I’d like to take this opportunity to give you a historical perspective of the Functional Movement Screen. The FMS has become quite popular as a way to identify basic movement dysfunction. It’s been used in a wide variety of sports medicine, strength and conditioning and fitness facilities around the world. But you may not know the history.

- Where did the Functional Movement Screen come from?
- What’s the background of the Screen?
- What’s the philosophy behind it?

Did Gray Cook walk into the office one day and say, “Here are seven tests. We’ll score from 0 to 21. Let’s go,” and a couple of years later, look what it’s become?

That’s not how it happened. I want to give you an idea of what did happen—from a guy who was there from the outset.

As more research and information comes out, people sometimes lose the intent of what the Functional Movement Screen was designed to do. In fact, I think that’s starting to happen now.

As any test, assessment or exercise becomes popular, more people look at it and take the opportunity to punch holes in it. Today, people are punching at things the Functional Movement Screen wasn't designed to do.

First and foremost, it’s a screen. Some of the comments we hear include, “It doesn't tell us this or that.” Well, that's not the intent. The Functional Movement Screen was designed to be a way to screen groups or individuals, much like blood pressure is designed to screen people. It's designed to tell us there's a problem. It's not designed to tell us what the problem is. It's up to you, as the professional, to dig a little bit deeper and figure out the problem.

The Functional Movement Screen is designed to provide an idea, to narrow down and rule out certain things. That's the way every screen is designed to work. A screen is created to be done quickly, easily, and to narrow things down. Look at it as a filter.

For example, if you know much about the movement screen, you know we have a shoulder mobility test. If you do well on the shoulder mobility test, you can rule that out as a problem. That's the way the screen was designed.

How did it get to this point? Where did it come from?

The Functional Movement Screen was designed in 1997; it’s been around for 15 years. The Functional Movement Screen used today was the one we first presented in 1997. However, when Gray Cook first brought forward the idea, the seven tests we originally started to play around with are not the seven tests we use now—those went through somewhat of an evolution.

Let me take you back to a guy coming out of graduate school in 1996, moving to Danville, Virginia. I got a phone call from Gray Cook asking me to visit so we could talk about opening a sports medicine outreach program.

Gray and I are both from a small town in southern Virginia. We went to the same high school. Gray and I have known each other all our lives. This is probably why we have the dynamic we have. It's almost like a marriage. We fight and get after each other, but at the end of the day, we’re brothers.

That dynamic allowed us to cultivate Functional Movement Systems the way we have. We’re our biggest critics, and that’s probably the best benefit we’ve had over the past 15 years.

I was just out of graduate school when he called and asked me to return home and work with him. Gray's a very dynamic individual, and talked me into moving away from the beach and back to Danville. Lucky for me, I took that invitation.

One of the first things that came up was when he asked me to evaluate an ankle injury. My background being in athletic training, I felt confident I could go into the room, evaluate an athlete's ankle, come out and tell Gray everything I knew about it.
Lo and behold, this cocky little guy coming out of graduate school takes his goniometer, goes into the room, gets all the information, comes back out and says, “He has a Grade II ankle sprain. He has this much range of motion. He has this much swelling. Let’s go in and do some E-stim. Let’s do some ultrasound. Let’s get this kid going.”

Gray then walked back into the room and said to the athlete, “Stand up. Bend over. Touch your toes. Lean back. Squat down.”

Granted, the kid was mobile. He had a chronic ankle injury. He wasn’t non-weight bearing, and had some function. These things Gray was asking were not above and beyond what we would expect to see.

However, Gray wasn’t looking at the kid’s ankle. At that moment, I was thinking, ‘What in the world am I doing here?’

What transpired after that was unique and interesting from my perspective.

We walked out of the room and Gray asked me what I thought. I said, “Gray, I don’t know what the hell you’re doing. The kid has an ankle sprain. You’re having him bend backward, touch his toes, twist around and do all these different movements.”

Gray said, “That’s right. We’re treating him. We are not just treating his ankle.”

Gray pointed to the paper and said, “He has a Grade II ankle sprain written on his physician’s evaluation. The doctor already told us he has a Grade II ankle sprain. We knew that going in, but we now have to figure out the best course of treatment based off of the entire body.”

