

Keywords

CoQ 10
Ubiquinone
Energy
Heart

Summary

**Ultrasome-CoQ10™ is an clinically evaluated advanced drug-delivery for-
mulation of Ubiquinone (Coenzyme Q10) in a liposomal system, clinically
evaluated for increased bioavailability (3-10 times) and through different
in-vivo studies**

Ultrasome CoQ10

Ultrasome
CoQ10

Description

The Ultrasome™ encapsulated CoQ10 from Herbamed showed high drug-tapping efficacy, with enhanced oral bioavailability compared to generic CoQ10. Ultrasomes are a new type of lipid particles considered as an intermediate or "Hybrid" system between liposomes and oil-in water emulsions. Ultrasome-CoQ10™ has been clinically evaluated for increased bioavailability (3-10 times) and through different in-vivo.

Enhanced bioavailability of Coenzyme Q10

Ultrasome-CoQ10™ has been clinically evaluated for :

- Increased bioavailability (3-10 times)
- improved symptoms of heart health
- improved recovery after hip fracture
- wound healing
- neural protection

As a free flowing powder, it has been found to be very easy to formulate.

Herbamed has formulated CoQ10 using the Ultrasome™ proprietary drug delivery technology.

The Ultrasome™ encapsulated CoQ10 showed high drug-tapping efficacy, better in vitro drug release and enhanced oral bioavailability compared to generic CoQ10. The positive effect of Ultrasome™ CoQ10 was observed among athletes with respect to muscle pain and fatigue after physical

activity. Additionally, in several clinical trials and scientific research Ultrasome™ CoQ10 played a role in quality of life in patients with end-stage heart failure awaiting cardiac transplantation, in healing process of chronic skin lesions, in rehabilitation outcome following surgical repair of hip fracture and in protecting against 6-hydroxydopamine induced nigra lesions in rats which indicates is potential therapy for Parkinson's disease (PD) and other neurodegenerative diseases without side effects. sis, thereby providing the means to maintain healthy body composition and lean body mass levels.

What is Ultrasome CoQ10 ?

Ultrasomes are a new type of lipid particles considered as an intermediate or "Hybrid" system between liposomes and oil-in water emulsions. Ultrasome particles have a new type of lipid assembly comprising a hydrophobic core, in standard oil-in water emulsions, but surrounded and stabilized by one or more phospholipid bilayers as in liposomes. The Ultrasome technology represents a new entity as lipoidal drug vehicle and its successful development was achieved by the incorporation of a relatively high lecithin content (5-10%) compared to standard emulsions (0.5-2%), the use of fats or triglycerides which are solid at room temperature instead of oils, and the utilization of high pressure emulsification. The combination of the specific lipid composition and manufacturing technology results in the formation of stable lipid particles in the submicron range.

Coenzyme Q10, also known as ubiquinone, refers to Quinone with 10 chemical subunits in its tail. It is a natural substance present in every cell of the body: a key nutrient to work against degenerative condition and fatigue. It is a component of the electron transport chain and participates in aerobic cellular respiration, generating energy in the form of ATP. 95% of the human body's energy is generated this way.

CoQ10 comes in Ubiquinone (also known as Ubidecarenon). When taken CoQ10, it is actually metabolized within our bodies where it also becomes Ubiquinol, the non-completely-oxidized and antioxidant form of CoQ10. Ubiquinol is sometimes said to be more bio available because it's soluble in water and fat. Besides the fact that Ubiquinol is metabolized in the body from Ubiquinone, the use of Ubiquinol refers to the antioxidant property, and not to the cascades of benefits of Ubiquinone in the mitochondria and energy.

Supplementing - Benefits

Since we get only a very little from the body due to conversion issues especially when aging, supplementing to maximize CoQ10 benefits make sense.

Benefits for Anti aging, energy and fatigue : To maintain a "healthy" rate of CoE Q10, an intake of 10 to 30 mg daily is often recommended generally if over 30-40 years, to keep the heart healthy as well as for energy boost. Patients may require up strong need 200-400mg under medical supervision. Beyond 600mg means clinical trials.

