

## Dietary Supplements - Important Information for Parents



As a swimming parent, you may or may not know that the use of dietary supplements among athletes is on the rise and that the regulation of dietary supplements in the United States is currently very loose. Therefore, the use of some dietary supplements by some athletes can present a real danger, physical and/or emotional. As parents, we want our children to swim to their potential. We want them to succeed. The topic of dietary supplements is not the only one that stirs controversy in our sport, but it has taken quite a prominent place in our landscape. Since your child is likely to be faced with the opportunity to take supplements at some point in his/her athletic career, it is important to educate him/her on the issues (s)he may face and to encourage him/her to think critically about the decisions (s)he may have to make. As parents, we are leaders, and as leaders we must be prepared to take a stand and to offer our athletes the guidance they need in order to make good decisions in swimming and in life. Presenting this type of information to your child 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 and how are they different from foods and drugs?**

What many people don't realize is that dietary supplements are a category of *foods*. They are regulated as foods by the FDA, but they are regulated differently from other foods and from drugs. Whether a product is classified as a dietary supplement, conventional food or drug is based on its **intended use**. Most often, classification as a

dietary supplement is determined by the information that the manufacturer provides on the product label or in accompanying literature, although many food and dietary supplement product labels do not include this information.

Congress and DSHEA (Dietary Supplement Health & Education Act of 1994) define a dietary supplement as a product (other than tobacco) that:

- Is intended to *supplement* the diet;
- Contains one or more dietary ingredients (including vitamins, minerals, herbs or other botanicals, amino acids, and other substances) or their constituents;
- Is intended to be taken by mouth as a pill, capsule, tablet, or liquid; **and**
- Is labeled on the front panel as being a dietary supplement.
- **\*\*A supplement cannot be represented as the sole item of a meal.\*\***

### **Why aren't supplements regulated? Actually, they ARE.**

Beginning in 1958, dietary supplements were regulated by the United States Food & Drug Administration (FDA). The purpose was to ensure that they were safe and that their labels were honest. Today, even after the passing of the Dietary Supplement Health and Education Act (DSHEA) in 1994, the FDA continues to be the regulatory body for dietary supplements.

The notion that supplements aren't regulated likely comes from the "gaps" in the way they are regulated:

**Regulation Gap #1:** The responsibility of ensuring that products are properly labeled

lies with the manufacturer, and government resources to be *proactive* in checking up on them are limited.

**Regulation Gap #2:** Supplement ingredients sold in the United States *before* October 15, 1994 are exempt from the intent to market regulation. Based on their history of use by humans, they are *presumed* to be safe and are therefore not subject to review by the FDA for safety.

**Regulation Gap #3:** The responsibility of providing the safety evidence information lies with the manufacturer, and government resources to be *proactive* in checking up on them are limited.

**Regulation Gap #4:** Once a dietary supplement is marketed, the FDA has to prove that the product is *not* safe in order to restrict its use or remove it from the market. In contrast, before being allowed to market a drug product, manufacturers must obtain FDA approval by providing convincing evidence that it is both safe and effective.

**Regulation Gap#5:** Even when the final GMP ruling is made, government resources to be *proactive* in checking up on them will likely be limited.

As a result of these gaps in supplement regulation, the consumer is left to choose between trusting the manufacturers who are reaping the monetary benefits of the supplements industry or waiting for the FDA, for whom the issue of dietary supplements in athletes falls fairly low on the priority list. Unfortunately, neither seems to be able to guarantee an answer. Our only proof right now is hindsight. Our only protection is critical thinking.

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### ***What's the worry?***

Despite the efforts of the FDA to regulate the supplement industry, their resources are too limited to make sure that everybody who sells supplements is doing the right thing. Because of this, quality control slips. Sometimes this happens during the manufacturing of a product, and sometimes it happens during the labeling process. Sometimes it even happens in both. Of course, balanced information is fair, and there are always two sides to every story. Always recognize the fact that there ARE laws and there ARE good companies, and there may even be products that are legitimate in their claims to the general population. But for every "good" company, there are as many if not more "rogue" companies (rule-breakers), and the FDA simply doesn't have/apply the resources we need to distinguish between the two and crack down on those targeting our swimmers. There have been far too many cases of product contamination and mislabeling, many of which are affecting our sport and our athletes' ability to feel comfortable with their decisions.

