

## Whey Protein, Cysteine, and Muscle *What You Haven't Been Told!*

**Do you suffer from early muscle fatigue, increased incidence of illness after training, or difficulty in recovering?**

Just one bout of treadmill running or heavy lifting can increase free radical levels in your body by more than 300%. These free radicals (oxidants) are a natural and important part of your body's energy production and muscle growth.

However, balance is critical when it comes to free radicals in the body. Without sufficient antioxidants, cellular damage can become rampant.

For bodybuilders and professional athletes, these boundaries are pushed almost daily. Without proper, balanced levels of endogenous antioxidants, namely glutathione, many problems can arise. These same problems can occur during the course of normal life for everyone due to the toxic burdens of today's world.

Glutathione is the body's master antioxidant. Without proper levels of glutathione, all other antioxidants cannot do their job effectively.



### **Cysteine Is The Key**

The problem? As we age and our exposures to toxins and stress increase, our glutathione levels drop significantly. Most theories point to a lack of naturally-occurring Cysteine in our diets.

Your body needs sufficient levels of Cysteine to produce glutathione. However, it is critical that the Cysteine be in its natural (native) non-denatured form for best results.

The best source for this critical amino acid in its original form is **NON-DENATURED** whey protein.

By protecting against excess free radical damage, Cysteine's effect on glutathione is also thought to **accelerate muscle growth** while also **preventing muscle loss** that occurs with aging.

Cysteine's effect on glutathione has also been shown to **dramatically reduce muscle fatigue** during exercise.

Endurance athletes such as long-distance runners and cyclists can better tolerate large volumes of training while remaining free of illness when cysteine and glutathione status is maintained.

## **Why Haven't You Heard This Before?**

Most whey protein companies never talk about Cysteine. Why? Because they can't.

In most commercial processing, the whey protein structure has been heavily denatured (high-heat pasteurization, acidic processing, ion-exchange, hydrolization).

When whey protein's fragile native conformation (structure) is denatured (broken apart), the bioactive and immune-supporting fractions are heavily diminished or destroyed. One of those being the fragile peptide bonds of Cysteine such as those found in the glutamate bonded form unique to whey protein, glutamylcysteine.

## **In Summary:**

Just because a whey protein product says it contains the amino acid Cysteine, it does not tell you in what form (bonded configuration) the molecule is present. In fact, unless the company proudly proclaims that their protein's structure is NON-denatured, then it is most likely damaged and less beneficial overall.

The difference can have a huge impact on your results. The human body was not designed to consume damaged, isolated proteins or amino acids. Protein should be consumed in a non-denatured state thus enabling its full intended biological activity.

Cysteine is just one of many reasons the quality of whey protein is vastly more important than the quantity.

If you're choosing your whey protein simply based on the lowest price, the volume of protein, marketing hype, endorsements, or the picture on the label you may be sacrificing your results and your long-term health.

Train with **Action Whey™** for 90 days. You will experience and understand the difference in quality.