The use of supplements, both dietary and pharmacological, has become a widespread practice in our society. Athletes live in an environment that focuses on winning at all costs, and many dietary supplement manufacturers claim that athletes who use supplements will have more energy, train harder, be more competitive, and recover more quickly.

Athletic trainers and therapists who work with high school, college, and professional athletes are well aware of the pervasiveness of dietary supplements and ergogenic aids. Just by hearing conversations in the athletic training room, reading newspapers and popular magazines, or logging onto the Internet, it becomes obvious that the use of supplements is a hot topic. For example, one popular publication advertises over 100 dietary supplements or products. And if you search the words “Sports Nutrition” on the Internet, you will be bombarded with company sites selling supplements such as creatine, protein powders, vitamins, minerals, herbs, and sport drinks, touting their proposed attributes and how to purchase these products.

Because athletes, coaches, and athletic trainers and therapists seek the edge in competition, it is not uncommon for an athletic staff to be approached by supplement companies that hope to profit by incorporating their products into the daily training regimen of the athletic teams. NCAA Division I college athletic departments budget thousands of dollars each year for nutritional supplements. Apparently, administrators have been convinced that the use of specific dietary supplements will enhance performance, and ultimately, win-loss records.

Given their frequent contact with athletes, athletic trainers and therapists can have a profound impact on athletes’ decisions to use supplements and administrators’ decisions to include them in the budget. This article provides background on dietary supplements, regulations for their use, and tips on how to evaluate them. In addition, the role of the sport nutritionist/dietitian will be discussed as an important resource for athletic trainers and therapists, and as a model for making decisions about the use of supplements, whether for high school, college, or professional athletic programs.

**Background on Dietary Supplements**

McArdle et al. (1999) define the term ergogenic by saying that it “refers to the application of a nutritional, physical, mechanical, psychologic, physiologic, or pharmacologic procedure or aid to improve physical work capacity, athletic performance, and responsiveness to exercise training” (p. 294). Dietary...
supplements could be classified as nutritional ergogenic aids because they are purported to enhance the performance of athletes.

"Dietary supplement," as defined by the U.S. Food and Drug Administration in the Dietary Supplement’s Health and Education Act of 1994, includes the following criteria:

- A product (other than tobacco) that is intended to supplement the diet that bears or contains one or more of the following dietary ingredients: a vitamin, a mineral, an herb or other botanical, an amino acid, a dietary substance for use by man to supplement the diet by increasing the total daily intake, or a concentrate, metabolite, constituent, extract, or combinations of these ingredients;
- Intended for ingestion in pill, capsule, tablet, or liquid form. Not represented for use as a conventional food or as the sole item of a meal or diet;
- Labeled as a “dietary supplement”;
- Includes products such as an approved new drug, certified antibiotic, or licensed biologic that was marketed as a dietary supplement or food before approval, certification, or license (unless the Secretary of Health and Human Services waives this provision).

In March 1999, new regulations under the Dietary Supplement Health and Education Act went into effect and require manufacturers to label dietary supplements (called Supplemental Facts) similar to conventional foods (FDA, 1998). This regulation will help the consumer identify which ingredients are in a supplement and how much is considered a serving size. However, unlike certain medications, not all supplements provide guidance for how much is recommended for a total daily intake.

One problem with dietary supplements is that there are no guarantees they are safe. Unlike conventional foods and drugs, the FDA does not have the authority to test dietary supplements for safety before they are put on the market. For example, creatine, one of the most widely used supplements, has been found to enhance performance in short explosive activities in some athletes (Engelhardt, 1998). Yet the long-term benefits and safety of creatine remain unclear, and specific recommendations have not been issued. Therefore many athletes are taking creatine without any knowledge of long-term health implications.

Many supplements lack rigorous scientific evaluation and the companies that produce them make claims that are often not substantiated. This year the FDA is conducting meetings to address the problems associated with false claims made by supplement companies and is considering new regulations for addressing these claims.

**How to Evaluate a Supplement**

Evaluation of dietary supplements is a time-consuming process that requires knowledge of the tactics used by supplement companies, as well as knowledge of the nutrition scientific literature. Rosenbloom and Storlie (1998) published a guide for effectively evaluating dietary supplements or ergogenic aids and divided the process into 4 steps based on the SOAP format: subjective, objective, assessment, and plan:

**Subjective**

Determine what claims are being made, who is making them, the training or background of the individuals making the claims, and their motivation.