



# Energizing Lives and Heart Health

**Boost Mitochondrial Resilience  
For A Healthy Heart**



**A Proactive Approach to Heart Health at a Cellular Level**

**Kahn, MD**

# Introducing the Experts

## Dr. Joel Kahn

Meet our brand ambassador, Dr. Joel Kahn, MD. FACC, otherwise known as “America’s Healthy Heart Doctor”.

He is one of the world’s leading cardiologists, a clinical professor of medicine, an integrative medicine practitioner and promoter of plant-based nutrition. He is a holistic cardiologist who strongly believes in the power of nutrition and supplements to help reduce disease risk, improve markers of heart health, and balance out dietary insufficiencies.

Dr. Joel Kahn has been an enormous asset to Xtendlife and continues his efforts to support in many ways. Dr. Kahn and Xtendlife’s unwavering mission to share good heart health advice, practices and supplements - so everyone can live a healthier, happier and longer life - is precisely why we’ve come together to design this informative guide to help you on your way to better health for many years to come.

Enjoy!



Dr. Joel Kahn, MD, FACC of Detroit, Michigan, co-host of Reversing Heart Disease Naturally Summit by DrTalks. Dr. Kahn is a practicing cardiologist and Clinical Professor of Medicine at Wayne State University School of Medicine. He has a triple board certification in Internal Medicine, Cardiovascular Medicine and Interventional Cardiology. He was also the first physician in the world to certify in Metabolic Cardiology with A4M/MMI and the University of South Florida.

## Laura Frontiero

Laura Frontiero is a functional health consultant combining both traditional and functional medicine. She has an extensive background working as a nurse practitioner over the last 22 years.

Laura has developed wellness programs to help her high-performing clients boost energy, mental focus, productivity and feel great overall. Her programs help clients on their journey back to peak mental, physical and biological performance.

She is also passionate about education, helping her clients to shift their mindset and take responsibility for their health.



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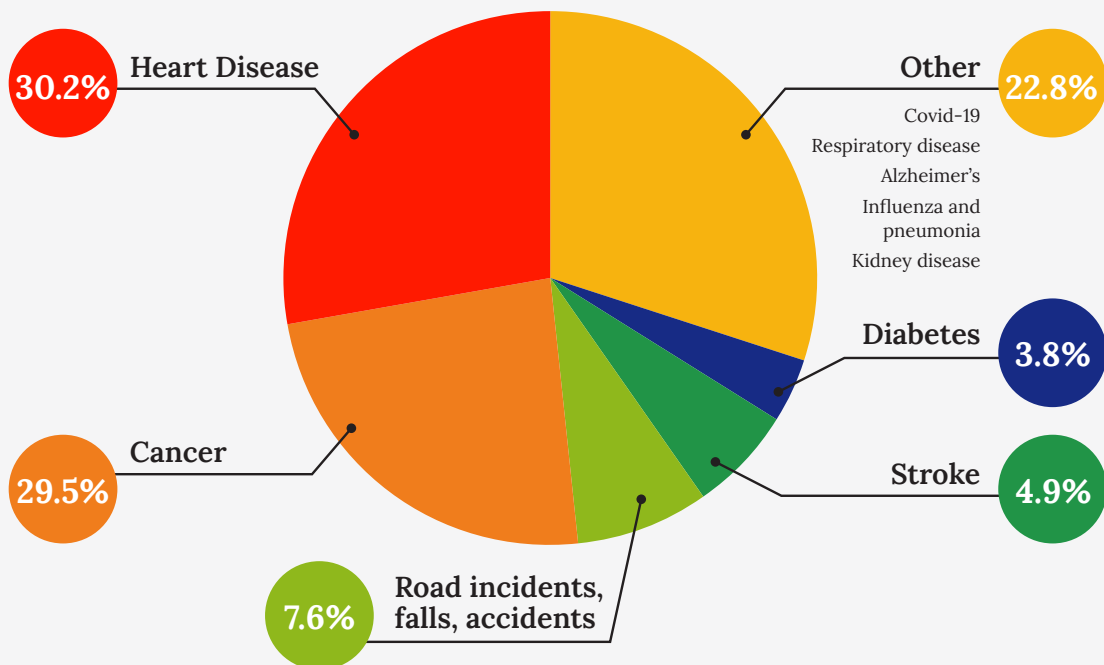
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# Heart Health is Important