In Gray’s mind, from his background in physical therapy and his way of thinking, even back then he was already looking at the individual. I was still focused on the ankle. I didn’t have his perspective. That’s when the light bulb went on for me. I thought to myself, ‘Wow. This is a revelation. I need to stick with this guy and figure out how to look at people.’

Back then, Gray had a unique way of evaluating people, and how to look at the different parts of the body—not just how the parts worked, but how the parts affected other areas. This way of thinking was nothing new, but it was new to me. Gray had been taught and had the background from people like Vladimir Janda, Shirley Sahrmann and Gary Gray.

Those people had an influence on Gray, but he took things to another level. He was looking at movement patterns during his evaluation of something as simple as an ankle sprain.

A few weeks later, Gray walked in and suggested we come up with a screen to look at athletes. My responsibility at the clinic was to do sports medicine outreach. I was the athletic trainer at a high school where we had approximately 500 athletes. My job was to be a typical athletic trainer, trying to keep these kids on the field, do whatever was needed, and get them into the clinic whenever needed.

We also did high school physicals in the surrounding area. I was constantly bringing in athletes who had chronic injuries, low back pain, knee pain and shoulder problems.

Using Gray’s perspective, I started digging a little bit deeper. A kid has a back problem. What might be causing this?

Gray suggested we screen some of the athletes during the pre-participation physical to give the doctor areas to look at a little closer, as well as allow us as sports medicine professionals to suggest stretches and other ways to exercise.

Corrective exercise wasn’t a term that was thrown around at that point. We were simply trying to identify dysfunctions and help correct them during the pre-season pre-participation process. This idea of a movement screen was based on seeing if we could make an impact in the high-school setting.

Gray’s idea was simple. Let’s look at the fundamental movements. Let’s look at some of the movements we’re using in our day-to-day clinical practice and see if we can put them into a group setting like a high school pre-participation physical.

We were doing 500 physicals at a time in the high-school setting. The idea of screening the groups was challenging. It’s even challenging now, but that was the idea. Take the philosophy of looking at
movement and put it into a package we could then carry out. That is the essence and heart of a good screen or a good test.

Gray suggested his ideas of the seven tests, and at that point it consisted of a squat, a rotation test and a step-over. The lunge wasn’t part of the screen then. We counted push-ups and did a quadruped test. These were different tests than today's movement screen.

From that idea, Gray, Kyle Kiesel, a couple of colleagues and I sat around a table, wrote on the wipe board, played around with the ideas, then screened hundreds of athletes trying to discover the best tests. We quickly realized we couldn’t count repetitions and identify the things we were trying to identify.

The original idea Gray had was a cross between a test and a screen. It wasn’t a screen because at the time we were counting repetitions and looking at different things. We quickly realized we couldn’t do this much, so we started looking at one repetition. Could we give a person one repetition that would give us a perspective of what we were trying to identify, which was major dysfunction?

That took us down a different path. We still liked the push-up. We liked the rotary stability test. In the crossover step, there were too many variables. We couldn’t figure out how to put it into the screening process. The screening process we were looking for just consisted of some simple bullet points.

The intent was never to assess people. The intent was to look at these major fundamental patterns and discover the biggest dysfunction. Our idea at the time was to implement it in larger groups. Try to make it quick. Try to make it easy. If we were going to make it quick and easy, we couldn’t turn it into an assessment.

What we wanted to do was to give the physician, the sports medicine professional and the athletic trainer this information so they could then do a deeper assessment. Take 100 athletes and eliminate 75 percent of those who don’t have major problems. Eliminate most of them who don’t have pain. They can then go out and have a better foundation to exercise or to go into practice. That’s what we were trying to do.

In 1997, we came up with the seven tests you see today, but it took nearly a year from the time Gray came in, threw this idea on the table and said, “Here are the seven tests I think we need to look at.”

We took the ball and ran with it. We tweaked it. We changed certain things. And in 1997 we came out with the seven tests you see today.

And look what’s happened over the last 13 years. The first 10 years brought a lot of scrutiny, but not so much the scrutiny it’s under today now that it’s become popular and more people are looking at it.

