

David

Hey, Ashley. How are you today?

Ashley Selman

Hi, David. I'm great. Thanks for having me here.

David

Absolutely. Pleasure to have you on today. We're going to talk about something that I'm quite familiar with. And you use a lot. BFR, blood flow restriction bands. And before we get too deeply into that and your enthusiasm for them, tell me a little bit about your background.

Ashley Selman

Sure. Yeah. So I was a collegiate athlete. I was actually a two time NCAA champion in the javelin throw of all things javelin. Real javelin. Yeah. Okay.

David

Yeah. Give me a number. How far?

Ashley Selman

192 seven was my best throw in competition right around 60m. Yeah. And I won a title for USC and also for University of Oregon. So kind of interestingly I transferred in the middle there. But I was pretty crazy how.

David

I've always wondered this. How did you pick like the javelin? That's for me.

Ashley Selman

How did you okay, okay. Sort of a funny back story. So when I was really young, like six years old, I started track and field just for fun. And they had the baseball throw, which is obviously not a real track and field event, but I was very good at that. Very good beat all around boys, girls, any age.

Ashley Selman

I don't know why. I just was natural. Then as I got older it became the Shotput and I was this skinny, lanky, like I was not a shot putter. So my parents, who were pretty sport oriented, got me a javelin for Christmas when I was in sixth grade, sitting against the Christmas tree, a javelin, right? How many parents do that?

Ashley Selman

And they had a friend that was a track coach. And so they just started doing that. And then I actually end up being a heptathlete first. Which javelin is one of the events? Because in high school I did all kinds of other events. Javelin wasn't an event in California, but by the time I got to college in the heptathlon, I was sort of getting smoked in some of the sprints and but javelin, I was just by far the best.

Ashley Selman

So I just kind of started to specialize and and yeah, I had a knack for it. For some reason.

David

How's your shoulder?

Ashley Selman

Exactly. Two surgeries later and hip replacement.

David

Okay.

Ashley Selman

But the hip replacement. I broke my hip when I was 13, skiing. And then it just came back to haunt me later. I mean, a lot of stress and plus a collegiate athlete. I'm doing plyometrics, heavy Olympic lifting, heavy squatting. You know, a lot of wear tear on a compromised joint was not the best thing in hindsight, but I don't know that I would change it.

Ashley Selman

I mean, it was it was pretty cool experience for some.

David

I don't know why I know this fact, but the javelin throwing and shoulder injury seemed to go together for sure.

Ashley Selman

Well, if you ever seen javelin, you're sprinting as fast as you can and then you stop and all this force goes from your feet all the way through in your body. In your arm is the like, last chain of the whip. Right? So it's a lot of a fast stress through the the head of the humerus and the shoulder joint.

Ashley Selman

So if you don't have a really, really stable shoulder or even if you do, it's a lot of force to control. So different than baseball, baseball sort of repetition. And they throw hundreds of pitches. This is like not the repetition but the the run up just creates so much more force than, you know, pitchers stationary on a mound.

Ashley Selman

Right. And so just the amount of force going through the chain is a lot is a lot greater.

David

I love the image of the Christmas tree and that you were in like.

Ashley Selman

Sixth grade at that point.

David

You got a sixth grader, a javelin. That's okay.

Ashley Selman

Yeah, exactly.

David

Really great. So now you're older now and you train people.

Ashley Selman

Yeah. So I got into fitness. I've been in the industry for almost 30 years. I'm 54 now. I've owned a gym for 20 years. So pretty heavily in industry. I speak in industry I've that's been what I've done for the majority of my career. I coached I coached Jackie Joyner-Kersey back in the day and I coached at Stanford University.

Ashley Selman

And so I started as a coach coach. But then I split into fitness and and I've loved it. And honestly, part of my interest in BFR has really grown in the last year and a half, two years. And in the 30 years I've been in fitness, I would say this is the most excited I've been about anything. And its ability to really impact people's lives in a positive way.

Ashley Selman

So it's it's been pretty exciting to learn about and start to implement with a wide variety of clients and really seeing the impact it's making for people.

David

You probably use it on yourself first.

Ashley Selman

Yeah. So going back to I broke my hip at 13. I had a hip replacement at 43. I've had two shoulder surgeries. I know how to lift heavy. I've lift heavy for a lot of years, but now harder to lift heavy and well, I went through menopause at 43 the same year. I had my hip replacement and started losing muscle really quickly.

Ashley Selman

I could not maintain it, even trying to lift heavy, and if I did lift heavy enough, my body would kind of pay for it. So I was in this like struggle of what do I do to keep my health? You know what? I'm talking about it kind of lightly now, but it was actually a very hard time for me.

Ashley Selman

I was pretty depressed and worried about my future health. I always thought, I'm strong, I'm athletic. I know how to workout. I'm going to I'm going to kick ass at this aging thing, you know? And then lo and behold, like you realize you don't have full control, right? Like things happen. And I started realizing, like, I'm doing everything I can and it's not going well.