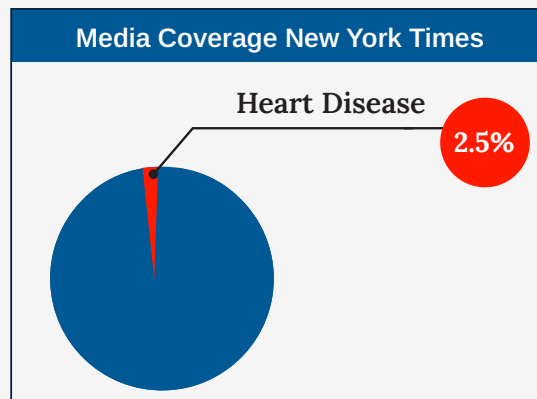
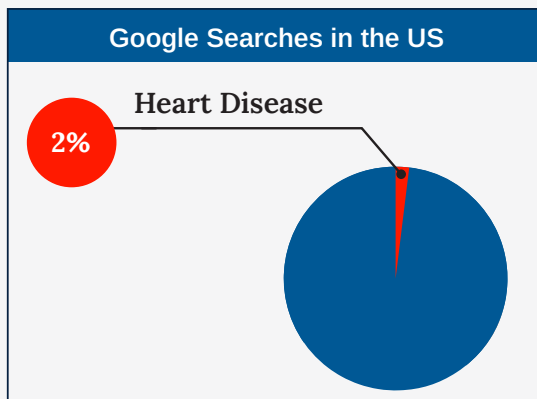
Heart health is essential to overall good health. The heart is responsible for pumping nutrient-rich blood throughout the body, supplying oxygen while removing toxins and waste. Keeping the heart in the optimum condition is important to all of us, no matter what.

Why do we need to pay special attention to heart health? Let's look at some data together. Globally, cardiovascular disease has remained the leading cause of death for the last 20 years, which takes away an estimated 17.9 million lives each year. In the US, this represents 30.2% of the deaths<sup>1</sup>. Surprisingly, heart disease remained the leading cause of death even during Covid years<sup>2</sup>. However, only 2% of Google searches and media coverage in the US are related to heart diseases<sup>3</sup>. This highlights why we need to care more for our hearts.

## 10 Main Causes of Death in the USA in 2020



<https://www.medicalnewstoday.com/articles/death-statistics-by-cause-2020#causes-of-death-in-the-us>

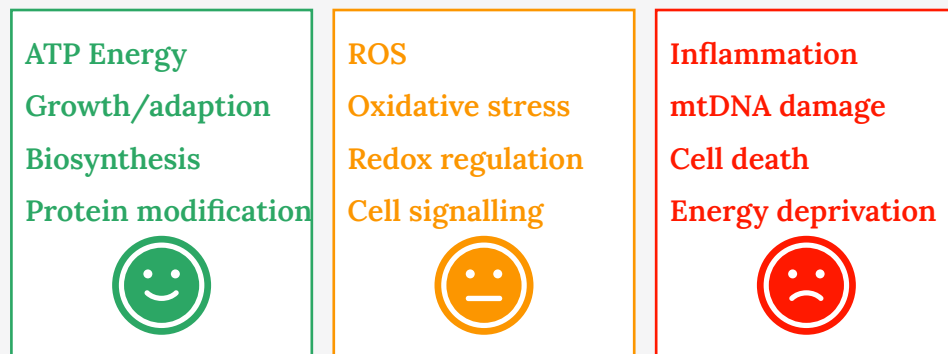
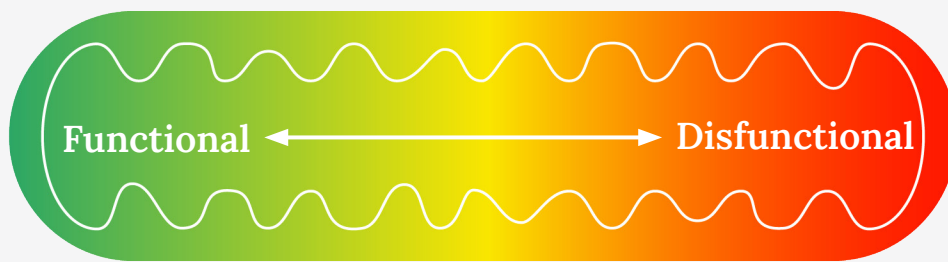


