



QUESTION & ANSWER

Jodi asks: "I have started an exercise program that is causing me some problems in this summer heat. I am not working too hard but I have felt weak, some dizziness, and a rapid heartbeat. What precautions should I take? I want to lose weight quickly and get in summer shape. What do you suggest to protect myself?"

Exercise increases in the summer months for many people and precautions for exercising in higher ambient temperatures are important. The body generates heat during exercise and the usual method of cooling is sweating with evaporative heat loss. With conditions of high ambient temperature, especially when combined with high humidity, evaporative heat loss during sweating becomes less efficient. When one engages in heavy exercise in such conditions there is a risk of a marked rise in the core body temperature which may lead to a condition called exertional heat stroke.

Exertional heat stroke can occur in young otherwise healthy individuals and may be life threatening. Symptoms may include weakness, dizziness, and a rapid heart rate. The best precautions to take include avoiding exercise in conditions of high temperature and humidity and staying well hydrated. Many times exercising early in the morning or later in the evening when it is cooler can mitigate risk. On such higher temperature, high humidity days it also may be prudent to confine exercise to a gym or exercise room with a temperature controlled environment. Alternatively, swimming or water sports could allow significant exercise while still remaining cool.

Brian asks: "I am body building and using creatine and androstenedione. Are there any risks involved with these natural supplements?"

Despite widespread use, there is very limited medical evidence that so-called performance enhancing natural supplements actually do any good, and there is some evidence of potential health risk. Evidence for the benefits of creatine is conflicting in individual studies. In one study, called a meta-analysis, in which sixteen smaller studies were lumped together to look for overall effect, creatine supplements together with resistance training increased the maximal weight that men under age 35 could lift as compared to resistance training alone. There was no benefit for those over age 35, no benefit in women, and there was no effect on endurance. The risk included weight gain, a possible increased incidence of a kidney disease called acute interstitial nephritis, and more rapid progression of kidney disease in those with kidney disease.

Androstenedione, a naturally occurring androgen which is available as a supplement, is widely taken ostensibly to increase muscle strength. While the male androgen testosterone, when given as a drug, will increase serum testosterone and thereby muscle strength, there is no current evidence to suggest that androstenedione will do the same. If there were evidence that androstenedione could increase testosterone levels, those who use it would risk the usual side effects of androgen excess including lower sperm counts and decreased testicular function, breast tissue enhancement in men, thickening of the blood, and a decrease in HDL cholesterol.

Moreover, one must wonder if even naturally occurring substances can be natural or healthful when taken in unnatural amounts. My recommendation would be not to take such substances at all and rather to rely on newer scientifically based training techniques to improve athletic performance and muscle strength.