

NATUROPATH

Carnitine

Carnitine is an essential nutrient for the transport of long chain fatty acids (Omega 3) into the mitochondria – basically it helps us make energy. The mitochondria are our energy producing power packs of the cell. The fatty acids are then oxidized in the cells to form energy.

Many tissues, including the heart and skeletal muscles depend on this process for energy. Normal heart function is also dependent on adequate carnitine. Many conditions such as angina, arrhythmias and cardiac myopathies have all been documented to benefit from carnitine supplementation.

Carnitine was first isolated from meat extracts in 1905, however little was learnt about it until 50 yrs later. There are still discussions around whether it can be classified as a vitamin, and sometimes is alternatively known as vitamin BT – B for the group of vitamins and T for the *Tenebrio molitor* meal worm when they established carnitine as a growth factor for it.

It is now known that carnitine concentrations in fetal and umbilical cord blood are higher than in maternal blood, suggesting the placenta may actively transport it, since synthesis is not fully developed. Our body can make small amounts of carnitine from a couple of aminos, vitamins and one mineral. Carnitine given to preterm infants has helped with their weight gain and growth.

The ability to enhance exercise tolerance and physical performance is also noted and several double blind studies in both athletes and normal subjects have been completed. The subjects who received carnitine showed improvement in exercise intensity and also improved energy metabolism within the muscles.

The daily dose is generally between 1500mg to 2000mg daily in divided doses. No adverse interactions between carnitine and any drug or nutrient are known.



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