

THE RADICAL PROTECTANT



RENOQUE
Ubidecarenone 180 mg Capsules

La Renon

RENOQUE

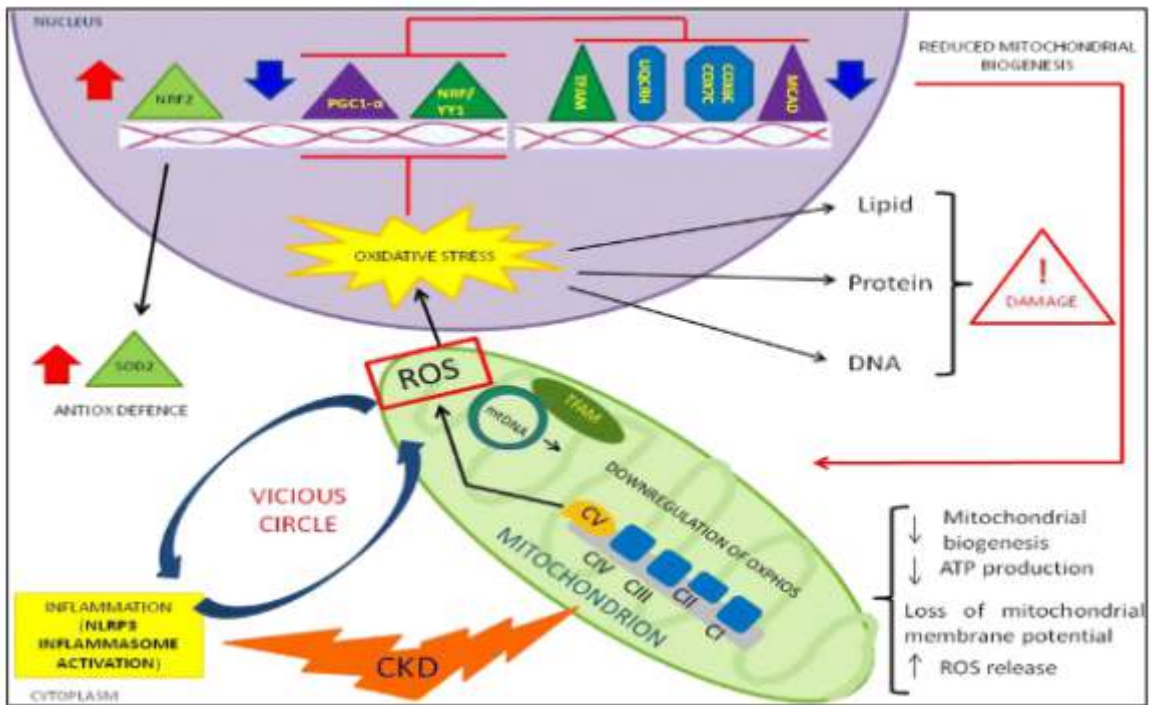
Ubidecarenone 180 mg Capsules

Background

Coenzyme Q10 (CoQ10, ubiquinone, vitamin Q10, ubidecaquinone or ubidecarenone), a vitamin-like benzoquinone compound synthesized naturally in the human body (the heart and kidneys contain the highest endogenous levels of co-enzymes (Co) Q10 compared to all other organs) is vital in the production of energy in processes which are aerobic respiration, aerobic metabolism or cell respiration. It is imperative that endogenous CoQ10 levels are maintained to ensure mitochondrial health, and this forms the rationale for CoQ10 therapy.

Mitochondrial involvement in chronic kidney disease (CKD)

- Mitochondria participate in numerous cellular functions including ion homeostasis, heme and steroid synthesis, calcium signaling, apoptosis; generate energy generation.
- Adequate amounts of CoQ10 are necessary for cellular respiration and ATP production.
- Due to its involvement in ATP synthesis, CoQ10 affects the function of all cells in the body, making it essential for the health of all tissues and organs.
- CoQ10 also functions as an intercellular antioxidant at the mitochondrial level.



