

## Ergogenic aids

Ergogenic aids are substances, supplements, and drugs used to boost athletic performance. These products may increase muscle strength or mass, ward off fatigue, enhance physical appearance, or boost energy. However, some of these products may cause serious harm to athletes who use them.

### Creatine

Creatine, a dietary element found abundantly in meat and fish, is available in over-the-counter supplement form but is not FDA-approved. Research indicates that creatine can contribute to increased muscle energy reserve. This may *slightly* improve recovery in sports involving short bursts of high-intensity activity, such as power lifting, wrestling and sprinting. In recent studies, creatine did not alter aerobic performance or endurance. Some have credited creatine with building muscle mass, however any increase is usually the result of muscle water retention rather than actual muscle growth. Side effects include stomach pain, nausea, diarrhea and muscle cramps. Therefore, it should not be taken just prior to exercise or in high heat or humidity. In studies, a 20g dosage of creatine had been used, however more recent research suggests that as little as 3g may produce the same effect. High doses of creatine may be associated with kidney, liver or heart problems, and even high blood pressure, although definitive links to severe illness haven't been established. Also noteworthy is that creatine has not been studied significantly in age groups under 16; any additional effects in this age group are unknown.

### Ephedrine & amphetamines

Some athletes turn to these stimulants to reduce physical fatigue, lose weight, or improve mental alertness. Athletes may take over-the-counter supplements containing ephedra to produce the same effect. A recent study in Oregon found that 30% of teen girls surveyed were taking "body-shaping" diet pills. Ephedrine and other similar substances have potentially serious side effects such as strokes, seizures and heart attacks — even death. Ephedra can raise your blood sugar and cause an irregular heart rhythm. Long-term use can lead to addiction. In late December 2003, the Food and Drug Administration announced the ban of ephedra from the marketplace because of health concerns. Ephedra was implicated in the high-profile death of Baltimore Orioles pitching prospect Steve Bechler last year.

### Anabolic steroids

Anabolic steroids have probably received the most attention of any other category of ergogenic aid. Read *The Times* next week for a more thorough description of steroids, their uses and side effects.

Given the relatively little benefit and all the negative side effects, why do athletes take performance-enhancing substances? Some athletes reach a "plateau" in their training or just become curious and hope these substances will invigorate them. Performance-enhancing drugs may help an athlete develop a body that increases self-esteem and gains him or her admiration from friends, family members and potential girl- or boyfriends. Performance-enhancing substances are more accepted than other illicit drugs by a significant number of athletes, and in some cases, used by the competition. Whatever the reason, the utmost caution must be afforded these substances.

For additional specific information on performance-enhancing substances, consult your healthcare provider.