

Huffines Sports Medicine Podcast

#173 – Dr. Branden Marcello

- S1 00:00 Hi, this is Tim Lightfoot for the Director for 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 & 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.
- S1 00:56 Hello and welcome to the weekly podcast from the Huffines Institute. I'm your host Tim Lightfoot, and part of our mission is to bring you interesting individuals in the world of sports medicine and human performance. And as we say every week, I think we have succeeded once again. We have a wonderful individual from the world of sports medicine and human performance, Dr. Brandon Marcello. Welcome to the podcast today, Brandon.
- S3 01:18 Thank you. It's great to be here.
- S1 01:20 So Brandon is joining us today from San Diego. The beauty of telecommunications, huh, Brandon?
- S3 01:25 Absolutely. Technology is a wonderful thing.
- S1 01:28 [chuckles] It is. I'm going to tell the audience a little bit about you, and then we'll just get started with the conversation. Dr. Marcello has a PhD in sports nutrition from Baylor University, he has a master's degree in exercise science from Marshall University. He is formally the director of sports performance at Stanford University. He's had quite a few roles over the years, but that was a more recent one. He is currently an independent performance consultant that's working with a number of groups both nationally or internationally, and in the show notes I will put his contact information and where you can find out more about Dr. Marcello and some other things he's doing. But in general, when asked to describe what he does, he has in the past said that he has extensive involvement in both the applied and research worlds. He's implemented successful, high-performance training programs for professional, Olympic and collegiate athletes. And including, I believe if I'm correct, a stint with USA Softball, is that correct Brandon?
- S3 02:24 That's correct, yeah.
- S1 02:25 Yeah. So, again, thank you for joining us today. I know our audience is going to be really interested to hear all the things you have to say. And so, let's start off with-- you had, one of your more recent positions was an intriguing position called the Director of Sports Performance at Stanford. What role does that play in athletics? I know there

are more and more of these kind of roles out there.

- S3 02:48 Yeah. It's kind of funny. I was really one of the first to ever have that position. Stanford didn't have that position before I took it. And that role is kind of streamlined to integrate and push the performance aspects of Stanford Athletics to the forefront and really kind of change the way we look at performance from the traditional ways of just one, having a strength and conditioning department, and two, having an athletic training department. So it really was to still keep those but enhance those and push limits and find other ways of complementing performance as well, that the athletes there benefit from.
- S1 03:24 And so that actually involved also nutrition, right? I think you were one of the first to really work on integrating the athletic training, the nutrition, and the strength and conditioning all together.
- S3 03:34 Yes. And there's a nutrition piece of it. There is the sleep piece of it that we brought in too. Really, the beautiful thing about working in a university setting - and I think it's funny that most people don't take advantage of this - is the huge academic piece. And much like A&M, you guys have some pretty great departments over there. And I think it's funny that many times athletics doesn't even think to reach out to the people that are five minute's walk from their office. And that's kind of what I did there - is tamper with that. We leaned on the people who have expertise in these areas, leverage that expertise and try to tie them into the athletic department for the betterment of everybody.
- S1 04:16 Did you get a lot of buy-in from the athletic department with that? I know coaches sometimes can be very much in their own silos and listening only to what other coaches say, and they're very mistrustful sometimes. Did you get buy-in from the coaches and were they helpful with this process?
- S3 04:32 You know, the initial process didn't even involve the coaches because it was typically on the support side of things. So many of the pieces that they were feeling, they didn't even see or knew where they came from. But I know exactly what you're saying and I think that's a commonplace. It's that you see these coaches that are resistant because they've done things a certain way for many years, and they've been successful for many years. And I think that's still out there for the most part, but I find it interesting that probably-- we call that hand-me-down coaching, where coaches do the same thing they've always done and they've done the same thing that their coaches did. And I always say, I think their coaches, a long, long time ago, would be very disappointed to see that they were doing the same thing that they did. Because I'm sure they crafted their practice plans and techniques using everything available during their day and age. I think a lot of those coaches would love to come back and be able to do it all over again with the technology today.
- S1 05:31 Yeah. And I think that also nowadays marks the best programs from-- they also ran programs as the ones that have been embraced technology and some of the changes, and like you said, reaching out to use local resources that are available.
- S3 05:47 Absolutely. Absolutely.
- S1 05:49 So you initiated and pioneered this concept I believe that you've termed performance-based dining, and actually was illustrated in Sports Illustrated in 2011. Can you tell the audience a little bit about what that concept is?
- S3 06:04 Yes. So the concept of the performance-based dining, really the genesis came from