Ashley Selman

It's not going in the direction I wanted to go. And I found out about BFR, ironically, from my dad, who was in his late 70s and had a shoulder replacement, and he was told about it from his doctor. And so same guy who bought me a javelin for Christmas gave me BFR plans for Christmas. So there you go.

Ashley Selman

You're like two for two going, dad is two for two on that. So I started playing around with them and then I learned a little more about it, which are really getting excited about the science and started using it on my legs and.

David

I just want to stop you because you and I use these all the time so we know what BFR is.

Ashley Selman

Oh yeah. Okay.

David

Physically describe this. We're talking about BFR Barnes. What is this.

Ashley Selman

Sure. Yeah. So BFR blood flow restriction training. Basically the concept is you wear these bands. There's different types. But this is an example of one on your upper arm and upper legs. And you you pop them to a certain amount of pressure. And what it does is it's slowing down primarily your venous blood flow. So say safe. It's not affecting arterial flow.

Ashley Selman

It's not stopping blood flow, but it's slowing down blood flow enough to do two major things. One, it causes hypoxia in the muscle and your type one muscle fibers that work with oxygen get fatigue. That can no longer work for a long period time under BFR. So they start to fail and your type two muscle fibers get involved at a very light load.

Ashley Selman

For those who maybe don't know, type two muscle fibers are stronger muscles and they are the ones that atrophy the most and the fastest as we age. And they're the ones that are probably most valuable for us in terms of maintaining our strength and our independence and even bone density. The other thing it does is it doesn't let the blood escape as quickly from your working muscles.

Ashley Selman

So lactic acid builds up in your muscle and stays there. And that is really the key to why BFR has all these amazing benefits is the lactic acid. So you get this increase in lactic acid. Your brain interprets that as major fatigue in your muscle and releases human growth hormone as well as other anabolic hormones. That's huge because we lose human growth hormone as we age.

Ashley Selman

And this is one of the few ways you can really get natural human growth hormone at a pretty substantial amount without having to to work out or lift up an intensity that, for most people, as they age, it becomes out of the reach. You can't work out hard enough to get that human growth hormone response that you could in your 20s and 30s, maybe.

Ashley Selman

So your choices, you just don't get that anymore. And you're slowly, you know, losing some of your function strength, bone density, gaining fat in some oftentimes as we age because we can't access that, BFR offers a real solution for people to be able to tap to produce more human growth hormone and maintain the benefits we get from human growth hormone without having to trash their body under these heavy loads.

Ashley Selman

So that really, to me is the key that lactic acid, which leads to the human growth hormone response.

David

As somebody who's used this and you and I both know it feels worse, you just doing air squats with them after about 50 you just like, oh my God.

Ashley Selman

I find it's like easier and harder at the same time. It's it's because you're not going heavy. It doesn't feel like the strain that you normally feel, but the, the fatigue and the burn at the local level of the muscle gets pretty intense. But the, the trick of that is because you're using light loader, like you said, doing an air squat.

Ashley Selman

Even though your muscles are fatigued and burning, you can keep going because the load is not heavy. So that's kind of the key. You can keep working and continue kind of to your to your tolerance and kind of mental toughness of the, the burn. Like you can keep going. And that's why you can get this bigger blood lactate levels than you normally would in regular training.

Ashley Selman

Because normally in heavy training you can only do a couple more reps once you really start getting fatigued because the load becomes too much. With a light load, you can just kind of push through that, that burning fatigue. But to your point, it's not it's not super pleasant at that point.

David

Sometimes we do like a lot of air squats with the bands, and we experience what we call race pain, and it's exactly what it sounds like. Yeah. So take us through how are you using these? How are you training your folks with these and what are you seeing happen?

Ashley Selman

So when I started using them and realized the huge benefit I started getting and very quickly, the other thing about using BFR is the results come quicker than normal training, because we're using the metabolic processes to get

stronger, which we can adapt really quickly to. So when I started seeing how much change I was getting, I started telling my friends.

Ashley Selman

I started telling my clients that I'd had for literally 20 plus years to get everyone to try these. And pretty much across the board, anybody that started using them consistently had pretty significant, whether that was they felt stronger right away. Their pain, whatever pain they had with decreased losing weight became easier. Bone density even on I've had some people do DEXA scans and the bone density will start to increase, which for women is particularly huge.

Ashley Selman

So just massive benefits across the board aerobic endurance. So I have a lot of cyclists that I was working with because that's one of the things I do and they're climbing improve like quickly, where they started to feel like they didn't have the fatigue because BFR will improve your VO2 max, because it makes your vascular system more efficient and your mitochondria more efficient.

Ashley Selman

So that's sort of the second half of what, you know, it's heart rate, lung capacity and heart rate for VO2 max. But then getting that blood flow to the muscle through the vascular system, BFR makes that way more efficient. Our vascular system starts getting more adept and more flexible. So some surprising VO2 benefits that people will get. And so then I started being like, this is life changing for people.

