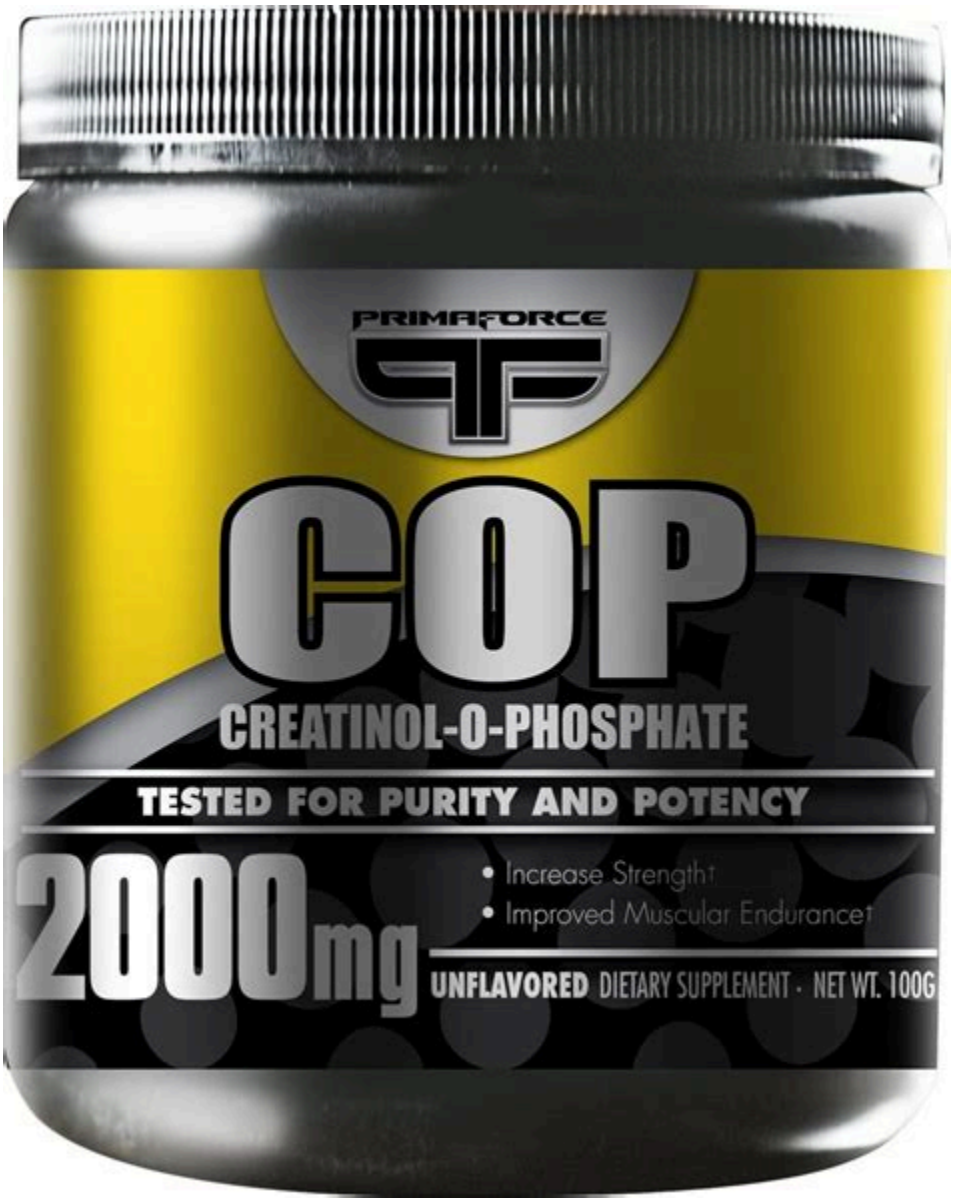
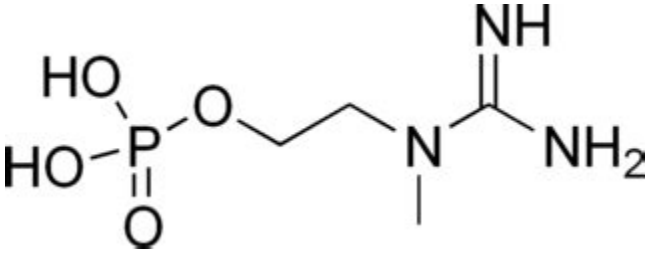
Creatinol-o-phosphate powder, commonly known as COP powder, is a synthetic compound made up of creatine and phosphoric acid. It is often used as a dietary supplement to improve workout performance and enhance physical endurance.