# Healthy Mitochondria for a Healthy Heart

If the heart is the hardest-working organ in the human body, then the different heart muscle cells and blood cells are the vital building blocks to assist the heart and cardiovascular system to perform.

The human body has over 37 trillion cells that make up every part of us in unique ways. These cells grow and develop continuously, eventually being replaced by new cells. Maintaining optimal mitochondrial health is crucial because it helps prevent abnormal cell growth, preserves the structural integrity of tissues, blocks harmful substances from entering cells, and promotes efficient nutrient absorption and waste removal.

## An Overview of Mitochondrial Function



## Heart Muscle Cells Have the Most Mitochondria

From the macro world, heart health is all about mitochondrial health. The heart muscle cells have the most mitochondria, about 5,000-8,000 mitochondria per cell<sup>4</sup>. They are the energy-producing organelles. Scientists have discovered that many mutated mitochondrial DNA were associated with chronic diseases, including heart issues and cardiovascular disorders<sup>5</sup>. Mitochondria occupy approximately one-third of the volume of adult cardiomyocytes<sup>6</sup>, playing a crucial role in providing the energy required for the heart to contract and pump blood throughout the body.

# The Importance of Mitochondrial Health for the Heart:



## Energy production:

The heart requires a significant amount of energy to constantly contract and pump blood throughout the body. Healthy cardiomyocytes with well-functioning mitochondria can efficiently produce ATP (adenosine triphosphate), the energy source of cells. Proper cellular condition ensures an adequate energy supply for the heart's continuous pumping action<sup>7</sup>. On the other hand, the inability to generate and transfer energy has long been considered a key mechanism of contractile failure<sup>6</sup>.



## Electrical signalling and contractile function:

Cardiomyocytes rely on proper cellular conditions to maintain their contractile function and electrical signalling<sup>6</sup>. Disruptions in cellular health can impair the coordinated contraction and relaxation of the heart muscle, leading to irregular heart rhythms, decreased pumping efficiency, and potential heart failure.



## Oxygen and nutrient supply:

Healthy blood vessels deliver oxygen and nutrients to the heart muscle cells. Maintaining the condition of endothelial cells lining the blood vessels is essential for optimal blood flow, ensuring an adequate supply of oxygen and nutrients to the heart cells.



## Removal of waste products:

Proper cellular condition enables the heart cells to efficiently remove metabolic waste products, such as carbon dioxide and lactate. An impaired ability to eliminate waste products can lead to cellular dysfunction and compromise heart health<sup>8</sup>.



## Protection against oxidative stress:

The heart is susceptible to oxidative stress, which can damage cellular components. Maintaining cellular condition helps support the heart's antioxidant defense mechanisms, protecting against oxidative damage and promoting heart health<sup>9</sup>.



## Tissue integrity and remodeling:

Healthy cardiomyocytes contribute to the overall tissue integrity of the heart. Maintaining cellular conditions helps prevent excessive tissue remodeling, fibrosis, and hypertrophy (enlargement) of the heart, which can impair its function<sup>6</sup>.

# Power Your Cells to Support Optimal Heart Health

Good lifestyle choices can help you maintain cellular health. A balanced diet, regular exercise, good stress management, and avoiding harmful substances can help support the optimal condition of cell turnover and promote overall tissue and organ health.

