



**Episode 59 Transcript**

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### ***Michael McGurk on the Future of Army Fitness***

**Nick Collias:** Hey everyone, welcome to *The Bodybuilding.com Podcast*. I'm Nick Collias, the host here. So, recently, one of my fellow employees here at BBcom headquarters announced that he had enlisted in the Army reserves, and would be leaving for basic training this February. And we'll miss him, and we're proud of him of course, but this news kind of sent me down the rabbit hole of Army fitness and the current state and culture of Army fitness. And what I quickly discovered was that the U.S. Army is in the middle of a massive shift in the way it measures and prioritizes physical prowess.

Now you don't have to be a veteran to know the basics of the Army physical fitness test, it's pretty simple, right? Max push-ups in two minutes, max sit-ups in two minutes, and a two-mile run. That's the old way, and it's been that way for a long time, since about 1980. But starting this year, and really kicking into high gear next year, the Army's going to have a new test called the Army combat fitness test. And it couldn't be more different from the old test. It's six events, and it does far, far more than just test your upper body endurance and your running or [cardiovascular ability](#).

On the contrary, it seems to take some of the strength and power principals that I've seen strength coaches and smart personal trainers advocating on our site and other sites for years, and it really puts them to the test. And honestly, my first thought looking at it was, "This looks like a lot of fun to do in the gym."

One big change is that it has a ton more equipment, really specific equipment like a trap bar or a hex bar, a weighted sled, some kettlebells. Plus, a lot more stuff than that. And only really one element from the old test survived. But before you think, "Oh jeez, the Army's drunk the functional fitness"

or [CrossFit](#) Kool-Aid or whatever, I wanted to talk it out with some of the people who are actually behind it. So, I called up Michael McGurk. He's the Director of Research for the U.S. Army for initial military training. And before that he had a long, diverse career in the military working as an infantry company commander and captain, a lieutenant colonel, and internationally for the U.S. Department of Defense. He has a deep knowledge of Army operations and culture, and this project was a really personal undertaking for him. He gave me all the background on how the test was created, and what they have planned for it, so let's listen in.

**Nick:** Before we really dig into the test in detail, I wanted to talk with you a little bit, you know get some background on military fitness and specifically on your history with military fitness. You're a retired colonel, and I wanted to ask you what your history with fitness tests and Army fitness tests is like. Maybe the first one you remember taking, and how your opinion of them has grown or shifted over time.

**Michael McGurk:** I enlisted in the United States Army in 1979, into the Army National Guard. And the first PT test I took was in July 1980 at Fort Dix, New Jersey as a member of the Army going through basic training. And I, in fact, still have my PT card from my first PT test. And it just so happens that in 1980 was when the current three event PT test was introduced. And unbeknownst to me, my unit was in some sort of beta testing of it, because we took the new PT test before it became official in October. So, I took it in July and August, when it was still kind of diagnostic, and that's what we took as a PT test.

**Nick:** Oh, okay. Were you anticipating that at the time, or were you anticipating the older test?

**Michael McGurk:** No, I was 17 years old, I was trying not to get yelled at by the drill sergeant, and trying not to do any more push-ups than I had to.

**Nick:** Okay, so what was your experience with that test like?

**Michael McGurk:** Well, so the Army's changed quite a lot since then. So, we didn't have a PT uniform back then. You wore your fatigues, and you took off your top shirt and just went to a T-shirt. So, you had a T-shirt and long pants and sneakers. We had athletic shoes then, but you had to bring your own. And we had a wide variety of shoes because we had no standards for shoes. So, you had everything from Keds high tops to running shoes to tennis shoes or anything in between. And we did PT back then gender separated. So, the males did PT and the females did PT for the running part of it in different groups.

And it was the military traditional, the daily dozen they used to say, you know push-ups and jumping jacks and mountain climbers and all these various exercises, and then running. And the standard for physical fitness then was a pretty low bar. If you know your American history, the draft ended in the mid-70s, so this is the early 1980s, '79, '80, we're coming out of the drafted Army into an all-volunteer Army. And the recruiting challenges have started and we're trying to man an Army at that time, it was probably about 875,000 people in the Army, probably almost double the size of the Army that it is today.

**Nick:** And do you recall what your score is, not to ask too personal of a question here?

**Michael McGurk:** I'd probably have to look it up here. I did okay. I didn't do great, I didn't do horrible, I did okay. Sit-ups and push-ups and running for a 17-year-old weren't that challenging back then.

**Nick:** When you were going through this, and I'm sure you had to go through many more of them, did you feel like it really carried over, that specific standard into how effective you were at your job?

**Michael McGurk:** No, I don't think anybody had ever thought that. It used to be a running joke that when the Russians came across the Fulda Gap in East Germany that we were gonna drop down and do two minutes of sit-ups, two minutes of push-ups and run two miles, and the Russians would obviously run the other way because they'd be scared of our physical prowess.

**Nick:** Or that you'd make them do the same thing.

**Michael McGurk:** Yeah. It was not, and so you have to understand historical context and everything else. If you remember [Jim Fixx](#) in the [Book of Running](#).

**Nick:** Sure.

**Michael McGurk:** Early writer there, running was really big in the early 80s period, and there was a lot of thought in the U.S. military that the days of soldier-on-soldier confrontation have ended, and we're in the nuclear rocket age, and that the next war is going to be all push buttons. And so there was a thought that fitness was important for health, but not so much for your military duties. You had to be in good shape, but it wasn't anything really excessive. And it was very much health-related.

And also, the integration, the Women's Army Corps as a separate corps went away in 1979 and then in 1980 it just became the United States Army with females fully integrated into it. So, we went to one standard PT test for the one Army and it was sit-ups, push-ups and the two-mile run. With the advantage being that it took no equipment to do, and you could do it virtually anywhere. And it is a fair indicator of health. But it is not a great indicator of readiness for combat.

**Nick:** Sure. Well, and I've read, and correct me if I'm wrong, that the test used to change fairly regularly, almost on the decade for decades leading up to that. But then after 1980, for almost 40 years we had the same standard. Why was that?

