What is ubiquinol?
Ubiquinol like ubiquinone is a form of CoQ10 produced naturally in the body. Thirty years of research has made ubiquinone the more familiar form of CoQ10 for consumers but ubiquinol is quickly getting ahead in the energy game. Why? To generate cellular energy (ATP), the body must first convert ubiquinone into ubiquinol (CoQH2). Without this happening, energy can not be produced, nor energy levels sustained. Without energy, a cell dies, affecting and compromising health of the whole body. Game over.

Why take ubiquinol?
More than 95% of ubiquinone is converted to ubiquinol, the predominant form of CoQ10 in plasma and tissues of healthy individuals. Before ubiquinol supplements came on the scene, the only way to increase levels was the slow way — to take supplemental ubiquinone which would naturally convert in the body. Research has shown this becomes increasingly difficult with age and/or in certain conditions.

Ubiquinol levels have been shown to be reduced in people with cardiovascular, neurological, liver- and diabetes-related conditions, putting them in a “check” position. How is age a factor?
Ubiquinone (CoQ10) levels within the body typically begin decreasing by age 40 and as early as age 20, suggesting its close connection with aging. The body’s ability to convert dwindling levels of ubiquinone into ubiquinol also diminishes with age. Without proper levels of these vital substances, the body produces less energy and lacks a strong defense against oxidative stress. Insufficient dietary intake, increased oxidative stress, higher energy needs or any combination affect levels as well. Besides low energy, inadequate levels may lead to a number of age-related conditions.

Ubiquinol offers a strong protective defense against oxidative stress and age-related conditions to promote health system-wide.

What happens when ubiquinol levels are low?
Declines in ubiquinol levels result in 1) less cellular energy and 2) diminished protection against oxidative stress, which in turn produces free radicals. Free radicals cause cellular damage, including to proteins, lipids and DNA. Ubiquinol provides a strong first-stage defense against this cellular oxidative damage and needs to be replenished to maintain optimum health. An increasing number of scientific reports indicate that dramatic decreases in ubiquinol levels and increased oxidative stress are associated with many age-related conditions. While it isn’t always black and white, some disorders or diseases that require increased energy (fibromyalgia, ME/CFS) and/or high antioxidant support (like hepatitis, diabetes, AIDS), ubiquinol may be the better choice.

What else do I need to know?
For those who cannot efficiently convert ubiquinone to ubiquinol, taking “straight” ubiquinol will restore healthy levels in plasma and organs an easier way. Additionally, because ubiquinol is an extremely powerful antioxidant, it

Ubiquinol CoQ10
For the Game of Life

CoQ10 is commonly called ubiquinone, the “everywhere” nutrient as it is found in nearly every cell of the body. All cells require CoQ10 for energy and life. But another form of CoQ10 is demanding attention, ubiquinol. What’s the difference and which one is right for you? It’s your move.

by Margy Squires
Can I get ubiquinol from food?
Most healthy individuals in their 20s and 30s can easily metabolize ubiquinone and convert it to ubiquinol. As the body begins losing its natural ability to maintain optimal levels of ubiquinone and ubiquinol, the most efficient way to restore healthy levels of these nutrients is through supplementation. Although you can get both in small amounts from your diet (mostly meats like beef, chicken), you’d have to eat the foods in such large amounts as to make them an impractical CoQ10 resource.

How much ubiquinol should I take?
Whether you're a pawn or a king, the recommended dose of ubiquinol varies based on each individual's needs. However, those who are older or suspect they have decreased levels due to disease may want to start supplementing with 200-300 mg per day. Since ubiquinol is pre-converted, it is ready for immediate use by the body. Studies show that ubiquinol plasma levels plateau at about two weeks at this dose. Then, 100 mg per day is a good maintenance dose.