Dr. Joel Kahn, the Healthy Heart Doctor, suggests “*prevention is much more important than the cure*”. As a part of his practice, he advises his patients to follow certain healthy lifestyle habits plus a focused dietary and supplement plan in order to maintain a healthy heart. These habits include<sup>5,10</sup>:

## 1 Eat a healthy diet

Foods that are rich in antioxidant properties can support mitochondrial health, such as fruit, vegetables and healthy fats (e.g. walnuts, avocado, olive oil). It is best to focus on unprocessed and whole food choices. Certain quality supplements can also help to fill in the gap.

## 2 Track your daily fluid intake

Fluid retention is a common symptom of heart complications. Maintaining adequate fluid intake is a good way to avoid water retention, it's also important in supporting cellular health. Water is essential for various cellular processes and overall bodily function, especially helping with nutrient uptake, waste removal, and overall cell metabolism.



## 3 Avoid or limit alcohol intake

If you consume alcohol on a regular basis, it should be in moderation (no more than 2 drinks daily for men and 1 drink daily for women). Excessive alcohol intake can harm cellular health, lead to oxidative stress within cells, disrupts energy production processes within cells, and induce cell death in the heart and brain.

## 4 Limit caffeine intake

Limit caffeine intake to no more than 2 cups daily. Excessive consumption of caffeine can have negative effects on cellular health, because it may disrupt normal sleep patterns. Disrupted sleep leads to fatigue, impaired cellular function, and reduced overall health.

## 5 Quit smoking

You may recognise smoking as a bad habit, especially for the heart. But did you know that the chemicals present in cigarette smoke can impact cells in various ways, too? It's true, smoking can damage cellular health because it increases oxidative stress and inflammation which contribute to DNA damage and interfere with mitochondrial function.

## 6 Maintain a healthy weight

Sudden weight fluctuation (gain or loss) could be a sign that you're developing heart complications, or that your heart complications are progressing. Making it a habit to check your weight daily (preferably in the morning before breakfast) is a good way to track your heart health.



## 7 Stay physically active

If you don't exercise as part of your regular routine, you may want to talk to your doctor about starting. Exercise has numerous benefits for cellular health, it can positively impact cellular function, promotes the production of antioxidants within the body, and stimulates the production of new mitochondria, the energy-producing organelles within cells.

## 8 Manage stress

While the stress response is a natural and necessary physiological reaction in some situations, chronic stress can disrupt cellular function and contribute to various health issues. It leads to increased production of free radicals and inflammation which can damage cellular structures, including DNA, proteins and lipids, and impair cellular communications. The result? It may increase the risk of age-related diseases, disrupt immune responses, and elevate stress hormones, which can interfere with the normal functioning of cardiovascular systems and others.

## 9 Get restorative sleep and adequate rest

Getting proper rest is not only great for your health, it's also essential for cellular repair and rejuvenation. Getting enough quality sleep is the best way to improve your energy levels, mindset, and overall wellbeing.

## 10 Monitor blood pressure

Manage your blood pressure levels by monitoring your blood pressure at home, outside of your regular doctor visits.