**Michael McGurk:** I think we were a little bit complacent, I would say. There were at least three attempts to change the test from 1980 going forward. And they run into various obstacles along the way. Either it's a, you know, the country is in a recession, or the military's budget levels are very low and we can't afford to change it, or it's seen as overly complex, or personalities of people involved or something. Or the choices that were made, the last one before this, the decision was that a new test without equipment was not sufficiently rigorous to justify changing the test.

So, I can develop a PT test that's different than the one that we have that doesn't need any equipment. But the assessment that it's going to give me is not going to be any much... much better for combat than the current PT test. Because I'm not measuring things that you need equipment to measure. A great example of that is a standardized measurement of strength. It is really hard to do a standardized measurement of strength without lifting something very heavy.

I mean, I can develop strength without having equipment. I can have, you know, my buddy sit on my shoulders as I do push-ups, and that will help develop strength. But when you talk about a standardized measurement of it, that's harder. Because depending on who your friend sitting on your shoulders is, they weigh different amounts. And when you're doing assessments you've gotta be

standardized, and that's one of the challenges.

So, to do a standardized assessment, you need to be lifting something that's standardized like a kettlebell, like a barbell, like a dumbbell, and that's equipment that costs money. And there was just not an appetite for that until recently.

**Nick:** What do you think changed, and how did you come to be involved in the creation of this new test (that we'll dig into the details of shortly)?

**Michael McGurk:** Okay, so I think one of the things that changed is the world, I mean just globally in a large sense, is the world kind of changed. We have developed better knowledge. Obviously, I have a slide somewhere around here that shows 1980, and you gotta remember that we had the Sony Walkman, and you have a VCR that's the size of a small suitcase that you put on your shoulder to take videos of people. And we go from a Sony Walkman to a Sony Discman, to an iPod, to a Nano, to an iPhone. I mean you see the evolution in technology. The same thing has happened in the sports and fitness world. We know a lot more now than we did 40 years ago about how to get people into shape and how to prevent injuries and how to do things better.

At the same time, we have seen some would say a decline in the general fitness of the American population. Partly due to the success of our economy and nation. It's given us more leisure time. We've become more a society that does services rather than producing goods and the manual labor associated therein. So, we've become, in some people's minds, softer. And so, the military has recognized that. And so, we just saw a need to have a little bit more toughening-type thing, so we developed a new test based on the requirements that we have for soldiers in combat. Which would have been born out, we've been at war now for 18 years, so we can see that that is a requirement still for us.

And some of the war that we have fought has been very much on the ground in very difficult circumstances. Like Afghanistan, the mountains of Afghanistan, and the physical effort required to perform at altitude.

**Nick:** And some of those things have always been true, and will always be true of what you need on the battlefield. Being able to carry something, being able to carry somebody, being able to move quickly and explosively.

**Michael McGurk:** Exactly.

**Nick:** Okay. So, was this something that you personally really wanted to be involved with? Or was it something that kind of fell to you?

**Michael McGurk:** I would say, if we're gonna be honest, it fell to me. But I have very much enjoyed being associated. So, I am a researcher by trade right now, but my initial career was in the Army as an infantry officer. I went to basic training as a private, I then went from the National Guard to West Point. I went through the fitness program at West Point, I took strength and developing courses at West Point. I took weightlifting courses at West Point. I then went to the Army's officer basic training, airborne school, Ranger school, Pathfinder school, light leader school. Spent my first four years in the light infantry and then another 10 years in infantry units after that. So, I had a pretty good taste of the physical nature of the Army, and I was in pretty good shape, probably.

And from that, the Army and I together chose my secondary career in the Army, which was in research. And so, I started doing personnel research in the mid-90s, and I did work at recruiting command, and then later at Army accessions command at Fort Monroe, Virginia. And then I did some other Army jobs and retired in 2011, and took a job as the Director of Research and Analysis here at the Center for Initial Military Training. And so, as the Director of Research here, I oversee a wide variety of research programs. We do research in partnership with other locations, mostly. We have a small staff here of talented professionals and it works best when we partner. So, we work with civilian universities and a lot of government laboratories and research centers.

And so, I've done research with my team here around iron deficiency in soldiers. Bone health in soldiers, nutrition in soldiers, and physical fitness.

**Nick:** Okay, so you have a fairly holistic picture of what health looks like or doesn't look like in the United States Army right now?

**Michael McGurk:** Yeah. And so, when we talk about health, the term that we use in the Army now is "Holistic Health and Fitness." Which we call H2F for short, 'cause we like acronyms in the Army. So, holistic health and fitness is a system that covers the spectrum of health and fitness. So, we talk about mental health, we talk about psychological health, we talk about sleep, nutrition, diet, exercise. All of that together. Because those systems are symbiotic. I mean, they interrelate to each other, they're co-dependent, co-used. Much like when you do a physical fitness workout, you work on different muscle groups in the body for body fitness. For a human being, you have to work on the different systems in the body as well and get them synchronizing together.

Your top bodybuilders are not going to perform very well if they have a very, very poor diet and are eating horrible foods. Would you agree?

**Nick:** Oh, absolutely.

**Michael McGurk:** So, the question is how you can best balance that. And obviously we take in about 120,000 soldiers a year. So, that's a pretty big freshman class. So, 120,000 kids in the freshman class for the U.S. Army, and a lot of them don't know anything about holistic health and fitness. They are not well-informed on how to work out, how to get their body in shape, how to eat properly, how to sleep properly, how to reduce stress. And so, part of our goal is to be able to teach them those things.

**Nick:** So, when the task came to you then, of "Alright, time to not only create a new standard of fitness for the Army, but research what will be the most effective thing." Where did that start for you? What did the early days of that look like?

**Michael McGurk:** So, I believe in the Ronald Reagan theory of leadership. Which is, you don't have to be smart, you have to have smart people working for you.

**Nick:** I believe in that as well.

**Michael McGurk:** So, the very first thing that you do is you start building your bench. And so, I looked at who I had working here. And I had some very talented people, but I didn't have the right talent for what I wanted to do going forward, and I wasn't sure what I needed to do going forward. So, the first thing you start doing is start expanding your staff and hiring more people in regard to the

resources that you have. And so, you go to your leadership and say, "Hey boss, I've taken initial look at this, and what I know is, we don't know what we don't know. And I'd like to bring on these two or three people to start out with." And the bosses here have been very supportive and said, "Okay, let's start with that."