Benefits for heart : a weak heart - Patients with congestive heart failure due to myocardial infarction, cardiomyopathy, or even hypertension - means the heart works inadequately and the blood volume pumped becomes very poor with all the undesired side effects : shortness of breath, fluid in lungs, heavy legs, ...

Benefit for immune system: efficient immune response will be reduced accordingly to a lower CoQ10 content, because immune system requires a tremendous amount of ATP to aggressively mount defenses.

Benefits in case of statin drugs : statin therapy cause a decrease of CoQ10 levels by 40-50%. There are several studies that has proved that external CoQ10 benefits to counter statin side effects.

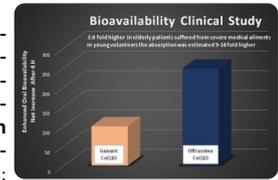
Benefits for Parkinson's disease : preliminary research suggests that CoQ10 supplementation can help to increase levels of dopamine, a neurotransmitter which are deficient in people with Parkinson's disease. Some clinical research are done, with sometimes very high level of supplementation.

Benefits for Skin Lesion : a prospective demonstration study on patient who suffered from either non-healing or deteriorating full thickness skin lesion for more than 20 days (see studies). There are also several reported anecdotal CoQ10 Benefits although there is no scientific evidence : migraine due to hyper tension, headache, ...

A few of Studies with Ultrasome CoQ10

"Enhanced Oral Bioavailability of Ultrasome™ CoQ10 Compared to generic CoQ10 Among Elderly Hospitalized Patients in a Randomized Double-Blind Controlled Study" :

The results of this study demonstrate the effectiveness of Ultrasome™ CoQ10 with significant enhanced oral bioavailability of CoQ10. In young volunteers the absorption was estimated 9-10 fold higher compare to generic CoQ10



"The influence of Ultrasome™ CoQ10 on chronic wounds in debilitated elderly imptatients" : on patients with mean age of 76.9 years, the conclusion is that Ultrasome™ CoQ10 plays a role on the healing process and thus should be considered as a toll in treating chronic skin lesions. Patients received 400 mg/day Ultrasome-CoQ10 (60 mg of CoQ10) for 20-60 days

"Coenzyme Q10 in Patients with End-Stage Heart Failure Awaiting Cardiac Transplantation: A randomized, Placebo-Controlled Study" : The study group showed significant improvement in the 6-min walk test and a decrease in dyspnea. The administration of CoQ10 to heart transplant candidates led to a significant improvement in functional status, clinical symptoms, and quality of life. 400 mg Ultrasome-CoQ10 (60 mg of CoQ10)

"Effect of Ultrasome-CoQ10 treatment on hip fracture rehabilitation" : All subjects in the intervention group received 400 mg of Ultrasome-CoQ10 (60 mg of CoQ10) daily for the entire hospital stay. Control patients received no additional therapy. Pain intensity frequency and endurance were lower in the intervention group (p<0.001) treated with 400 mg of Ultrasome-CoQ10 (60 mg of CoQ10) daily during the entire hospital-stay

"Ultrasome-CoQ10 treatment on muscles soreness and fatigue in athletes after physical activity" : Thirty runner's athletes were randomly assigned to receive an oral dose of 400 mg Ultrasome-CoQ10 (60 mg of CoQ10) :

Oral administration of 400 mg of Ultrasome-CoQ10 (60 mg of CoQ10) in nutrition bar form before physical activity for 1 week significantly reduced muscle soreness and fatigue at the intervention group (p<0.05)

"Ultrasome-CoQ10 treatment on neuronal damage in animal model" : on Male Sprague-Dawley rats. Oral administration of Ultrasome-CoQ10 (5 mg/kg), one week before and two weeks after 6-OHDA lesion, reduced apomorphine (25 mg/kg) induced rotations by 87% (p < 0.04). The same results were obtained but with lower dosage of Ultrasome-CoQ10 (3 mg/kg) regards to amphetamine (5 mg/kg). The reduction in rotation rate was by 72% (p < 0.03)