What Is Creatinol-O-Phosphate Powder And Why You May Want To Use It .



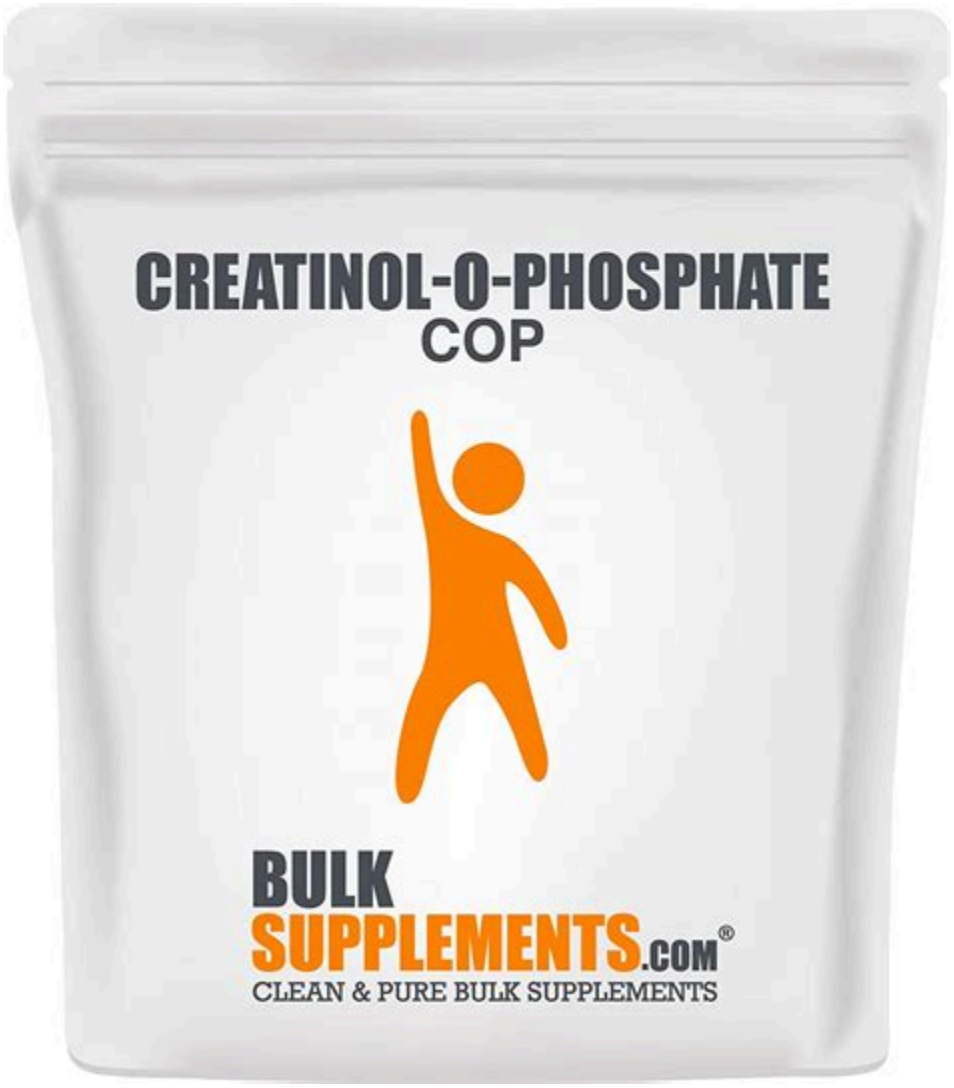
Creatinol-O-Phosphate (COP) No Evidence: Intramuscular and intravenous administration of COP ↑ handgrip performance, but no studies have evaluated if it has any effect on muscle creatine levels or exercise performance [35, 43] Buffered or KreAlkalyn® Creatine: Some Evidence:

Creatinolfosfate - Wikipedia



Creatinol O-Phosphate (COP) is a creatine analogue synthesized for the treatment of heart complications. It appears to protect cardiac cells at 3g injections, but does not have sufficient evidence for oral consumption. Dosage Refer and Earn Creatinol O-Phosphate is most often used for Cardiovascular Health. Researched by : Kamal Patel, MPH, MBA

BULKSUPPLEMENTSM Creatinol-O-Phosphate Powder - Pure Creatine Powder .