And so, one of the first and earliest people I hired was a gentleman that goes by the name of Dr. Whitfield East. And Dr. Whitfield East has his Ph.D. in exercise science, actually an EED in exercise science. He's been a Ph.D. doing this for about 30 years, and he spent his last 16 years at the Department of Physical Education at West Point. So, one of our premiere institutes for the military for physical fitness would be the United States Military Academy at West Point. And he had spent 16 years there as an instructor and coach and trainer, and he had in fact instituted the kinesiology major there. So, I convinced him to come work for me part time for two or three years. And then I then convinced him to quit his job up there and come work for me full-time.

**Nick:** I can imagine that somebody in that position probably relished this opportunity as well.

**Michael McGurk:** Well, and Dr. East's personal passion is the Army physical fitness test. And in fact, if you search him online, you'll see he's written a book on it. Literally, he's written a book on the history of the development of Army physical fitness, and he takes it from the Medici's and the medicine ball up to current U.S. Army. So, probably about four or five hundred years of physical fitness. He's done extensive researching. So, he has a really good idea of where we've been and what we've done and where we're kind of lacking.

And then so to add to that, I brought onboard some medical expertise. I hired a, what we call the surgeon here, which is a physician assistant. The current one I have also has a degree in exercise science, and was enlisted before she became an officer. And when she was enlisted, she worked in orthopedics. So, she had a good background there. I brought in a nutritionist, who happens to be a CSCS and a sports nutritionist. I brought in a physical therapist who wrote chapters in the book The NSCA Test Manual. And is a pose runner instructor and a bunch of other qualifications.

So, yeah you bring in some very talented, very bright people and let them do their work.

**Nick:** So, now we're over 20 minutes almost in here, I want to finally reveal some of what's actually in this test, and then ask you about how it came to be. So, the first element is a three-rep max (3RM) trap bar deadlift. Which I think is really interesting, because a three-rep max is not how a lot of people measure their strength. I hear our strength coaches say all the time, "You don't need to do more than a three-rep max." But you know, people think of well, how much can you pull? How much can you bench press? How did you land on the trap bar, and on a three-rep max as the measure of strength?

**Michael McGurk:** Okay, so first of all, the trap bar. So, not everyone's familiar with trap bars. It depends on how much lifting and stuff you do. So, one nice thing about a trap bar is safety, to a large extent. So, if you use a trap bar by the handles that your hands are going to be placed on, running front to back as opposed to sideways, it forces you into largely the correct position for deadlifting, to be able to reach those handles on those bars. It is really hard to lift a hex bar without bending your legs and having a straight back. I suppose you could do it, but it's hard.

**Nick:** It's definitely harder than a barbell.

**Michael McGurk:** Yeah. And so, it makes it a little bit safer for us. And if you were lifting too much weight and you drop it, it tends to do a little bit better. It tends to not. So, there was a big safety aspect in there. And as far as coaching and training people through it, it was really easy. So, we really liked it on that. And we went Olympic-sized, obviously for the standardization reason on it.

And the three-rep max, because we're looking at a total assessment. So, we're looking at all the different components of fitness, and we're not overly concerned with any single element of fitness. And we're also not concerned with huge extremes. Because it's not a competition for us, so we have to face that. And it's not that we all have to max this event, it's what we call occupational fitness. Now some people say functional fitness, but we don't really like that term that much. We much prefer calling it occupational fitness.

And our occupation is being a soldier. And so, the question is, what is the level of fitness you need to be a soldier, and to be a successful soldier? And the difference with ours is, you're gonna have to pass six different assessments, not just one. So, we think about people that are really heavy into weightlifting or something, they're often really good at one event. They're really good at the snatch or the clean and jerk or the [deadlift](#), right? But they're not so good at other events. So, how many people do we know that can go out and medal in the deadlift, and then go out and medal in the 300-meter, or the 400-meter? There's not a whole lot of people who can do that type of fitness across the entire body.

And the Army is looking more for the type of athlete that's more of, we would say a decathlete type of athlete. One that's good in a lot of different events. Because the job of being a soldier creates a lot of different physical stresses on your body.

**Nick:** Sure, and one thing I've always liked about the trap bar. I know it's not the sexiest implement, because some people view it as just easier than a barbell. But I've always found it more comfortable, and it's just, there's something about it that reminds me a lot of growing up on the farm, lifting heavy buckets, you know? And I knew how to lift a heavy bucket when I was a kid, when I was a teenager. And then once I got in the gym, and there was this barbell in front of me, it felt so foreign to me the first time. It took me forever to even figure out, alright how is my body supposed to do that? It seems like it's a much more... If it feels like it has a little bit more carryover to actually carrying things, for one.

**Michael McGurk:** Well, I'm glad you led us down that path. I could have told you the same thing, but I'm glad you led us there. So, if you think about it, one of the things that we occasionally have to do in the military is lift heavy objects. And what are the types of things that we have to lift? Well, often you have to carry two cans of ammunition some place. And what does that look like? It's kind of like a deadlift with a trap bar. You have to carry two five-gallon water cans. What is that like? It's kind of like a deadlift with a trap bar. And if you had to pick up the handles on the end of a stretcher and carry your end of the stretcher, it's kind of like picking up a trap bar.

And so, yeah, it was a conscious choice on that as well, because the movement of a trap bar is much more functional to the daily activities in the military than an Olympic bar or straight bar would be.

**Nick:** Sure. Now one unique thing about trap bars is they have different heights, often. There's high handles, low handles. How is the Army handling that? Is it going to be fairly uniform?

**Michael McGurk:** We're no handles. We're straight, flat.

**Nick:** Oh, okay.

**Michael McGurk:** We don't use the D handle ones. If we have D handle ones, the high handles are only used for warming up, if you want to warm up, you can use them. But when you're actually lifting for any of our graded events, it's the flat handles. There is no extension handles authorized.

**Nick:** And during testing so far, has it been, somebody calls out the weight that they want to use like a [powerlifting](#) meet? Or does it sort of gradually slide up and you say, "Alright, here's the benchmark that everybody needs to at least meet."

