

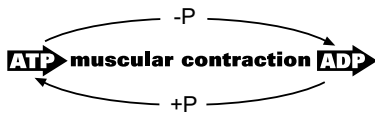
ECLIPSE SPORT SUPPLEMENTS

The Intelligent Choice in Sport Nutrition™

Creatine Monohydrate

Pure Creatine = Pure Results

Creatine is an amino acid in structure consisting of arginine, glycine, and methionine. Our bodies naturally synthesize creatine in the liver and pancreas.¹ Creatine monohydrate is the preferred type of creatine used for supplementation and is the precursor of creatine phosphate. Creatine monohydrate is stored inside the muscle cell as creatine phosphate. This leads to how creatine performs its functions inside the body. First, we need to understand that when we perform short duration exercise our body utilizes ATP (adenosine triphosphate) for energy.² As our ATP stores are being used they form ADP (Adenosine diphosphate) which needs to be recycled back to ATP. Here's a diagram to show you what happens inside the muscle cell:



The creatine phosphate inside the muscle cell allows your ATP to recycle at a faster than normal rate by giving up its phosphate (+/-P).³ This is how creatine provides increases in strength and endurance. As far as increases in muscle size, the increase in strength can contribute to increased muscular gains. The other and most accepted theory for the increase in muscle size is that once creatine is stored inside the muscle cell there is an increase in intracellular fluid. This intracellular fluid then causes an increase in osmotic pressure, which may turn on protein synthesis.⁴ The activation of protein synthesis can then lead to increased muscular size.

Research indicates that the best way to use creatine is by loading for 5-7 days on 20 grams divided throughout the day.⁵ For the next two months a maintenance dose of 5 grams per day is recommended.⁶ In order to maximize your results you should reload with 20 grams every 2 months. If you decide to cycle, then a layoff of 4 weeks is necessary because it takes 4 weeks for creatine to leave your muscles.⁷ The use of caffeine and acidic fruit juices have been shown to inhibit creatine absorption. Carbohydrates are the only sub-

stances that have been shown to increase absorption of creatine.⁸

The safety of creatine is another area of concern. According to the leading researchers creatine is safe at the recommended doses. There is not a single study showing that creatine may increase muscle cramping, muscle strains, or renal stress.⁹ Any reports of negative side effects are purely anecdotal and have no real scientific justification. Reports of muscle cramps are most likely do to the athlete's poor hydration techniques. If you engage in intense physical activity you should consume 16 oz. of fluid 1-2 hours prior to workout, 4-6 oz. of fluid every 15 minutes during workout and then consume 16 oz. of fluid for every pound of bodyweight lost after exercise.¹⁰

The importance of purchasing high quality creatine has become an issue in the supplement

industry. Eclipse creatine is manufactured by Pfanstiehl Labs. Pfanstiehl creatine is manufactured in the United States, which means regular FDA inspections. They manufacture creatine under U.S. patent 5,719,319 and are the only producer of creatine that has registered a drug master file on creatine with the FDA. Pfanstiehl creatine is kosher certified and they utilize state of the art HPLC analysis. This analysis coincides with their zero tolerance policy for impurities and by-products. As you can see, this company is a leader in creatine manufacturing.

Overall, any bodybuilder or endurance athlete should not overlook creatine monohydrate. As athletes already know, research shows that creatine works for most people. This is why Eclipse offers a 400-gram, 1000 gram, and a 4-lb. Creatine Activator. Creatine Activator adds the carbohydrates and essential nutrients to enhance the absorption of the creatine. The next time you're looking for creatine monohydrate you can feel confident that the Eclipse label stands for quality and purity.



REFERENCES

1. Greenhaff, P.L. 1995. "Creatine and its applications as an ergogenic aid" Int J Sport Nutr. Vol. 5, S-100 to S-110.
2. Whitney, E.N. et al. 1990. "Understanding Nutrition" West Publishing Comp. 5th ed, Ch.7; p.171-175.
3. Balsom P. et al. 1995. "Skeletal muscle metabolism during short duration high-intensity exercise: influence on creatine supplementation" Acta Physiol Scand; 1154:303-310.
4. Bessman S, Savabi F. 1998. "The role of phosphocreatine energy shuttle in exercise and muscle hypertrophy." International Series on Sport Sciences: Biochemistry of Exercise VII: Champaign, IL: Human Kinetics: p.167-178.
5. Harris R. et al. 1992. "Elevation of creatine in resting and exercised muscle of normal subjects by creatine supplementation." Clin Sci; 83:p. 367-374.
6. Hultman E. et al. 1996. "Muscle creatine loading in man." J Appl Physiol; 81: p.232-237.
7. Febbraio M. et al. 1995. "Effect of creatine supplementation on intramuscular TCr, metabolism and performance during intermittent, supramaximal exercise in humans." Acta Physiol Scand; 155:p. 387-395.
8. Green A. et al. 1996. "Creatine ingestion augments muscle creatine uptake and glycogen synthesis during carbohydrate feeding in man." J Physiol; 491:p. 63. Abstract
9. Potman J.R. et al. 1997. "Effect of short-term creatine supplementation on renal responses in men." Eur J Appl Physiol; 76:p. 566-567.
10. Berning J.R., Steen S.N. 1991. "Sport Nutrition for the 90's." Aspen Publishing. Ch.10; p. 180-195.