

# PHARMACEUTICAL-GRADE ATHLETES

## DO SPORTS SUPPLEMENTS PROVIDE REAL ADVANTAGES?

While many watch the controversies surrounding performance-enhancing substances in sports with little more than morbid curiosity, athletes should sit up and take note. *After all, athletes are competitors. And competition necessarily leads to a desire to gain an advantage.* This drive to win invariably causes some to take dietary supplements. That's where sports supplements, or ergogenic aids that claim to enhance physical performance, come in. Creatine, amino acids, chromium and even caffeine are among dozens of supplements now used to increase performance. But do they work? Is there a flip side to ingesting

them? This edition of Face Off brings in two individuals who know what they are talking about when it comes to sports supplements. But that doesn't mean they agree. If you are thinking about adding creatine powder to your weight-training regimen or taking in any other sports supplements, read up before you drink up or swallow that pill!

### JOSE ANTONIO

"I DON'T CARE IF PEOPLE WANT TO USE SUPPLEMENTS OR NOT. BUT IF YOU WANT TO GET BIGGER, STRONGER AND FASTER, YOU SHOULD USE THEM."

Jose Antonio, PhD, is a research advocate in the field of performance nutrition. He is Chief Executive Officer of the International Society of Sports Nutrition, the only academic society exclusively dedicated to promoting the science and practice of sports nutrition. He has published more than 40 peer-reviewed scientific papers and has written 13 books in the field of sports nutrition and exercise. He also serves as a consultant for a sports supplement company.

Jose Antonio views sports supplements in a simple and practical manner. If you are looking to get better at the sport of your choice, take them, he argues. Why wouldn't you? Antonio has been a strong proponent of supplements for more than a decade, and his unabashed support has come with mixed results, as he is equally praised and made a pariah because of his views. For Antonio, asking whether a supplement makes an athlete miss the mark. He views sports supplements, like creatine, caffeine and amino acids that come in the form of powders, pills, drinks and gels, as just as an important part of the athlete equation as anything else. "When you are doing everything that you can to possibly help your performance, I put supplements in same category as whole foods—do all of it."

Antonio says you can't ignore the role of supplements in making better athletes, and that to do so would put any athlete at a competitive disadvantage. "I don't care if they do them or not. But if you want to get bigger, stronger and faster, you should. Not using them would be like saying you don't feel like lifting weights," he says. Whether you're taking creatine before pumping iron or caffeine before engaging in endurance sports, Antonio says sports supplements are increasingly part of modern athletes' regimens.

