Choline Citrate is Safe… Here’s what you need to know

Choline is an exceptionally helpful nutrient in the numerous methylation processes occurring in the body. It improves mental power, memory, helps with fat transport, detoxification, post-game fatigue and more. Choline deficiency is widespread in America particularly among those who are physically the most active.

Concerns have been raised about choline. Perhaps you’ve heard them. A recent study published in The New England Journal of Medicine says that "intestinal bacteria metabolize choline and release a substance that the liver converts to...TMAO....High levels of TMAO in the blood are linked to increased risk of heart attack and stroke. Dr. Hazen, the lead researcher said it also may be wise to avoid supplements or vitamins with added choline." ¹

We agree that it is not good to have quarternary amines such as TMA (Trimethylamine) and TMAO (Trimethylamine oxide) in the colon since TMAOs are thought to be atherogenic and promote heart disease. Since it is the bacteria in the colon that are responsible for this metabolism of choline, the formation of TMA and TMAO is inevitable when choline absorption and assimilation is incomplete and choline spills over into the colon. As the 2,000 year old man said, “Don't do that.”

Choline should not reach the colon!

This is why PERQUE Integrative Health uses only Choline Citrate, which is easily and absorbed 100% in the upper GI tract (small intestine) and does not spill into the colon. All choline is not at all the same as is explained below.

Other forms, such as Choline Chloride, Choline Stearate are not suitable since they have been shown to increase production of TMA due to poor uptake.² ³ Choline bitartrate is actively not recommended because it too has poor bioavailability and includes corn antigens, important for those with delayed food allergies.

So, while some types of choline have troublesome aspects, PERQUE’s Choline Citrate (and dietary sources like eggs) is uniquely formulated for 100% uptake. Combined with PERQUE Mg Plus Guard, an additional reason to take PERQUE Choline Citrate is that it enhances the uptake of magnesium in turn making the choline and citrate more effective in the body. A biological triple play; just for you.

² Zeisel SH, Wishnok JS, Blusztajn JK. Formation of methylamines from ingested choline and lecithin. J Pharmacol Exp Ther. 1983; 225(2) 320-324