In 2003, American swimmer Kicker Vencill tested positive for 19-norandrostenedione. It was traced back to his ***multi-vitamin***. Kicker didn't get sick, but he failed a drug test and was handed a two-year suspension. He missed the 2004 Olympic Trials because of it. In the Spring of 2005, he won a lawsuit against the dietary supplement company that made his multi-vitamin. What does Kicker say about supplements now?

"In my opinion, there are probably some reputable companies out there, and I'm not against supplements. But you have an issue with the industry.

I learned personally that some manufacturing practices might be standard for the industry, but in my mind from a quality aspect for the consumer, they're pretty poor. If others are like that in the industry, I'd tell everyone to beware.

Knowing what I know now, there's no way. The only way I could ever take a multivitamin again is if it was approved by the FDA and I had a doctor prescribe it to me. It's unfortunate I have to say that, but it's the truth. I think it's ridiculous to have to be scared to pick a multivitamin, but it's the reality of the situation that athletes are faced with. So beware, coaches, parents and athletes. Be careful what you're giving your kids.

Supplements are something we don't really want to talk about. It's a tough situation. A lot of good people have been affected by the contamination in the supplement industry, but we have to provide athletes and coaches with information they can use to properly educate themselves or others about supplements. I want people to really think about what they're consuming and realize that in taking this, they're going to be held liable for it, regardless if it's a multivitamin. And think, "Is the risk worth the improvements I might get?" To me it's not worth it. If I test positive again, I'm done. I'm banned for life. I don't ever, ever, ever want that to be the case."

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 your child is getting is safe? Maybe he/she is allergic to one of the unidentified ingredients. Maybe his/her body can only tolerate certain

amounts of ingredients. And what if one of those ingredients that got left off the list is prohibited? Not knowing if a supplement really contains what the label says it does can affect your child in several ways:

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

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

***Did you know ... that some of the "boosters" offered at popular commercial smoothie shops contain guarana, a powerful stimulant? To avoid smoothie contamination from boosters or contaminated commercial blenders, consider making your own smoothies at home or switching to a store-bought drink such as Nouriche.***

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***But our kids are so busy, they often don't have time to eat well....Vitamins are okay just in case, right?***

No, vitamins are not okay "just in case." First of all, *there is no place for supplements in the diet of young (especially pre-pubescent)athletes.* Second, more is not always better, and as in the case of iron, more can actually be very dangerous. The only athletes who should be taking a vitamin or mineral supplement are those who have a documented deficiency in their intake of those vitamins and minerals. And when it comes to iron, the only athletes who should be taking an iron supplement are those who have been diagnosed by a *medical doctor* with an iron deficiency for which an iron supplement has been recommended. Iron is NOT suitable for the "just in case" scenario. Too much iron can be toxic to any person, regardless of age, physical stature, or competitive level.

The first step in determining an individual athlete's need for increased nutrient intake is determining the current nutrient status. We can start with a simple dietary intake assessment. All swimmers (and coaches) who are members of USA Swimming can use ***Nutrition Tracker***, an online diet analysis program offered free of charge by USA Swimming. The program will tell you, based on your age, gender, body weight and daily activities, what your nutrient requirements actually are. Once you have entered your daily food intake, the program will then compare your

requirements to your actual intake. Any deficiencies in intake are easily identified and pointed out. Intake deficiencies may warrant further exploration, including the biomarker tests and/or an assessment of deficiency symptoms, as mentioned above. If these assessments reveal a deficiency in dietary intake of one or more nutrients, then the second step is for the individual to increase the intake of that nutrient by increasing the intake of normal foods. This process holds true for every single nutrient, from the basic energy nutrient (carbohydrate, protein, or fat) to the most specific vitamin.

Words of Wisdom...Beware the "just in case" scenario. Many athletes are taking a vitamin and/or mineral supplement JUST IN CASE their diet is inadequate, but in most cases this is highly unnecessary. A caloric- and variety-adequate diet accounts for all of the vitamins and minerals required by an athlete to perform day-to-day and at competition time. If an athlete is maintaining body weight with an adequate caloric intake of food, this food should be coming from a variety of sources. If it's not, there are resources to help (ex. ***Nutrition Tracker***).



\*\*Look for the ***Nutrition Tracker*** icon on the Swimmers, Parents and Coaches sections of the USA Swimming website ([www.usaswimming.org](http://www.usaswimming.org)).

