

Supplements and Your Performance

Can you really build more muscle, increase your speed, enhance your endurance, better your game or make other enticing performance improvements with the help of powders and potions?

Cyndy Maynard, MS, RD, says, "The body of research is growing, but there's still a lot we don't know. Dietary supplements, including ergogenic aids (foods or supplements believed to enhance physical performance above normal levels), are not regulated by the U.S. Food and Drug Administration, which means these products can be marketed without proof of safety, potency or efficacy." Maynard offers this research update on 10 popular supplements.

Note: Caution is advised. Consult with a physician or registered dietitian regarding effectiveness, safety and dosage before using any ergogenic aid.

1 Human Growth Hormone. Human growth hormone (hGH), secreted by the body's pituitary gland, activates the growth of bone and tissue. Research indicates that supplementation with synthetic hGH does increase muscle size and enhance strength in hGH-deficient individuals, such as the elderly; however, research in healthy, normal subjects is much less clear. At this time, supplementing with hGH poses numerous problems: Product quality and claims are often questionable, side effects can be dangerous and risks of long-term use are unknown.

2 Carnitine. Carnitine is a vitamin-like compound synthesized in the body. Our daily needs for carnitine are generally supplied through dietary sources such as meat, poultry, fish and some dairy products. There is no lack of research on carnitine, but results are mixed. Most experts do not recommend carnitine supplementation because there is no substantial evidence to indicate that it benefits performance or helps reduce body fat.

3 Creatine. Creatine is an energy-producing substance in the body. Some research studies have shown creatine supplementation significantly enhances athletic performance in a variety of areas. Significant increases in fat-free mass have also been shown in some research studies but the effectiveness of creatine supplementation varies.

4 Chromium Picolinate. Chromium is an essential trace mineral that works with insulin to transport sugar out of the blood and into muscle cells. Picolinate acid is a natural derivative of the amino acid tryptophan and is thought to facilitate chromium absorption. Manufacturers claim the chromium picolinate combination fosters weight loss and increases performance and strength. However,

research has not conclusively documented these benefits.

5 HMB. HMB is produced in trace quantities in the body and is found in foods such as grapefruit, alfalfa and catfish. HMB is not an essential nutrient. Preliminary (but not yet conclusive) studies have shown it may have some benefit in increasing muscle size and strength during resistance training. A typical dosage of 3 grams per day appears to be safe with few reported side effects, but long-term risks are unknown.

6 Androstenedione. Claims that androstenedione builds muscle size and strength are based mostly on anecdotal information. Research is scarce, and there are potential side effects. Supplementation with androstenedione as an ergogenic aid is generally not recommended.

7 Pyruvate. Several studies have shown that pyruvate may increase endurance, but more research is needed before this substance can be recommended as safe or effective.

8 Protein Supplements. Sufficient protein can be obtained through the diet, and protein supplements are typically not needed. Most supplements have not been tested for effectiveness.

9 Amino Acid Supplements. Arginine and ornithine in particular have been said to build strength and to increase muscle mass by stimulating growth hormones and insulin. In reality, little evidence supports these claims.

10 DHEA. This adrenal hormone is believed to increase testosterone, provide antiaging benefits and serve as an alternative to illegal steroids. However, there is no evidence that DHEA decreases body fat or provides other ergogenic effects.

Kimberly A. Searl
www.mindbodybalance.com
 By Appointment Only
 Phone: 734 - 241 - 7457
 Fax: 734 - 241 - 7457
kim@mindbodybalance.com