## 11 Get regular check-ups

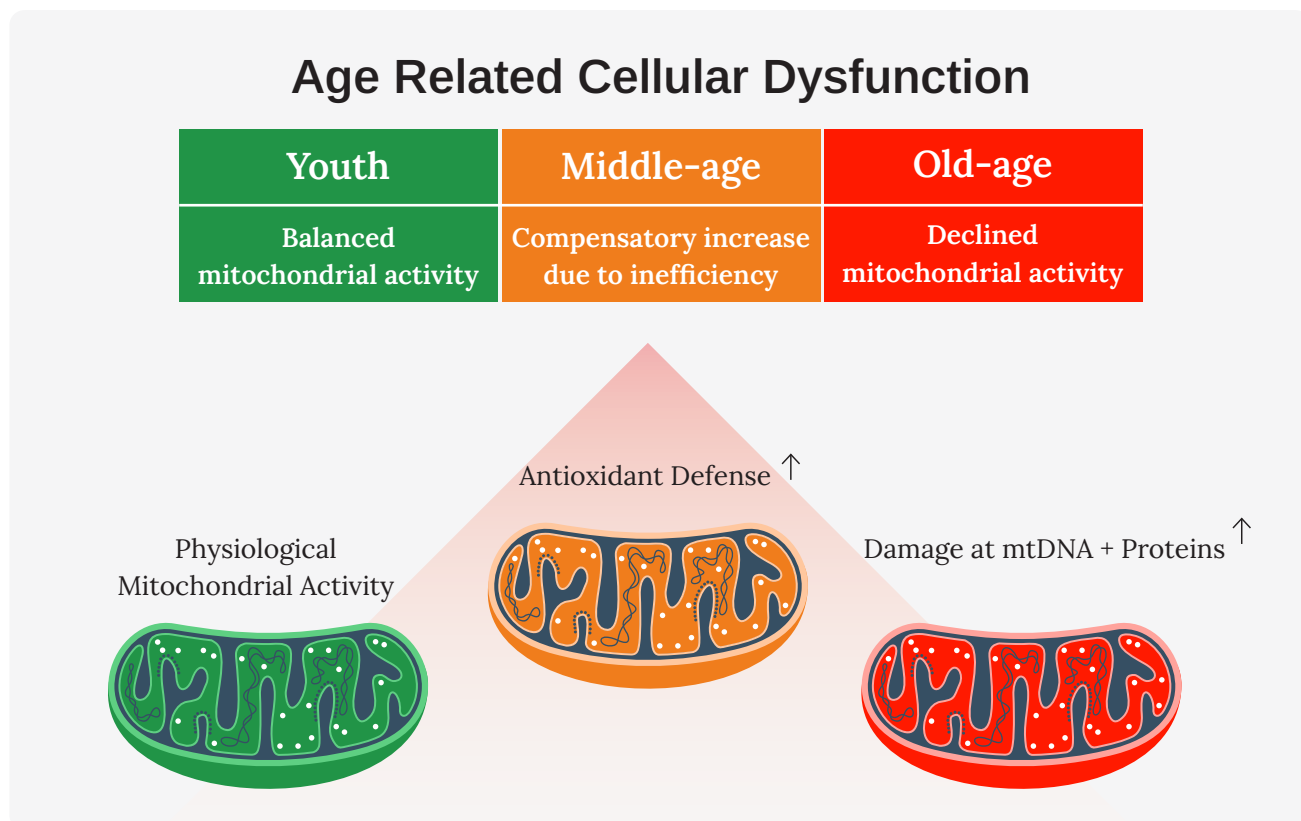
Visiting a healthcare provider on a regular basis is a surefire way to catch any complications before it's too late.





# Why Supplementation?

The truth is, as we age, we need additional nutrients to support healthy energy production and cellular repair to maintain good overall wellness. However, our body's mitochondrial activity and absorption ability may have decreased dramatically, resulting in not being able to keep up with the increased demand<sup>12</sup>.



Therefore, targeted supplementation can help address these deficiencies and support cellular health. Some of these nutrients are also crucial for promoting cardiovascular health and preventing disease.

**Omega-3 Essential Fats** - Our body simply cannot make omega-3 essential fats, so instead we must obtain this necessary nutrient from the foods we eat, such as salmon, mackerel, sardines, walnuts and flaxseed oil.

**CoQ10** - Yes, our body does have the ability to produce CoQ10, but that ability begins to decrease substantially as we age. Sources for getting this important nutrient would include food like oily fish, organ meats and whole grains, although the amount is relatively small. In addition, approximately 14% - 32% of the CoQ10 may be lost during the cooking process<sup>13</sup>.

**Vitamin D** - Vitamin D is essential for healthy bones because your body can only absorb calcium when vitamin D is present. Vitamin D is also helpful in reducing inflammation and boosting immune function, cell growth and cardio health. Some foods contain vitamin D - such as oily fish and mushrooms, however, the contribution is low compared to the amount generated through sunlight exposure. Again, aging is one of the factors that may contribute to the low production of this essential nutrient.

**Vitamin K2** - Unfortunately, this vitamin is often missing from the Western diet. The good news is there are some food where K2 is present, such as fish, meat, cheese, but the best resource for K2 is natto.