### **Temptation vs Reality and Responsibility**

There are lots of athletes being tempted to use dietary supplements as part of their training. Some of the reasons they consider it is because they have been told that:

"Supplements will help with your workouts in the pool."

"Supplements will improve your times at 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. The fact is that your child's nutrient needs can be met through a sound diet of quality, variety and colorful foods. Eating a variety of foods from all of the food groups, and eating them in quantities that are sufficient to support the caloric demands of high quality training and recovery is one of the keys to success. Turning to supplements for the "quick fix" is not.

When it comes down to it, your child alone is the only one responsible for what goes into his/her mouth. Not the coach. Not you, the parent. Not the doctor. Not the nutritionist. Not the team-mates. THE ATHLETE. This is where your child 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.

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### **Tips to Keep in Mind While Grocery Shopping for Your Swimmer:**

- ❖ Supplements bear a “Supplement Facts” label or the word “supplement” on the container.
- ❖ Conventional foods bear a “Nutrition Facts” label on the package.
- ❖ Without a Supplement Facts label or the word “supplement” on the container, it’s a conventional food.
- ❖ Some products look like supplements or we might *think* of them as supplements (ex. Sobe, Gatorade, Red Bull), but they are actually conventional foods and bear a Nutrition Facts label.
- ❖ Some products that have some of the same ingredients as supplements (herbs, amino acids, vitamins, minerals)...ingredients that we might caution our athletes against for health- and/or doping control-related reasons are actually conventional foods
- ❖ Some conventional foods may also contain ingredients that could lead to a positive drug test (ex. poppy seeds).
- ❖ There are some products that bear neither a Nutrition Facts label nor a Supplement Facts label. It is best to consider these products off-limits because their regulation cannot be identified.
- ❖ Ingredients and food additives aren’t what make a product a supplement versus a conventional food. It’s the label.
- ❖ Foods with added herbals can be conventional foods or supplements, depending on how they’re labeled.
- ❖ Overlaps between conventional foods and ingredients emphasize the importance of *reading the label*.

### **USA Swimming's Position on Supplements**

In an effort to maintain the integrity of our sport and the safety of our athletes, USA Swimming has taken a proactive role in making athletes and coaches more aware of the risks involved in the use of commercially available dietary supplements that have been linked to enhancing performance. Along with the US Anti-Doping Agency (USADA), USA Swimming considers dietary supplements “take at your own risk,” placing full responsibility for any effects and repercussions on the athlete.

It is the role of USA Swimming to educate swimmers, coaches and parents on the issues of dietary supplements, including general and specific risks, normal values and toxicity, drug testing and drug interactions, stacking, and conventional dietary alternatives. It is also the role of USA Swimming to validate or repudiate via research review or sanctioned research the answers to the many questions that surround scientific and anecdotal evidence versus actual application. Any recommendations or opinions offered by USA Swimming regarding the use of dietary supplements are based on a yellow-orange-red light continuum Health & Contamination Risk Chart for Dietary Supplements and the most current publicly available scientific and consumer-specific information.

Claims made by the manufacturers/ distributors of dietary supplements regarding the effectiveness of their products are not strictly regulated by the US Food and Drug Administration. Any commercial dietary supplement is susceptible to containing substances that may appear on the Prohibited Substance list(s) of FINA and/or the IOC. The potential exists for commercial supplements to contain substances that do not appear on the product’s list of ingredients (see Dietary Supplement Health and Education Act for more information). Statistics indicate that in some cases, the use of legal dietary supplements has been linked to positive test results for prohibited substances in athletics.

The choice to use a dietary supplement is the sole responsibility of the athlete and one that should not be made in haste. An athlete is advised to weigh the options heavily, consider the consequences, and take responsibility for his/her actions.

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### Pry Before You Try: 12 Steps to Determining Supplement Safety, Effectiveness and Need

*So you're thinking about adding a dietary supplement to your training regimen? Before you do, use this worksheet to learn exactly what you need to know about your product before making any hasty decisions. Step #1: Learn the answers to each question. Step #2: Determine whether the answer is "good" or "bad". Step #3: Assign a degree of importance to each question/answer combo (0=not important at all; 10=extremely important). Step #4: Tally the pros, tally the cons, compare, and decide! Tip: Consider asking your coach and/or parent(s) for assistance in gathering the information. When finished, discuss your answers with your coach, parent, or a nutrition professional who works closely with you before trying any new product. It won't take too long, and you'll be glad you made the investment.*

