

Cardiovascular Exercise

Valor Voices Podcast Transcript



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John Bouthillette: Hi, I'm John Bouthillette. I'm the lead instructor with the VALOR Program and host for this edition of VALOR Voices podcast. Joining me today is Lieutenant Brandon Post from the Provo, Utah, Police Department. Brandon is one of our VALOR instructors. Brandon is a certified physical fitness specialist and a member of the Provo Police Fitness Committee and has taught on the topic of fitness, health, and wellness for 15 years.

Hey, Brandon, we're going to take a little time today and we're going to talk about the concept of physical wellness, or, specifically, fitness as it pertains to law enforcement.

Before we even get going and start talking about—we're going to talk about cardiovascular fitness today—is why do we need to talk about fitness in law enforcement in the first place?

Brandon Post: As we all know, there's a lot of benefits we get from both strength training and cardiovascular training that does so many positive things for our body. Yet with all this knowledge, we're not taking advantage of it to the degree that we should. The general population—I mentioned this in previous podcast, but the general population—less than 10 percent of them work out vigorously three times a week.

Now, I guess that translates over to law enforcement thinking, "Well if we just have to be in better shape than the average person, that sounds like it's going to be fairly easy to do." There's been actually some pretty fantastic studies that have compared the physical capacity of law enforcement compared to the average person.

Sadly, in every one of these studies, it's coming out showing that we're fatter, weaker, less flexible, less energetic than the average person.

John: Yeah, that's unfortunate, and I've seen some of those studies, too, Brandon. From my background, I have a hard time understanding why that is. Real quick, today we're going to focus on the topic of cardiovascular training. Let's do this first. Again, what is cardiovascular training? You can ask different people and they'll have different concepts of what they think that is, so can we just talk about what cardiovascular training is in the first place.

Brandon: Yeah, absolutely, so cardiovascular training is any training that increases the body's capacity. Obviously, when we breathe in, we're taking in oxygen. That oxygen is then being transferred to the blood, and then the heart pumps and pumps that blood throughout the body. That oxygenated blood then goes to the muscles, which use that oxygen for energy to help convert with energy, that along with glycogen and carbohydrates.

A muscle cannot function without the oxygen, so cardiovascular training is any training that increases the efficiency of your body to do all that. Your lungs get more efficient at taking in oxygen without so many breaths. I mean, the heart walls will actually thicken and strengthen, so that it doesn't take . . . with one pump, it's going to be able to circulate the blood much more efficiently.

Muscles are able to use it and transfer it into energy much quicker, so it's a necessary component to make sure our body's doing these critical processes efficiently.

John: All right, so that's basically cardiovascular training in a nutshell, but let's talk about that. Why is it important? Let's just look at the general population first, just as the general population outside of law enforcement, why is cardiovascular training important, just the general population?

Brandon: Well, the number one killer of Americans is heart disease, so anything that strengthens your heart and helps it be healthy is going to extend your life. There's a big one right there—it lowers cholesterol, improves triglycerides. You sleep better, it alleviates depression. Your brain actually functions better if you're a regular participant in cardiovascular exercise.

There's just a lot of very tangible benefits that come along with this. I would like to say one caveat, though, a lot of people think . . . they equate cardiovascular exercise with weight management. While strength training and cardiovascular exercise can be a contributing factor, no matter how hard you train . . . runners say you can't outrun a bad diet.

Weightlifters say you can't out-train a bad diet. Diet is really important, so while there's some very fantastic, critical things that these exercises can do for us, if your overall goal is weight management, they're not as effective as we once believed.

John: I think that's important, and it's a motto I live by. Real quick, so we talked about the general population, the benefits of cardiovascular fitness to the general population. Let's break this down a little bit further, because we're law enforcement: Why is cardiovascular training specifically important for law enforcement?

Brandon: We talked about how . . . we've all been to that point where if you've run a sprint, or especially if you've had to chase somebody with all your gear—your vest, your boots, your 20-pound duty belt—just all the different gear you're wearing, and suddenly you have to chase someone, how you're breathing really heavy. You just can't get that air and if you've pushed hard enough, how things can even get blurry and you can start to feel dizzy.