the notion that I thought, "There's a better way of doing food." That's kind of the way I look at everything. I always think there's a better way. I don't know if the way that I throw out there is the better way, but I know there is a better way. And I thought that food was being done the same way at every university and every college for a long period of time, but something needed to change. That came up with this idea of this performance dining concept. I got the idea, I'm just thinking about it and I ran it by one of my good friends Condoleezza Rice. She said, "Brandon, I think that's a great idea." And I said, "Okay." She goes, "You need to talk to a couple different people." So she gave me the people I needed to speak to, I went and met with them.

S3 06:55

One was the vice provost for dining services, residential dining services, and she is very forwarding thinking, likes to do things different as well, believes there's a better way, and she loves the concept. And from then we hired a registered dietitian who specialized or had a strong background in nutrition, but looking at nutrition differently. And together we all generated this process of performance-based dining, and really kind of teased out what it meant and what it was. And essentially, the short version is that it puts food together really differently. So our food and the types of food were structured to either enhance immunity, to improve brain performance, to improve sports performance. Food synergy was also within that, so certain foods when cooked together provide a greater nutritional benefit. There was some anti-inflammatory foods and foods that are rich in antioxidants. And that's actually that's how food is labeled, but it wasn't labeled that traditional green, yellow, red. It was labeled either anti-oxidant, anti-inflammatory, brain performance, sports performance or food synergy. Which gave a whole new twist on food and the concept of performance-dining just took off.

S1 08:11

Was that across the university or was it just for the athletes?

S3 08:15

It's across the university. The whole purpose of it is to help everybody because there are people who are performing in everything they do. So you're in the classroom, whether you're in the board room, whether you're on the field of play, you do need to perform. And all of these things really transcended all aspects of human performance, not just the athletic endeavors which we are typically used to seeing.

S1 08:38

Now was that, did you all fine tune that for your athletes? So for example in some of your different sports maybe that required more power that you would change the dining based on their requirements?

S3 08:52

Not tremendously, no. Because there's a typical base level and it's-- any food that we serve the athletes, they could gravitate towards any of the sports performance categories or if was a difference in training table foods. Training tables is the meal which the athletic department can give their athletes that would actually possess all of the icons. We really tried to do food right to where we were doing a lot of research on types of foods, the spices to use within the foods. So we collect all the research and information and then we would hand that over to the culinary people and they're the experts at making food taste good. So then we say these are the spices for instance you should cook with, now you make it taste wonderful and that's what they did. So it's really utilizing people's strengths for what they are and then you get everybody buying into it and working together to create a really nice product because you're allowing them to leverage their expertise.

S1 09:50

That sounds like a really cool idea and it sounds like the university embraced it. Are they still offering that kind of dining for their students there?