N-Methyl-N-(beta-hydroxyethyl)guanidine O-phosphate (creatinol O-phosphate, COP) has proved to possess anti-ischemic and anti-arrhythmic activities associated with improved ionic balance and heart performance. These activities, which have also been shown in clinical studies, are more evident in phar …

Antiarrhythmic effectiveness of creatinol O-phosphate in man

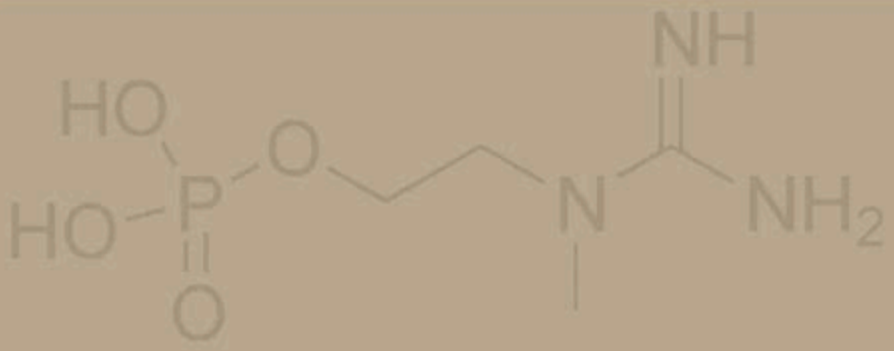
🏃Promotes Exercise Endurance - Creatinol-o-Phosphate, or creatine powder, helps boost performance in short duration high intensity activities such as weightlifting by increasing the amount of ATP available to your body's muscles. * Creatine powder, an ATP supplements, allows you to workout more and promote exercise endurance. *

APS Mesomorph: Powerhouse Pre Workout Reformulated - The PricePlow Blog

The intent of this comprehensive review is to provide an update regarding (1) how creatine is absorbed from food and/or dietary supplements into the body; (2) whether sources of creatine currently marketed and/or used in dietary supplements are bioavailable sources of creatine; and (3) whether any of these purportedly alternate forms of creatine.

Creatinol-O-Phosphate: Benefits, Side Effects & Dosage

4 BENEFITS OF CREATINOL-O-PHOSPHATE



Bodybuilding Benefits

People use creatinol-O-phosphate supplements because they believe these supplements make them stronger, more muscular and more able to recover quickly during and after strenuous exercise. It seems to be most effective at helping athletes experience bursts of speed and energy, particularly over short periods. This application shows its usefulness in activities like racing and weight lifting when the body needs to perform better, stronger and faster over a short duration.

Improvement of Endurance

Creatinol-O-phosphate supplements allow the body to experience prolonged periods of anaerobic glycolysis. The body avoids a dramatic drop in pH that would normally activate a process meant to protect muscle damage. The creatinol-O-phosphate supplement acts as an intracellular buffer that prevents the drop in pH and thereby allows the body to continue putting the muscles under stress. Working harder for longer periods is the result. In this way, creatinol-O-phosphate supplements impact endurance.

Cardiovascular Health

Heart failure happens, in part, when the myocardial total creatine content is gradually lost. When this happens, processes that would normally occur with a healthy level of creatine begin to stop, one by one. In fact, some suggest that the prevention of the decline in total creatine levels may be of therapeutic benefit to those with heart failure. Supplementation may help bridge that gap.

Researchers did a study on 10 patients with ischemic heart disease and frequent premature ventricular contractions. The results show that the patients receiving creatinol-O-phosphate experienced a dramatically reduced incidence of premature ventricular contractions compared to another substance.

Other Potential Benefits and Uses

Although human studies are unavailable, there are studies with animals suggesting that supplementation of creatine can have a beneficial impact on life and longevity. In fact, one such study showed that creatine supplementation in mice increased the life span by 9 percent as well as significantly improving performance on neurobehavioral tests.

