**Vitamin C Improves Blood Pressure in the Elderly**

Supplementing with vitamin C helps to control blood pressure in elderly adults with high blood pressure that fails to respond to ordinary treatment (refractory hypertension), according to a new report. Noting that oxidative stress plays a role in hypertension, Japanese scientists sought to determine whether antioxidants might benefit people with uncontrolled blood pressure. For six months, two groups of patients received 600 mg of ascorbic acid per day. Patients in the elderly group (average age of 78) saw marked decreases in systolic blood pressure, while patients in the adult group (average age of 55) saw no effect from supplementation. Markers of oxidative stress, such as C-reactive protein, were also reduced in the elderly group.

Ascorbic acid is thus emerging as a useful tool in controlling blood pressure in elderly patients with refractory hypertension. The study authors noted that vitamin C may benefit cardiovascular health, as vascular aging is also closely related to oxidative stress.

—Dale Kiefer

**Vitamin E, Lipoic Acid Help Slow Vision Loss**

The antioxidants vitamin E and lipoic acid help slow the loss of vision associated with the sight-robbing disease known as *retinitis pigmentosa*, according to a recent study. A degenerative eye disease, retinitis pigmentosa involves a genetic mutation that affects the low light-sensing "rod" cells in the eye's retina, leading to gradual loss of night and peripheral vision. Later, the surrounding "cone" cells of the retina, which detect bright light and color, may also die, which may result in complete blindness. Currently, there is no effective medical treatment for retinitis pigmentosa.

Scientists hypothesized that high levels of oxidative stress in the retina may cause the destruction of the cone cells following damage to the rod cells. To determine whether antioxidants can prevent this vision-robbing effect, they administered vitamin E, vitamin C, or lipoic acid to mice with a form of retinitis pigmentosa. In test subjects that received vitamin E or lipoic acid, nearly 40% of cone cells survived, nearly twice the cell survival rate seen in the vitamin C and control groups.

Vitamin E and lipoic acid may thus offer protection against the vision loss associated with retinitis pigmentosa. This finding lends further support to a growing body of evidence linking antioxidants with improved eye health.

—Robert Gaston

**Creatine, Whey Before Exercise Boost Muscle Growth**

Numerous studies have demonstrated that supplementation with whey protein and/or creatine monohydrate, combined with exercise, contributes to increases in lean muscle mass and strength. Australian researchers now report that when these supplements are consumed may have a significant impact on muscle-building efforts. According to as-yet-unpublished research, men who took the supplements before or immediately after supervised resistance training built more lean muscle mass than men who took the supplements at other times of the day. While both groups took the supplements and engaged in strength training for 10 weeks, those who took the supplements immediately before exercising showed significantly better improvements in strength and lean muscle mass than control subjects. Results were confirmed by sophisticated muscle tissue analysis.

These findings have important implications not only for bodybuilders, but for all adults seeking to maintain healthy muscle mass with aging. According to a new report by the Council for Responsible Nutrition, creatine is safe for long-term consumption at doses of up to 5 grams per day.

—Dale Kiefer
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