**Michael McGurk:** Okay, so the way that we work it is, it's kind of unique. 'Cause you're testing, okay? So, one of our things about testing is, we have to have, you know there's time limits because you're testing, and how many people you can put through a test. And so, if I were to ask any soldier in the military how fast he runs two miles, they can all tell you. Do you know why? 'Cause they've done it a lot and they've been tested on it a lot. And so, by the time you've showed up for a test on my deadlift, you will have been deadlifting for probably several months before you came for my test. So, you'll know what your deadlift is already, and you'll know what your three-rep max is.

But when you show up on test day, what we do is we give you two attempts, and your two attempts are to successfully achieve three deadlifts, a three-rep max. So, typically a soldier wants to get on the scoreboard. And if you've ever been in competition, you know it's important to get your score registered, right? You have to get a score in. Maybe not your best, but you got to get a score in.

So, if I were to walk over I might say, 240, and there's probably be 10 or 15 hex bars set up there. And I'd walk over to the one that's 240, and I'd go over and I'd do three reps on 240, which allows me to pass the test. The minimum test score on our current test, it's 140 is minimum. So, 240 is well over what I would need to pass the test. So, I go over and I lift 240, and I do three reps, I put it down. And then he says, "Okay, you completed your first attempt successfully for 240, do you wish to take a second attempt?" And I would say, "Yes." And then I would step out of that bar and I would move down the line to a heavier bar. I might go over to 340, and then I do three reps with 340, and then he goes, "Okay, 340's your score."

But if for some reason I failed on the 340, I could only make two lifts and then I couldn't lift it again, I still have a score and I've still passed the test. So, there's kind of some technique in there.

**Nick:** Okay. And there's a time limit on that as well, I'm imagining, right?

**Michael McGurk:** Yeah. I think it's two minutes on our time limit for that, once you start your lift. We haven't really had a challenge with people in time on it. It's a pretty straightforward event. And it's not one that takes a lot of time.

**Nick:** So, then from there, somebody moves onto a standing power throw with a 10-pound medicine ball, throwing it over their back for distance, right?

**Michael McGurk:** Yes. And so, the first time you see this you say, why did we choose this? I mean the first time you see it, it's kind of like, "Wow." So, what you got to realize is, you're trying to measure different components of fitness, right? So, the deadlift obviously measures strength, right?



So, what is this one measuring? Well, it's measuring explosive power, because you're generating explosive power as you drive up with this ball to throw it. It's measuring a little bit of speed, because you know the explosive power has a speed component to it as well. But it's also measuring balance, coordination, and flexibility. So, it's actually one event that's measuring a large number of things.

Someone says, "Well why are you throwing it backwards for distance?" And I said, "Well, if you're throwing it backwards for distance, that's something we can measure and we can scale." 'Cause if we threw it straight up in the air, I could measure how high you threw it, but since the ball never stops, it's really hard to measure how high up it went. So, you have to go for distance. Because in order to make it scalar, that's the easiest way to do it.

And there's a little bit of technique to learn. I mean, people learn if you release too early or release too late, you don't get as much distance. And they gotta do a little bit of practice. And that's also good for hand-eye coordination and balance. It's a really nice event. If you haven't tried it, you should try it. It's a fun one to try to see how good you can get.

**Nick:** Yeah, and it's not something that I've done a lot of. Unlike the trap bar which is a fairly-recent invention, I think just going back to the 80s or so. People have been throwing around medicine balls forever, right? Since ancient times. And I like that this is, yeah, it's something you could practice with a rock even, if you wanted to. But it is technique-wise a little trickier than just stepping in the trap bar and lifting a heavy weight off the ground.

**Michael McGurk:** It is. And then the results are quite variable. I think the furthest I've seen is about 17 meters. So, go out there and take a look at how far 17 meters is, and then you look at your throw. Which I imagine your first throw will probably be in the six to nine-meter range. And then when you see that someone's throwing at 17, you'll realize there are some people that can really generate some force in this.

**Nick:** Right. And they're generating out of their entire body. I mean, your feet, your calves, everything is involved in that.

**Michael McGurk:** Right.

**Nick:** Okay, so the third event is the hand-release pushup, which I've also seen called I think the perfect pushup before. For somebody who doesn't know what that is, it's a pushup where your chest actually rests on the ground for a second, you lift your arms up, and then you do a rep from the bottom, right?

**Michael McGurk:** Yeah. So, there's actually, we have two different techniques for it. And we're testing both of the techniques in our initial trials here to determine which one will be our final one. And they're slightly different, but they're both generally the same. So, one of the problems with push-ups, with grading people, is determining if they've come down far enough. A lot of people, you know what the up pushup position is, but what's the down? So, people say, "Come down to your arms or at 90 degrees," or, "Come down to your arms, break the parallel plane." But with ours we said, "Hey, we'll just make it simple. Come all the way down to the ground." So, then it resets your body to straight, because you can't be kipped if you're lying on the ground, and then you push up again.

And once again, it goes back to functionality for us. So, in the military, most of the time when we're on the ground and have to get up, we start from all the way down on the ground. So, if you're taking

cover behind a log or a rock or a building or something, you're lying on the ground. When you have to get up to run in the military, you start from the ground position. So, you're all the way down on the ground pushing yourself up off the ground. So, that's one of the reasons we went to all the way down.

Also, we want to do that distinctly and as cleanly and as perfectly as possible. So, therefore, we have the release mechanism. So, when you come down to the ground, the two methods that we use is either a release where you just briefly lift your hands straight up off the ground. or what we call an arm extension, or a T pushup, which is where you push your arms out to the side and make your upper body kind of form a cross with your arms out to the side, and then bring them back in. They're very similar. The one where you push your arms out to the side gives you a little bit more engagement in your shoulders and delts a little bit more. And it's a lot easier to grade because it's easier to see the guy sticking his arms out to the side than lifting his hands off the ground.

**Nick:** I read one account where a colonel who had just a week or two before scored 84 push-ups in two minutes on the old test, only got 50 in this one, and felt like, he said, "I was completely destroyed afterwards." So, it's clearly very different. But it's different in interesting ways. I was wondering how you feel it's different, not only in terms of what it provides, but also just as an experience for somebody.

