



Antioxidants - Friend or Foe?

Antioxidants mop up waste products called free radicals produced during biochemical reactions and stop them inflicting damage on our cells. Coenzyme Q10 is an antioxidant that is produced naturally in our body; however, as we get older, our ability to produce it diminishes. Taking antioxidant supplements such as MitoQ, a revolutionary targeted form of Coenzyme Q10, boosts our own supply of antioxidants and reduces free radical damage.

Our bodies are made up of over ten trillion cells. Each cell is composed of molecules which are made up of one or more atoms joined by chemical bonds. Within every cell in your body, every second of the day, biochemical reactions are taking place. Many of these reactions involve the transfer of electrons from one atom to another. All are vital for our survival.

One of the most important reactions is cellular respiration, and this happens deep within mitochondria that float freely inside the cell. Cellular respiration uses carbon atoms from the food we eat and oxygen from the air we breathe to make a substance called adenosine triphosphate, or ATP, which is the major fuel source of the cell.

However, this life-sustaining process -along with almost every other biochemical reaction in our body - generates waste products called free radicals. Free radicals are commonly oxygen or nitrogen atoms with an unpaired electron in their outer shell. They are very unstable and move quickly to steal their missing electron from the closest stable molecule in its vicinity. This may be a lipid or protein molecule, or a strand of DNA or RNA. Although free radicals have some important functions when present in the right numbers, they can cause severe damage to the cell if overproduction occurs.

Environmental toxins such as UV radiation, pollution and cigarette smoke as well as poorly functioning mitochondria can all result in higher than normal levels of free radicals.

This is where antioxidants fit in. Antioxidants sacrifice themselves to free radicals, and give them their missing electron, turning them back into a stable atom. This prevents free radical damage to other molecules within the cell.

Our bodies are amazing and we are capable of producing our own supply of antioxidants to keep our free radical levels in check. One of the most important

endogenously produced antioxidants is Coenzyme Q10 (Co Q10). Co Q10 actually has a dual role in the body. As well as being a potent antioxidant it is also important in the reaction that produces ATP.

Unfortunately, as we get older, our body's ability to produce these natural antioxidants decreases. Free radicals left unchecked cause more and more damage to our cells. Not having enough antioxidants in your body to counteract the effects of free radicals can lead to a state called oxidative stress.

Luckily, we are able to top up our body's natural supply of antioxidants through supplementation. Co Q10 is available as a dietary supplement and research has shown that it may be beneficial for many disease states associated with oxidative stress. MitoQ is a revolutionary formulation of Co Q10 that can be uptaken directly by the mitochondria of the cell, replenishing levels of Co Q10 in the place where it is needed the most.

Along with a healthy diet and exercise, MitoQ can help reduce that long-term damage inflicted on your cells by free radicals.

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