

# Transcribe Me!

## Transcription details:

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## Transcription results:

- S1 00:00 Hi. This is Tim Lightfoot, the director of the Huffines Institute for Sports Medicine and Human Performance. I am so excited to let you know that the Huffines Institute now has apps for your smartphones and your tablets. We have apps for the Apple products and for Android products. You can go to iTunes or go to Google Play, either one. Download those Huffines apps and you can pull in our content every week. Now on to the podcast.
- S2 00:26 Welcome to the Sports Medicine podcast, brought to you by the Sydney and J.L. Huffines Institute for Sports Medicine and Human Performance in the Department of Health and Kinesiology at Texas A&M University. At the Huffines Institute, we're always working to facilitate, apply, and bring you the most up-to-date coverage of the wide world that is sports medicine and human performance, all in a language you can understand and share with your friends. And now, here's our host, the director of the Huffines Institute, Dr. Tim Lightfoot.[music]
- S1 00:57 Hello, and welcome to the weekly edition of the Huffines Institute for sports medicine podcast. I'm your host, Tim Lightfoot, and we're so glad that you took the time to download us and that you're listening. Our objective is to bring you an interesting person in the world of sports medicine and human performance every week and this week is no exception. We have with us, one of our full clinical professors here, from Texas A & M, Dr. Mike Greenwood. Mike, welcome to the podcast.
- S3 01:21 Thank you so much for having me.
- S1 01:23 We're glad to have you here. I'm going to tell the audience a little bit about you and why we've got you here. Then, we will just go on with the conversation. Dr. Greenwood has-- he's done a little bit of everything in his life. He's got a master's in science and education from Northern Illinois University. He has his Ph.D. from Texas Woman's University. He's a fellow of the international society of sports nutrition, fellow of the National Strength and Conditioning Association, a fellow of the American College of Sports Medicine. He was named educator of the year in 2005 by the National Strength and Conditioning Association. He's an all-around good guy. Been involved in athletics, baseball coaching in particular. The reason we have him on today is talk about a new book that he is the lead editor on, called The Nutritional Supplements in Sports and Exercises by Springer. Just came out in 2015. Congratulations on the book, Mike.
- S3 02:12 Thank you so much.
- S1 02:14 Well nutritional supplementation, sports, and exercises is incredibly important topic, and popular. Is that right?
- S3 02:21 It is. it's a very hot topic area. In last 15 years, probably the two most developing academic areas in our discipline are strength and conditioning, and sport nutrition.
- S1 02:34 Now this is really great refers book, because you got the world expects and all these different areas that are riding. Let's start with, how do you recruit this kind of level of expertise to take part in a book like this?
- S3 02:45 It's primarily a combination of number of things. It's very fortunate that some of the doctoral students that we have produced out of our Exercise and Sport Nutrition Lab have contributed. We're also highly involved with International Society of Sports Nutrition, and some of the authors on some of these chapters are actually, as you said, internationally known in this particular topic.
- S1 03:10 Yeah. And there's so much information out there on nutritional supplements, especially around sports and exercise. Is this the kind of book you recommend most people go to to find answers?
- S3 03:22 It is. Primarily because we really have a major emphasis on being scientifically based, as opposed to anecdotally. You hear things, you read things all over, but we've done a really nice job, I believe, of tracking down the current research on a lot of different hot topic areas.
- S1 03:40 Cool. So, we're going to talk a little big about some of these areas. What's the most egregious myth, nutritional myth you've heard out there around sports and exercise?

