



Creatine Ethyl-Ester

Everyone that has experienced the "bloat" from creatine knows that creatine monohydrate is poorly absorbed by the body. Creatine's effectiveness is dependant upon the cells ability to absorb it. The poor absorption rate of regular creatine monohydrate requires the creatine user to ingest large dosages of creatine to achieve desired effect. This in turn can create unwanted side effects such as stomach bloating, water retention, and diarrhea.

Creatine works by drawing water into the cell. Since most supplemental creatine monohydrate is not absorbed, the unabsorbed creatine can hang outside the target cell with the water it was initially trying to draw in. The end result is the notorious "creatine bloat."

With the sports nutrition industry constantly evolving, scientific researchers are always on the quest for the "next big thing". Well folks, the next generation of creatine is here. It's called creatine ethyl-ester, the most innovative creatine known to man.

Before we bombarded you with technical information, let's take a moment for a refresher course in Biochemistry. All living cells have a **lipid bilayer**. This is a membrane composed only of lipid molecules. The lipid bilayer is the foundation of all biological membranes, and is a prerequisite of cell-based life. **Passive permeation** is a process that describes the diffusion of a substance across a cell membrane through the use of lipids as transport mechanisms. **Esters** are organic compounds that are formed by esterification - the reaction of carboxylic acid and alcohols. The most common esters found in nature are in the fat tissue in animals. That sounds familiar right? Now let's get on to the interesting stuff.

Regular creatine monohydrate is semi-lipophilic. This means that it inefficiently uses fat as a transport mechanism. The esterification of substances will increase their lipophilic abilities. Therefore, esterified creatine will use fat more efficiently to permeate the cell wall and exert its effects upon cellular function vs. unesterified creatine monohydrate. What does this mean? Well it's simple. The absorption of esterified creatine is significantly increased up to 30-40 times more than creatine monohydrate. Side effects such as the infamous creatine bloat, cramping, diarrhea and water retention are not experienced! Creatine ethyl-ester is so efficient, that results can be achieved with a smaller serving size. Say goodbye to the standard 5-10 gram servings per day with regular creatine monohydrate. Of all the athletes that have tried the Pure Advantage creatine ethyl-ester, results were reported within 30-45 minutes upon ingestion. Pure Advantages' creatine ethyl-ester is in a convenient vegetable capsule and does not require the use of expensive sugar laden transport systems. Creatine ethyl-esters rapid absorption and nearly 100% utilization has raised the bar for creatine supplementation.

References

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