

Dr. Lightfoot: [music] So our next speaker is an artist that deals with performance. Please join me in welcoming Mr. Dan Acheson from Drum Corps International to the stage. [applause]

Mr. Acheson: Howdy.

[Audience]: Howdy.

Mr. Acheson: So I'm holding in my hands a pair of 21st-century drumsticks. You say, "Okay, what does that mean?" Well, when you look at this rendering of this famous painting, Spirit of '76 by Archibald M. Willard, you'll notice that the gentlemen in that painting are using drumsticks. So 150 years later here's the drumstick. Looks pretty much the same as what is what 150 years ago-- or near 150 years ago. Grand pause. And here's the human being using and interacting with the drumstick. Here's the human being today interacting with the drumstick. You'll notice that the drum is significantly different. There's actually a carrier that has evolved in 150 years as well as the drumstick. Well, you also have a whole lot of market-driven research that has gone into the drum, the drumstick, and the development of the carrier. So let's look at these human beings as performers. Do you look at them any differently as sports medicine professionals or human development specialists? Perhaps. I hope so. Traditional sports equipment probably looks pretty close to what it looked like when the sport was founded. But probably a lot of technology advances ever since. What do we know about the golf swing? I bet what you can tell me is there is terabytes upon terabytes of information out there about how to enhance the golf swing, how to be better at it, what the body mechanics are behind the golf swing, and everything else.

What I'm here to tell you today is a lot more research has gone into these drumsticks and their development - that drum and the carrier - than has that marching band performer. And you say, "Really, Dan? This is about the marching band? What does that have to do with today's discussion?" Well, in fact, the marching band is the largest team on campus. And you say, "Well, okay. Team." Buttons. Anyone know this band? It's the finest military band in the world. Imagine if this gentleman with the trumpet decided to turn right instead of turn left. Bit of a quandary there in terms of what his other teammates might think of that response. So very simply, of course, marching band is a team. Is it really the largest team on campus? Well, let's look at it from the standpoint of Texas. So a variety of sources and research, including the National Federation of High School Associations, we have determined that marching band participation in the state of Texas is just under 140,000 students. What that means is about 140 students per high school. And what we also know is that it's been growing at a median rate of 5% since 2011. So indeed, Texas has a lot of marching band participants. And the obligatory bar chart-- traditional sports like football, basketball, cheer, and then you can see there the marching band is indeed the largest.

So we say, "Is marching band a sport, really? They're just band kids. Is it really a sport?" Well, sport is very simply designed or defined as physical. It's skilled, competition, and entertainment. So it has all the components of sport. And they also have to continue to make music at the same time. So 18 out of 50 states specifically allow marching band as a high school PE credit substitution, according to The Society of Health and Physical Educators. In the state of Texas, they allow their districts to make this decision. They do put a criteria on it of 100 minutes a week of vigorous or moderate activity in order to qualify for a substitution. Well, those that regulate band - marching band specifically - in the state of Texas only allow for 480 minutes a week of band rehearsal. Do the math and we can convince every district in the state of

Texas to make sure that that substitution is available for students. So moderate physical activity as defined by the CDC and The American College of Sports Medicine, includes playing instruments while actively moving, playing in a marching band, of course, twirling a baton in a marching band. And when playing in a heavy musical instrument, like a big drum or something like that, running in a marching band is officially classified as vigorous physical activity. So indeed we're making the case here that it's probably a sport.

So in 1993, Dr. Jeffrey Edwards was asked to measure the metabolic rate of this percussionist during a marching rehearsal. We asked him to do it again 12 years later for an ESPN2 broadcast of the DCI World Championship Finals. His conclusions were relatively the same, 12 years later. These kids are working very hard metabolically. They're doing the same type of work as a marathoner. Think about that for a second. And then let's throw a 50 pound drum on top of that. Think about that for a second. And oh yeah, they have to play the music, they have to do it in time, and they have to stay in step. So quite the heavy workload in everything that is occurring with that particular exercise. So for just a second, let's take a moment and let's watch a little bit of the activity here to see if we can identify athleticism. [music]

Keep in mind that all of that sound production was happening while those performers were literally running, but maintaining formations as they were doing it. So that was the Bluecoats from Canton, Ohio, one of the independent organizations - independent meaning not school affiliated - that tours with Drum Corps International in the summertime. They're like club sports. The best of the best of the community come together, audition, perform in these groups. They tour all over the country. They're accomplished either in dance or in their-- on their instrument I should say. And they do an amazing amount of work when they tour. They do a 5-week pre-tour camp, then 7 weeks of tour, 30 different cities, 12,000 miles traveled in the lap of luxury. They sleep half the time on the bus, the other half on a gym floor in high schools. So they're very committed. They pay to play. And they do this so that they can perform in front of large audiences.