- S3 03:52 There are quite a few, actually, but I know that our lab is internationally known for our research with creatine. And even though there are over 1500 published studies - quality studies - that have been done on that topic, there are still a lot of myths that are flying around. Because people believe everything they read. So we have to do a good job of trying to educate, not only for efficacy, but also safety. So that particular topic, it still boggles my mind how many myths are still associated with that topic.
- S1 04:25 Yeah. For some reason, I've started hearing people talking about pickle juice again. It's just one of those things that keeps coming back up. You just keep going and you shake your head and walk away, I guess.
- S3 04:36 Well, we actually talked about this in class the other day relative to hydration status - electrolytes, sodium, et cetera - and one of the students asked about pickle juice. Again, if you're doing things right from a hydration standpoint, and you're getting enough sodium, which you have a lot of sodium in food anyway, and electrolytes, et cetera, then pickle juice might be an option. I think what happened is Dallas Cowboys were using it first and foremost, so everybody jumped on that bandwagon. But again, what I tell my students, is we need to go to the literature. What does the scientific literature say to support these claims that are so called made?
- S1 05:14 And that's the problem, isn't it? Not only with nutrition, but other kinds of sports coaching and all this. Someone at a more famous institute will do something, and they'll start talking about it, and people will go, "Well, it worked for them so I have to do it." Even though there's no scientific basis for that.
- S3 05:30 Right. And I think that really goes back to-- that 30 years ago we did something a certain way, and that doesn't necessarily make it right. And again, one of the-- a prime example of that is carbohydrate loading. There was a point in time where we felt like we had to have a depletion, exercise to deplete carbohydrates, starve the body for a few days, and then be able to carbohydrate load. But now, we know that that's not necessary. Primarily because it's going to fatigue the individual prior to competition. But all we have to do is increase the amount of carbohydrate that we normally get - usually two to 300 calories more per day. Again, it depends on if it's complex carbohydrate or simple carbohydrate, so that's a factor too. Just by doing research over the years, we know that we really don't have to do that depletion exercise anymore.
- S1 06:22 For those of us that used to do that depletion exercise, that's no fun. You get real grumpy [chuckles]. Let's talk about the book for a second. What's interesting about this book, and for someone like me, who's kind of interested in how these kind of nutritionally supplements are actually working within the current governmental regulation. You actually have a chapter on that, on governmental regulation and the industrial nature of that, and how supplements are made and marketed, and so forth and so on. What caused you to put something like that in the book? Because that's a different for a textbook like this.
- S3 06:53 Well everything has politics associated with it, and when you look at this particular topic, there have been quite a few lawsuits associated with this particular realm. So the FDA has been under scrutiny for quite a while, relative to being able to put a safe and effective product on the market. But they seem to have gone backwards in some aspects, where they can put in on the shelves before that research has been conducted. But--
- S1 07:21 Would you say that's the case in the supplementation market?
- S3 07:24 It's actually changed a little bit for the better because the DSHEA's Act came out in '92.
- S1 07:30 Tell us what that is.
- S3 07:31 Well, it's an Education Act - Health and Education Act - that's associated with some of these supplements prior to '92 where grandfathered in if they had been shown to be safe and effective. But now, any new product coming out actually has to go through two clinical trials before there's any performance trials. Those clinical trials are to look at blood marker safety issues, so on, so forth. Then at that point, if everything is clear, then you're able to do performance types of evaluation.
- S1 08:02 So if we go down to our local GNC, all the things on those shelves will have gone through all these things - all these safety and efficacy trials?
- S3 08:11 Some were probably already grandfathered in. There is a stipulation though, whenever you're combining possibly two or three grandfathered ingredients that haven't been evaluated together, then you have to go through that clinical trial process.
- S1 08:26 Is that marked on the label somewhere? So if someone goes in and they can pick up the label and say, "Oh, yeah. So this one is--"
- S3 08:32 No.

- S1 08:32 No?
- S3 08:33 No.
- S1 08:33 How do people find out about that, or they just take the chances and walk in and--?
- S3 08:38 First of all, you don't want to go to the company's website because there's a conflict of interest. But again, you need to get into the high-quality, scientific literature to actually evaluate what these studies are saying. And one study doesn't tell you anything, but when you have multiple studies that are coming up with consistent results, then you can actually put more quality and comfortability on the top product. There is a stipulation with the FDA though, food products have to be on the label within 10% of accuracy, where supplements are 5% accuracy of what the ingredients are.
- S1 09:16 So where do you-- you said you want folks to go out and get into the literature, so certainly that's your book. We'd certainly continue to plug your book again. What's a source for people?
- S3 09:27 There's quite a few reputable websites that you could go to. American College and Sports Medicine, they're not as active in the nutrition world but they do have some information, some physician papers. I mentioned the International Society for Nutrition, they have a journal. Actually, without being a member, you can go to that website download their articles, but we have some very high quality physician papers based on research that they can actually gets some up-to-date information. Plus, on that website, there are contacts in every state for people that are sport nutritionists, researchers that people can contact to actually get further information.
- S3 10:13 Historically, in our lab here, the Exercise and Sports Nutrition lab, we have some common questions that come to use on a regular basis. And what we have done there is generated some of those answers to those common questions on our website, so people can actually go and get some of that information. Because our philosophy at ESNL is, first of all, Is it safe? And then does it work? The public has a right to know that truth. And so, that's the approach that we try-- we try to educate what the scientific literature is telling us.
- S1 10:46 So, can people also go to the National Library of Medicine online, like pubmed.org, to get some of those studies?
- S3 10:54 Sure. MEDLINE, PubMed, but there are organizations that specifically target this particular topic. So again, it's a matter of keying in the right words but-- again, just because it's published, doesn't mean it's quality research either [laughter].
- S1 11:11 Yeah. What's interesting about your book is that it has, as I said, a real wide range of topics. Again from the industrial nature, to government regulations, to psychology, basic nutrition of sport, some of the specialized nutrition strategies for each of the specific sports. So, you really cover the waterfront in your book.
- S3 11:32 I think that was the major purpose of developing the textbook, was to deal with some of the diversity that's in this particular realm. And there are a lot of different key areas that fall into this category. But the first thing I would educate people in, we don't push supplements. We push a nutrient-dense diet, first.
- S1 11:54 Tell us what you mean by a nutrient-dense diet.
- S3 11:56 Nutrient-dense, we're dealing with the macronutrients - the primary macronutrients of protein, carbohydrate, and fat. But then we need to get specific about, "Okay, what type of proteins, what types of fat, what types of carbohydrate?" And a big part of that too is nutrient timing. It's not just what we ingest, it's also when-- the timing of when we ingest.
- S1 12:19 Yeah. There's been a lot of of talk about that four-hour window after exercise, and whether that's true or not.
- S3 12:25 I personally believe that most people after intense training or competition, don't feel like eating a full nutrient-dense meal. But I believe, just from my own experiences working with athletes, that you need to start that process as soon as possible because you're trying to prepare the body for, first of all, recovery, and then for that next bout whenever that might be. So if we had a room full of sport nutritionists in here, they would probably all agree, it's more of a two-hour window. But as much as we can, as soon as we can. And it may be 45 minutes later, "Okay, now I'm ready for a full meal." But you need to initiate that process as soon as possible.
- S1 13:08 Is that one of the hotter topics right now? What would you say are the hot topics right now in exercise nutrition?
- S3 13:13 Again, there are quite a few that could probably fall under that category, but--