Back then it was under our scrutiny.

We presented the Functional Movement Screen anywhere we could. We talked about the movement screen at different local, regional and national conferences. We just presented the idea because we were trying to get the information out in order to get a better perspective of what was and wasn’t working. We wanted to figure out what is normal. How should a person be moving?

We didn’t talk a lot about exercise until we started figuring out what the movement screen told us. How do these people move? How do these athletes move? What are the major problems? Then we could talk about exercise.

The screen became popular with certain Division I institutions. Professional teams and hospitals started using it. They weren’t using it as a part of their decisions, but were trying to figure out and play around with it to do their own internal research.

The first research study on the Functional Movement Screen didn’t come out until 2007, 10 years after we introduced it. That was after 10 years of feedback and a lot of clinical research. A lot of people said, and continue to say, “Let’s try this out. If it works, that’s great. If it doesn’t work, we’ll try something else.”

The one thing that hit me early on was that when the professional sports teams started using the movement screen, they weren’t doing the
movement screen because the research said to do it. They're doing the movement screen because they've seen some benefits in using it.

That's when I knew these seven tests told us something. That's when I felt we had actually created something that was unique, because a professional strength coach, athletic trainer or pro athlete doesn't necessarily rely on research. They rely on what's getting the job done. Those were some of the first places it was successfully implemented—at some of the highest levels.

We started getting more and more feedback. We started designing better corrective strategies. The corrective exercise, the functional exercise, was already there based off Gray's unique way of functional evaluation, but how we laid things out continued to evolve as we got more feedback from the screen.

The exercise and the interventions continue to change to this day. They changed quite a bit from the early onset in 2000 through 2002, up to 2004 and 2005 and now. There was a lot of change in how we looked at exercise and how we took the information from the movement screen.

Early on, like most of us do, we thought the deep squat was the best thing to look at because it gave such a good perspective of basic movement fundamentals. It shows everything. But over the course of a few years, we soon realized the four bottom tests—the more primitive tests or the mobility aspect—actually gave us a better perspective on how we needed to correct the things the squat told us.

As an example, if we see poor shoulder mobility and a poor deep squat, that shoulder mobility may be creating a squat problem. That's what came out of the Functional Movement Screen. Those were the types of things we looked at as far as intervention, and this is what continues to evolve.

The seven tests of the movement screen became pretty solid in 1997, but the information we gathered over the course of four to six years helped create a better corrective exercise philosophy. We use the results. We use the information to figure out the best way to create a better corrective intervention and a better way to train an individual.

In 1997, we weren't sure we knew the answer to that. I'm a lot more confident now based on what the movement screen has told us over the last 15 years—not the other way around.

There's a big misconception that people have to do certain exercises. Well, maybe or maybe not.

What's the best exercise? It depends on the person. We've figured that out based on how each person moves, because if a person has pain in the shoulder or back, we need to figure that out and look at that first.

The Functional Movement Screen has evolved, but not so much the tests. Many people question that and think we've changed things. We haven't. What we have changed, and what will continually change, is what we do with the information.

There's a lot more research available now, and more research coming out. I see a lot of abstracts. There's new research coming down the pipeline that's going to be published over the next year, some very interesting research.

However, to a degree a lot of the research is like any test or assessment. There are some that are positive and some negative. Obviously, and fortunately for use, there's much more positive research on the movement screen than negative.

The reliability of the Functional Movement Screen is rock solid. One of the biggest things coming out of the research is that it's a reliable way to look at movement.

We can debate all day long on the exercise interventions, but let's all agree that the movement screen is a fundamental way and a quick, easy test to identify movement dysfunction. But if we agree on that, the intervention piece is still going to be more difficult for us to navigate.

That's one of the biggest things research has told us so far. There's some research that says the FMS shows some relationship to injuries. There are a few research articles out that say it does not. To this point, it depends on the population. There's some
research coming out in the next few months on older people that shows a relationship to fatigue.

We have a very interesting research lit review on our website at functionalmovement.com. If you're interested in the research, take a look at that.

However, let's go back to the history and to the intent of the movement screen. As misconceptions develop or as websites suggest the movement screen is not something to look at, what's the original thing to look at when movement screening?

