

# Dietary Supplements

## Important Information for Coaches

### Introduction

As you probably already know, the use of dietary supplements among athletes is on the rise. What you may not know is that the regulation of dietary supplements in the United States is currently very loose, and that the use of some dietary supplements by some athletes can present a real danger, physical and/or emotional. Since your swimmers are likely to be faced with the opportunity to take supplements at some point in their athletic career, it is important to educate them on the issues they may face and to encourage them to think critically about the decisions they may have to make. Presenting information to your swimmers can be a learning experience for both of you and an opportunity to open the channels of communication on a very important topic.

### What ARE Dietary Supplements?

The FDA's (Food & Drug Administration's) definition of dietary supplements is a bit long, so to summarize, dietary supplements are vitamins, minerals, herbs and other botanicals or amino acids used to supplement the diet by increasing the total daily intake. They include concentrates, metabolites, constituents, extracts or combinations of these ingredients and are intended for ingestion in pill, capsule, tablet or liquid form. Another familiar form is powder. Dietary supplements include everything from the basic daily multi-vitamin, energy bar and sports drink to the most exotic herb and "booster." Most importantly, dietary supplements are not represented for use as a conventional food or as the sole item of a meal or diet.

When most people think of dietary supplements, they think Pills and Powders. However, many of the products we **commonly** use are **ALSO** dietary supplements:

- Sports Drinks (Gatorade, Powerade, Hydrafuel, Endurox, etc)
- Energy Bars (Power Bar, Harvest Bar, Balance Bar, Luna Bar, Clif Bar, etc)
- Protein Bars
- Gels
- Multivitamins

### The Use of Dietary Supplements in Sports

As you can imagine, there are lots of athletes using one or more of the products just mentioned. Some of the reasons they do this is because they have been told that:

- “Supplements will help with your workouts in the pool.”
- “Supplements will improve your times as meets.”
- “Supplements will help you recover faster.”
- “Supplements will help you stay healthy and not get sick.”
- “Supplements will help you lose weight and look cut.”

Does this sound too good to be true? It probably is.

### Food vs Drug vs Supplement

Let's take a step back and take a look at dietary supplements and "conventional" foods and how these two differ from drugs.

There are some distinct differences between foods and drugs. Food is what we eat to obtain energy and vitamins and minerals. For the most part, foods are under the control of the FDA. The FDA checks food products all the time to make sure they ARE what they say they are. The FDA also checks on

prescription drugs. As for supplements, we already know what the definition is and that the FDA is “the Boss.”

While the differences seem pretty clear, there is still some confusion about what is a food, what is a drug and what is a dietary supplement. To demonstrate the confusion, think of food and drug on opposite ends of a rainbow. One thing we know about rainbows is that they come with rain. And one thing we know about rain is that it comes with clouds. Imagine a big fluffy gray cloud smack-dab in the middle of your perfect rainbow. This is where we most often find dietary supplements. The cloudy, gray area.

### **Houston, We have a Problem...**

#### **It's called Regulation and Labeling...Safety and The “Open Door” Analogy.**

Even though the FDA is supposed to be watching over dietary supplements, they are often too busy to make sure everybody who sells them is doing the right thing. Because of this, people are able to get away with being sloppy. Sometimes this happens during the manufacturing of a product, and sometimes it happens during the labeling process. And sometimes it even happens in both! Unfortunately, what this leads to is not knowing if a supplement really contains what the label says it does. There are several ways this can affect a person:

1. You may be getting something in a supplement that is not listed on the label.
2. You may be getting something that is listed on the label, but in a different amount, maybe more, maybe less.
3. You may not be getting what's listed on the label, in which case you've just wasted you hard-earned money on a bottle of "nothing."

What is the point? If you can't be sure that a product's ingredients list matches its contents 100%, how do you know that what you're getting is safe? Maybe you're allergic to one of the unidentified ingredients. Maybe your body can only tolerate certain amounts of ingredients. And what if one of those ingredients that got left off the list is prohibited?

### ***In the News...***

#### **The Times - September 20, 2001**

NEARLY 40 of 200 over-the-counter food supplements tested in one of the world's leading drugs laboratories contain **nandrolone**. None of these **food supplements** carried warnings that they might contain a substance banned in most international sports

#### **CNN SI.com - August 29, 2001**

PARIS (AP) -- French sprinter Christophe Cheval has denied knowingly taking a banned steroid for which he tested positive at this month's Edmonton World Championships, a French newspaper reported Wednesday. Cheval, 30, told the French sports daily *L'Equipe* that he had taken a **food supplement** that did not indicate it contained the banned substance **nandrolone**. "Naturally, nandrolone wasn't mentioned on the wrapper," he said. "I realized I might be lacking in magnesium and iron. I was trying to make up for this shortage."

