

ABOUT:

Disclaimer:

Supplements are not tested and approved by the FDA; thus, they may be contaminated with substances that are not listed on their label. The FDA only removes a supplement from the market once there have been This may result in a positive drug test. There are no NCAA approved supplements as no supplement is a safe supplement. Supplements should not be taken until you have consulted your health care provider as ***supplements may interact with medications, other supplements, and/or certain nutrients.***

Choosing Safer Supplements:

Choose Third Party Tested:

- 1) These organizations test supplements for banned substance for sport and to test for label accuracy:
 - a. NSF for Sport
 - b. Informed Choice for Sport

- 2) These organizations test supplements for label accuracy:
 - a. NSF International
 - b. Informed Choice

Supplement Resources:

- Examine.com – evidence-based analysis of supplements
- Labdoor.com – tests supplements and compares results to supplement label and claims; ranks and compares tested supplements
- ConsumerLab.com – information & reviews on supplements

Should I take a supplement?

- Supplements may be beneficial for health and performance; however, most health and wellness supplements (ex: vitamins and minerals) are better absorbed in their natural form – in food!
- Understand the supplement:
 - o Are there side effects?
 - o Does it make sense for you and your sport?
 - o Is it doing what it says it is supposed to do?
 - o Are you taking the dosage that science proves to be effective?
 - Many supplement companies sell supplements at a lower dosage than is effective to make more \$\$

PROBIOTICS

Look for CFUs 15,000 or greater. Some research suggests that there is not much difference between 15,000 CFU and 50,000 CFUs. Different strains provide different benefits for different purposes (e.g. travel, IBS, etc.)

Take daily or every other day.

Top Recommendations:

1. Culturelle Daily Probiotic
2. Schiff's Digestive Advantage Daily



OMEGA-3

Fish-based or algae-based:

- Fish based:
 - o Pros: more research with omega-3 supplements from fish
 - o Cons: risk of higher heavy metals / contaminants
- Algae*:
 - o Pros:
 - Vegan
 - No heavy metal presence
 - o Cons: less research studies with n-3 supps from algae

*fish get their n-3 from the algae they eat, so in theory, algae n-3s should not be less effective.

Recommendations:

- Dosage
 - o Grams/day and EPA:DHA depends on individual needs and purpose (e.g. deficiency, surgery recovery, brain health, reducing exercise-associated inflammation/soreness, etc.)
 - o American Heart Association recommends 1 g /day for general health
 - o Athletes may benefit from a higher dose than 1 g/d
- Top Brands:
 - o Brain Amor
 - o Viva Naturals Fish Oil
 - o Nordic Naturals Algae Omega

CREATINE

Benefits¹:

- 1) Strength and power output during resistance exercise
- 2) Increase muscle mass due*

*Note: creatine holds water in your muscles which may contribute to an “increased lean mass” measurement although it is not true muscle mass; however, with prolonged use at a moderate dosage, increased strength and power during resistance exercise may contribute to muscle hypertrophy.

Look for¹:

- 1) Creatine monohydrate or
- 2) Micronized creatine monohydrate - dissolves in water more easily, so this may be a better option if you experience stomach cramping as a side effect.

Side effects¹:

- 1) Stomach cramping – may occur when inadequate water is consumed with creatine supplement
- 2) Diarrhea and nausea – may occur when too much creatine taken at once - doses should be spread out over the day and taken with meals.
- 3) Restlessness – may occur when taken close to sleep

Protocols:

- 1) Dosage²:
 - a. First 3 days: ~0.3 grams/kg/day of creatine monohydrate
 - b. After 3 days: 3–5 g/ d to maintain elevated stores.
 - i. Ingesting smaller amounts of creatine monohydrate (e.g., 2–3 g/d) will increase muscle creatine stores over a 3–4 week period, however, the performance effects of this method of supplementation are less supported.
- 2) Timing
 - a. Best if consumed before and/or after resistance training³

Notes:

- Make sure to drink adequate water. You may need to increase your water intake, especially if loading or taking higher doses.
- May achieve best results by not co-consuming caffeine with creatine.^{4,5}

- Some people are more responsive than others depending on naturally-occurring muscle creatine levels. Creatine is found naturally in animal protein (meat, poultry, etc.); vegetarians may experience greater benefits due to lower stores as a result of not consuming animal protein. Non-responders can increase creatine dosage to see if they experience any results; however, with a diet consisting of whole foods, balanced meals with protein coming from animal sources, and a post-training meal within an hour of the conclusion of training, creatine supplementation may not be necessary.
- Less trained/novice athletes may see greater results than higher trained/elite athletes. I.e. high school athletes may see greater results than when they are a junior/senior in college or a professional athlete.

Top Recommendations:

- Thorne - Creatine
- Klean Athlete - Klean Creatine
- CytoSport - Creatine Monohydrate Supplement Powder

Questions?

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References

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2. Thomas W Buford RBK, Jeffrey R Stout, Mike Greenwood, Bill Campbell, Marie Spano, Tim Ziegenfuss, Hector Lopez, Jamie Landis and Jose Antonio. International Society of Sports Nutrition position stand: creatine supplementation and exercise. *Journal of the International Society of Sports Nutrition*. 2007.
3. Cribb PJ, Hayes A. Effects of supplement timing and resistance exercise on skeletal muscle hypertrophy. *Med Sci Sports Exerc*. 2006;38(11):1918-1925.
4. Vandenberghe K ea. Caffeine counteracts the ergogenic action of muscle creatine loading. *Journal of Applied Physiology*. 1996.
5. Doherty M, Smith PM, Davison RC, Hughes MG. Caffeine is ergogenic after supplementation of oral creatine monohydrate. *Med Sci Sports Exerc*. 2002;34(11):1785-1792.