Question	Answer	Good or Bad	Importance (0-10)
1. Is this product legal in swimming?			
2. Am I confident that the ingredients listed on the outside label for this supplement are exactly what are inside the container?			
3. Are there reports of risks and/or adverse effects associated with taking this supplement and/or any of its key ingredients?			
4. Have the short-term effects of using this supplement and/or any of its key ingredients been studied?			
5. Have the long-term effects of using this supplement and/or any of its key ingredients been studied?			
6. Are the proposed effects of this supplement and/or each of its key ingredients supported by science?			
7. Do the amounts of the ingredients on the label of this supplement match the amounts that have been studied?			
8. Do the proposed effects of this supplement apply to my sport in terms of the nature of training and competition?			
9. Have I sought the advice of an expert in the field of sport physiology regarding my need for this supplement from a training/competition perspective?			
10. Have I sought the advice from an expert in the field of sport nutrition regarding my need for this supplement from a nutritional perspective?			
11. Are there foods, prescriptions, or other alternatives to using this supplement that may have the same effect(s)?			
12. Do I really need this supplement and/or any of its key ingredients to improve my competitive performance?			
TOTALS	Total number of "Good": _____ Total importance score: _____ Total number of "Bad": _____ Total importance score: _____		

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#### Personal Thoughts and Conclusion:

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### COST-BENEFIT ANALYSIS for Dietary Supplements and Ingredients

*Step 1: Rate the importance of each benefit and cost using a scale of 0-10; 0=not important at all; 10=extremely important.*

*Step 2: Total the benefit and cost score for each area (health, performance, financial, other).*

*Step 3: Total all benefit scores. Total all cost scores.*

*Step 4: Determine which total score (benefit or cost) is higher. Draw your conclusion based on this comparison.*

**Potential Health Benefits:**

- Correct a deficiency in diet.
- Ensure meeting the RDA for vitamins/minerals.
- Better health due to meeting RDA.
- Less risk of illness and missed practices.
- Other:
- Other:

**Potential Health Costs:**

- Risk of contamination with dangerous substance.
- Future health consequences unknown.
- Side effects (cramp, muscle tear, gastrointestinal).
- Over-consumption dangers.
- Other:
- Other:
- Other:
- Other:
- Other:

**Health Benefits Score:** \_\_\_\_\_

**Health Costs Score:** \_\_\_\_\_

**Personal Thoughts:**

**Potential Performance Benefits:**

- Improve competition performance.
- Improve training performance.
- Stay competitive with others taking supplements.
- Other:
- Other:
- Other:

**Potential Performance Costs:**

- Decrease in performance.
- Excessive caloric consumption and weight gain.
- Risk of a positive drug test and 2-yr suspension.
- Loss of opportunity to qualify for int'l competition.
- Loss of performance capabilities during suspension.
- Loss of performance capabilities if working full-time.
- Other:
- Other:

**Performance Benefits Score:** \_\_\_\_\_

**Performance Costs Score:** \_\_\_\_\_

**Personal Thoughts:**

**Potential Financial Benefits:**

- Cheaper to than buying foods to meet RDA.
- Sponsorship opportunities.
- Medal money for better performance.
- Other:
- Other:
- Other:

**Potential Financial Costs:**

- More expensive than buying foods to meet RDA.
- Legal fees associated with positive drug test.
- Travel fees associated with positive drug test.
- Loss of sponsorship income.
- Loss of performance-based income (medal money).
- Loss of Elite Athlete Health Insurance.
- Loss of monthly assistance or grants.
- Other:
- Other:

**Financial Benefits Score:** \_\_\_\_\_

**Financial Costs Score:** \_\_\_\_\_

**Personal Thoughts:**

**Other Potential Benefits:**

- Easier than shopping for/preparing balanced diet.
- Good performance makes me a role model.
- Good performance makes my coach successful.
- Everyone else is doing it.
- Other:
- Other:

**Other Potential Costs:**

- Tarnished reputation.
- Viewed as a cheater.
- Coach viewed as associated with cheaters.
- Other:
- Other:
- Other:
- Other:

**Other Benefits Score:** \_\_\_\_\_

**Other Costs Score:** \_\_\_\_\_

**Personal Thoughts:**

**Total Benefits Score:** \_\_\_\_\_

**Total Costs Score:** \_\_\_\_\_

**Personal Conclusion:**