

## It's Everywhere...

CoQ10 is everywhere. That is, it is in every cell of our bodies. Without it we don't function. **Without enough of it we don't function well.** And yet many people have never heard of it. You may be one of them.

There are a number of health ailments that are linked to CoQ10 deficiencies.

**Many of them are related to heart health.**

We will get to the details in a moment.

Let me just make this note. The following topics are handled in a **'thumbnail' fashion**. The discussions are brief for those who do not wish to do extra research. However, for those who want to do more detailed reading there are links provided.

### One note though...

It is best to save this document to your computer and open it from there. If you simply opened it from **optimal-heart-health.com** and click the links you may navigate away from this report to another site. You will have to use your 'back' button to return.

Alright, let's get started. Let's begin by asking the question...

## What Is CoQ10 Anyway?

Coenzyme Q10, as its name implies, is a coenzyme. That means it is **essential for the activation of enzymes**. Enzymes are produced by our bodies and are necessary for our survival and healthy living. Without enzymes functioning properly our bodies cannot function properly.

**Without CoQ10 many of our enzymes cannot do their jobs.**

## How Important is CoQ10 for Health...

And particularly heart health? There are at least three main categories to help us answer that question. CoQ10 is essential for...

- Cellular energy production
- Cell membrane stabilization
- Prevention of LDL oxidation

## Cellular energy

All cellular functions depend upon the production of adenosine triphosphate (ATP). ATP is a high-energy phosphate which exists in all our cells.

**ATP is the primary energy source for many metabolic processes.**

**CoQ10 is absolutely essential for the ATP production process.** When CoQ10 levels are insufficient cellular energy production suffers. This of course has many health implications. However one very pertinent application is heart function.



Because the **heart has such high metabolic demands** it is dependent upon sufficient ATP production... Which in turn is...

**Dependent upon sufficient CoQ10 levels.**

## Cellular membrane stabilization

As part of the energy production process, CoQ10 must exist in the inner mitochondrial membrane to aid in the electron transport chain. In short **CoQ10 transports the electrons and protons through the membranes** to make the energy production process possible.

There are other membranes that require CoQ10 for proton transfer. Additionally, CoQ10 not only aids in protein transfer but it also protects the membranes themselves from oxidative damage.

CoQ10 does this by functioning as a strong antioxidant. This brings us to the third category...

## The prevention of LDL oxidation

We all know what antioxidants do. They protect the cells from the damage done by scavenging free radicals. Even if we don't know that, we do know that antioxidants are good for us.

Most of us know what LDL cholesterol is. It is the 'bad' kind of cholesterol. Too much LDL means higher risk of cardiovascular disease. But it is not the amount of LDL alone which promotes heart disease. Rather...

**It is the oxidation of LDL that promotes atherosclerosis.**

And atherosclerosis (hardening of the arteries) increases our risk of dying from coronary heart disease. That is why many of us take vitamin-E as a health precaution. However...

**CoQ10 has been demonstrated to be a much stronger antioxidant than vitamin-E for protection against LDL oxidation.**

These three categories give us a hint concerning how CoQ10 is essential for heart health. Now let's look at some of the...

## **Particular Cardiovascular Diseases With Which CoQ10 Can Help**

Since we have already hinted that CoQ10 prevents the oxidation of LDL let's start with...

### **Preventing LDL oxidation**

We talk a lot about keeping total cholesterol levels low... and especially LDL cholesterol. But you rarely hear casual talk about **making our LDL less harmful**.

When free radicals attack our cells they either damage them or kill them outright. Our cells, then, can no longer function properly.

**When LDL cholesterol oxidizes it tends to build up on the inside of our arteries.**

This condition is what we call atherosclerosis. (We will come back to this.) So what do we do? Many of us take vitamin-E. It is relatively inexpensive and it is known as an antioxidant. The trouble is...

**Vitamin-E is not nearly as effective in prevention LDL oxidation as CoQ10.**

Not only that... but vitamin-E can become exhausted in its fight against free radicals. In fact some studies have suggested that...

**Exhausted vitamin-E can actually promote coronary heart disease (CHD).**

Did you get that? There are some cases in which vitamin-E can actually promote coronary heart disease. The good news is... CoQ10 can reenergize spent vitamin-E. And, CoQ10 has never been shown to be exhausted by free radical damage. Nor can it promote CHD.

Keeping LDL cholesterol levels down is only part of the picture. Protecting LDL from oxidation is very important. And CoQ10 has been shown to be a very strong LDL antioxidant.

[You can research this topic in more detail by clicking here.](#)

Very closely related to this is the topic of...

## CoQ10 and coronary heart disease

Coronary heart disease is the leading cause of death for both men and women in the US and many other countries.

### Let that sink in.

We are killing ourselves because of the way we approach heart health... or the lack of it.