The number one thing you need to think about is whether people have pain. Why would anybody debate that? Why would anybody say it doesn't matter? The original intent was to simply create a baseline of the biggest dysfunction, using these movement patterns to do that. Quite simply, that's the intent.

First and foremost, does the person have pain with the tests? If we see pain with the tests, it needs to be addressed—people who debate that shouldn't be creating exercise programming. That's the most important function of the Functional Movement Screen: Does a person have pain?

Secondly, does the person have any major dysfunctions? If a person has a major dysfunction and can't even get into a position in the movement screen or can't complete a pattern, is that person ready to advance in exercise?

Those two things in a nutshell were and have always been the major objectives of the Functional Movement Screen. Where is the biggest dysfunction? Does the person have pain?

When we added the ‘0 to 3’ scoring system, people became confused. What do these scores mean? It takes time to delve a little deeper into those scores, but at the end of all of this, does the person have a significant dysfunction or does the person have pain?

If you can appreciate that, the movement screen can tell you more as you get into this type of philosophy and methodology. The scoring system can be as complicated or as easy as you want to make it.

Depending on your setting and on how you're looking at it, screening can be quite simple. You can look at the basic scoring system ‘0 to 3’ and give a score of ‘15.’ You can look at the different movements within the score of ‘15’ and quickly identify where you need to start. You can just look at the score of ‘15.’ What does tell you?

People think they need to be above a ‘14.’ That's been the latest idea. But you need to dig deeper. You need to look at what makes up that ‘14.’

The original research from 2007 said if you were below a ‘14,’ you're twice as likely to be injured. Well, that research came from professional football, which is a very good place to start because we know they're setting themselves up for injury.

What makes up a ‘14?’ Because we score each individual pattern, there are a lot of ways to get a score of ‘14.’

A ‘21’ is a perfect score. You can have ‘18,’ which is a very high score. This is above what the research is alluding to, which is a ‘14’ being a good score. But if you’re above that ‘14’ at ‘18,’ does this mean you’re less likely to be injured? Some of the research suggests this.

But what makes up that ‘18?’ You could have a ‘0’ on one test. You could have pain. You could have a ‘1.’ You could have a significant dysfunction, but still have a score of ‘18.’ You need to dig deeper than the total.

Again, look at the intent of the Functional Movement Screen. Go back to what we were trying to do in 1997, which was to create a basic, simple test that would help us identify the biggest dysfunctions, and from there create the best intervention. That's still applicable today.

You can use the screen differently depending on your setting. If you’re a personal trainer working in a typical personal training studio, you’ll want to look at all seven tests. You’ll dig deeper and maybe do a longer assessment.

People in the collegiate setting where there are 100 football players walking in the door may use the
information from the Functional Movement Screen in a different way. That’s what makes this test unique.

That’s what has allowed this test to undergo the scrutiny more from ourselves and some of our colleagues and other professionals who’ve used it—and now is coming under scrutiny with research.

That’s what allowed it to evolve over the past 15-20 years—not so much the screen itself, but what the information tells us. That’s one of the most important things to consider.

As you look at the Functional Movement Screen today, it hasn’t changed. The seven tests haven’t changed since 1997. What has changed is how we use the information the movement screen gives us—how we create our corrective strategies. That’s always going to change. It’s always going to be up for debate.

If we can agree the Functional Movement Screen is a good baseline, my next question is, “Have you affected and improved that baseline?” And more important, in some cases, to make sure you haven’t created a bigger dysfunction.

A good score on the movement screen is a ‘16’ with no asymmetries—to me that’s a good score. That tells me the person is ready to work out.

As a fitness and exercise professional, your job at that point is to train the person hard without creating dysfunction. This is sometimes just as hard and maybe just as important as trying to help a person who has significant dysfunction.

Take a person who moves very well, who moves great. Get the individual bigger, faster and stronger to help achieve the fitness goals without adversely affecting the movement screen.

The Functional Movement Screen is the baseline. What you do with that information is quite different depending on the setting.

However, let’s all agree. Let’s understand where the movement screen came from to appreciate it is a fundamental test that can be used in many different settings. If you understand that, you’ll get a lot more out of the movement screen.