



Mitochondria-ATP

Introduced 2009



What Is It?

Mitochondria are the powerhouses of the cell, responsible for most of the energy production in the body. This formula provides nutrients and antioxidants designed to support healthy mitochondria function, aging, energy and performance.*

Uses For Mitochondria-ATP

Mitochondria Function/Energy Production: CoQ₁₀ is a component of the mitochondria and plays a key role in the synthesis of ATP. Ubiquinol is the activated form of CoQ₁₀ and may be especially important for individuals over 40 or for those experiencing greater levels of oxidative or physical stress. B vitamins are important cofactors needed to fuel the Krebs cycle, while optimum serum levels of magnesium are associated with healthy mitochondrial metabolism and nutrient transport. Acetyl-L-carnitine provides carnitine to transport long chain fatty acids into the mitochondria for energy as well as an acetyl group for the synthesis of the Krebs cycle precursor acetyl-CoA. Creatine serves as an ATP precursor, promoting ATP synthesis and performance in working muscle. Research indicates that low doses of stability-enhanced, pH balanced Kre-Alkalyn® creatine promote ATP production and lessen muscle soreness due to lactic acid. This formula provides powerful antioxidant support from vitamins C and E, grape seed extract, resveratrol, alpha lipoic acid and N-acetyl-L-cysteine (NAC). These nutrients neutralize the free radicals generated during energy production in the mitochondria. In a double-blind, placebo-controlled crossover study, the combination of creatine, CoQ₁₀, and alpha lipoic acid supported energy production and antioxidant status within the mitochondria.*

What Is The Source?

Vitamin C and riboflavin (B₂) are derived from corn dextrose fermentation. Vitamin E (d-alpha tocopherol succinate) is derived from soybean oil, processed and purified to contain no soy protein or isoflavones. Thiamin HCl (B₁), niacinamide, acetyl-L-carnitine, N-acetyl-L-cysteine is derived from duck feather. Alpha lipoic acid (thioctic acid) is synthetic. Magnesium is derived from earthen ore. Ubiquinol (Kaneka QH™ active antioxidant form of coenzyme Q₁₀) is produced by microbial (yeast) fermentation. There is no residual yeast in the final product. Kre-Alkalyn® (pH balanced creatine)

is synthetic. Resveratrol extract is derived from *Polygonum cuspidatum* root and standardized to contain 20% trans resveratrol. Grape seed extract is derived from *Vitis vinifera* and standardized to contain 92% polyphenols.

Recommendations

Pure Encapsulations recommends 4 capsules daily, in divided doses, with meals.

Are There Any Potential Side Effects Or Precautions?

If pregnant or lactating, consult your physician before taking this product. Some ingredients have been associated with mild gastrointestinal upset, nausea, vomiting, diarrhea or constipation. Alpha lipoic acid can cause headache in sensitive individuals. Creatine can cause muscle cramping. Creatine supplementation may be contraindicated for individuals with kidney disease. One case report of creatine supplementation has been related to each of the following: atrial fibrillation, dermatitis and acute interstitial nephritis. Consult your physician for more information.

Are There Any Potential Drug Interactions?

CoQ₁₀, acetyl-L-carnitine, resveratrol and grape seed extract may be contraindicated with blood thinning medications. NAC is contraindicated with nitroglycerin. Individuals taking anti-diabetes medications with alpha lipoic acid may need to have their blood glucose levels monitored. Consult your physician for more information.

(continued)

four vegetarian capsules contain  00

| | |
|--|--------|
| vitamin C (as ascorbic acid)..... | 200 mg |
| vitamin E (as d-alpha tocopherol succinate)..... | 50 iu |
| thiamin (as thiamin HCl) (B ₁)..... | 20 mg |
| riboflavin (vitamin B ₂)..... | 15 mg |
| niacin (as niacinamide)..... | 35 mg |
| magnesium (as magnesium citrate/malate)..... | 100 mg |
| Kre-Alkalyn® (pH balanced creatine)..... | 750 mg |
| acetyl-L-carnitine (free form)..... | 500 mg |
| Japanese knotweed (polygonum cuspidatum) | 250 mg |
| extract (root) | |
| (standardized to contain 20% trans resveratrol) | |
| grape (vitis vinifera L.) extract (seed)..... | 100 mg |
| (standardized to contain 92% polyphenols) | |
| n-acetyl-L-cysteine (free-form)..... | 100 mg |
| alpha lipoic acid (thioctic acid)..... | 100 mg |
| ubiquinol (Kaneka QH™ active antioxidant form)..... | 50 mg |
| of coenzyme Q ₁₀) | |
| other ingredients: vegetarian capsule (cellulose, water) | |
| 4 capsules daily, in divided doses, with meals. | |

Kre-Alkalyn® is a registered trademark of Bioceutical Research and Development Laboratory (BR&D). Kre-Alkalyn® is a US-patented product (US Patent 6,399,661).

Kaneka QH™ is a trademark of Kaneka Corporation.