**Michael McGurk:** Yeah, psychologically, our guys here will tell you that each pushup is about 30% harder because of the extended range of motion starting all the way down at the ground. And what we have seen is most people see their scores roughly cut in half. So, if he did 50, he was doing pretty well. And it is a much more fuller workout, where you feel you're working more muscles, and muscles that you haven't worked before. And also, requiring the hands, the hands have to be inside the seam of your shoulders of your uniform shirts, so you gotta bring your hands in. So, it's not a diamond, but we've brought your hands in. We no longer allow wide arm push-ups, so you really feel that as well.

**Nick:** Yeah, that's a big change. My normal co-host Heather Eastman here who's been a personal trainer in town here forever, she wanted me to point out that throughout her career, the worst push-ups that she feels like she's ever seen have always been from people who have done a bunch of pushup tests. Because they had that number in mind, the arms tended to be out, and they would just be as efficient as possible, regardless of whether it was really good pushup form. This seems like, yeah, there's very strict guidelines about what constitutes a good pushup.

**Michael McGurk:** Right, and so this gets much more of, we'd rather have them do a lower number of very correct, hard push-ups than a high number of poor push-ups. And people really feel it in the workout. I mean, guys get up and go, "Wow, that was different, and in a good way." They can feel that muscles are being built.

**Nick:** And during the test, can you rest in the top position, or what do you do if you run out of gas a minute in?

**Michael McGurk:** Right, the only authorized position is the up position with a straight back. So, you have to hold the correct position, kind of like a ... Almost like a plank. You cannot rest in the down position. So, a lot of people run out of pushup juice before they run out of time.

**Nick:** Okay, so what's the highest number you've seen in two minutes by these standards?

**Michael McGurk:** I think 70, 70 or 80, I think. There are people that can do those.

**Nick:** That's moving fast on those.

**Michael McGurk:** Yeah, but you have some people that knockout 120 push-ups in two minutes normally, so. So, for them to go to 120 to 80, yeah, that's moving fast.

**Nick:** Okay, so let's move to the fourth event here which is starting to get a little bit more complex. It's a little medley of dragging a weighted sled, carrying a couple kettlebells, and then sprinting and shuffling.

**Michael McGurk:** So, the sprint drag carry is what we call it. It's another wonderful event, because it's combined several things together to shorten the amount of time we have to have people out in the field testing, but to still give us some real accurate assessments. So, it starts out with a 50-meter sprint, 25 meters down, 25 meters back. You sprint down 25 meters, touch and come back. And then for the second lap, you're dragging a sled backwards, and the sled has 90 pounds on it. The handles are 96 inches, eight feet, so four foot each side. So, you drag the sled down, across the line and back up. You then go down and back doing a side shuffle, laterals, without your feet crossing. You then come back and pick up two 40-pound kettlebells, and go down and back. And then your last down and back is hands-free, just a sprint down and sprint back.

**Nick:** Wow, so that's testing a lot of stuff. There are a couple of implements in there that I really don't associate with anything I've seen in military training. I mean you see sleds more often than not these days in gyms. You see plenty of kettlebells. What brought those unique pieces of equipment into the military? Where did the idea of those two come from?

**Michael McGurk:** So, they're all functional things from the military, actually, or occupational things. So, the first thing is the sprint. So, think about if soldiers are, for example, under fire. Obviously, you have to sprint from where you are to a covered and concealed position so that someone can't shoot at you. So, the test starts, you're on the ground in the prone position, just like you were for the pushup, right? And you have to push yourself up and off the ground, just like with the pushup, to sprint 50 meters in this case to get away from something, or get to some place of safety.

Then the drag there. So, the drag for us is a replica of dragging an injured or wounded comrade to safety. So, what you'll see with most of our soldiers today we wear body armor, and on the back of your body armor there's a handle at your neck. And so, when you're dragging a casualty, what you do is you reach down and you grab that handle, and then you pull backwards. And that's how you would drag a casualty. And most people can generate the most force pulling backwards, which is why we have them drag this casualty backwards.

And so, it may surprise you to know that the average battlefield casualty for the U.S. is between 240 and 260 pounds.

**Nick:** Wow.

**Michael McGurk:** Because the average soldier that we have in the U.S. Army weighs 168 pounds, and that's just skin. By the time you add on boots, equipment, body armor, rifle, ammunition, backpack, water, and everything else, the weight of the casualty itself when the person gets hit is

probably between 240 and 260 pounds. And everyone says, "Well, you don't have to move all their equipment." Well, when the person is injured in the middle of someplace where people are shooting, you don't have time to stop and take all that equipment off while you're moving them to safety. So, you initially grab them and drag them out of the line of fire before you can treat them or do anything else.

So, if we know a casualty weighs about 240 or 260 pounds, and you're gonna drag them out of a road or street or someplace, we typically think you'd be dragging them 15 to 20 meters, which is how far you have to get them to safety. So, what we've done is just for standardization and for ease for us, we've reduced that weight to 90 but increased the distance. So, it's 90 pounds over 50 meters, so that gives you a fair representation of a very similar volume of work for that.

**Nick:** Well, and I'm somebody who's known on occasion here to pull a weighted sled around the property of Bodybuilding.com, so it's a sensation that I'm familiar with. And I will say, it's sneaky tough. It builds up really quickly in you, and the same with loaded carries, even if with just 40 pounds per hand. It can be pretty tough as you get above 20, 25 meters. The fatigue grows incrementally. And I was wondering, has this test really caught some people unprepared?

**Michael McGurk:** Yeah, so one of the things that we really notice is, when you're doing the backwards drag there, it's working the posterior chain. And then when you switch to do the laterals, you can pick your term. We've called them Bambi legs, or Goofy feet or something. As you switch from the posterior to the anterior, your mind knows what you're doing but it takes your body a few seconds to catch up sometimes. And you'll see this kind of weird walking gait as the muscles are kind of uncoordinated as they try to readjust to it. It can be a little bit humorous, at first.

So, you do the laterals then, so the laterals are down and back. And that's to simulate moving sideways, like if you were in an alleyway, or moving around some sort of obstacle. And then the kettlebells are similar to the trap bar deadlift. It's like, "Hey look, they need more ammunition here," or, "They need water over here." So, you pick up two cans of ammunition, and surprisingly, ammunition cans in the Army weigh about what? About 40 pounds. And so, you pick up two cans of ammunition, bring them down and back and then make one last sprint there.