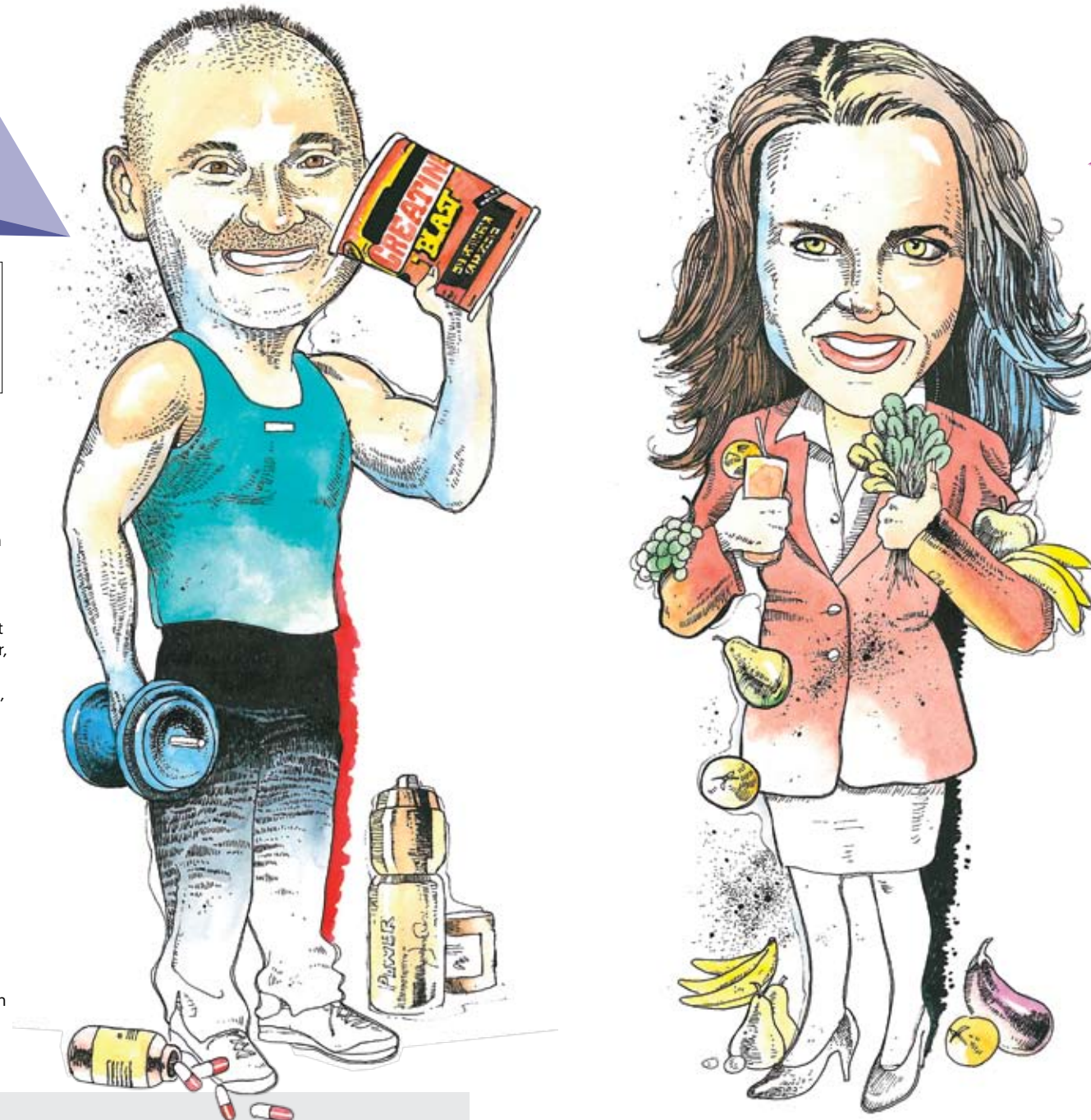
Focusing on misconceptions and fear-mongering about such supplements is as irrational as it is futile. Instead of asking whether athletes should be taking supplements—a no-brainer—Antonio says the discussion ought to center around which supplements a particular athlete should be taking and in what amounts. "Nothing is the end-all and be-all for everybody. You have to tailor your supplements to your individual needs." He thinks the argument should be framed differently. "It's about dose and duration. How much and how long? Not whether or not. That is a given," he says.

To put the sports supplement issue in the appropriate context, Antonio uses another medical field with significantly more superficial and dangerous outcomes to make his point. "Why is it okay to undergo cosmetic surgery just because you want to look good, but if you're some guy who wants to lose fat and put in muscle, it's evil?" he asks. The evolution of sports and the undeniable scientific evidence supporting sports supplementation, for Antonio, mean that athletes can only achieve their maximum potential through the use of supplements. "Millions of people have used (sports supplements) over the past 50 years. There are so few negatives to using them. There is so much more evidence showing how they can help you... it's not even close."

### WHAT ARE SPORTS SUPPLEMENTS? AND WHO IS TAKING THEM?

Unlike common dietary supplements that are supposed to promote different aspects of health, sports supplements, also known as ergogenic aids, are intended specifically to enhance physical performance, including increasing energy, speed or recovery. The FDA regulates neither. However, the more popular ergogenic aids (which can be nutrients or metabolic byproducts of nutrients, food or plant extracts) are: caffeine, creatine, beta-alanine and arginine. While some ergogenic aids are banned, many are legal and commonly used, especially among athletes. A University of Illinois

study found that use of sports supplements hovers around 50% for the general population and 76% among college athletes in the U.S., while a German study published in the *International Journal of Sport Nutrition and Exercise Metabolism* found that 80% of all athletes reported using at least one supplement.



