

Supplements

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Overview

- Introduction to supplementation
- What is NSF?
- MVI and minerals
- Omega 3 (DHA/EPA)
- Whey protein
- B-Alanine
- Creatine Monohydryte
- HMB
- Caffeine

Supplementation

- **Remember....** Nutrition is the foundation
- Supplements needed **ONLY** after you have established nutritional needs from food.
- Supplements may be beneficial for athletes who....
 - Restrict energy intake
 - Use severe weight-loss practices
 - Eliminate one or more food groups from their diet
 - Consume unbalanced diets with low micronutrient density



What is NSF?

- NSF provides certification of products around the world that meet their standards for consumer safety.
- Product testing for:
 - +150 banned substances
 - Label content confirmation
 - Formulation and label review
 - Production facility and supplier inspections
 - Ongoing monitoring in line with substance prohibitive lists



Multivitamin and Minerals

- **Role:** energy production, hemoglobin synthesis, maintenance of bone health, adequate immune function, and protection against oxidative damage.
- **Forms:** Pills/tablets, liquid, shake, powder, bars, injection of single vitamin
- **NSF certified Brands:** Platinum, Muscle Pharm, EAS, Biosteel, BodyCustom, Core Health, Eight Ball, USANA, Criosport, dotFIT
- **Recommended amount:**
 - Can take daily
 - Caution of MVI that may cause toxicity



Omega 3 (EPA/DHA)

- **Role:** Beneficial for cardiovascular health increasing HDL and reducing inflammation.
- **Forms:** Soft gel pills
- **NSF brands:** Platinum, EAS, BodyCustom, MartekEyepromise, Max International, Amway, Omega XI, Usana, Nordic Naturals, Purity Products, Vital Choice, Zone Labs and more.
- **Recommended amount:**
 - 1000 mg Omega 3
 - Recommended taking with food avoid "kitty cat breath" and fishy burps



Whey Protein



- **Role:** Fast acting protein and gets to muscle faster: beneficial for immune function and increasing muscle mass and rich in BCAA-leucine, valine, isovaline.
- **Forms:** Powder, liquid, bars
- **NSF brands:** EAS, biPro, EightBall, GI Nutrition, the Vitamin Shoppe
- **Recommended amount:**
 - Daily, before or after workout (1 scoop ~30g)
 - Daily protein intakes exceeding 2.5g/kg body weight CAN put athletes at risk for dehydration, low CHO intake, excessive energy intake

Beta-Alanine

- **Role:** Buffers acidity in cell to allow high intensity exercise and overall build lean muscle mass
- **Form:** capsules, soft gels, powder, bars
- **NSF brands:** PowerBar
- **Recommended amount:**
 - Take 2 tablets twice a day for 3.2 g for 4 weeks
 - After 4 weeks, begin taking 2 tablets once per day
 - Cycle off after 8 weeks.
 - May cause paraesthesia in extremities



Creatine Monohydrate

- **Role:** Increase energy, build muscle and enhance recovery
- **Form:** Pills, powder
- **NSF brands:** Musclepharm, Eight Ball, Crio Sport, EAS, Proven 4, Vitamin Shoppe
- **Recommended amount:**
 - Dose of 3-5 grams/day
 - Loading dose typically 20-25 grams per day in four to five doses for five to seven days
 - Loading is not necessary unless time urgent



HMB (Beta-hydroxy-beta-methylbutyrate)

- **Role:** (BCAA) enhance lean body mass, increase strength, prevents muscle catabolism, and decreases body fat
- **Forms:** Tablets and capsules
- **NSF brands:** EAS
- **Recommended amount:**
 - 1.5g twice a day for 6-8 weeks



Caffeine

- **Role:** CNS stimulant: Boost energy to enhance performance and may increase Free Fatty Acids in the bloodstream
- **Forms:** beverages and pills
- **NSF brands:** Platinum, Core Health, Nutramax, Eight Ball, Crio Sport, FRS, Juice Plus, Amway, Bayer, Red Bull, WIN, Advanced Bio Development
- **Recommended Amount:**
 - 3-5mg/kg body weight per day
 - No known toxicity



References:

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Dunford, M. (2006). *Sports nutrition: A practice manual for professionals*, Amer Dietetic Assn.