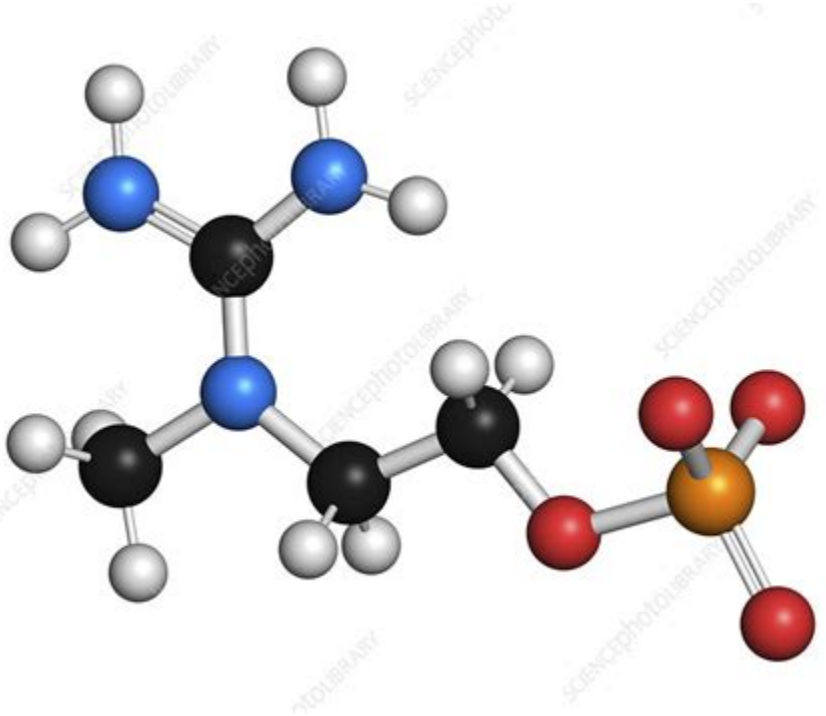
Another study in pregnant mice showed that creatine supplementation sharply increased the amount of creatine in the placenta and vital organs of the fetus. This improved the birth outcomes by protecting the fetus from the damaging effects of fetal hypoxia. Although experts have not yet conducted human trials, this study suggests that creatine supplementation may have an application in high-risk human pregnancies.

Studies have consistently indicated that CM supplementation increases muscle creatine and phosphocreatine concentrations by approximately 15-40%, enhances anaerobic exercise capacity, and increases training volume leading to greater gains in strength, power, and muscle mass.

Acute clinical tolerance of creatinol O-phosphate - PubMed

Creatinolfosfate | C4H12N3O4P | CID 23342 - structure, chemical names, physical and chemical properties, classification, patents, literature, biological activities, safety/hazards/toxicity information, supplier lists, and more.

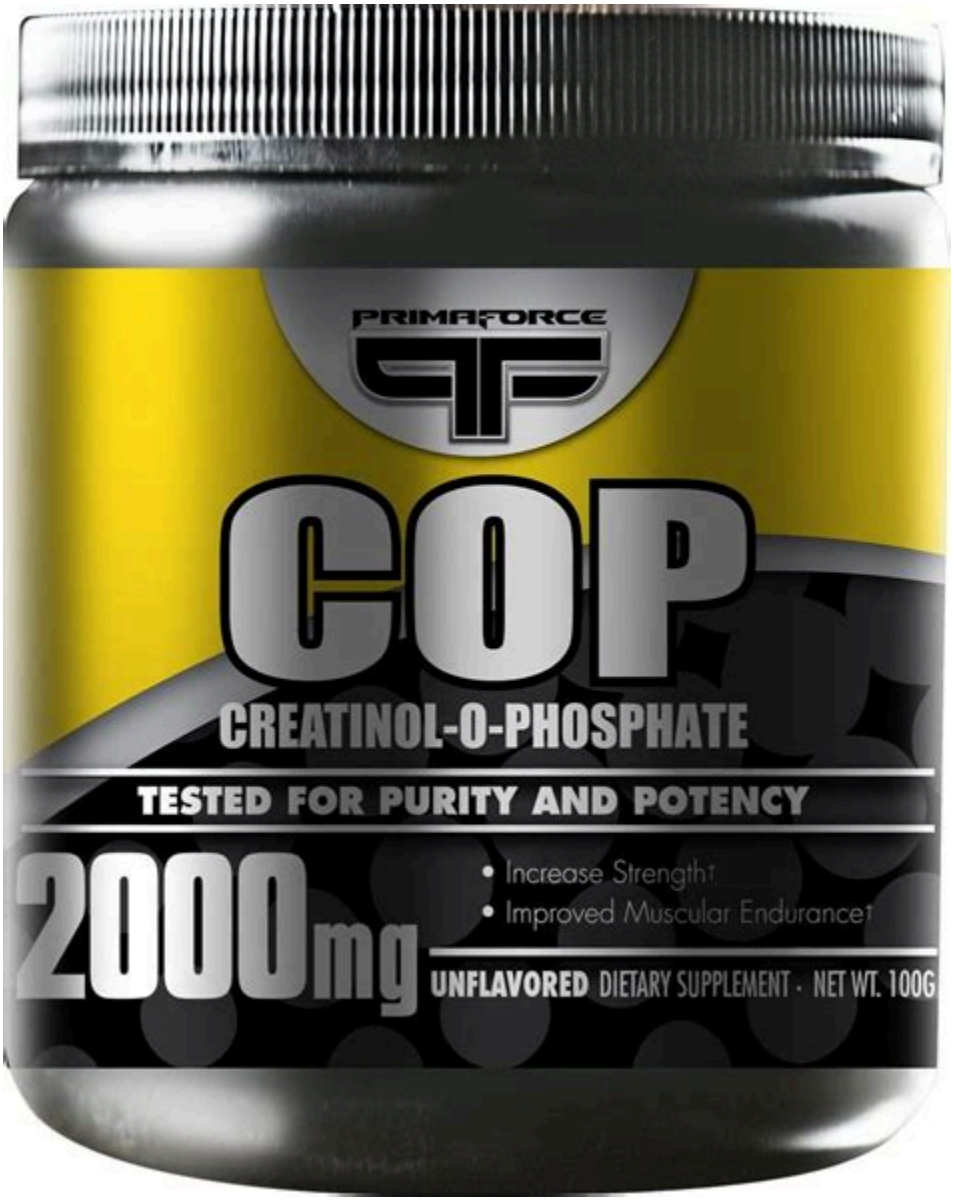
Effects of creatinol O-phosphate on serum enzymes in acute . - PubMed