### TAKING SUPPLEMENTS OR EATING RIGHT WHICH COMES FIRST FOR SPORTS PERFORMANCE?

Does your regular diet determine whether a sports supplement will work for you? Antonio says that the two, diet and sports supplements, have little, if anything, to do with each other. "About 99.9% of nutritionists hold the belief that a clean (or healthy) diet has to occur before you take

supplements, or at least they say that publicly," he says. "But athletes usually don't eat like that. Nobody does." He points to creatine as a prime example. "There are more than 300 studies on creatine and how it improves performance, but none of them have to do with the rest of your diet," he says.

Gidus argues that absence of evidence does not mean evidence of absence. "Some nutrients, even in supplement form, are absorbed better when combined with a healthy diet and in synergy with other nutrients," she says, even though she admits that some nutrients compete with one another for absorption.

### TARA GIDUS

"FINDING A SUPPLEMENT WILL NEVER BE ON THE SAME LEVEL AS PUMPING IRON, WORKING ON YOUR AGILITY AND BUSTING YOUR BUTT ON THE FIELD—THAT'S WHAT MAKES AN ATHLETE."

Tara Gidus serves as a national media spokesperson for the American Dietetic Association and is the team dietitian for the Orlando Magic. She is a regular contributor to a variety of media, including television, radio, newspapers, magazines and websites. She appears biweekly as the "Diet Diva" on the national morning television show *The Daily Buzz*, and owns Tara Gidus Nutrition Consulting in Orlando.

Can a particular sports supplement make an athlete? "I hope not," answers Tara Gidus. "I think an athlete makes an athlete. His or her performance is based on three things: genetics, training and, in my opinion, diet." Unlike Antonio, who says supplements are just as critical to the success of athletes as things like weight training and coaching, Gidus says their usefulness is modest, at best. "Finding a supplement will never be on the same level as pumping iron, working on your agility and busting your butt on the field—that's what makes an athlete."

She admits that there is a wealth of research on the effectiveness of sports supplements, but says many of the findings are hollow, since much, if not most, of the research is conducted by the supplement companies themselves. Even with that inherent bias, Gidus says the research is mostly inconclusive or contradictory to supplement claims, while only some of the data show measurable gains. There is just as much information casting considerable doubt on the safety of those products, she says. Though she's not always opposed to their use, she generally directs athletes away from a dependence on supplements rather than toward them. "I don't recommend athletic supplements as a general rule, even if a lot of athletes like to take them," Gidus says.

As team dietitian for a professional basketball team, Gidus has seen the competitive streak in athletes push them toward the cutting edge of nutrition and supplements, but insists that a cautious approach is in order. "It's tough to know what you are getting into with many supplements. You have to err on the side of safety, and often you don't have a lot of safety data on these products," she says. As such, Gidus views taking something with only mild benefits and without a full understanding of its side effects as a dangerous proposition. "You're kind of taking your health into your own hands by taking these supplements," she says.

Even with the risks and unknown effects, Gidus admits that some athletes will ingest just about anything for even a small chance of gaining a competitive advantage. But that rationale often backfires because of the uncertainty surrounding what goes into many supplements. "My biggest fear would be having an athlete fail a drug test because of some supplement that I recommended to them," she says. "For the athlete, it's just as serious. They are gambling with their career and reputation." To reduce that risk, she urges athletes in competitive sports to research what they are taking and get the help of professionals when needed.

When it comes to sports supplements, though the temptation is strong, Gidus says the risk versus reward ratio is still unfavorable. "I just don't think these supplements really give you much of an advantage. I would focus on mind, body and spirit training to give you a competitive edge." **S**

In the May/June issue, our contributors faced off on whether employers should require their employees to be fit. Here's how you voted:

NO, THEY SHOULDN'T

67%

YES, THEY SHOULD

33%

SO IS AN ERGOGENIC SUPPLEMENT NECESSARY FOR OPTIMAL PERFORMANCE? YOU DECIDE IN THE READER INTERACTION SECTION AT [WWW.SOBEFITMAGAZINE.COM](http://WWW.SOBEFITMAGAZINE.COM)