

## Features& Benefits

# **Creatine Plus**

**Creatine Plus (From Adeeva Nutritionals)** 

Creatine Plus: stir into any juice or shake for enhanced energy, strength, power, performance, and anti-aging benefits

**Creatine Plus** – contains micronized creatine for optimal absorption. Creatine is proven to increase strength, performance and lean mass gains in athletes of all ages. Creatine also preserves strength in aging persons, keeping them more functional. Other medical uses include improving strength and functionality in patients with multiple sclerosis, other neurodegenerative diseases, and chronic heart failure. This product also contains L-Glutamine, which has been shown to decrease muscle and protein breakdown during workouts and during periods of stress. It is also proven to reduce incidence of upper respiratory tract infections in athletes undergoing heavy training, by supporting immune function. This product can also help lower high blood glucose and HbA1c levels, improving management of type 2 diabetes and pre-diabetes. Creatine Plus also contains therapeutic doses of Arginine and Ornithine shown to boost growth hormone release, which accelerates lean mass development in athletes and helps preserve lean mass and strength in person's over 40.

**10 Unprecedented Benefits:** Creatine Plus contains nutrients proven to provide the following health and performance benefits:

- 1. Increases explosive power and speed endurance with exercise training
- 2. Anti-aging creatine, L-glutamine, ornithine and arginine have been shown to reverse muscle mass and strength losses in aging and elderly persons, increasing lean mass and feeling of well being and energy (even in the absence of formal exercise). These effects have a profound influence on the aging person's quality of life, enabling them to remain more functional, capable of physical tasks, and independent

- 3. Increases lean mass gains in conjunction with strength training
- 4. Decreases muscle breakdown caused by exercise and stress, and allowing a greater natural anabolic effect from exercise
- 5. Supports immune health in athletes training at high levels, who are prone to upper respiratory tract infections (L-glutamine is primary fuel for many immune cells).
- 6. Increases release of Growth Hormone from the pituitary gland, which in turn, increases release of insulin-like growth factor-1 (IGF-1) from the liver. IGF-1 has significant anabolic effects that enhance lean mass gains in conjunction with exercise, in both young (over 17 years old), and older persons
- 7. Neurodegenerative Diseases and Brain Function—by providing more available energy to nerve and brain cells ingredients in this formula have been shown to help improve management of Parkinson's disease and other neurodegenerative diseases (e.g. MS, early stage Alzheimer's disease). Creatine has also been shown to boost brain function and performance in vegetarians, who are known to ingest sub-optimal amounts of creatine from food.
- 8. Congestive Heart Failure (CHF) by providing more available energy to the heart muscle ingredients in this formula have been shown to improve the management of CHF
- 9. Rehabilitation ingredients in this formula have reduced muscle atrophy in patients whose limbs are in a cast due to fractures, enabling faster recovery time and earlier return to competition
- 10. Type 2 Diabetes creatine has been shown to increase activity of the Glut-4 transporter, which increases insulin sensitivity, lowering blood glucose in diabetics and pre-diabetics, along with lowering the hemoglobin A1c (HbA1c).

#### **Ingredients:**

Each serving contains the following:

Micronized Creatine Monohydrate – 5 grams

L-Glutamine – 0.5 grams

L-Arginine – 0.5 grams

L-Ornithine – 0.5 grams

One serving (one scoop) = 6.5 gms

60 servings per bottle (390 grams)

#### **Daily Dosage:**

**Loading Phase:** For the first 5-7 days, ingest two scoops (2 servings) in the morning, mixed into juice or shake mix, two scoops in the afternoon (mixed with juice or shake), and one additional scoop towards the end of the day (mixed into juice or shake mix)

Maintenance Phase: ingest two scoops (servings) per day mixed into any juice or shake.

### **Clinical Applications:**

- Athletic Performance: strength, explosive power, speed endurance, anabolic muscle gains
- Anti-aging: maintain strength, power, muscle mass, and energy in person's over 40
- Immune Support in athletes and stressed individuals
- Type 2 diabetes and pre-diabetes
- Fracture recovery to prevent atrophy
- Certain Neurogenerative Disease (supportive measure)
- Certain cases of Congestive Heart Failure (supportive measure)
- Vegetarians

#### **Contra-indications and Precautions:**

- Kidney Disease patients with any stage or type of kidney disease should not take this product
- Liver Disease requires physician approval
- Organ Transplant requires physician approval
- Pregnant
- · Breast Feeding
- History of Cancer requires physician approval