# What to Look for in a Heart Supplement

As mentioned previously, foods that are rich in antioxidant properties can support mitochondrial health and heart, the same applies to supplements. If you are looking for supplements to bridge the nutrient gaps, here is what you should look for:

## DeltaGold® Tocotrienols

Tocotrienols are members of the vitamin E family which play a pivotal antioxidant role in the body.



Their strong antioxidant effect prevents cholesterol from becoming part of the calcification problem, where the "bad" LDL cholesterol can build up on the walls of your blood vessels (called "plaque"). DeltaGold® Tocotrienols is the most potent anti-inflammatory vitamin E, clinically proven to help manage lipid oxidation, support healthy cholesterol and balance metabolites.

### **Tocotrienols plays a key role in the following:**

- Circulation management
- Blood sugar management
- Heart health support and arterial calcification management
- Cholesterol management

## Rutin

Rutin is known for its potential positive effects on heart health. The rich antioxidant properties help neutralize harmful free radicals in the body. By reducing oxidative stress, rutin may help protect the heart and blood vessels.



### **Health benefits of rutin:**

- May help manage inflammation in the arteries and other cardiovascular tissues
- May help regulate blood pressure levels
- May help improve the lipid profile by lowering LDL cholesterol levels
- May help to inhibit the clumping of platelets in the blood

## Omega-7 (CardiOmegia™)

The risk of developing cardiovascular disease is propelled by the presence of metabolic syndrome - in the US alone about one-fourth of the adult population has at least 3 out of 5 syndromes associated with metabolic syndrome.

Omega-7 is clinically proven to improve metabolic syndrome.



### Health Benefits of Omega-7:

- May help reduce LDL (bad cholesterol)
- May help increase HDL (good cholesterol)
- May help balance blood sugar
- May help maintain normal blood pressure
- May help reduce insulin resistance
- May help fight inflammation

Sourced from 100% Organic Wild Sea Buckthorn grown in the Tibetan Plateau, CardioOmegia™ offers up to 45% Omega-7 in triglyceride form - which is 4.5x higher compared to other sources<sup>14</sup>.

## CyanthOx™ Proanthocyanidin

CyanthOx™ is a clinically proven extract derived from organic, wild-harvested Tibetan Sea Buckthorn. It has been found to help support cellular regeneration, cardiometabolic health and healthy inflammatory response.

CyanthOx™ is a super antioxidant, studies show that it's 8 times more potent than grape seed extract, which is great to help support cardiometabolic health and healthy inflammatory response.

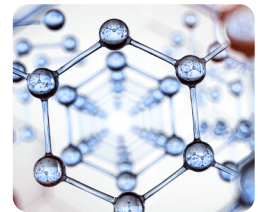


## Vitamin D3

Vitamin D3 has many important functions in the body including immunity, bone growth, muscle contraction regulation, and converting blood sugar into energy. It's also helpful in reducing inflammation, boosting cell growth and cardio health.

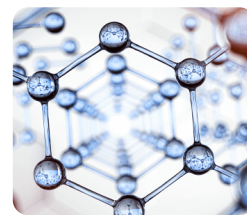
Recent studies also suggest that vitamin D3 may play a key role in lowering blood pressure in people with hypertension<sup>15</sup>.

According to a study conducted by Dr. Tadeusz Malinski, a professor of chemistry at Ohio University, vitamin D3 has a revitalizing effect on the cardiovascular system, repairing damage from hypertension and reducing the risk of heart attack<sup>16</sup>.



## Vitamin K2 (MenaQ7®)

Discovered in 1929 as an essential nutrient for controlling blood coagulation (blood clotting), this powerhouse nutrient plays a key role in several aspects of health - some people think that vitamin K2 could very well be the missing link between our diet and many chronic diseases.



### Vitamin K plays a key role in the following:

- Blood coagulation
- Calcium metabolism
- Heart health

However, one of the most important functions of Vitamin K is in regard calcium deposition - it promotes proper bone calcification and prevents blood vessel and kidney calcification<sup>17</sup>.