Coronary heart disease or (CHD) in its broadest definition refers to any disease that involves the heart and/or blood vessels. However, in its restricted sense it refers to **conditions related to atherosclerosis**, otherwise known as arterial disease.



When oxidized LDL builds up on the arterial walls, the buildup can cause restrictions in blood flow... overworking the heart... and **ultimately leading to a heart attack**. Arterial buildup can also break loose **increasing the risk of stroke**.

Additionally atherosclerosis buildup damages the artery walls.

We noted above that LDL oxidation is a major cause of atherosclerosis. By protecting LDL cholesterol from oxidation you essentially reduce your risk of developing CHD. And as seen above...

### Sufficient levels of CoQ10 prevent LDL oxidation.

Here's a word of support from one scientific paper...

**The antioxidant or free radical quenching properties of CoQ10 serve to greatly reduce oxidative damage to tissues as well as significantly inhibit the oxidation of LDL cholesterol.**

[You can further research statements like these by clicking here.](#)

While doing everything you can to keep your LDL levels low, **be sure to do what you can to minimize the damage caused by LDL oxidation**. CoQ10 supplementation is a good way to do that.

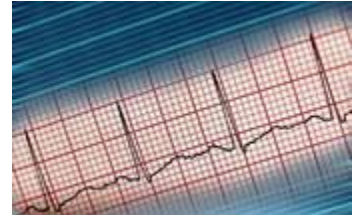
Atherosclerosis – in the restricted definition – **is coronary heart disease**. And as such it is implicated in other serious cardiovascular conditions, such as...

## Myocardial damage

Myocardial damage is essentially damage to the heart muscle.

### **The sort of damage that occurs from a heart attack.**

When heart muscles are starved for oxygen because of restricted blood flow – the kind of restriction caused by atherosclerosis – they can become irreparably damaged. Some of the tissues die. That is what a heart attack is.



We have already seen that **CoQ10 can help in the prevention of heart attacks** by preventing LDL oxidation. In so doing, CoQ10 can help prevent myocardial damage.

### **But what if the damage is already done?**

It is, of course, important to prevent further damage to heart muscles. But CoQ10 has been shown to do more than help prevent heart damage.

### **CoQ10 can also increase heart function after the damage has occurred.**

The heart's ability to pump blood can be severely hindered when the heart muscles are damaged. A number of studies have shown that CoQ10 supplementation can significantly improve the heart's ability to function even after the damage has occurred.

[You can do more detailed research into this by clicking here.](#)

Myocardial damage is one condition that can hinder the heart from functioning properly. There are others. When the heart becomes weak and incapable of adequately supplying the body with blood it is a condition known as...

## Congestive heart failure

Congestive heart failure (CHF) is a painful and often deadly condition. It develops over time as...

- The arteries become clogged with atherosclerosis buildup
- The heart becomes damaged from heart attacks or other strains
- The metabolic needs of the heart are greater than the cells' ability to produce energy

The first two conditions we have already touched on briefly. The third we will consider in a moment. But for now let's look at the usefulness of CoQ10 treatment for CHF.

Essentially congestive heart failure is a state wherein heart function is substandard. One of the ways doctors measure heart function is by what is called **ejection fraction** – the heart's ability to pump blood. A number of studies have shown that ejection fraction is improved via CoQ10 supplementing. One study included patients with varying conditions all resulting in poor heart function. The conditions included...

- Valvular Heart Disease - pertaining to dysfunction of heart valves
- Hypertension
- Diastolic Dysfunction - failure of the heart to properly refill itself with blood
- Dilated Cardiomyopathy - group of disorders where the heart muscle is weakened and enlarged and cannot pump effectively
- Ischemic Cardiomyopathy - low oxygen state usually due to obstruction of the arterial blood supply

Overall results demonstrated measurable cardiac improvements in one month with maximum improvements at about six months. With continued treatment the CoQ10 benefit was sustained in most patients. However, discontinuing the treatment usually resulted in a decline of cardiac function with eventual return to pre-treatment conditions.

[You can read more detail my clicking here.](#)

Closely related to congestive heart failure is a condition listed above. It happens when the metabolic needs of the heart are greater than the cells' ability to produce energy. This can be influenced by a couple of things. The first is heart damage – which we have already discussed. And the other is lack of...

## Cellular energy

As mentioned earlier, cellular energy is produced through the ATP process. Without CoQ10 the ATP process cannot function.



Bodily organs which have high metabolic demands require a consistent supply of energy from ATP production. The heart, of course, requires a lot of energy. As energy supplies diminish due to many factors, the heart - as well as other high demand organs - no longer function properly. Usually the damage does not happen quickly. But over time damage does occur leaving many people with chronic health conditions.