- S1 13:19 Which one do you want to talk about?
- S3 13:22 Well, muscle building is always a big, big category.
- S1 13:26 People drop a lot of money on supplements that supposedly make them bigger, stronger, faster.
- S3 13:30 They want a magic pill that happens overnight. But there's still no substitute for smart nutrient dense diet, and--
- S1 13:37 Wait, you're saying there's no magic pill?
- S3 13:39 Well, part of that is that there is no shortcuts. Rome wasn't built over night. You think about your age. It's taken you so many years to get where you're at. You're not really going to change that overnight. Part of it, it's just being disciplined and consistent with the approach that you take. Hopefully you're educated, or you find someone that can help make those decisions to educate you regarding that process. But--
- S1 14:07 I know in your book you talk about the nutrient-dense diet, but then you talk about supplementation on top of that. So, if we-- let's assume our listeners are all eating appropriately and eating a nutrient-dense diet. What kind of supplementation, in general, if someone's just moderately active?
- S3 14:24 Well, the first thing is we need to know what scientific literature is telling us. And unfortunately the nutritional supplement industry is a billion-dollar industry.
- S1 14:34 Wow, a lot of money there.
- S3 14:35 And probably 90% of it doesn't work. There are some health benefits associated with it, but no necessarily ergogenic benefits. But the only way you would know that is to get into the literature, find that information out. We know-- again, if we're dealing with macro-- a nutrient-dense diet that-- say you have a 300-pound athlete, and they're requiring 4,500 calories a day. 5000 calories a day. They're probably not going to get that sitting down at the table and ingesting all that true food product. That's why it's called a supplement, to supplement a nutrient-dense diet.
- S3 15:12 So obviously, protein - we're talking about weight gain now - and hopefully lean muscle mass, as opposed to adipose. Then obviously, we're going to be emphasizing again nutrient-dense, but also there are certain types of proteins that can enhance that process. We know that hydroxymethylbutyrate is a muscle builder. We know that creatine, beta-alanine - all those supplements. We know, first of all, they're safe and we also know that they're effective. But there are responders and non-responders, too. The research shows us that some people react differently to different product. What might work well for you, may not work well for me. So that's why we need to know our clients, understand our clients, and what works well for them.
- S1 15:56 Yeah. So let's talk about some of these things, some of these specific items. A lot is made about sports and especially with the World Anti-Doping Association, the Cycling UIC. They're the ones that come up with a lot of the lists for what can be taken, and what can't be taken. NCAA has that prohibited list as well. Some of these supplements, do any of them fall on those lists? Or are they all considered safe and just nutraceuticals, so they're part of food, and there's no problem with them?
- S3 16:27 The banned substance list is different for the NCAA than it is for the Olympic Committee. So, the Olympic list is actually a little bit more rigorous than the NCAA's. But by and large, there's been some decisions made at the NCAA level relative to the amount of protein content that can actually be distributed to their athletes.
- S1 16:51 Really?
- S3 16:52 That was quite a few years ago. Don't think for a second that the supplement industry didn't jump on board to develop a collegiate series, to accommodate those specific guidelines that the NCAA had stipulated. By and large, one of the things that hurt research was in 2003, we had done tremendous amount of research on creatine with athletes. And then the NCAA came in and said, "Okay, you cannot disseminate this to athletes anymore. It's not on the ban list but it cannot be provided to athletes." It was, unfortunately, an inequality issue, it wasn't a safety issue. Some conferences couldn't afford it. So for us to continue our research with athletic population at the Division I level, that basically shut that type of research down. But again in the 1990s, that was a really hot topic area because people were finding out about creatine, but there was really no science behind it. That's when we started investigating some of these anecdotal reports that we were able to actually show that, again, it was safe and was effective.
- S1 18:03 We hear, time and time again, athletes test positive for drugs, who would claim that they didn't know anything about it, that it was in a supplement that they took, and that was a claim, or whatever. Given your experience, how much credence do you put

