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ANTIOXIDANT

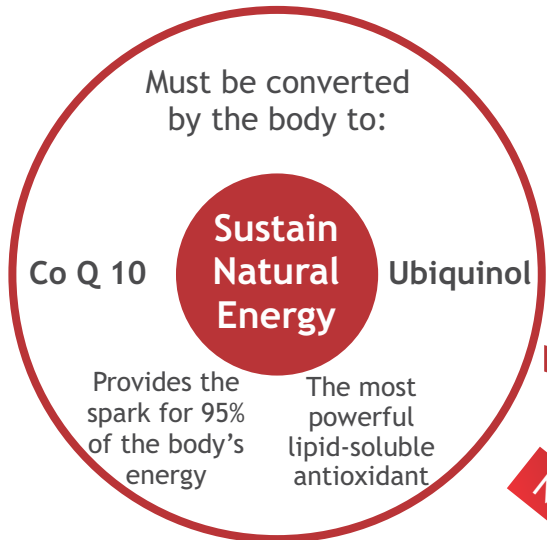
IMMUNE  
INFLAMMATION

MUSCLE  
STRENGTH

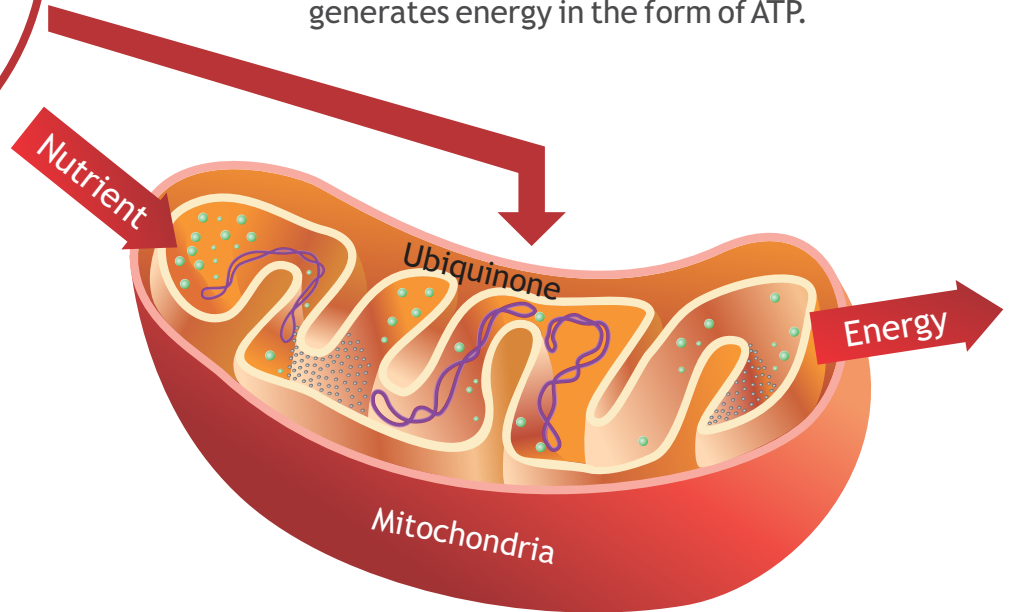
# ASTHOQUE

Coenzyme Q10 120 mg, L-Carnitine 500 mg,  
Choline 1500 mcg & Selenium 200 mcg Tablets