This is not a Colts game at Lucas Oil Stadium. This is the DCI World Championship Finals where 25,000 people bought a ticket to come in and watch these performances. So marching band is more than a halftime production. Certainly that plays an important role to everything we do with football. And we all enjoy that very much. But there's competition all over the country. In fact, there's 84 bands competing at the Alamodome this weekend that are a part of a Bands of America competition. There's an indoor activity. The indoor activity serves tens of thousands of people literally all over the world. That occurs over the course of the springtime, and then the summertime activity, which you just saw a little bit of a performance from. So this activity-- and the point of all this is, is that they work year-round, much like traditional club sports might. Here's the challenge with all this marching around. It's an over-evolved and under-researched activity as it relates to the demands on the performer's body, mind, and spirit. It is also not as well supported by current sports medicine resources, as you might expect it would be, related to prevention and treatment issues relative to what a sport athlete might have. Again, it's an under-served activity in that regard. Marching band, marching music, could benefit greatly from the current knowledge that sports medicine and human development specialists have in this field.

So we know there's not a whole lot of research out there. That's kind of my point today. We're looking for more information so that we can apply it to what we do. Organizations like the Performing Arts Medicine Association and Athletes and the Arts, they're doing a great job of connecting sports science with the performing arts. But the marching band is kind of not quite in that mix either. So it's not a sport. It's

not a performing art. What is it?

So many of the sports med professionals that we interact with, they're not surprised by some of the activity that occurs and some of the treatments and so forth. They're pretty traditional in anything related to athletics. But here's an example of someone who tossed a rifle up in the air and she assumed pretty much that it was going to come down in her arms. And there's the rifle. Well this enlightened young man probably had been to one too many rehearsals, because he decided to show up to rehearsal prepared with his bike helmet just in case that rifle might have dropped. The serious side of this is concussion protocol is in fact very important in marching music as much as it is any sport. In a study presented at The American College of Sports Medicine 56th annual meeting, Dr. Gary Granata studied the 172 members of the Avon High School Marching Band in Indiana. He found 95% of the members reported muscle stiffness or soreness after practice. More than 38% suffered an injury. Many participants suffered nausea, fatigue, and feeling faint related to heat. Their study was done in 2009. A 2015 study of 21 college marching bands found that 25% of the band or color guard suffered a musculoskeletal injury. The National Athletic Trainers' Association put out an article where they offer timely recommendations to keep marching band members healthy and well prepared for activity. They released this on August 18th of 2017. I am incredibly grateful to the NATA and the work that they do and the fact that they've embraced the marching band. But if you release an article like this on the 18th of August, band camps have already occurred all over the nation. So it's a little after the fact is the point.

Performing arts health and wellness education focus of study could dramatically impact the experience of the performer as well as the audience who enjoys their performances. Marching band is now, and will continue to be, a platform for advances in human development that covers several disciplines. We've identified that there's not much information out there in terms of statistics for health and wellness as well as injury care for the marching music athlete. So we know for a fact almost how many pitches a baseball pitcher can throw in a day before damage is done to the shoulder. What we haven't done a good job of is applying that knowledge to a marching music musician. How long should they be out there rehearsing? How long should they be in the heat? What kind of uniform technology should there be? How about how many strokes on the bass drum, etc.?

So marching band is a sport. It is athletic. It is the largest team on campus. And it needs the same intensity and urgency any sport is given for the health, wellness, and safety of its team members. My vision for the Marching Music Health and Wellness effort is that one day soon there'll be a lot more advancement in study on the human side of the performer - known as the marching music athlete - than there is the drumsticks. I hold a significant amount of respect for the sport medicine health and wellness professional. And I am so grateful for what they do to help us work and play at a much higher level. I hope today I've given you just a little bit of insight and awareness into helping us all getting in step with the largest team on campus. Thank you. [applause]

Dr. Lightfoot: Great job, Dan. Thank you.

Mr. Acheson: Thank you.

Dr. Lightfoot: All my band friends are texting me saying, "Oorah" and all that other stuff [laughter]. They're really excited. So Ebony from Sam Houston has sent us a question. "Moving towards the future, are there any plans for DCI to collaborate with healthcare professionals involved with Marching Music Health and Wellness Project to start the regulation of health, safety, and nutritional standards?"

Mr. Acheson: Well, what we have done is we have what's known as the Marching Music Health and Wellness Project, which is a volunteer effort of sports med professionals and so forth that gather together specifically on the study of marching music.

Dr. Lightfoot: We've had several questions along this line and so I'm going to ask this from Keegan at Queens. "Why do you think that college marching bands are often overlooked regarding as being a sport?"

Mr. Acheson: I'm not sure, because what we do know is most college marching bands are a part of the athletic department, not the music department. So it's interesting to me that they aren't and we need to find out why.

Dr. Lightfoot: Jennifer Gonzales wrote-- and we always like to know why people got into what they're doing. And she says, "What got you into the dynamic and world of sports medicine evaluation of marching bands?"

Mr. Acheson: Wow. For me personally it started way back when I was teaching drill at a band camp. I walked into a rehearsal, and the first thing the band director did is say, "Mark, time, mark," which means start marching. There was no preparation whatsoever. There was no training, no care for the body, and no focus on hydration. And this was in the early '80s. So I took an interest from that point forward in this very subject.

Dr. Lightfoot: And here you are.

Mr. Acheson: And here I am.

Dr. Lightfoot: Right. And we're glad you're here. So thank you so much. Please join me in thanking Mr. Acheson. [applause]

Mr. Acheson: Thank you. Thank you very much. Thank you. [music]