#### **USA Today - June 18, 2001**

Norwegian weightlifter Stian Grimseth, who tested positive for the steroid **Nandrolone** 2 weeks before the Sydney Olympics, was suspended for 6 months. He said the positive was caused by an improperly labeled **food supplement**, and tests showed the supplement contained substances not listed on the label.

### **The failure of a supplement's ingredients list to match its contents 100% opens the door for health risks and positive drug tests.**

Now, let's clarify that even though things like bars gels, sports drinks and basic multivitamins ARE supplements and therefore also have the potential to open that door, it's probably only open a crack. These products have been around a long time and have not been implicated in any scandals. However, as variations of them become more exotic, with added herbs and other substances, their potential to open that door wider increases. Powders, herbals and muscle-building supplements tend to be more susceptible to contamination with prohibited substances. In addition, their ingredients lists tend to be more inaccurate, more often.

### **Critical Questions**

Regardless of the situation, there are several critical questions that should be asked ANY time the use of a dietary supplement is being considered. Knowing important details about a supplement empowers athletes and coaches to make informed decisions

about its use. So ask yourself these before using or recommending ANY supplement:

1. **Is the product legal?**
2. **Is it safe?**
3. **Is it helpful?**

Chances are the answers to ALL of these questions are not available. And if you don't have all the answers, it's probably best to err on the side of caution. However, if the answer to each of these questions is YES, then there is a decision to be made.

#### Is the product legal?

If a product is not legal, then the point is moot. If it's not legal, the athlete shouldn't be using it anyway. And if they are considering using it, they are on their own.

#### Is the product safe?

In order to determine the safety of a product, we have to test both short- and long-term effects. Information like this is rare. The fact is that a lot of supplements haven't been around long enough for scientists to test it enough to know whether or not it is safe. This means that the answer to this question is almost ALWAYS "I don't know."

#### Is the product helpful?

Whether or not a product will be helpful to your athlete's swimming can be determined through research studies that look at the effects of the product on swim performance. The problem with this is that many studies misrepresent their findings, saying a supplement works when the way they conducted the study can't really prove it. Consider these two scenarios:

1. A group of people takes a vitamin supplement for "x" number of weeks. They complete a 100 m time trial before and after this time. Their times improve. The researchers conclude that taking this supplement improves performance. But what they don't tell you is that this particular group of people was **deficient** in this nutrient to begin with! So what *really* happened was a matter of correcting a nutritional deficiency, which 9 times out of 10 can be corrected by making small healthy adjustments to the regular diet.
2. A group of people who are not deficient are given a supplement while they train for 6 weeks. Pre- and post-tests indicate that their performance improved. The supplement improved their performance, right? Not necessarily! What gets left out is the fact that the people who improved were **untrained** to begin with! You train ANYBODY for 6 weeks, and they will get better. It's a simple fact.

And so we have two examples of how the research on dietary supplements is not yet good enough to conclude that supplements improve performance. We just don't know enough about it.

### **Responsibility**

When it comes down to it, the athlete and the athlete alone is the only one responsible for what goes into his/her mouth. Not you, the coach. Not the parents. Not the doctor. Not the nutritionist. Not the teammates. THE ATHLETE. This is where the athlete is required to assume some responsibility for his/her actions. The decision to take a supplement is his/hers to make. We hope he/she makes the right one. After all, he/she is the one who has to live with any consequences. The responsibility is huge.

### **Summary**

The fact is that an athlete's nutrient needs can be met through dietary means. That means eating a variety of foods from all of the food groups, and eating them in quantities that are sufficient to support his/her caloric demands of training and recovery. Turning to supplements for the "quick fix" is not the answer. Here are a few points to help you remember why:

1. Claims made by the manufacturers/distributors of dietary supplements regarding their effectiveness do not require evaluation by the Food & Drug Administration (FDA).
2. **The majority of products themselves are legal, but the ingredients listed on the label do not guarantee the contents of the product. There are cases where supplements contained prohibited substances that were not clearly identified on the label.**
3. The failure of a supplement's ingredients list to match the product's contents 100% opens the door for positive drug tests. This is now becoming known as "inadvertent doping."
4. Some products contain substances that may not be prohibited, but which cause changes in the body's chemistry that are considered illegal. One example is the effect of products that contain ingredients to enhance the body's natural production of testosterone.
5. The proposed effects of most supplements have not been supported by science, and too much CAN be harmful.
6. Companies use marketing strategies that lure the consumer into believing the claims made about the product, as well as its quality and safety.

**The risk may be small, but it is very REAL.  
The athlete alone is responsible.**

**Education and critical thinking are MANDATORY**  
to avoid losses in the areas of success, reputation and potential earnings.