These muscle fibers are known to possess the greatest capacity for hypertrophy. As an additional benefit,

COP may allow you to target your muscle fibers that contain the highest potential for growth. Bodybuilders may even notice increased post-workout muscle soreness after supplementing with COP.

Pharmacological and toxicological properties of creatinol O-phosphate .



Antiarrhythmic effectiveness of N-methyl-N-(beta-hydroxyethyl) guanidine O-phosphate (creatinol O-phosphate, COP) has been investigated in 10 patients with ischemic heart disease and frequent premature ventricular contractions (PVCs). Each patient received a random succession of treatment with the d …

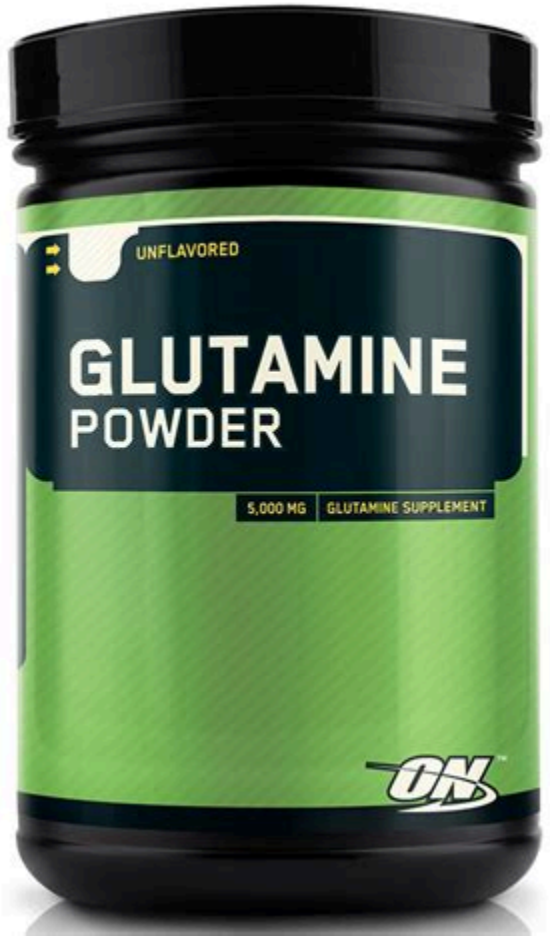
what is Creatinol O-Phosphate and why you should take it as . - Blubbs

Chemical Scientific Resources: Creatinol-O-Phosphate - Clinical trials (PubMed) Creatinol-O-Phosphate - Dose and administration (PubMed) Creatinol-O-Phosphate - Adverse effects (PubMed) Creatinol-O-Phosphate - Mechanism of action (PubMed) Creatinol-O-Phosphate - Dietary supplement use in human (PubMed) Synonyms/sources:

Creatine benefits, dosage, and side effects - Examine

View our Creatinol-O-Phosphate Supplements Simplified article and increase your knowledge on this supplement ingredient.