## Nattozimes®

Nattozimes® is an advanced alternative to nattokinase, known for its effectiveness in promoting healthy circulation. Research suggests that it may support the natural breakdown of fibrin, a key factor in blood clot formation, potentially reducing the risk of clots. Nattozimes® is particularly beneficial for individuals with high blood pressure.



### Health benefits of Nattozimes®:

- Healthy circulation support
- Blood vessel function support
- Cognitive support

## Oxifend® Blackcurrant

New Zealand blackcurrants contain a good source of antioxidants including vitamin C and polyphenols. It helps protect body cells and support healthy aging, providing potential benefits for cholesterol health. Oxifend® Blackcurrant is highly concentrated. In a single dose of 50 mg, you get the same amount of polyphenols as 20 whole fresh blackcurrants - without the sugar content.



## Omega-3

Omega-3 fatty acids (DAH and EPA) are vital nutrients that play an important role in maintaining overall health. They are known to support various bodily functions, including brain development, cardiovascular health, and immune system support. Found in sources like fish oil, omega-3s are associated with supporting heart health by contributing to the body's response to inflammation. Additionally, omega-3s may also help maintain healthy blood flow.



### Omega-3 plays a key role in the following:

- Support overall wellness
- Support cardiovascular health
- Support circulation and inflammation management

## CoQ10

CoQ10 is the powerhouse of your cells, playing a key role in ATP synthesis, it's essential for your body, particularly your heart. CoQ10 is naturally found in the body, however, with age, your body produces less of it. Fortunately, CoQ10 can also be obtained through supplements or food. Ubiquinol, a bio-identical form of CoQ10, is often recommended by doctors for its cardiovascular benefits.



### Health benefits of CoQ10 include:

- Support mitochondrial health
- Support cardiovascular health
- Support healthy aging

# Your Heart Deserves Premium Care

## CX8 Cardiovascular Support

A multivitamin for your heart, this unique natural supplement is formulated with clinically proven ingredients to support a healthy heart and cardiovascular system.

- Heart and artery support from a cellular level
- Manage arterial calcification
- Promote health blood pressure and balanced cholesterol

### How does it work?

Through the synergistic action of 8 ingredients, CX8 aims to improve heart health and support against arterial calcification. The ingredients include: DeltaGold® Tocotrienol Complex, Rutin, CardiOmega™ Sea Buckthorn Fruit Extract, CyanthOx™ Proanthocyanidin, Vitamin D3, Vitamin K2, Nattozimes® Protease, and Blackcurrant Extract.

[LEARN MORE](#)



## Omega 3 / QH Premium CoQ10

Premium fish oil with high levels of both EPA and DHA omega-3 essential fats, plus genuine Kaneka Ubiquinol™ CoQ10, astaxanthin, and lycopene for daily wellness.

- Support cellular energy production
- Support healthy blood pressure and overall heart health
- Support brain health and cognition
- Support healthy joints, muscles
- Support healthy maintenance of free radicals, promote healthy skin

### How does it work?

CoQ10 is essential for supporting cardiovascular and cellular health. Kaneka Ubiquinol™ CoQ10 is bioidentical to the ubiquinol CoQ10 naturally produced by the body and has been scientifically proven to effectively replenish natural cellular energy.

Powered by premium fish oil high in DHA and enriched with additional potent antioxidants, this formula is ideal for supporting overall wellness, particularly in heart health, cognitive health, eye health, joint health, and healthy aging.

[LEARN MORE](#)



## About Xtendlife: Who We Are

Xtendlife is a natural supplement company located in the beautiful land of New Zealand. Founded over 25 years ago, the company strives to provide dietary supplements containing only the best possible ingredients.

The Xtendlife supplements and quality meet the approval of “America’s Healthy Heart Doctor” - leading cardiologist, Dr. Joel Kahn<sup>18</sup>.

### Evidence-Based Nutrition for Your Heart

SHOP HEART HEALTH



In 2022, Xtendlife was nominated as one of the 10 Best Companies in Nutraceutical Market, November 2022.

Xtendlife is on a mission to provide people with the foundation for better health that enhances their quality of life - using the power of science and nature alongside our core values: Integrity, Purity, Innovation.



Natural Products Made in New Zealand

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