

# From Fatigued... To Fantastic!

*"I suspect we will find that our understanding of ribose may be the most important nutrient discovery of the decade."*

It's all about energy, think about it. Almost everything in life comes down to energy. Every day we need energy for relationships, our careers, and certainly for enjoyment. At the micro level, our brains are energy dependent; and if energy supplies are low, brain fog, confusion, or apathy becomes dominant.

Our immune system is energy driven. It takes a lot of energy to fight infection and maintain the vigilance of health. Add the toxins of 21st Century living that our bodies must isolate, repackage, and eliminate before they cause harm and yes, it all takes energy.

We need energy to transport the nutrients we digest and then absorb needed fuel into cell membranes. Cells need energy to repair, rebuild, and reproduce. If our cells don't have the necessary energy, our muscles won't work right; and we may experience cramping or pain.



Certainly one of our most vital muscles, the heart, won't work right either. That's why cardiologists Steven Sinatra and James Roberts, in their book Reverse Heart Disease Now, have named four key nutrients as the "the awesome foursome" in cardiovascular disease. They are Coenzyme Q 10, magnesium, L-Carnitine and D-Ribose. Awesome foursome, I love it, but what is so interesting about the big four is that they are all about energy production.

Of course the authors' suggest the use of a high quality mul-

tiple and EFAs for foundational support, but the "Awesome Foursome" are the key raw materials used by the mitochondria to produce ATP (Adenosine-5'-triphosphate). CoQ and magnesium are essential for the citric acid cycle to maximize ATP production.

L-Carnitine helps carry fats into the mitochondria of the cell which provide a major source of fuel; but why D-Ribose? "D-Ribose is a unique sugar made by the body to synthesize many important compounds, including

DNA, RNA, and most importantly, ATP, the "energy currency" of the cells. ATP is critical to health and maintaining normal energy for every cell in the body."

Our bodies manufacture ATP from raw materials as well as recycle it through a process called oxidative phosphorylation. CoQ and carnitine are essential for this recycling process. But ribose is the essential component in the making of ATP.

Here's the word picture Dr. Sinatra uses to describe this process. Ribose helps fill the body's gas tank. CoQ and carnitine help the body convert fuel to energy; and like the spark plug which is central to both processes, magnesium turns on the enzymes that drive the entire metabolic reaction.

All enzymatic reactions involving ATP have an absolute requirement for magnesium. As a normal process, the body uses ATP; and during mitochondrial replenishing, storehouses are renewed. But here is what happens: infections, excess stress, trauma, or even the process of aging itself can create ATP deficits.

Eating a dead devitalized diet can further weaken us. Ischemia or low levels of oxygen cause low levels of ribose which compromise the body's ability to resynthesize and regenerate ATP.

You may have heard the term "downhill syndrome" in reference to chronic illness. As energy levels fall, the underlying illness tends to gain an even stronger foothold in the body. And as your immune system struggles harder and harder to fight the spreading illness, your body's ability to produce energy becomes stretched to its limit, resulting in even lower energy levels than before. Over time, this

allows the underlying illness to become chronic, wreaking havoc on your body.

So the worse your illness gets, the more your body's ability to produce energy is taxed; and the more your body's ability to produce energy is taxed, the worse your illness gets. It becomes a vicious cycle that is almost impossible to break. By supplying ribose, we can provide the raw materials to jump start the body ability to naturally increase ATP and break the cycle.

Here's what Dr. Jacob Teitelbaum, M.D., author of the best-selling book From Fatigued to Fantastic says about D-Ribose: "Not having enough ribose in your body is like trying to build a fire without kindling--nothing happens...Ribose is a unique and powerful addition to our complement of metabolic therapies. For those suffering from fatigue, muscle soreness, stiffness, and a host of related medical complications the relief can be life changing...I suspect we will find that our understanding of ribose may be the most important nutrient discovery of the decade. I'd recommend it be used in all Chronic Fatigue Syndrome cases, fibromyalgia, and cardiac patients as well as athletes. Though healthy, I take it daily myself as I like the extra energy boost it gives me."

I like what he says, "Ribose is a unique and powerful addition to our complement of metabolic therapies." Obviously, it won't fix every case; but I can tell you I notice the difference when I use it before my workout. Click below for some recipes and additional information. Try it yourself and see if it adds an extra ummph to your exercise program.

Thanks for reading this week's edition. I'll see you next Tuesday.