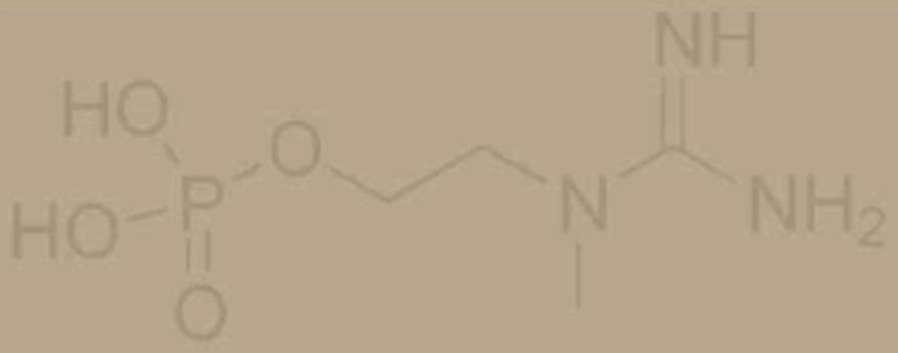
Creatinol-O-Phosphate | Supplements Simplified | MassiveJoes



Creatinol O-Phosphate (COP) is a creatine analogue for the treatment of heart complications. It appears to protect cardiac cells at 3g injections, but has no evidence for oral consumption. Learn about its dosage, pharmacology, excretion, cardiovascular health, safety and toxicity from research articles.

Creatinol O-Phosphate benefits, dosage, and side effects - Examine

4 BENEFITS OF CREATINOL-O-PHOSPHATE



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Acute clinical tolerance to N-methyl-N- (beta-hydroxyethyl) guanidine O-phosphate (creatinol O-phosphate, COP) was investigated in volunteer human subjects without heart or renal disease and without other serious illness. COP was administered i. v. at three different dosages, 1020 mg (group A), 2040 mg (group B) and 3060 mg (group C), in .

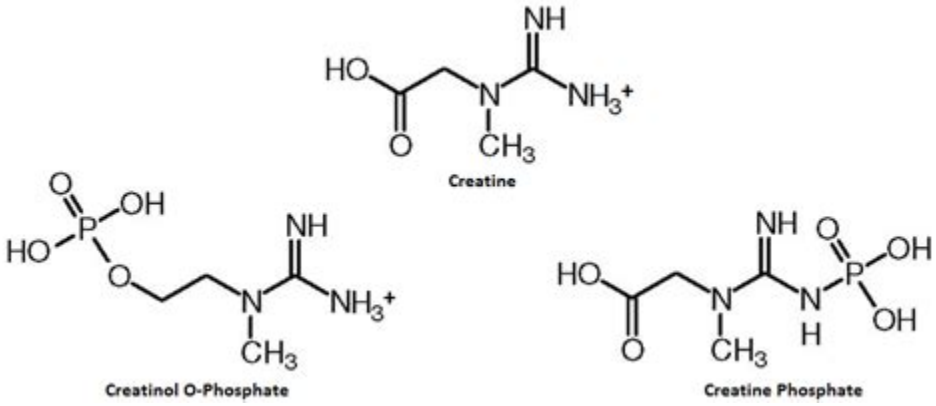
Creatinol-O-Phosphate Bulk Powder Supplier | Nutriavenue

Creatine is a supplement that can improve exercise performance and cognitive function. It is made in the body from amino acids and stored in the liver and kidneys. Creatine monohydrate is the most effective form of creatine and can be taken as a powder or capsule. Learn more about creatine's effects, sources, safety, and alternatives.

Supercharging Muscle Growth With Creatinol-O-Phosphate And Beta-Alanine!

Two groups of 23 patients, each with acute myocardial infarction, were treated. The first group (control) received glucose-insuline-K+ (GIK) over a 3-day period, and the second GIK and N-methyl-N-(beta-hydroxyethyl) guanidine O-phosphate (creatinol O-phosphate, COP) (3. 06 g i. v. /24 h), again for a 3 …

Research Breakdown on Creatinol O-Phosphate - Examine



Creatinol-O-Phosphate is a dietary supplement that is used to increase muscle strength and endurance. It is a derivative of creatine, which is a naturally occurring compound found in the body. Creatinol-O-Phosphate is believed to be more effective than creatine in increasing muscle strength and endurance.