in those kind of claims, "Oh, I didn't know it was in the product"?

- S3 18:22 Well I know from a former coaching standpoint, at A&M, it's a little bit different. We have compliance meetings. And the NCAA requires once a month to meet with your athletes, either as individual team or as an entire crew.
- S1 18:37 Really?
- S3 18:38 And one of the things that they emphasize are these types of issues relative to ban substances, and they talk about academic issues, so on and so forth. So it's not like the athletes don't know, and you train them, you teach them. If you're not sure, these are the people you go to to find out. And I know that strength coaches, athletic trainers, if you're fortunate enough to have a sports nutritionist, they walk through the locker room, they see things in lockers, bottles, et cetera. But again, for that to actually happen, for somebody to not know what the ingredients are, they've been told, they've been educated about how to go through that process.
- S1 19:18 So, you think that excuse doesn't fly?
- S3 19:19 Well, it's something that maybe-- it could be done for a number of reasons. I guess you can plead ignorance, but part of that, too is, "Hey, I didn't know what I was doing. I didn't mean to do it. I would never break the rules." But most athletes are concerned about their eligibility. And if they care anything about their teammates, it's not just about them, it's also about their teammates, and what are we doing to actually help or harm our goals. Our athletic goals.
- S1 19:49 So we're getting the sign to wrap up here, we're coming to the end. As we do with all our guests, we're going to give you an opportunity, Mike, to give us your take home message. What's the one thing you want the audience to remember?
- S3 20:01 In a lot of topic areas that people make claims, companies make claims, you need to investigate through the scientific literature as to, "Are these claims actually accurate? Who's making the claims? Who's doing the research?" You want to-- that's where our lab makes a lot of support relative to this topic is because we're an independent group, and we have a reputation of conducting quality research. And any of these companies that have product and their credible, they want good research behind their product. You talked about the legalities earlier, they don't want to have to deal with any lawsuits because they're very comfortable about the products that are being put on the shelf. So do your homework, be a detective, and do your homework on these particular topics.
- S1 20:53 Great take home message. Thank you for being with us today.
- S3 20:56 Thanks for having me, and I appreciate what you do here with the Huffines.
- S1 20:58 You're more than welcome, and again, I want to remind the audience, this is a new book, Nutritional Supplements in Sports and Exercise. The publisher is Springer. It just came out at the end of 2015, I'd highly recommend it. There is so much more in here than we could get to in just 20 minutes. We could actually talk for days and days and days about what's going on. So, I appreciate Mike coming in for this. Regular listeners of our podcast will know that this is the time of the podcast when we have our podcast question of the week. And here with our podcast question of the week is the producer, Kenneth McIntyre.
- S4 21:30 What did Dr. Greenwood references two websites for sport nutrition information?
- S1 21:37 That's the podcast question of the week. Be the first one to send us an email at [huffinespodcast@hlkn.tamu.edu](mailto:huffinespodcast@hlkn.tamu.edu), and you'll win one of our Nifty podcast T-shirts. Again, don't think you're too late, go ahead and send us an answer, if you think you've got the answer now. Again, I want to thank our guest Dr. Mike Greenwood for being with us. Mike, thanks for being with us again.
- S3 21:57 Thank you for having me.
- S1 21:58 And I hope-- and I thank all of you for taking the time to download and listen. Spread the word about this podcast, and we hope that you join us next week when we have another interesting person in the world of sports medicine and human performance. Until then, we hope that you stay active and healthy.
- S2 22:13 The executive producer of the sports medicine podcast is Kenneth McIntyre, and co-produced by Carlos Quivera, and Alexis [?]. This podcast is licensed by the Hubfinds institute an Texas A&M under a creed of commons 3.0 license. You can share as much as you want and you can talk or blog about it all you want just don't change it or charge money for it. This podcast is made possible by support from the Omar Smith family and the Sidney and JL Huffines family. Our music was composed, performed, graciously provided by Dave Sellner productions. Your source for quality music and music production since 1992. Find them at [www.davidsellner.com](http://www.davidsellner.com). Our opening and closing credits were provided by John Miles productions at

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