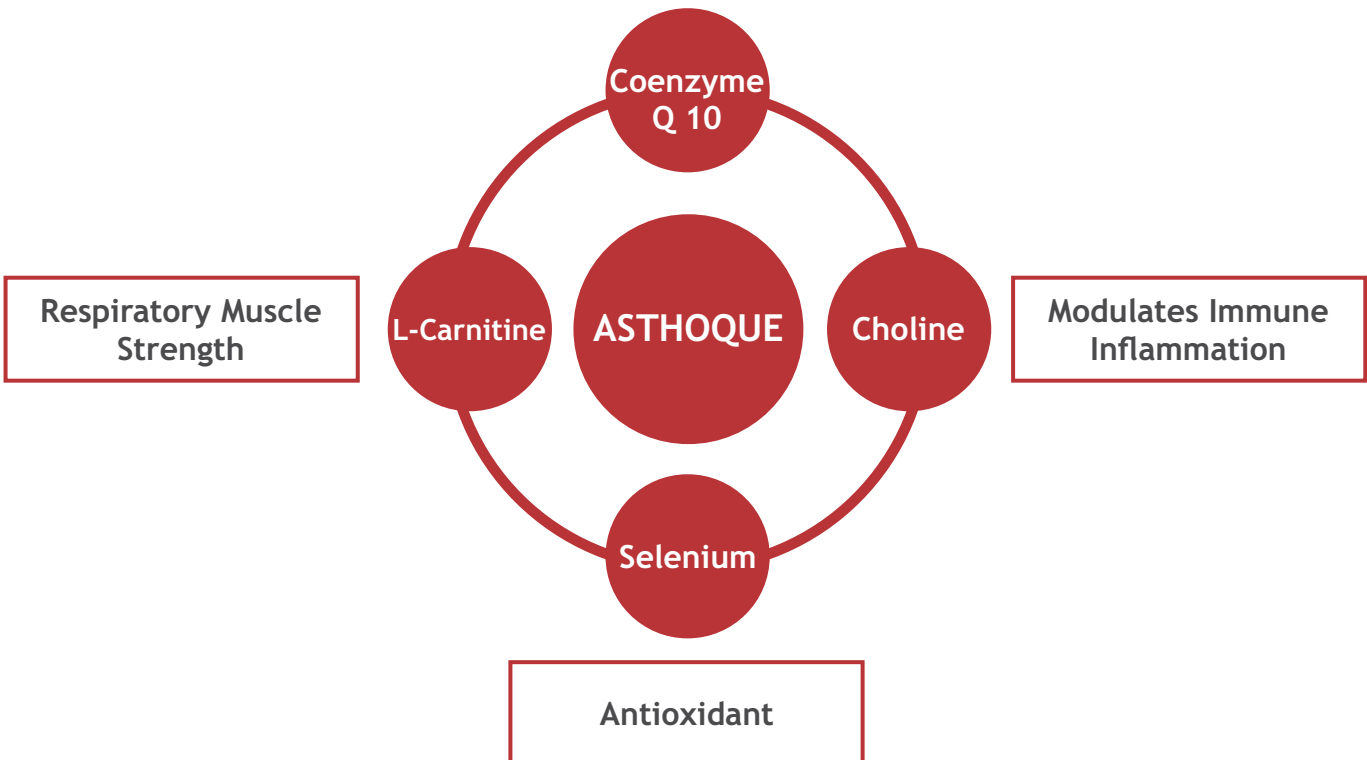
# Coenzyme Q10:



- ⊙ Also known as Ubiquinone, Ubidecarenone or Coenzyme Q.
- ⊙ Resembles a vitamin, is present in all cells, primarily in the mitochondria.
- ⊙ Component of the Electron transport chain and participates in aerobic cellular respiration, which generates energy in the form of ATP.



Energy Production  
Powerful antioxidant



## CLINICAL EVIDENCES:

### A) Significantly decreased levels of coenzyme Q10 in patients with bronchial asthma

56 Patients suffering from allergic Asthma were enrolled

Possible Contribution of suboptimal concentrations of CoQ10 on antioxidative dysbalance in Asthmatics and provide a rationale for its supplementation

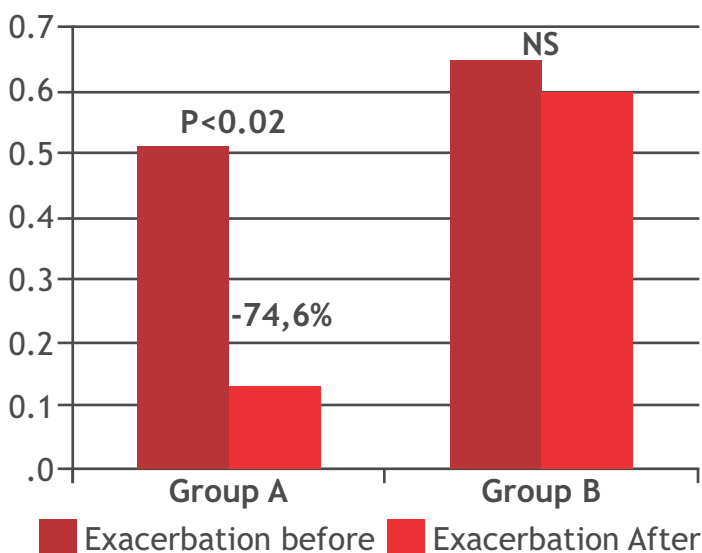
Patients	Coenzyme Q10 Concentration	
	Plasma	Whole Blood
Healthy	0.52 $\mu\text{mol/l}$	0.50 $\mu\text{mol/l}$
Asthmatics	0.34 $\mu\text{mol/l}$	0.33 $\mu\text{mol/l}$

