



An Interview With Dr. Avery Faigenbaum

What is creatine and how safe is it?

Faigenbaum: Creatine is actually a kind of protein. While it's a legal substance, it is important to keep in mind that Creatine is a naturally occurring substance that exists in our food - primarily in fish and meat. On the other hand, Creatine can be bought in the stores as a white powdery substance that has been found to improve strength and power in adults.



Dr. Avery Faigenbaum

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What does it actually do to the body?

Faigenbaum: It helps our body generate energy in the short term - in events that last less than 30 seconds. So, Creatine is not going to help a marathon runner and it probably is not going to help a one-mile runner. But Creatine in adult athletes may help a football player or it may help a hockey player.

Is it safe?

Faigenbaum: That's a loaded question. There haven't been any studies on children or on teenagers. Some studies have been done on adults. In some of these studies it works, and in others, it doesn't. But we have to remember that children and teens are not miniature adults. Just because a study says it works on adults does not mean that it works on teenagers. Many health professionals are concerned about the long-term affects of Creatine on children or teens. You need to remember that a typical research study lasts about 8 weeks. Just because Creatine has been shown to be safe in 8 weeks does not mean that a 16 year old who takes Creatine for 2 years in high school will necessarily be safe. In my opinion, I do not recommend Creatine for children and teens. I believe that there are many other things that a young athlete can do to improve performance.

How long has creatine been around in its powdery form?

Faigenbaum: The research studies that have looked at Creatine came out about 10 years ago. It made a splash in scientific literature because some studies involving adult athletes demonstrated that it improved power, the ability to generate force in 20 or 30 seconds. It's one of the few substances that are out there that has actually been scientifically studied. But you must keep in mind that only in some cases has it been found to work in adults.

Why do you think young people are so enticed to use creatine and other performance enhancement supplements and drugs?

Faigenbaum: Many young athletes, like adult athletes want to be stronger, they want to be faster, they want to be more powerful - and they want to do it right now. Young athletes believe that performance enhancement supplements, like Creatine give them a competitive edge. And in many cases teenagers who take substances like Creatine do so because they believe it will improve their appearance. It's really a quick fix solution and we need to take a look at some of the long-term implications.

What impact do professional athletes have on teens taking these and other types of supplements/drugs?

Faigenbaum: We know many major league baseball players have used these kinds of substances, and many have used anabolic steroids. We know these substances been used in

football. We know that Olympic world-class sprinters have used illegal drugs, as have the weight lifters. I think we need to view it as a continuum - at one end you have the legal supplements that you can buy in the store and at the other end of the spectrum you have the illegal substances, such as anabolic steroids. I do think there's a likelihood that teenagers who start taking Creatine and some of the other stuff to become more tempted to try some of the illegal drugs. So from a public health standpoint, I think that the best message is to look at healthier alternatives.

What does creatine actually do to the body?

Faigenbaum: Again, the studies have not been done on children and adolescents. One can only speculate. There is the potential for kidney problems with the use of Creatine that has been reported in the literature. On another note, children and teens are still growing and maturing and I am not sure that we want to put something in their bodies that may in the long term have some kind of harmful affect. To put a list together of long term effects of Creatine is not possible yet. But when you talk to health care professionals - pediatricians, family doctors, physical therapists who understand the growth and development of teens, many are very concerned. On the other hand if you talk to high school coaches who may not understand the physiology of growth and development they may say that Creatine is safe and effective. We are not sure what the affects are, but the risk is still there. We are well aware of the affects of anabolic steroids, which have been studied for over 50 years and the affects are cancer, heart disease, etc.

Some kids have tried all kinds of things - some, which increase their heartbeat.

Faigenbaum: There are some drugs out on the market, one being Ma Juang or ephedra which, we are very concerned about because they have been implicated as the cause of death or disability in at least two dozen healthy athletes over a two year period. Ma Juang is sometimes sold separately and sometimes it is just a part of the list of ingredients. This is one nutritional supplement that is very dangerous. It has received a lot of bad press lately. A lot of teenage girls are taking fat burner supplements. There are shelves of these in the health food stores. These supplements increase your metabolism and your heart rate, too, and we are concerned about these products because of the potential for death or disability.

Should young athletes take supplements of any kind to enhance their ability or physical appearance?

Faigenbaum: We need to get back to food. We are society that loves a quick fix. We are getting away from whole grain foods, fruits and vegetables because supplement companies tell us that we can be more energetic or we will get faster if we take this supplement. We need to get back to fundamental fitness. When I am working with an athlete and the athlete asks, 'Should I take Creatine,' I have a lot of

questions for that athlete. First, I want to know what he eats for breakfast, lunch and dinner. Then I want to know what he had for a pre-work-out meal and a post-work-out meal. Then I want to know that he drank at least eight glasses of water. Then I want to know if he had eight to nine hours of sleep that night. What I just mentioned will do more to enhance that athlete's performance than anything he could take in a store. Even with Creatine monohydrate, performance can only improve three to five percent. If you stink as a football player and you take Creatine, you are still going to stink. To improve performance, you need a good coach; a good training program, a well balanced diet and you need to value the importance of recovery. Many of the athletes in our country train too hard, they train all the time every day. Creatine is not going to make you the best football player, the best soccer player, the best basketball player. That's a myth.

Eight glasses of water a day is a lot. Why is that so important?

Faigenbaum: The average teenager in our high school is drinking 20 -24 ounces of soda every day. That's a lot of soda. If they are drinking coke with caffeine in it (caffeine is a diuretic) they are going to loose water. Where does that water come from? That water comes from muscles. What teens have to realize is that muscle is 75 percent water. If they start drinking all of this coffee, tea, coke, they are going to show up for practice at 3:00 p.m. totally dehydrated. If they are dehydrated, their strength goes down at least 5 percent. If strength goes down at least 5 percent, and if the average teenager sleeps only 6-7 hours a night, strength and reaction time will go down dramatically. I could look at the life-style of any teenager and change it to improve performance by 10-20 percent. That's far more than you would ever get from any nutritional supplement.

But most teenagers can't get 9 hours of sleep.

Faigenbaum: Sleep deprivation is a problem. Researchers tell us that teens need 8-9 hours of sleep a night. I don't know too many teens that get 9 hours a night. European athletes that I have spoken with say it's not uncommon take naps. I know you can't take naps in school - but athletes at our Olympic training center will take a break in the morning have lunch and then have a nap and train hard in the afternoon.

Should we be training for a sport every day?

Faigenbaum: There's nothing wrong in athletes training hard. But what we miss in this country is the importance of rest and recovery. If you train hard today that should mean you go light tomorrow. You can't train hard all the time. Athletes and coaches need to better value the importance of rest and recovery because that's how our bodies get stronger. In Europe they value the importance of rest and recovery. I firmly believe that during the week athletes should have a chance to have time off for growth. Hard

training everyday can lead to injuries.