A good time on this, anything under about 1:45 is a good time. I had a soldier run 1:30 yesterday or the day before.

**Nick:** Wow. And this is getting be quite a bit of work at this point. I imagine somebody is feeling like, "Okay, I'm four events into this. It used to only be three events. I've still got two more to go," and the last two are no slouch, either. The fifth one, in lieu of sit-ups, I imagine, is a hanging leg tuck basically, where you're gripping a bar and bringing your knees up to your elbows, right?

**Michael McGurk:** Yes. And so, you grip the bar, and you bring your knees up to touch your elbows, your knees or your thighs. And you don't have to flex your arms, but almost everybody does flex their arms. It's really hard to get your knees or elbows up to your arms if they're in a dead straight, but I've seen it done. And it really works the core, very much.

And so, our standards on this is one is the minimum, and the current max is 20. I have seen someone do 40 of them, and he ran out of time, he had more in him but he just ran out of time.

**Nick:** And how are you holding the bar? Are you doing it like a double-overhand pull-up grip, or is it

more side-to-side?

**Michael McGurk:** It's more side-to-side for most people. We don't have a double-overhand, you could do it. Most people do it side-to-side. There's no rule against it.

**Nick:** Yeah, I think we've called that a commando grip before. I think that seems like it'd be a little bit more comfortable. Okay, and then after that. Well, I guess my first question is, how have you found that's superior to the old sit-up test?

**Michael McGurk:** Well, the problem with the old sit-up test is, anecdotally, soldiers complained that it hurt their neck, on the sit-up test. Because you had to lock your hands behind your neck, and as you came up to touch your knees, people tended to pull on the back of their head, and people would say it hurt their neck. It's not well documented in scientific or medical research from neck injuries. But people didn't like it. And also, once again, it can be challenging a little bit to grade coming all the way up to make sure that the base of the neck came even with the base of the spine. But it was just time for one, it was a change and a little bit better, and a little bit more functional.

The leg tuck is really good for people getting up and over obstacles like up and over a wall. It's very similar. So, particularly if you're loaded, meaning you're wearing body armor or something like that and you gotta get over a wall, you're gonna jump up and you're gonna grab that wall with your hands in a similar grip to when you were holding the bar. And then in order to get a leg over it, you've gotta do kind of a leg tuck to pull your abdomen to get your leg up to bring your leg up and over that wall.

**Nick:** Okay, I like it. I tried it, it was not a move in that grip in particular that I had tried before. And last week when I was preparing for this, I tried it and I thought, "You know, it's a lot more difficult than you anticipate," because your lower body's feeling pretty heavy at that point. And even if you're doing it with your arms bent, there's a lot of stuff contracting, a lot of stuff working hard. Your biceps are working hard, your back's working hard, your grip is working really hard.

**Michael McGurk:** And so, after you've finished that, we move you onto your last event, which is the two-mile run.

**Nick:** Yeah, the two-mile run is still in there. What made you decide to hold onto that particular event?

**Michael McGurk:** Okay, so my researchers here are all very bright like me. And they tell me that if you believe in the Cooper test and everything else, what I need you to do is run for 12 minutes. Because Cooper's standard is, they measure the distance that you run when you do 12 minutes. So, that will give you a pretty accurate predictor to get a [VO2max](#) on someone with a 12-minute run for distance, and measure the distance. So, we could have done that. We could have done a mile and a half run. Frankly, we looked at what the other service has done and we decided that the two-mile was appropriate for the Army. We've been doing it for a long time, we have all the tracks, we have all the measurements. And the two-mile run is an excellent predictor of VO2max. It is better than a mile and a half run.

And so, people said, "Well, we could have just done a mile and a half." And I said, "Yeah, but a two-mile's better." And then it's a question of, how much better? A couple percent better. But it is better.

**Nick:** Well, I imagine that kind of like some of the other events, like the push-up test, this two-mile

run doesn't really feel like the old two-mile run after you've done all that other stuff.

**Michael McGurk:** Yeah. And it's accounted for in our standards, but most people see about, somewhere between a minute to two minutes decrease in their two-mile run time.

**Nick:** Okay, so start to finish, what are we looking at for somebody who's undertaking this entire test? What's the timeframe?

**Michael McGurk:** So, if I were testing you as an individual, and I brought you out here, I would want you to complete everything in under an hour. About 50-something minutes. Because we give you, there is some rest between the events when you're testing as an individual. You gotta remember, when we test as an Army, we got a large number of people out there. So, we normally go through in kind of like a four-man stack as we do each event. So, the rest time is then calculated into it because as the other people do the event, you're resting. But if you're running through it for yourself, you're gonna finish it somewhere between 30 to 50 minutes depending on how fast you do each event and how fast you run.

**Nick:** Wow. I can just imagine, it must have blown some minds when you first presented this to people because it's so different than the old way of really just testing muscular endurance in a couple of areas and then testing that VO2max.

**Michael McGurk:** If you look at our young soldiers today, it really didn't blow young soldier's minds. Young soldiers today have grown up around seeing lots of different fitness things, the popularity of Internet, YouTube, and websites like Bodybuilding.com. They've seen all kinds of different competitions and events. There's Tough Mudders. There're Spartan Races. They've seen all these other things that are out there. I think the younger generation wasn't mind blown by it. I think the biggest change for people is that we made the decision to go age and gender neutral. There's one standard for the test, and the standard is based on the occupational fitness required for jobs in the military. It's very similar to how fire departments, and police departments, and other places test. So you say, "In order to do the job of the soldier, this is what the standards are for doing their job." Everyone that does stuff is rewarded at the same level for the effort that they've achieved. Everyone that does 20 leg tucks gets the same number of points.

**Nick:** Yeah. When you mentioned firefighters and things like that, it did make me wonder how this compares to other branches of the military, but also to other military around the world. Is there really a precedent for a test that's this complex and thought out like this?