Well, that's a sign that you're breathing so hard and the heart is pumping so hard, because it's not as efficient as maybe it could be if we were in good cardiovascular situation. Now the real danger here is if we continue to push, the muscles are just not going to get oxygen, and you're not going to be able to continue to function.

If you're struggling with a suspect who's resisting, at some point your cardiovascular system is going to get taxed if that person is going to resist past that point, and you're no longer going to be able to function, which then obviously leaves you no other option other than potentially escalating use of force to make sure you're safe, that other individuals are safe, and that you can take this person into custody.

In reality, a healthy cardiovascular system may give you the opportunity to not have to escalate that use of force, because while that other person may be shutting down, you could have a trained system that allows you to continue to function past the point where others are quitting, so you can then restrain the person without having to escalate the use of force.

Which obviously means safer for everyone, less liability, just all the things we really want to see in law enforcement.

John: Yeah, and we talked about this also, the concept in our strength training podcast about how we go from 0 to 100, how we'll spend hours driving around in a car, nothing going on, listening to the radio, and then the next thing you know, bang, you're out, you're chasing, you're running, you're fighting. How does cardiovascular fitness help us go from 0 to 100 to 150?

Brandon: Okay, so I think of all the tools we carry, of everything we have, the most important thing is our brain. Brain for good decision making has got to continue to get oxygen. Now we've all . . . a critical desperate situation, your heart rate, I mean, depending on age, can skyrocket up to 180 bpm and beyond. When we get to 180 bpm and beyond, we start to make bad decisions, because the brain actually gets foggy, it gets clouded.

We're not able to process things as efficiently or as well as we could have before. The critical component of this is, if you are regularly doing cardiovascular exercising, you're pushing your heart rate into . . . again, this is dependent on age—but the 130s up to 160s, 170s at the top range, depending. It means when you suddenly find yourself in that critical incident, it's not the first time you're dealing with an elevated heart rate in a very long time, meaning your brain, your body, everything's going to continue to function much better as if it were another day at the office, because you've been there before, your body is accustomed to it.

It knows how to function in that realm, where somebody who hasn't done any strenuous cardiovascular activity for weeks, months, or, heaven forbid, years, they are not going to be thinking clearly. The body's going to be shutting down, they're going to be experiencing some very real, difficult physical limitations in the situation.

John: Yeah, and I think I want to really hone in on this concept, because then we stress that heart out and we start pumping, pumping, pumping. We know already that heart disease is the number one killer of the general population in the United States. How does law enforcement compare to the general population as far as heart disease goes?

Brandon: We're actually 30 to 70 times higher risk of sudden cardiac death when we're in a situation than the general population.

John: That concerns me, and it should concern everybody that's listening to this podcast today, and one of the reasons why we need to increase our cardiovascular fitness. It's going from that 0 to 100 and as Brandon just said, if you haven't trained your heart to go at that rate, you're going to have to expect some failure.

One place you do not want to have failure, Brandon, is with your heart, correct?

Brandon: Yes, absolutely.

John: It just won't work, it just won't work. As we go on with this cardiovascular fitness training concept, what are the different means that you can achieve that cardiovascular training? What are some of the techniques or systems that can be used to increase your cardiovascular fitness?

Brandon: Again, a lot like weight training, it's pick your flavor. There's so many different things you can do that are beneficial. Now, depending on what your goal is, there's some things that are more effective than others, but steady-state cardio. That's a fancy way of saying you're just going to out for a jog and you're not going to go superfast, you're not going to go . . .

It's not a plodding along, just walking thing, it's a steady state that will absolutely get your heart pumping. It's going to get you to an elevated heart, it's going to get the body used to processing oxygen and taking it in, you're going to get a good workout with that. I mentioned walking, and that can actually be a very effective form of exercise.

