L-Carnitine less Fat more Energy

by Margy Squires

Energy. Who couldn't use more of it? Every moment, no matter what we are doing (awake or asleep), every cell in our body requires energy just to keep us alive. Energy is essential to think, to breathe, to move. Tiny powerhouses in the cells called mitochondria supply this energy. Some cells have more mitochondria than others, depending on their energy requirements, organs such as your heart, brain, liver and kidneys. The more mitochondria, the more energy produced.

But the mitochondria doesn't "work" alone. In a complicated chain of chemical reactions (called the Krebs cycle), it takes the mitochondria and several other nutrients, to convert carbohydrates, proteins and fats into usable energy units called ATP. Magnesium may be the match that ignites the ATP fire but L-Carnitine – by shuttling fats in the form of long chain fatty acids – is the wood that stokes the furnace to keep the fire burning. If your energy's low, it may be time to stock the woodpile and turn up the heat.

Stockpiling L-Carnitine levels depend on several factors: internal synthesis, available diet sources, age and even exercise.

Although your body makes about 20 mg, it requires the amino acids lysine and methioine, as well as several cofactors to do so – vitamin c, niacin, thiamine, B6 and iron. If any of these elements are missing, L-Carnitine doesn't get made. Given that exercise improves amino acid synergy, sedentary people fall short in this part of the equation. Since you need 300 mg of L-Carnitine daily, your diet will need to supply the rest. The highest sources are sheep and lamb, with less amounts in beef, making vegans at risk (even deficient). But many people are cutting back on red meat for health reasons and only modest amounts are found in chicken and fish. If you're over 40, levels of L-Carnitine decrease with age as well. What happens now to your liver, heart and high energy organs?

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Obesity, heart disease and diabetes are the leading health risks today. By shuttling fats to be "burned" up, L-Carnitine helps control excess fat buildup in blood vessels, tissues and organs, especially the heart.

Less fat may lower cardiovascular risk. Likewise, L-Carnitine assists the liver in managing fatty lipids (cholesterol and triglycerides), further promoting heart health. One sign of poor fat metabolism is a "spare-tire" middle, which is also a marker for pre-diabetes, especially when coupled with rising cholesterol levels. When it comes to fat metabolism, lean on L-Carnitine.

L-Carnitine may slow down aging. Health experts believe that you're as young as your mitochondria.

As a child, you had boundless energy, a high aptitude for learning, and your highest levels of L-Carnitine. Another way, L-Carnitine maintains mitochondria is by cleaning up post-energy production. This protects the mitochondria's DNA (the genetic material that tells cells what to do) from toxic damage and keeps the energy making system running more efficiently. Anti-aging experts think a dietary intake of 500-2000 mg a day may be closer to optimal levels.

In Summary

L-Carnitine is considered an essential nutrient, meaning your body doesn't make as much as you need. If you have fatigue, middle-aged spread, type 2 diabetes, high cholesterol and difficulty in losing (fat) weight, your dietary L-Carnitine may not be sufficient. Supplemental at 500 mg a day may be beneficial and considered safe, too. Another form of L-Carnitine, acetyl L-Carnitine, is specific to supplying "mental" energy.

Consider taking L-Carnitine and CoQ10 together as a combination of the two works better than either alone to keep mitochondria efficiently energized. Studies show that L-Carnitine and alpha lipoic acid also help mitochondria feel "young" again. Anyway you look at L-Carnitine, it's one energetic nutrient!