Kemiko's *Megastar (Cretine Monohydrate)*

1st time Bangladesh, Kemiko's Food Supplement Division introduces orange flavoured and tasty Creatine Monohydrate branded as ***Megastar***.

Composition

Each 6.5 gm (one serving) contains 5.71 gm Creatine Monohydrate Eqv. to 5 gm Creatine.

Brings benefits for –

Professional and amateur athletes
Body builders
Who wants to increase lean muscle mass

How to use -

6.5 gm Megastar Powder mix with any suitable drink or water and take once a day.

Not for –

Below 18 years old.

What is Creatine?

Creatine is a compound formed from several amino acids that is stored in high amounts in our muscles. It is synthesized from three amino acids - arginine, glycine and methionine that are predominantly located in skeletal muscle (SM) tissue. The source of creatine to replace our daily turnover (~ 2 g) is shared roughly equally between dietary intake (animal muscle foods such as meat, poultry and eggs) and manufactured by our bodies.

Types of Creatine

Creatine Monohydrate - Creatine Monohydrate, a creatine molecule bound with water. 1 gram of creatine monohydrate has 880 milligrams of creatine. Creatine Monohydrate, the most common form for a creatine supplement, and the majority of studies and research have been conducted using creatine monohydrate.

Creatine Phosphate - Creatine Phosphate is creatine bound to a phosphate group. This form, creatine phosphate, has not been shown to be more effective than just taking creatine monohydrate.

Creatine Citrate - Creatine Citrate is more water soluble than other forms of creatine. Simply put, it dissolves better when you mix it up, but is equally as effective as the other forms.

Benefits of Creatine consumption among athletes

- Increases lean muscle mass
- Increases muscle strength
- Enhances high-intensity exercise performance
- Reduces oxidative damage following intense exercise
- Improves concentration in sleep-deprived athletes
- Reduces thermal strain
- Improves glucose transport

How to take Creatine supplements

According to the International Society for Sports Nutrition position statement (2007), the following is defined as an effective creatine supplementation protocol:

Loading phase of 0.3g/kg/day creatine monohydrate/day for at least 3days Followed by 3-5g/day to maintain elevated stores.

Alternatively

Rapid Loading: 5 days of 4 x 5g doses of Creatine Monohydrate

Slow loading: 3g creatine monohydrate daily over a 28 day period

Both the protocols will saturate the muscle with Creatine, which will then take about 4-5 weeks to return to normal levels. A continued dose of 3 gm per day will enable the elevated Creatine levels to be maintained.

What may happen if discontinued?

If supplementation is ceased, muscle creatine stores gradually return to resting levels - some studies have shown that it takes 4-6 weeks for this to occur. A 'maintenance' supplemental dose of 2-5 g creatine per day keeps the loaded muscle at elevated levels.

Creatine supplementation & sports performance

Many athletes cycle their Creatine supplementation -loading up, maintaining for a certain training period, and then stopping the supplements for a couple of weeks before reloading. This may suit the athlete's training cycle or periodisation.

Side-effects

Kidneys and liver may be at risk ***if you misuse*** Creatine. Any creatine your body does not use is excreted as a waste product called creatinine. If you constantly overdose Creatine (>20 g/day) - you will have increased waste of creatinine. This constant excretion of creatinine may put extra stress on your kidneys and liver, as well as lead to gastro-intestinal discomfort.

Creatine is an osmotically active substance; it pulls water into your muscle cells, which can lead to weight gain or occasional dehydration due to increased muscular water uptake from the rest of the body.

Contraindication

Due to ethical reasons, no known studies have been done on humans under the age of 18. Because of the side-effects are unknown, taking Creatine under the age of 18 is not recommended.

Concerns

Contamination, A recent study highlighted that in 33 commercially available creatine supplements, 50% contained contaminants including heavy metals, at levels exceeding the maximum limit recommended by the European Food Safety Authority in 2004. It is therefore advisable to consult a performance nutritionist before consuming any creatine-based or creatine-containing supplement.

References:

Fact sheet published by:

Sports Dietitians Australia (SDA)

U.S. Olympic Committee, Sport Performance Division

The Irish Sports Council