 4 weeks to see beneficial effects. For use beyond 12 weeks, consult a health care practitioner.

Cautions and Contraindications

- Consult a health care practitioner prior to use if you are pregnant or breastfeeding, are taking blood pressure medication or blood thinners, or have a liver disease, kidney disease, and/or a seizure disorder. May cause digestive problems. Keep out of reach of children.

Drug Interactions

- Although very little evidence supports this interaction, a potential interaction is possible for individuals taking the anticoagulant warfarin and both CoQ10 and acetyl-L-carnitine.¹⁶ Close monitoring of the INR is recommended in these patients. No other negative drug interactions are known for CoQ10, though several medications inhibit CoQ10 synthesis or function in the body, including statin or blood pressure medications, tricyclic antidepressants, and oral hypoglycemic agents, suggesting a potential benefit of combined use.^{17,18}

PATIENT NAME: _____

PRACTITIONER NOTES:

PRACTITIONER CONTACT INFORMATION:

Quick Tips for Optimal Health

- Physical activity is closely tied to mitochondrial function and helps promote mitogenesis (the formation of new mitochondria).¹⁹ Regular exercise, including both aerobic and resistance exercise, can help support mitochondrial health.²⁰
- One form of exercise, high-intensity interval training (HIIT), has been shown to improve mitochondrial quality.²¹
- The Mediterranean diet is rich in antioxidants and anti-inflammatory foods associated with improved mitochondrial health.²² It emphasizes whole grains, fruits and vegetables, nuts, legumes, and olive oil, while eliminating or reducing foods such as juices and sweetened beverages, refined grains, starchy vegetables such as potatoes, and sweets.
- The Mediterranean diet has been linked to better cognitive function and a slower decline in cognitive health in some studies, at least in part via its effect on mitochondrial function.²³
- Avoiding environmental toxins may also help restore mitochondrial health, as many common environmental pollutants appear to directly target mitochondria.^{24,25}
- Bisphenols (such as bisphenol A) have been found to directly target mitochondria by increasing oxidative stress and promoting apoptosis (programmed cell death). Bisphenols are used in a wide range of plastic products.²⁶

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