#### References:

- Kreider RB: Creatine, the next ergogenic supplement? Sportscience Training and Technology. Internet Society for Sports Science. Available at: http://www.sportsci.org/traintech/creatine/rbk.html. Accessed May 5, 1998.
- 2. Kreider RB: Creatine supplement: analysis of ergogenic value, medical safety, and concerns. Journal of Exercise Physiology Online 1998; 1(1). Available at: http://www.css.edu/users/tboone2/asep/jan3.html. Accessed May 5, 1998.
- 3. Bramberger M: The magic potion. Sports Illus 1998;88(16):58-65.
- 4. Bessman SP, Savabi F: The role of the phosphocreatine energy shuttle in exercise and muscle hypertrophy, in: Taylor AW, Gollnick PD, Green HJ (eds.), International Series on Sport Sciences: Biochemistry of Exercise VII. Champaign, IL, Human Kinetics, 1988, vol. 19, pp 167-178.
- 5. Ingwall JS: Creatine and the control of muscle-specific protein synthesis in cardiac and skeletal muscle. Circ. Res 1976;38(5 suppl 1):I115-I123.
- 6. Sipila I, Rapola J, Simell O, et al: Supplementary creatine as a treatment for gyrate atrophy of the choroid and retina. N Engl J Med 1981;304(5):867-870.
- 7. Almada A, Kreider R, Ferreira M, et al: Effects of calcium-HMB supplementation with or without creatine during training on strength and sprint capacity, abstract. FASEB J 1997; 11:A374.
- 8. Earnest CP, Snell PG, Rodriguez R et al.: The effect of creatine monohydrate ingestion on anaerobic power indices, muscular strength and body composition. Acta Physiol Scand 1995;153(2):207-209.
- 9. Burke LM, Pyne DB, Telford RD: Effect or oral creatine supplementation on single-effort sprint performance in elite swimmers. Int. J Sports Nutr 1996;6(3):222-223.
- 10. Dawson B, Cutler M, Moody A, et al.: Effects of oral creatine loading on single and repeated maximal short sprints. Aust J Sci Med Sports 1995;27(3):56-61.
- 11. Redondo DR, Dowling EA, Graham BL, et al: The effect of oral creatine monohydrate supplementation on running velocity. Int J Sports Nutr 1996;6(3):213-221.
- 12. Kreider RB, Ferreira M, Wilson M, et al.: Effects of creatine supplementation on body composition, strength, and sprint performance. Med Sci Sports Exerc 1998;30(1):73-82.
- 13. Poortmans JR, Auquier H, Renaut V, et al.: A Effect of short-term creatine supplementation on renal responses in men. Eur J Appl Physiol 1997;76(6):566-567.
- 14. Mazzini, L., Balzarini, C., Colombo, R., Mora, G, Pastore, I., De Ambrogio, R., Caligari, M. Effects of creatine supplementation on exercise performance and muscular strength in amyotrophic lateral sclerosis: preliminary results. J Neurol Sci, 2001 Oct 15; Vol. 191 (1-2), pp. 139-44
- 15. Persky, A.M., Brazeau, G.A. Clinical pharmacology of the dietary supplement creatine monohydrate. Pharmacol Rev. 2001 Jun; Vol. 53 (2), pp. 161-76
- 16. Stout, J.R., Eckerson, J.M., May, E., Coulter, C., Bradley-Popovich, G.E. Effects of resistance exercise and creatine supplementation on myasthenia gravis: a case study. Med Sci Sports Exerc, 2001 Jun; Vol. 33 (6), pp. 869-72
- 17. Witte, K.K., Clark, A.L., Cleland, J.G. Chronic heart failure and micronutrients. J Am Coll Cardiol, 2001 Jun 1; Vol. 37 (7), pp. 1765-74
- 18. A leg to stand on. Better Nutrition, May 2002, Vol. 64 Issue 5, p.20
- 19. Chrusch, M.J., Chilibeck, P.D., Chad, K.E., Davison, K.S., Burke, D.G. Creatine supplementation combined with resistance training in older men. Med, Sci Sports Exerc., 2001 Dec; Vol. 33 (12), pp. 2111-7

- 20. Gotshalk, L.A., Volek, J.S., Staron, R.S., Denegar, C.R., Hagerman, F.C., Kraemer, W.J. Creatine supplementation improves muscular performance in older men. Med Sci Sports Exerc, 2002 Mar; Vol. 34 (3), pp. 537-43
- 21. Gordon, A., Hultman, E., Kaijser, L., et al. Creatine supplementation in chronic heart failure incrases skeletal muscle creatine phosphate and muscle performance. Cardiovasc Res. Sep 1995; 30 (3): 413-8
- 22. Andrews, R., Greenhaff, P., Curtis, S., et al. The effect of dietary creatine supplementation on skeletal muscle metabolism in congestive heart failure. Eur Heart J. Apr 1998; 19 (4): 617-22
- 23. Healthnotes, Inc., 2001. www.healthnotes.com
- 24. Walter, M.C., Lochmüller, H., Reilich, P., et al. Creatine monohydrate in muscular dystrophies: A double-blind, placebo-controlled clinical study. Neurology 2000; 54: 1848-50
- 25. Roth E, et al. Glutamine: An anabolic effector. J Parent Ent Nutr 1990;14:1305-65.
- 26. Lacey JM, Wilmore DW. Is glutamine a conditionally essential amino acid? Nutr Rev 1990;48:297-309.
- 27. Castell LM, Poortmans JR, Newsholme EA. Does glutamine have a role in reducing infections in athletes? Eur J Appl Physiol Occup Physiol 1996;23:488-90.
- 28. Rowbottom DG, Keast D, Morton AR. The emerging role of glutamine as an indicator of exercise stress and overtraining. Sport Med 1996;21:80-90[review].
- 29. Klatz R. Grow Young with HGH. New York: Harper Perrenial Pub 1977. p. 200-208.
- 30. Klatz R. The Official Anti-Aging Revolution: Basic Health Publications Inc. p. 238-256
- 31. The American Physiology Society Press Release (annual meeting at Experimental Biology 2019 in Orlando Florida). April 8, 2019
- 32. <a href="http://www.the-aps.org/mm/hp/Audiences/Public-Press/2019/19.html">http://www.the-aps.org/mm/hp/Audiences/Public-Press/2019/19.html</a>
- 33. http://www.dynamicchiropractic.ca/mpacms/dc\_ca/article.php?id=55698
- 34. Gualano B, Lancha AH Junior, et al. Creatine in Type 2 Diabetes: A Randomized, Double-Blind, Placebo-Controlled Trial," Med Sci Sports Exerc, 2010 Sep 24
- 35. Creatine in MS: <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5299567/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5299567/</a>
- 36. Creatine in Alzheimer's disease: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1510941/