CREATINOLFOSFATE - National Center for Advancing Translational Sciences

Creatinolfosfate (creatinol- O -phosphate, creatinol phosphate, COP) is a cardiac preparation, not to be confused with phosphocreatine . This drug article relating to the cardiovascular system is a stub. You can help Wikipedia by expanding it.

Bioavailability, Efficacy, Safety, and Regulatory Status of Creatine .

Creatinol-O-Phosphate (COP) is a great ingredient for increasing athletic performance and endurance that acts as a lactic acid buffer, similar to beta alanine. Additionally, COP contributes a phosphate-group back to the ATP process, which increases creatine's effects.

Analysis of the efficacy, safety, and regulatory status of novel forms .

Amino Acids
DOI 10.1007/s00726-011-0874-6

REVIEW ARTICLE

Analysis of the efficacy, safety, and regulatory status of novel forms of creatine

Ralf Jäger · Martin Purpura · Andrew Shao · Toshitada Inoue · Richard B. Kreider

Received: 10 July 2010 / Accepted: 30 November 2010

Abstract Creatine has become one of the most popular dietary supplements in the sports nutrition market. The form of creatine that has been most extensively studied and commonly used in dietary supplements is creatine monohydrate (CM). Studies have consistently indicated that CM supplementation increases muscle creatine and phosphocreatine concentrations by approximately 15–40%, enhances anaerobic exercise capacity, and increases training volume leading to greater gains in strength, power, and muscle mass. A number of potential therapeutic benefits have also been suggested in various clinical populations. Studies have indicated that CM is not degraded during normal digestion and that nearly 99% of orally ingested CM is either taken up by muscle or excreted in urine. Further, no medically significant side effects have been reported in literature. Nevertheless, supplement manufacturers have continually introduced newer forms of creatine into the marketplace. These newer forms have been purported to have better physical and chemical properties, bioavailability, efficacy, and/or safety profiles than CM. However, there is little to no evidence that any of the newer forms of creatine are more effective and/or safer than CM whether ingested alone and/or in combination with other nutrients. In addition, whereas the safety, efficacy, and regulatory status of CM is clearly defined in almost all global markets; the safety, efficacy, and regulatory status of other forms of creatine present in today's marketplace as a dietary or food supplement is less clear.

Keywords Creatine · Dietary supplements · Ergogenic aids · Exercise · Performance

Invited paper presented at the Creatine in Health and Sport 2010 conference. Submitted to Amino Acids, 15 June 2010.

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Published online: 22 March 2011

Introduction

Creatine (*N*-(aminoiminomethyl)-*N*-methyl glycine) is an ingredient commonly found in food, mainly in fish and meat, and is sold as a dietary supplement in markets around the world. Its use as an ergogenic aid and possible treatment for certain neuromuscular disorders is well documented in scientific literature (Buford et al. 2007; Kreider et al. 2010). In recent years, the popularity of creatine has risen dramatically, especially among athletes. In the USA alone, creatine-containing dietary supplements make up a large portion of the estimated $2.7 billion in annual sales of sports nutrition supplements (NBJ 2009).

Accompanying this explosive growth in sales has been the introduction of different forms of creatine. Creatine monohydrate (CM), first marketed in the early 1990s, is the form most commonly found in dietary supplement/food products and most frequently cited in scientific literature. The introduction into the marketplace of alternate forms of

Creatinolfosfate (or creatinol-O-phosphate, or COP) possesses anti-ischemic and anti-arrhythmic activities associated with improved ionic balance and heart performance. This compound exerts its cardioprotective effect by action on anaerobic glycolysis. The results of the toxicological studies showed that creatinolfosfate didn't have side effects.

Analysis of the efficacy, safety, and cost of alternative forms of .

Heliyon 8 (2022) e12113

Contents lists available at ScienceDirect

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journal homepage: www.cell.com/heliyon

Research article

Analysis of the efficacy, safety, and cost of alternative forms of creatine available for purchase on Amazon.com: are label claims supported by science?