- S3 10:01 That's a good question. I don't know. I believe they are, but I know a lot of other groups have reached out to me since my departure and are trying to implement pieces of that as well and work on pieces of it, which is part of the things I do from a consulting standpoint. A number of groups have reached out about how to implement some performance type of integration within their food and a couple pro teams actually. That's kind of what I'm gravitating to right now
- S1 10:26 Interesting, I guess that was leading to the next question. If we are thinking about sports performance, would you and what you're gravitating to right now, would you pick certain macro-nutrients for particular sports? Or do you think of it still - and this goes back a little bit to what we just talked about - do you think of it still in terms of pre-performance and recovery and regeneration aspects?
- S3 10:50 I look at it from that standpoint actually. Macro-nutrients are great but when we are talking about nutrition I think we're very much like teenagers where, when we first discovered the macro-nutrients, we thought we had nutrition licked and figured out. And then we learned about vitamins and minerals, and then we were like, "Now we have it figured out. Now we really have it down." And then we learned about phytochemicals, and it's like, my gosh, we keep learning more and more and discovering more about foods. And now we're even peeling back and looking at the microbiome and how that interacts with food, and they alter the types of foods that we gravitate toward, how we metabolize foods, food sensitivities, and things like that. And that topic, as you know, is just huge and we know very little bit about it.
- S1 11:42 It's interesting how the nutrition recommendations have changed over the years, and I know that there may be some people listening that are going, "Yeah, geez, they keep changing the story on us." Eggs were bad for a while, now eggs are okay. Just recently, the Dietary Guidelines say you don't have to worry about the cholesterol in the food you eat any longer. What would you say to those people who get frustrated with the changing story?
- S3 12:07 Well, I understand how it can be very frustrating, but I think at the end of the day the underlying message hasn't changed. The underlying message is eat whole foods, eat fruits, eat vegetables, eat whole grains, and minimally processed foods, and odds are you're going to be okay. Most of the changes really occur with a lot of the other pieces of it, so the one thing that the nutrition world actually agrees upon is nobody has ever come out and said, "Don't eat vegetables." They change their stance on protein, eggs and those types of things, but they've really never lashed out against whole foods. They've never lashed out against whole grains, and certainly never lashed out against fruits and vegetables.
- S3 12:56 That's the way I try to view nutrition is not from a subtractive standpoint, which a lot of people like to do. Don't eat this, don't eat that, my saying is, "What are you not eating? Let's put that into you." In sports you look at it the same way. If an athlete is deficient at something, you give them something extra to do. You don't tell them, "Okay I need you to stop doing this." If you have a baseball player who is a pitcher or a hitter I'm going have you stop hitting and I want you to work on this, no you still work on and develop it. And the same thing with nutrition, I want you eat more fruit or eat some vegetables or eat this one food, add this food into your diet rather than let's just not eat any carbohydrates.
- S1 13:38 Right. And so in talking about I guess sports performance with athletes here to reflect back on all your experiences that you had. If someone were to ask you right now, what do you think are the key factors that an athlete should focus on for success?

Assuming that they have basic techniques down, so we don't have skill development but you're worried about their performance. Would it be the nutrition side would be more important? Would it be rest and recovery? What do you think would be the thing that they need to focus on that most often they don't focus on?

S3 14:12

Well, I think you kind of mentioned them all there. There's rest and recovery-- and there's two things. There's recovery and then I say what's called "precovery". So, precovery is nutrition and sleep. Those are the fundamentals you need. And I think if I had to pick one, between sleep and nutrition, sleep goes first. It doesn't matter how well you eat if you're not getting enough sleep. A whole cascade of things occur that are undesirable. Not only that, people who are sleep deprived metabolize carbohydrates a little differently or their metabolism is depleted. You know, then obviously glycogen stores are impacted so there's a whole cascade of events there. But, sleep is first, which is precovery. Nutrition has to be next, which is precovery. Then, all of the other things to ensure optimal performance can follow suit. Otherwise, you're just not going to work well.

S1 15:07

It's interesting, Brandon, the thing you say about sleep because as we've interviewed athletic trainers, coaches, and other strength and conditioning people ,with college athletes in particular that's the one thing they say over and over. If i could get them to sleep more we would do better.

S3 15:24

Sure, its kind of funny I always laugh about this. People in athletics departments and athletic directors and coaches and strength coaches and athletic trainers, many of them have been guilty for years saying let's provide our athletes breakfast because that's the most important meal of the day. Well, with a chronically sleep deprived group like college athletes, why would I want to wake them up in the morning if I don't have to, to feed them. Let them sleep in. I would rather them sleep in and then I will see them at lunch or dinner rather than-- they are up late anyway. They go to bed anywhere between midnight and 2 A.M.

I don't want to wake them up at seven or eight just to eat if I don't have to wake them up. I just think it's big. It's a big thing, and it's one of the reasons when I go back in 2007 my first call to Stanford was to their sleep center.

S1 16:17

And integrated them into what you were doing there.

S3 16:20

Absolutely, absolutely.

S1 16:22

It's interesting you bring that up about breakfast. So many times I hear of the different teams having to do early morning weight lifting. They have to be in the weight room at 6:00 in the morning.

S3 16:35

Yep. And I get that because obviously at the collegiate level, you're kind of dealt these cards which say you can train in the morning and in the afternoon because the middle part of the day is reserved for classes. But I think that's where colleges and universities, not just to meet the needs of the athletic population, looking at the academic population-- let's start classes at 9:00, you know? Let those be the earliest classes. As least give some kids a chance to sleep in. And obviously, the devil's advocate would say, "Well, they're just going to stay up an hour later." Well, I get that, but I think some people will benefit from it.