When will I be able to feel the benefits?
Unlike caffeine and sugar which boost energy levels quickly and can cause a “crash” later, ubiquinol offers sustained natural energy. Although individuals differ, it generally takes 2-3 weeks to restore optimal levels in blood plasma and tissues. Most people will begin feeling the effects as their individual plasma levels start to increase, generally around the fifth day.

What kind of clinical studies have been conducted on ubiquinol?
Scientists and researchers at Kaneka Corporation have been studying this nutrient for more than a decade and have conducted numerous safety and toxicity studies on the ingredient. Like ubiquinone, ubiquinol is considered a safe and vital nutrient for health. Checkmate!

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*Information compiled and adapted from Kaneka Corporation, the world's most recognized and researched CoQ10, and maker of ubiquinol, Kaneka QH™. Statements made in this article have not been evaluated by the FDA and therefore, are for informational purposes only and not intended to diagnose, treat, cure or prevent any disorder.

Ubiquinol Research
In studies, blood plasma in healthy people reflects a 95/5 ratio of ubiquinol to ubiquinone, suggesting ubiquinol is the most bio-active CoQ10 form in the body. Like this sampling below, the combination antioxidant and energy enhancing potential of ubiquinol may be just the tip of the iceberg. Its influence on cell signaling, proteins, gene expression and disease-specific mechanisms is also making new CoQ10 history.

CARDIOVASCULAR
In a comparison study, researchers gave congestive heart failure subjects ubiquinone 450-900 mg daily but blood plasma levels were still sub-therapeutic. On switching to ubiquinol, levels quadrupled (1.6 mcg/mL to 6.5 mcg/mL) to therapeutic level. Ejection fraction (a measure of heart pumping ability) doubled from 22% to 45% (normal = 60-65%). Disease classification improved from class IV to class II. The safety of CoQ10 was also tested as the patients were on multiple meds including coumadin and no adverse interactions were observed. [Langsjoen, 2008]

PARKINSON’S
A comparative look in a rat model study looked at the protective effect of both forms against MPTP. MPTP is a neurotoxin that induces changes similar to that of Parkinson’s, selectively targeting brain cells responsible for synthesis of dopamine and motor control. On evaluation, researchers noted that ubiquinol protected cells better, a decrease in pathological biomarkers was seen and a blood plasma levels were higher than in the ubiquinone group. [Cleren et al, 2008]

AGING & ENERGY
Women (average age 63) given 150 mg daily ubiquinol reported increased physical activity and scored higher on mental health testing. Age may factor in the ability to synthesize ubiquinone to ubiquinol per researchers. [Wada et al, 2007]

DIABETES
Ubiquinol ratios are known to be low in diabetics. In a published study in Diabetic Medicine, researchers found severe diabetics exhibited about 75% less than non-diabetics and suggest that oxidative stress may cause ubiquinol to convert to ubiquinone. Due to ubiquinol’s effect on cholesterol, this may also increase the known risk of cardiovascular disease in this population. [Lin et al, 2006]
CHOLESTEROL
A small study of 53 healthy men were given 150 mg of ubiquinol for 2 weeks and average plasma levels increased 4-8 fold. Biochemical analysis showed a reduction of low density lipoprotein (LDL) cholesterol levels, particularly on plaque forming small, dense LDL particles. The researchers concluded ubiquinol’s influence on gene expression resulted in reducing LDL levels. [Schmelzer et al, 2009]

OXIDATIVE STRESS & DISEASE
Several studies as early as 1996 have found decreased levels of ubiquinol in hypertension, diabetes, renal disorders, hyperlipidemia, liver disease (cirrhosis, hepatitis), congestive heart failure and cancer. This decrease is associated with increase in reactive oxidative species (ROS) that cause free radical damage to either body structures and/or function that may allow disease progression. Therefore, maintaining optimal ubiquinol levels may be a pro-active, pro-health measure. [Sources available upon request]

Medical Disclaimer: While these studies may appear remarkable, please consult with your healthcare professional for guidance for your individual health needs.

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