Guillermo Escalante [a,*], Adam M. Gonzalez [b], Dean St Mart [c], Michael Torres [a], Jacob Echols [a], Mariesha Islas [a], Brad J. Schoenfeld [d]

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[d] CUNY Lehman College, USA

ARTICLE INFO

Keywords:
Supplementation
Creatine monohydrate
Multi-ingredient
Functional ingredients

ABSTRACT

Creatine monohydrate (CM) is an established and effective dietary supplement, but it is not the only form of creatine. We analyzed forms of creatine for sale on Amazon.com' title = "http://Amazon.com">Amazon.com and evaluated if the advertised claims are supported by the available scientific evidence. We also analyzed the cost per gram of the forms of creatine. A total of 175 creatine supplements were included and we reported the total creatine content per serving, form(s) of creatine in products, product claims, and prevalence of products third party certified. The identified products contained 16 forms of creatine other than CM. The prevalence of products containing functional ingredients with CM or forms of creatine was 29.7%, and the prevalence of products containing blends of different forms of creatine was 21.7%. Only 8% of products were third party certified. The products using only CM (n = 91) had a mean price per gram of $0.12 ± 0.08, whereas products using only other forms of creatine (n = 32) had a mean price per gram of $0.26 ± 0.17. Approximately 88% of alternative creatine products in this study are classified as having limited to no evidence to support bioavailability, efficacy, and safety.

1. Introduction

Creatine (N-(aminoiminomethyl)-N-methyl glycine) is a naturally occurring nitrogenous compound derived from the amino acids glycine and arginine. Creatine is synthesized endogenously by the transfer of the amidino group of L-arginine to the N^{ω}-amine group of L-glycine that is catalyzed by L-arginine-glycine amidinotransferase to yield ornithine and guanidinoacetate (GAA); GAA is then methylated by guanidinoacetate N-methyltransferase with S-adenosyl methionine to form creatine [5, 23, 35, 37, 52]. Although creatine is not a traditional proteinogenic amino acid [35], it is frequently referred to as an amino acid in the literature [1, 5, 13, 26, 36, 66] because it is a non-proteinogenic amino acid similar to ornithine, citrulline, and homoserine [5, 7, 40, 45]. In a general sense, an amino acid can be any organic compound that contains both an amino group and carboxylic group [40].

Creatine has recently been proposed to be a conditionally essential nutrient for humans due to the need to obtain this nutrient from the diet for normal growth, development, and health [47]. Roughly half of the daily creatine requirements for an average person (~1–1.5 g) are produced in the kidneys, liver, pancreas, and brain [8]. However, the remaining creatine content must be supplied by the diet from foods such as meat, beef, and fish [35, 36, 47] or from dietary creatine supplementation. Creatine supplements are among the most popular ergogenic aids used by athletes as hundreds of studies have consistently shown that supplementation leads to improvements in high intensity exercise performance to enhance strength, muscle mass, power production, and sprint performance [66]. Other research on creatine has also shown the potential benefits of supplementation on injury prevention, improved exercise recovery, enhanced tolerance to exercise in the heat, improved rehabilitation outcomes, brain and spinal cord neuroprotection, ischemic heart disease, aging, and other health conditions/special populations [36, 37]. As a result, it has been reported that Americans consume over four million kilograms of creatine per year with the worldwide use being significantly higher [36]. Indeed, the creatine market is expected to increase from $360 million in 2020 to $520 million by 2024 [75].

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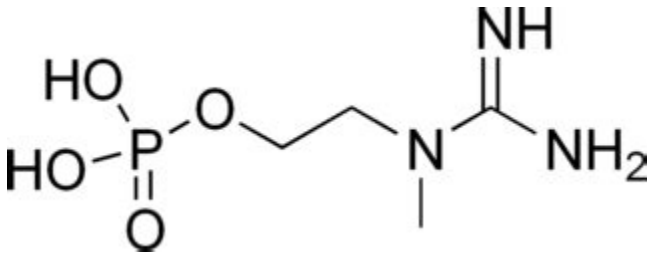
Creatinol-O-phosphate was originally designed to work as a cardioprotective drug that was also used to treat irregular heartbeats because it helps improve heart performance and ionic balance. Toxicological studies confirmed that creatinol-O-phosphate is well-tolerated, lacks side effects and has a favorable therapeutic index (x).

Creatinolfosfate | C4H12N3O4P | CID 23342 - PubChem



It has a molecular formula of C4H12N3O4P and a molecular weight of 197. 13 g/mol. Creatinol-O-Phosphate has a white to off-white powder appearance and is generally soluble in water. It is usually sold in bulk or lesser quantities. In bulk purchases, the product is usually packed in paper drums having two layers of poly bags inside.

- https://sites.google.com/view/dianabol2024/is-methandienone-legal-in-uk-is-dianabol-legal-exploring-the-legality-of
- http://www.fanart-central.net/user/vadimfrolovxf/blogs/20328/Anadrol-Vs-Dbol-Vs-Anavar---Which-is-better---DBOL-or-Anavar---YouTube
- https://publiclab.org/notes/print/44154