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CoQ10

Coenzyme Q10

Fact Sheet

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What is Coenzyme Q10?

Coenzyme Q10, also known as ubiquinone, is a biomolecule that is present in most cells in the body. It is considered an antioxidant (meaning it inhibits the oxidation of other molecules). Sometimes, oxidation reactions produce free radicals which can result in damage to cells or cell death. Hence, antioxidants can be good when used to intervene in this process to protect and limit cell damage.

How does CoQ10 work?

CoQ10 is used widely as a dietary supplement to support various aspects of general health and wellness. As such, it's us as an agent in fertility to support sperm and egg quality has been extensively examined.

In the body, CoQ10 is mainly present in the mitochondria and is a component of the electron transport chain that is involved in generating energy within cells. The vast majority of the human body's energy is produced in this way.

The rationale for using CoQ10 in fertility is because CoQ10 is found in high concentrations in cells with high energy needs. Since eggs and sperm maturation and development require considerable energy, these cells are subject to oxidative stress. In addition, researchers have established that the eggs of older women do not produce enough CoQ10 (Ben-Meir et al., 2015) which may be responsible for age-related decline in egg quality and quantity.

There is evidence to suggest that higher concentrations of CoQ10 were associated with better quality embryos and higher pregnancy rates (Xu et al., 2018).

What is the evidence for CoQ10?

There is some clinical evidence that CoQ10 may help women with poor ovarian reserve (POR). In fact, among adjuvant treatments, CoQ10 and DHEA were demonstrated to improve the probability of achieving pregnancy, and these treatments also had lower cycle cancelation rates in patients with POR (Zang, Yu et al., 2020).

More research is needed to understand the mechanism by which CoQ10 acts to can improve a range of fertility related factors.

References

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