In Mitochondria, deficiency of Coenzyme Q10 could lead to decrease in production of ATP and increase the amount of ROS (Reactive Oxygen Species).

Clinical Evidence

Effects of coenzyme Q10 supplementation on C-reactive protein and homocysteine as the inflammatory markers in hemodialysis patients; a randomized clinical trial

Background:

- The most leading cause of death in end-stage renal disease (ESRD) patients are cardiovascular disease and inflammatory markers are related to coronary events.
- CO-Q10 (coenzyme Q10) is a protective supplement from free radical oxidative damage. In addition, hyperhomocysteinemia is an independent coronary artery disease (CAD) risk factor.

Objectives:

- Due to increasing oxidative stress in dialysis patients, and the effect of CO-Q10 in decrease oxidative stress, in this work, we assessed the effect of CO-Q10 on C-reactive protein (CRP) level as an inflammatory marker and homocysteine in dialysis patients.

Patients and Methods:

- This was a single-blind, randomized cross over clinical trial. Patients with ESRD were randomly allotted to two groups.
- All patients received placebo and CO-Q10 100mg/d during the three months in each stage, with two week washout period.
- Plasma level of CRP and homocysteine from the start of the work and at the conclusion of each menses, are evaluated.

Results:

- Thirty-four patients randomized, but 26 patients complete study protocol.
- The treatment effect of CO-Q10 on CRP level is significant ($P < 0.001$) (95% CI = -20.1 to -10.5) and it was also significant for the increasing albumin level. ($P = 0.044$) (95% CI = 0.0-0.6), But there was not any substantial effect on serum homocysteine level ($P = 0.630$).

Conclusions:

- Co-Q10 supplement could reduce hs-CRP levels significantly, which is a known inflammatory factor.
- Co-Q10 could raise serum albumin level as a marker of better surveillance factor. According to the favorable effect of CoQ10 on Co-Q10 level, this antioxidant may play the role in reducing CVD events in CKD patients.
- Therefore CO-Q10 could significantly decrease CRP level as an inflammatory marker and can protect cardiovascular events.

Reference:

J Nephropathol. 2016 Jan;5(1):38-43



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Description:

- Coenzyme Q10 is synthesized intracellularly in the human body using tyrosine as the fundamental building block.
- Certain situations can disrupt the body's ability to produce enough CoQ10 to meet requirements.
- A CoQ10 deficiency could result from: (1) impaired CoQ10 synthesis due to nutritional deficiencies (such as vitamin B6 deficiency), (2) a genetic or acquired defect in CoQ10 synthesis or utilization, or (3) increased tissue needs resulting from a particular illness.els are maintained to ensure mitochondrial health, and this forms the rationale for CoQ10 therapy.

Indicative Usage:

- Improvement of Renal function in Chronic Renal Failure
- Decreasing the need for dialysis

Mechanism of Action:

- The primary role of CoQ10 is as a vital intermediate of the electron transport system in the mitochondria.
- Adequate amounts of CoQ10 are necessary for cellular respiration and ATP production.
- Due to its involvement in ATP synthesis, CoQ10 affects the function of all cells in the body, making it essential for the health of all tissues and organs.
- CoQ10 also functions as an intercellular antioxidant at the mitochondrial level, perhaps accounting for its benefit in renal function, neurodegenerative diseases, male infertility and periodontal disease.

Role in CKD:

- Research articles have postulated that treatment with coenzyme Q10 (180 mg/ day) in patients with renal failure was associated with a significant reduction in blood urea and serum creatinine, with an increase in creatinine clearance and urine output.
- Also, studies state that treatment with antioxidant coenzyme Q10 in patients with end-stage renal failure was associated with a significant decline in serum creatinine and blood urea nitrogen with an increase in creatinine clearance and urine output after 12 weeks of follow-up.

Dosage:

Once Daily dosage or as prescribed by a Nephrologist for a period of preferably 8 weeks.

Administration:

RENOQUE is available as a 180 mg capsule for oral administration.

Presentation:

RENOQUE is available as a strip of 10 Capsules.