**Michael McGurk:** I would say there're other tests around the world that are somewhat similar. When we develop this test, in all our work that we do, we always partner with everybody. Like I said, "Find all the smart people and steal their ideas shamelessly." So, we worked with the Canadians, with the French, with the Australians, the British, the Germans, the Danish. We worked with these other people, and we also worked with the Marine Corps, with the Army National Guard, the Army Reserve, the Air Force in order to see what the different tests were. Then from those different tests, we developed our test. The tests are very similar. If you look at the Ranger Regiment in the United States, the Ranger Regiment has the RAW (Ranger Athlete Warrior) test which is very similar to this test. If you look at the Air Force Pararescue, they have very similar events to this.

Yeah, we've thought of other people and stuff. What you'll find is across the world a lot of other nations, particularly smaller nations, follow the U.S. lead. If you were to survey the entire world for

fitness test you would probably find half of the militaries in the world right now do sit-ups, push-ups, and a two-mile run. I imagine in five or ten years you'll see that change.

**Nick:** If they want to do that, though, there are two things they're really going to have to overcome. One of which, it looks like there's a lot to teach here. Even using fairly-safe implements like doing loaded carries and doing the trap bar deadlift, it seems like quality instruction is going to be completely paramount in this.

**Michael McGurk:** Yeah. There is some, so the U.S. Army is working on that to develop the system further than we have already. Currently, we have several different systems. We're training all the graders for this test already. We're training three different levels of graders for the test. We're training a standard grader, senior grader, and a master grader. A standard grader is someone that knows how to give the test, administer the test to somebody else. A senior grader is someone that knows how to set up the test, and give the test to people, and then train other people how to grade. A master grader has typically about 30 days of training in strength, and fitness, and physical fitness elements and stuff, so they can help develop programs to remediate deficiencies as well as conduct the test and train other people to conduct the test.

**Nick:** Okay, so it's going to go with a pretty massive reinforcement of fitness culture and strength culture in the Army then is what it sounds like.

**Michael McGurk:** Yeah. One of the goals from this test from the outset were to change the culture of fitness in the Army completely. I think you will see a physical and mental emotional transformation in the Army as a result of this test over the next three to five years. As you know, if you lift, your body changes as you lift. Different muscles get developed. Different shapes get developed. As we go away from some place that has been much more focused on aerobic fitness and distance [running](#) into much more strength and power, you'll see soldiers developing larger backs, larger shoulders, larger arms.

**Nick:** Sure. It will necessarily be a gym presence it seems like around the world wherever the military goes just because there's a lot of equipment here. Are you anticipating having trap bars, kettlebells, flying around in cargo planes around the world?

**Michael McGurk:** The Army is in the process right now of procuring approximately 40,000 sets of fitness test equipment, so 40,000 trap bars. That's a lot of trap bars.

**Nick:** Right. They take up a little bit more space than barbells, too.

**Michael McGurk:** Yeah, but we've got the entire military structure. We're not really concerned about that. 40,000 trap bars, that's 80,000 kettlebells.

**Nick:** Wow. Will these be in a new kind of military gym or wellness center? Where will somebody be able to encounter them?

**Michael McGurk:** We will have them at, in military terms, they'll be consolidated at the battalion level. What that means is for groups of soldiers that have about 500-800 soldiers in the group, we'll have 16 sets of this equipment for that group. Then we'll distribute it out to other levels as well. We are working through the process of adding other additional equipment and personnel to the Army, but we're a very large organization and changing some of these things takes time, money, and

resources. We're working through that. We think we'll ultimately be very successful. The first step we have is a pilot program that's taking place in some selected units in the Army where we're adding a physical therapist, a registered dietician, an occupational therapist, an athletic trainer, and two strength and conditioning coaches to each element of about 500 people.

**Nick:** Those are things that aren't necessarily there right now?

**Michael McGurk:** Right. They haven't typically been there in the past in the units. It used to be if you wanted to see a physical therapist, you had to leave your unit and go to the hospital, right, or the medical clinic to see the physical therapist. Well, obviously that cuts down somewhat on utilization and use because you have to leave where you are and go someplace else. Also, it's a treatment model where you're going to go see the physical therapist because you've injured yourself. What we're trying to do is change that from a treatment model to a preventative model where, at your unit, while you're working out, there's a physical therapist, athletic trainer, strength and conditioning coaches that are constantly going around and they're lending their expertise to you to show you how to lift properly and safely so you don't get injured in the first place.

If you do get injured through an accident or other things that happen to you, the person that can help you rehabilitate is right there with you. You'd see them virtually every day. This should make it a much faster return to full performance for you because of much easier access to these experts.

**Nick:** This all makes perfect sense to me as somebody who spends my days reading about strength and fitness. I can imagine that there would be people in the military though who could have some initial hesitancy or resistance about it. Do you feel like the response has been largely positive, or has there been some resistance?

**Michael McGurk:** I would say the response has been largely positive, but not exclusively positive. There are always going to be some people that are resistant. There are some people that have to come to grips with that their job is not always the daily work that they do in the office. As I tell some people, it's a tragedy, but on September 11th, if you were working in the Pentagon in the office, your workday could have gone very quickly from being somebody in the office to somebody that has to evacuate casualties and assist people in moving very heavy things. That wasn't what you intended when you came to work, but that's part of being a soldier in the military. You have to be prepared for that. If you say, "Well, that's never going to happen," well, I would say, "That's never going to be true." We have scaled it so that people that this is less likely to be doing these type of events have a lower fitness requirement than people that are going to be required to do it all the time.

When you join the Army into a job that's very physical such as the infantry, the field artillery, some of the engineering jobs, you're expected to be very physically fit because your daily duties will involve doing those. If you were to come in to the military for a job that is less physically demanding, a paralegal, a journalist, you'll still have to be physically fit but at a lower level than someone, for example, in the combat jobs.

**Nick:** I took a course from a great strength coach named Dan John a while ago. One thing that I remember that he told me was that firefighters and soldiers as well are sometimes guilty of training like they're preparing for the fireman's calendar, the soldier's calendar, not for their actual needs as firefighters and soldiers. This sounds like it definitely has the potential to help ameliorate that.