Just getting and out walking, your heart rate is going to . . . It's going to go higher, you're going to breathe a little bit heavier, you're getting the body used to having to do that cardiovascular exercise. In fact, that's one of my favorite things to do, is my wife and I schedule walks every week, because it gives us a chance to . . .

We love our kids, but we can actually get away and talk and yet get some kind of cardiovascular exercise while we're doing it. My favorite is, they call it HIIT, it's high-intensity interval training.

John: Why am I not surprised by that, Brandon? But go ahead.

Brandon: Basically, it involves really short bursts. One of the things that's difficult is if you're really trying to add muscle to your frame, you're trying to get some muscle and you're doing a whole lot of cardio, those actually can be counterproductive to one another. While both are important, it's sending conflicting messages to the body.

If you're telling your body, "I'm going to do a lot of steady state, I'm going to go run for an hour, two hours, or six, seven, eight, nine miles," whatever it may be, you're actually telling the body that muscle is a liability in that case, because it's extra weight. The body's trying to compensate for whatever you're telling it to do.

When you do HIIT, that is actually directly . . . it directly contributes to your body's ability to maintain muscle, because it's just like weight training where it's going to be a short burst. It can vary, 10 seconds on, 20 seconds off, a minute on, just depending on what the workout is. It's going to be a very intense short burst of output, and then you're going to back off completely and try and get your heart rate back down.

One of the reasons I think it's such good training, not only for others, but for law enforcement, is it's pretty much training us, because we, like you mentioned, we have to go from 0 to 60 with no notice. Suddenly you're grabbing someone, your heart rate spikes at an extremely elevated rate. You may be at a very, very high output for 30, 40 seconds.

Well, if you've trained this way, you're used to performing that way and your body's going to continue to be able to do the output. What's even better is then when you are training with the rest period, you're stopping and the heart rate is able to go back to normal much quicker. That is an absolute measure of fitness

that it doesn't have to continue to pump to try and make up for the backlog of effort that was put out.

Which, the way that translates into law enforcement, is you're able to calm down and think clearly. Once you have the person into custody, you're able to calm down and take appropriate means and action and make good decisions about what to do next; it's fantastic training.

John: Yeah, and one of the ways I looked at that a lot of times, Brandon, in my career, my training, was my ability to recover is just as important as my ability to put forth the effort.

Brandon: Yes.

John: The faster I could recover, the better I am going to be able to stay in the game and to think clearly. I think that's what you're talking about here: That cardiovascular training, or that high intensity, gives you the ability to recover quickly, which is important, I think it's important. Was there anything else you could do for cardiovascular training?

Brandon: There's body weight exercises, we mentioned in the last one, just like HIIT, where it's 20 seconds on, 10 seconds off. That's just a very specific formula and you do it eight times. I know a lot of my buddies at the gym think that just lifting weights faster is a great form of cardio. I used to make fun of them, but I've learned that actually lifting weights faster can be a form of cardio, as I've tried it more often on my own over the last four years.

If you're going to do that, you're looking at very high rep ranges, 20 to 30 reps and very short rest periods, 30 seconds or so, and then you're getting back after it.

John: Bottom line, with all the things you mention, is get that heart rate up.

Brandon: Yes.

John: Then give yourself a quick rest period and then get the heart rate back up again.

Brandon: Yeah.

John: That's the key, is that rapid acceleration of heart rate, followed by quick recovery, rapid acceleration. Basically, it mirrors what we do in crisis situations, correct?

Brandon: Correct, correct, and then you just go on past the crisis situation or the law enforcement benefit, they've been able to show . . . a steady-state cardio person will go out and go for . . . they'll do an hour or two hours' worth of work at the same steady state, where somebody doing a HIIT workout in 15, 20

minutes is going to get the same measure of cardiovascular benefit as the person who did a steady-state workout for an hour or two.

Our time is limited in law enforcement—biggest bang for your buck is going to be HIIT workouts.