(P < 0.001)

### B) Effects of coenzyme Q10 on dyspnea, exercise tolerance, and quality of life in COPD patients with chronic respiratory failure

55 patients having chronic obstructive pulmonary disorder with chronic respiratory failure:  
**Group A:** 30 Patients received Coenzyme Q10 160mg twice a day for 2 months;  
**Group B:** 25 patients received placebo.

Parameters	Outcomes
Fat Free Mass Index(FFMI)	Significant increase
Degree of Dyspnea	Significant improvement
Quality of Life	Significant improvement
Rate of Exacerbation of COPD	Significant reduction



Coenzyme Q10 administration in COPD patients with CRF is effective to increase lean body mass and exercise tolerance, reduce dyspnea, improve quality of life and exacerbations by improving protein turnover and mitochondrial energy.

#### References:

- 1) F. Gazdik et al. Allergy 2002; 57: 811-814
- 2) Marinari et al. Multidisciplinary Respiratory Medicine 2013, 8:40



# ASTHOQUE

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## DESCRIPTION:

Asthma and COPD are been associated with imbalance of the REDOX reactions in the body. Asthoque contains a specially formulated concentration of Co Q10 with L-carnitine , selenium and choline to help balance the normal rhythm of the body in such diseases.

## USE:

Asthma and chronic obstructive pulmonary disease (COPD).

## MECHANISM OF ACTION:

### Co Q10:

- ⊙ The major diseases of the lung, asthma and chronic obstructive pulmonary disease (COPD), involve a severe imbalance of oxidation and the body's natural preventive measures, including CoQ10. Levels of CoQ10 are markedly lower in both asthmatics and patients with COPD. Oxygen free radicals are attributed to the pathogenesis of asthma.
- ⊙ Adequate antioxidants are essential for asthmatics, however, they are often decreased. Supplementation with antioxidants including Co Q10 can decrease oxidative stress and asthma symptoms. In addition, CoQ10 supplementation may also reduce adverse effects of glucocorticosteroid treatment<sup>1</sup>.

### L-CARNITINE L-TARTRATE:

- ⊙ Chronic Obstructive Pulmonary Disease (COPD) is increasingly recognized as a systemic disease characterized by progressive airflow limitation as well as respiratory and peripheral muscle weakness.
- ⊙ Deficiency in the levels of carnitine “an essential nutrient for optimal muscle function” has been associated with peripheral and respiratory muscle weakness in other diseases<sup>2</sup>.
- ⊙ L-carnitine levels were initially lower in moderate persistent asthmatic children as compared to healthy control children.

### SELENIUM AND CHOLINE:

- ⊙ Supplementation of antioxidant micronutrients selenium may therefore potentially help maintain an oxidant-antioxidant balance.
- ⊙ Selenium is important for making many body processes work correctly. It seems to increase the action of antioxidants.
- ⊙ Choline therapy modulates immune inflammation and suppresses oxidative stress in asthma patients. It can be used as an adjunct therapy for asthma patients<sup>3</sup>.

## DOSAGE:

As directed by physician

## PRESENTATION:

It is available in 10x10 blister pack.

### References:

- 1) Gvozdjáková A, Kucharská J et. al. Biofactors. 2005;25(1-4):235-40.
- 2) Elsammak et al. J Pulmonary Respiratory Medicine. 2011;(1):106.
- 3) Mehta AK, Singh BP et. al. Immunobiology 2010 Jul;215(7):527-34.

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