**Michael McGurk:** Yeah, it does, and that's why I like to talk about occupational fitness because



there are some workout regimes that what you do may put more of a cut in one muscle or another, or develop one part of the body more than the other, but it's not something that's really particularly useful for your occupation. We've tried to balance ours to make it something that works all the different muscles of the body across all the different elements and makes it very relevant to their occupation. The six events together give you a score of 600. So, far in our trial period, nobody has scored a perfect score on the test yet. Nobody's been able to achieve the maximum score in all six elements. Now, I expect very shortly someone will come in and tell me, "Hey, just yesterday, a soldier out at Fort Bliss scored a perfect 600." That's what we want, but it's going to take a little bit of time, and they're going to have to change some of their workouts because it's unusual to find a soldier that will deadlift 340 pounds or 360 pounds, and then can turn around and go out and run a 14-minute 2-mile after doing all that other work.

**Nick:** Right. It's a test obviously not a workout in and of itself. It raises a really interesting vision of fitness and training, as well. It makes me wonder if these standards make sense as goals for people, for fitness buffs, not just for soldiers in combat. I wonder what I would look like if I could meet it at a certain level, or how I would perform in other things if I could meet it at a certain level. How do think these are as just human fitness standards?

**Michael McGurk:** I think as human fitness standards they're really good. They're highly relevant. If you talk to anybody who's a world-class athlete in specific events, they will probably tell you that they're cross-training into other events is what really helps. Some of the world-class marathon runners hit a wall at a certain point in how fast they can run. What they find that they need to do is they need to go not to running, they need to go to strength training to lifting weights to get better. In the past, our test in the past was primarily muscular endurance and aerobic endurance. There wasn't any component of strength, or power, agility, or speed really in it. I think adding those components will make them better in a lot of things. We also believe it will have a side effect of reducing injuries for us overall in the military. As soldiers get in better shape, and they can do more things, they're much less likely to get injured. For us, that's a huge savings in time and money.

**Nick:** Sure. All right. What's the timeline on this? When will this be what most people or everyone is doing? Is that the plan that everyone from the reserves on up will be doing this?

**Michael McGurk:** Yes. This is one test. Everybody will do it from reserves on up. We started in October of this year, so we've already started. We're about three months into it, a little over three months into it. We've already trained about 2,000 graders. We'll probably train another couple of thousand here in the next couple of months. For the first year, we're going to have about 30,000 people total involved in this test. That's out of about a million. About 30,000 will be involved in it between now and the first of October, which is the military years are October to October, so about 30,000 people testing this year up until October. We'll collect all those scores and then we'll look at the scores that we have for the standards and determine if we need to make any adjustments either up or down on our standards. I always tell people, "Always count on them going up not down." The equipment that we're purchasing should be purchased and distributed to the entire Army, all three components of the Army, by this October, no later than the first of January, we believe. Then, the entire Army will get about a year to practice and a year to work out and improve. Then it will become the test of record. Our timeline says no later than the first of October in 2020.

**Nick:** Okay. Wow. Are the other branches of military watching this closely?

**Michael McGurk:** Yes. They are all watching it very closely. Some of them are going to be jealous,

and some of them are going to be a little bit worried that someone's going to ask them to do that same thing.

**Nick:** Wow. Where can somebody go to really learn what they need to know? If they listen to this and they thought, "You know what? I want to be ahead of the curve here. I want to actually start training for this now."

**Michael McGurk:** We have a micro site. I can send you the link. I don't have it off the top of my head. Stephanie can send you the [micro site link](#). We have a micro site link that will give you all the events, videos of the events. We'll give you a testing manual. We'll give you a score card. We'll give you the scoring standards. We'll give you some recommended exercises to improve on the events, pretty much everything you could ever need to go forward on this.

**Nick:** Right. The handbook I looked through was really extensive given how far you are away from actually having the speed, the test of record. There's tons of assistance exercises. There's programming recommendations. There's a lot in there.

**Michael McGurk:** Yeah. Then, in the next year or so, we're producing a new fitness manual which will be called Holistic Health and Fitness, which the Army's number for it is FM7-22. That new manual will be about 500 pages available free of charge to everybody in the world because it's a government document. It will include all the holistic elements. It will have all the weightlifting in it. The physical fitness workouts, and routines, and information on diet, nutrition, sleep, mental health, spiritual fitness, the whole ball.

**Nick:** Wow. One final question here. The old test didn't strike me as the sort of thing that somebody would do and then necessarily say, "Boy, I need a protein shake after that one." This new one, it's firmly enough in mainstream fitness culture in some of what you're doing that it seems like the sort of thing that people would have a [protein shake](#) afterwards. Sometimes that's, in the military I know there's a very mixed history with supplements and just the view of supplements. Is that something that's changing as well?

**Michael McGurk:** As a researcher, one of the challenges that we have is sometimes when we have soldiers in a controlled environment, it makes fueling more challenging. When you're living in the barracks like in basic training there's not a refrigerator you can go to in the barracks, obviously.

**Nick:** Right.

**Michael McGurk:** One of the things that we looked at is we looked at injuries and bone health. What we found out is that particularly in our young recruits coming in, they are often deficient in [vitamin D](#) and calcium. The Army developed its own performance readiness bar, it's called, a performance readiness bar which is enhanced with Vitamin D and [calcium](#) into a chocolate-flavored energy bar. When you're in basic training we give you one of those bars every evening. The reason we give it in the evening is because if you understand the military, you have your first meal at about 7:30, 8:00 in the morning. You have lunch around noon. You have your evening meal somewhere around 5:00 PM. If your evening meal is at 5:00 PM, and you're going to your fitness workout the next morning at 6:00 AM, you've gone 13 hours without eating, which some people think is less than optimal.

**Nick:** Right.

**Michael McGurk:** What we do is we pass out this fitness bar in the evening with the calcium, and the vitamin D, and the chocolate, and the calories in it at about 8:00 in the evening. They eat it between 8:00 and 9:00 in the evening. That helps tide them over for the night and gives them the extra calcium and the vitamin D to help build strong bones.

**Nick:** Okay, so it's not just necessarily just a vitamin D and calcium bar. There're some calories, maybe some [protein](#) in there, as well?

**Michael McGurk:** Yes.

**Nick:** Wow. Well, thank you for talking with me Michael McGurk. This has been really interesting. I'm very curious to see how this develops over time.

**Michael McGurk:** All right. I appreciate talking with you too. I hope this works out well for you. As always, we're available. We don't editorialize, but we're always happy to amend statements of fact if you need a clarification on something.

**Nick:** I really appreciate that.



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