John: Yeah, I like the way you presented that, and I agree, because I know one of the biggest things that happens in our lifetime is we get hired. We get to take that oath and we get hired, but the second biggest thing is that we survive this career. I think this is one of the reasons, and I just want to cover that real quick and how to get to that end date. We all have it, we're all going to retire someday, is the concept that functional fitness. We covered this briefly when we talked about strength training in the last podcast. How does cardiovascular training fit in with an overall functional fitness theory?

Brandon: Functional fitness, again, functional fitness is just trying to replicate real-world motion into your training. You're not just doing some isolated wrist curls or bicep curls or things like that—that's only involving one joint. Functional fitness is a multijoint . . . your dead lifts, your squats, your sprinting, jumping . . . real dynamic, explosive movement that is using your body in the way it is intended to and exerting force, so it's accustomed to doing these things.

Heaven forbid if you do end up having to wrestle with someone and you've only been doing single-joint exercises; sometimes that could mean there's an imbalance, you're more prone to injury. As far as the cardiovascular side goes, jumping, sprinting, climbing, things like that, it's the body's natural movement, replicating things you'd have to do on the job as part of your training.

John: Yeah, I think that's important. Now it's my time to put you on the spot again and say, Can you recommend a simple cardiovascular workout that basically anybody can do with very little time and actually no equipment?

Brandon: Awesome, yeah, so just sticking to maybe the theme of the HIIT workout, I'm a big fan, especially . . . we've got limited time, and if you take . . . in a 15-minute period, you can actually do a great workout. If we're talking, and you could do this with running, if we're talking no equipment. If we're talking very, very limited equipment, a jump rope.

If we're going a little bit more extreme in equipment, a rowing machine, an air-assault bike, something like that, that you're able to increase the intensity and back off very quickly. If you've ever done battle ropes, that's a vicious cardiovascular workout that . . .

John: Been there.

Brandon: Yeah, fantastic workout, but what I'd recommend doing is you do a 5-minute warm-up, maybe not with the battle ropes, a 5-minute warm-up would be fairly

difficult. You're going to do a 5-minute warm-up in any of the other things— basically just a slow exertion—you're warming yourself up, you're getting all the joints lubed, you're getting the blood flowing.

: Easy five minutes, then you're going to go on, you're going to put a good, hard exertion for 20 seconds. Then you're going to stop and recover for 40 seconds and then you're back on hard for 20, back off or 40. You're going to do that five times, so obviously 5-minute warm-up, five intervals at 20 on, 40 off, that's another five minutes.

: Then when you're done with that, you're going to do a 5-minute cool-down, basically going back to the same level of exertion as your warm-up, but you want the body to be able to gradually cool down. Again, we're trying to train the body, we're trying to limit injuries. We've got to go on shift the next day; we can't get ourselves hurt.

Doing this kind of workout, I think, is so good for preparing for law enforcement. The benefits, and regardless of the fitness level, if you're very, very fit or just starting out, I believe this is a reasonable workout that you can get good benefits from.

John: Yeah, and I think after listening to this ... Our having a discussion today . . . there's an old saying, you can do something or you can do nothing. I think in the job that we have or the profession that we chose, that doing nothing is not the answer. Would you agree?

Brandon: Absolutely, got to do something.

John: You have to start small and be consistent, I think, is the message here. I want to thank you, Brandon, again for taking time out of your busy schedule to join me on the VALOR podcast series. Your insight is definitely important to law enforcement, and you've shown that in the field as well. I also want to encourage all the listeners that it's important to exercise—either cardiovascular fitness, strength training—and to get healthy.

If you get healthy, you get to go home. That's the important piece—this job is just too stressful. It demands too much from us, and our goal is to get home. By looking at the concepts of functional fitness with cardiovascular training and in another podcast with strength training, we can accomplish that task.

I also want to tell everybody to take the time, visit our website, the VALOR website, for additional information. Brandon, I want to thank you for doing that as well. Anything you want to add Brandon before we close this out?

Brandon: No, I really enjoyed myself. Thank you for the opportunity, and just be safe, everybody.

John: Yeah, thank you, sir, I appreciate all that you do.

Brandon: Thank you.

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