The good news is that our bodies produce CoQ10 from the foods we eat. The bad news is... as we age our bodies lose the ability to produce CoQ10 in sufficient supplies. Also, **statin use has been proven to deplete CoQ10 levels**. So if you are taking statins you may be depleting your body of its much needed CoQ10. And you may be depriving your heart of the cellular energy it needs.

**Ironic, isn't it?**

[You can study more about CoQ10 and cellular energy by clicking here.](#)

One more thumbnail sketch before moving on. There is ample evidence that supplementing with CoQ10 can help...

## Lower blood pressure

A lot of scientific attention has focused on CoQ10 treatment for such conditions as congestive heart failure and cardiomyopathy. But CoQ10 for treating high blood pressure has also received attention. For example...

A short-term study involving hypertensive patients – who were already receiving traditional treatments for high blood pressure – showed that after 8 weeks of supplementing with 120 mg per day of CoQ10 the patients showed improvements in blood pressure compared to those taking B-complex.

Studies involving CoQ10 and vitamin-E supplementation showed similar results.

Other studies have shown that about half of the patients taking CoQ10 supplements were able to stop taking one or more of their antihypertensive drugs in an average of 4.4 months.



**Rather impressive.**

[You can read more about CoQ10 and blood pressure by clicking here.](#)

CoQ10 has a growing resume in relation to health issues. Just some of the heart health issues that show improvement with CoQ10 supplementation are...

- Elevated cholesterol levels
- High blood pressure
- Congestive heart failure
- Cardiomyopathy
- Mitral valve prolapse
- Coronary artery bypass surgery
- Angina

There are more. Because of this strong recommendation it seems evident that CoQ10 supplementation should be a part of our heart health regimen. But, you may be asking...

## **What Do I Look For In A Good CoQ10?**

First and foremost you should buy from a company that is...

### **Committed to scientific research**



Anyone can purchase a generic supplement line and put his or her label on it. I once sat in the office of a fellow that was doing just that. He really knew nothing about the product.

Supplements are largely unregulated which results in a wide array of practices in the industry. There are some very good companies out there that are committed to just one thing – **producing high quality supplements.**

The best companies have – not one scientist – but **a team of scientists** who are recognized in their individual fields of study. These companies also have research relationships with universities that are heavily engaged in nutritional research. Some even hold a number of important patents related to quality control in supplement manufacturing. And they are involved in more than just the manufacturing phase. **They are involved in every phase of every process.**

Once you find a trusted company that manufactures high quality supplements, make sure you...

## Buy directly from the source

Think about it for a moment. If people are unloading their unused supplements at an auction site below wholesale cost they are not doing it to make money. Very often they are merely **getting rid of products that have been lying around** for some extended period of time.

### Why is this important?

You do **not** want artificial preservatives in your all natural supplements. There are some manufacturing processes that can help extend the shelf-life of whole food supplements. But artificial preservatives should not be among them.

The best whole food supplements do not use preservatives. Therefore they have a limited shelf-life. You want to purchase them **as soon after they are sourced and manufactured as possible**. Even buying them from a store shelf does not guarantee they are fresh. Stores keep them until they are sold. If possible **buy directly from the company** that makes them.

And since you are buying whole food supplements (not chemical equivalents) make sure you buy from a company that is...

## Careful about its sourcing

The way a supplement company manufactures its products is important. **But equally important is controlling the source material that goes into each supplement.**

If you are buying supplements that are manufactured from plant material it is important to look for a company that is committed to organic farming and **owns and controls all its farms**. If you are careful about the food you put on your table shouldn't you also be careful about the food that is concentrated in the supplements your family takes?



## What We Buy For Our Family

All these issues we have discussed are important to our family. We buy from a company that has a **long history of scientific research**. They are the oldest supplement company in the US and they began as a research entity. They have earned many awards and hold many patents. They work with dozens of scientists and a number of universities.

**They own and control all of their organic farms**. Because of this we don't worry about toxins, fillers or artificial preservatives in the supplements we take.

We do believe quality makes all the difference. When our children were younger we gave them cheaper – although still whole food – supplements. When we switched to the supplements we take now **we noticed a dramatic improvement in their health...** especially during the winter months when flus and bronchitis are prevalent.

So quality does make a big difference to us. The vitamin stores are full of second rate products. They may be cheap. But you also may not get what you want. And you may be getting a few things you do not want. Take your time and do the research. It's worth it.

If you would like to buy from the same source we do you will find a link below. The website does not try to sell you. It simply provides information on what is in the product and how you can get it. There is also a little information on their approach to research and quality. The company is well established and stands behind its products. We have never had an issue with them.

My best to you in your pursuit of optimal health. I hope this information has been helpful.

[Click here to buy the high quality CoQ10 my family uses.](#)

[Click here to learn about the company's approach to manufacturing supplements.](#)