Coenzyme Q10

Know your risk™ *for oxidative stress.*

vitamins

What is Coenzyme Q10?

Coenzyme Q10 (CoQ10) is a fat-soluble, vitamin-like substance needed for normal cellular function. CoQ10 has two major roles in the body. First, it helps the cells make energy within their powerhouses. Second, it acts as anti-oxidant to protect body tissues from damage due to toxic molecules known as free radicals. Research shows that CoQ10 can also protect against inflammation.

CoQ10 is one of the best-selling supplements in the US, in part due to an increasing number of stories on television, in print, and online about the health benefits of CoQ10. Unfortunately, much of the information is confusing, which means you might not have the information you need to make the best choice of supplement for your health. Your decision is made even harder by the growing availability of different types of CoQ10 supplements online and at stores. That's why it's important to understand the health benefits of CoQ10 and what's available on the market today.

What are the different forms of Coenzyme Q10?

CoQ10 exists as two forms within the body: ubiquinone and ubiquinol. Ubiquinone is made in the body and comes from food. Ubiquinol, the active antioxidant form of CoQ10, is made in the body from ubiquinone. As we age, the levels of both forms go down. As early as age 20, the amount of ubiquinone made within our bodies begins to drop. To make things worse, the body also loses its ability to make ubiquinol from ubiquinone. Most dietary supplements contain ubiquinone and are relatively cost effective. Unfortunately, supplements containing ubiquinol, which may be of most benefit as we age, may not be as easy to find and may cost a lot more.

Why check my CoQ10 level?

Antioxidants such as CoQ10 are either made by the body or obtained from food, and help protect the body from damage caused by free radicals. When your body doesn't make or get enough antioxidants from the food you eat, this can lead to oxidative stress which may play a role in diseases such as heart disease. Taking CoQ10 supplements may help to reduce your risk. Recent literature also demonstrates that low blood levels of CoQ10 are associated with low levels of the "good" cholesterol (e.g., low levels of HDL cholesterol and ApoA1) which may further increase your risk for heart disease.

The commonly prescribed lipid-lowering drugs called statins can contribute to low blood levels of CoQ10. In some instances, this may result in muscle aches and weakness, not related to physical activity, which may make you want to stop your statin medication. Thus, it is very important for you to feel well while taking a statin as it can significantly reduce your chances of having a heart attack or stroke and may lower death rates from heart disease. It is important to monitor your CoQ10 levels in an effort to prevent muscle aches and weakness, and allow you to take the statin medication you need. People in a research study who took CoQ10 with their statin medications reported less muscle pain, and less interference in their daily lives from pain than those who took statins without CoQ10.

Taking CoQ10 may improve your compliance with certain medications.

What can I do to raise my CoQ10 level if it is low?

- If your CoQ10 level is low, your medical provider may suggest you eat foods rich in CoQ10 such as broccoli, cauliflower, spinach, asparagus, chicken or pork.
- Some medical providers also recommend CoQ10 dietary supplements to help raise your CoQ10 levels. Remember, your body doesn't make or absorb as much CoQ10 as you get older. Younger people may benefit more from ubiquinone while older people may benefit more from ubiquinol. It is important that you take the form and amount recommended for you. It is also important to take CoQ10 supplements with food in order to get the most benefit.
- Additionally, your medical provider may encourage you to make lifestyle choices, like quitting smoking or increasing your activity, or prescribe medications to help increase your HDL levels.

REFERENCE RANGE

CoQ10
(µg/mL)

0.36-1.59

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