S1 17:18

So, given your experiences, you obviously spend a lot of time thinking about what's next, what you can do different maybe to give your athletes an edge, but where do you see Strength and Conditioning world going in the next five to ten years? What do

you think are the new hot topics - maybe things we haven't mentioned so far?

- S3 17:39 Well, I think it's already changing and evolving. I think it's going into that world away from the old strength and conditioning, meaning: I think if you're doing strength and conditioning, you're only good at two things. You can get athletes stronger, and you can get them in better shape, which is very small potatoes considering the role of a strength coach, which is why I have used the term performance coach. Because really what you're finding now is a complete team integration. And with that, the new and innovative things coming down the road are just kind of building upon what we've already been doing for years in the private sector. Is, enhancing movement, and getting athletes to move better and function better. So even though we've done that for a very long time, we're learning some different modalities on how to do that.
- S3 18:30 Breathing has taken off in the past three years, four years now, where you're seeing a lot of people focusing on breath work. And the influence on breathing, and proper breathing, and diaphragmatic function on human movement, which is really fascinating stuff. So we now know the diaphragm can tie into movement, it ties into recovery, autonomic nervous system. So really that's a very impactful muscle that the strength conditioning world, so to speak, and even the athletic training world, for that matter, has kind of overlooked. So I think these movement based methods focusing less on how much weight somebody can push and more on proper function of the human body I think is really going to be the-- it's going to be ubiquitous down the road.
- S1 19:17 Yeah, along that line I think that you also represent one of the emerging trends and that is the development - and we can say emergence of - the human performance coach that works primarily with high elite athletes, high caliber athletes. I know you have some background work working with people preparing for the NFL combine and we're starting to hear more and more about coaches that these athletes hire in off seasons in particular. Sports Illustrated has done some recent pieces on some people like that. Do you see that as a trend that these aren't performance coaches that are associated with the University or a team but they're really more are privately associated with individuals?
- S3 19:59 Yeah, you know I think you'll see that too. I think it's just a whole business is expanding, everybody's finding little niches. For instance, I was working with some surgeons a couple years ago, optimizing surgeons performance. The surgical athlete is kind of an area which I've been focusing on for the past three years, no one's even touched. So really anybody who can perform with these guys and win it are standing all day depending on how long the case is, and in precarious positions. It's not like they're standing around a table like Grey's Anatomy. They are in very precarious positions from time to time for very long amounts of time and they eat terrible and they don't sleep much. So it's been fun to work with groups like that and kind of focus on advancing them a little bit, because that's a completely untouched area right now that people have kind of just walked over. They started going to technical athletes, tactical athletes, MMA group, but this is-- I think you're going to find a lot of different groups heading toward the normal population and those types of high- performance level.
- S1 21:02 Fascinating. So you say the surgeons now have all the characteristics of a college athlete.
- S3 21:07 Well, I don't know if they have all the characteristics [laughter] but they certainly have to execute specific skills. And the thing about a college athlete compared to a surgeon

is, take a baseball player-- you have this one little thing on the board, a whole category called "Errors." You don't want to walk into an operating room and see that category. So it's very different, hugely different, but fascinating at the same time.

S1 21:37

Well, Brandon, I'm getting the wrap-up sign here. We are running out of time and want to thank you for being with us. We always give our guests the opportunity to give us their take-home message. What's the one thing you want listeners to this podcast to remember?

S3 21:52

I think the biggest thing, I almost can tie it back to the nutrition piece that we spoke about, which is if you stick to the basics that haven't changed, you're going to be on the right track. So those whole foods and fruits and vegetables, and I think you're going to be just fine.

S1 22:07

Great take-home message. Thank you again for being with us today.

S3 22:11

My pleasure, it was wonderful to be here and to chat with you.

S1 22:14

Super. It's always great to take time to talk to folks that are out in the field that are trying to make a difference. And I want to thank all those of you that have taken the time to download and listen to this podcast. As we do at the end of all of our audio podcasts, we have for you a question of the week. And here with the question of the week is our producer, Ayland Letsinger.

S4 22:34

What is "precovery?"

S1 22:37

And there's the question of the week. Be the first one to send us an email at huffinesinstitute@hlkn.tamu.edu with the correct answer, and we'll send you one of our nifty podcast T-shirts. And again, we want to thank all of you for listening today. Brandon, once again, thank you for being with us. And for all of you, we hope that you join us next week when we have another interesting person from the world of sports medicine and human performance. And until then, we hope you stay active and healthy.

S2 23:06

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