Ashley Selman

I really had myself and multiple clients tell me this was changing their life. And I already owned a gym. I didn't need another business, but I just had this compelling feeling of more people need to try this. And I think the reason why they have it is the totally new way to exercise. There's a million questions how do I use the bands?

Ashley Selman

What kind of bands should I use? What reps and set should I do? How many days a week? What's the vault? You know, on and on and on. And there's no real fitness program out there. You've used it in physical therapy, which is

common, but in fitness it's not as common. There's not as many programs. So I created a program to really walk you through from day one day one you're using VFR band.

Ashley Selman

What do you do? How do you put them on? How do you start? How do you progress and really created a program for that? Because I just see the application being so, so beneficial for people.

David

Let's go into some of the specifics here. Yeah. So what is the difference between doing a regular workout and doing a BFR workout.

Ashley Selman

Yeah. So you can pretty much do any of the same exercises. The BFR is always going to be lighter weight. The goal is not to try to get as heavy. You want to go lighter, because your muscles aren't going to be as strong using BFR. So 30% to 50% of your normal weight would be the most you'd ever want to use.

Ashley Selman

So weights are always going to be lighter, reps are going to be higher because we kind of what we talked about before, you're getting that fatigue, but you want to keep building that fatigue for as long as you can during that set. So the weights light, you're going to do a lot of repetitions. And other than that, I mean, depending on your goal, if your goal is hypertrophy or gaining muscle, you would, you know, maybe focus on more isolated exercises that are going to target a muscle group like for you and your knee injury.

Ashley Selman

You're targeting maybe quads a lot doing your air squats. You really want to get those strong. Or if you're looking for VO2 or just systemic mitochondrial health and just kind of overall energy, you do maybe full body exercises or even cardio exercises with the bands on, I'd have people do a bit of both. So we focus on hypertrophy some days or and then we work on more systemic vascular benefits and more energetic mitochondrial benefits by using multiple muscle groups.

Ashley Selman

Or you're challenging it more from a systemic standpoint. But the exercises, you know, we do squats, we do push ups, we do mountain climbers, we do, you know, standard exercises. But just with the different load repetitions. And also the total workout time is less so BFR workouts usually are going to be more than 20 minutes. And the reason for that is the fatigue happens so fast.

Ashley Selman

Right. Like like we're talking about that burn, that fatigue. You don't need 45 minute. Yeah. Like it happens so fast that all your brain knows is that you've hit a really deep level of fatigue, and that's all you need to do. You don't need to keep continuing that for for a long session.

David

There's a particular sensation that I get, I start sweating a lot, like heart rate's going up and it's out of proportion to what I'm doing. And then after 20 minutes of BFR on is a right. You may have done 1518. And I just want to say take these things off of me.

Ashley Selman

Yeah. And the sweating the sweating is kind of crazy. I'm not a sweater typically. But when I started and before I was like, where is this coming from? Like, yeah.

David

Yeah, yeah. And you mentioned cardio. So are you having people do I can't even imagine how unpleasant this would be. But like doing sprints with BFR or. Yeah, like hit training with BFR. Are you doing that.

Ashley Selman

Yeah we're doing mix up to steady state. But if it's steady state is still no more than 20 minutes. But mostly I focus on like kind of the VO2 like 3 to 4 minute intervals with maybe a two minute recovery with the bands on. And it's pretty wild. I do them with the bands on, and then I always say my last set and I take the bands off.

Ashley Selman

I'll often use my peloton and my weights are through the roof on that last set, like way beyond what I can do.

David

You've got the hormone thing happen. As soon as you take those bands off, it's like, yeah.

Ashley Selman

Yeah, so your body's releasing nitric oxide, which thins your blood and expands your vascular system so that when the bands are on, you can get enough blood flow. But then you take the bands off and you have this like just rush of blood flow, so your VO2 max goes up. So it's actually a great thing for endurance athletes to use as a warm up, because it gets our body really primed to be delivering blood to the muscles as efficiently as possible.

David

I've also heard that if you are more of an anaerobic athletes, I do this silly ski racing thing. So my event lasts about a minute, which doesn't sound like a lot, but if you're doing it, it's like a lifetime. One of the things I was coached to do is to do warm ups with the BFR, and then you've got a window.

David

You've got about a 12 to 14 minute window where there's this, you know, a lot of chemicals are going into your blood and you can you can click to another level that you couldn't do before.

Ashley Selman

That's cool. Yeah. I hadn't heard of the 12 to 14 minute window, but that that intuitively makes sense to me from how I felt. But that's that's really cool. What's your event that you do. That's a minute.

David

Ski racer.

Ashley Selman

Okay. So pretty significant quad burn I would imagine. And everything else. Yeah.

David

Yeah the last 15 seconds are often just like survive. Oh wow.

Ashley Selman

And race pain.

David

Race pain highly consequential velocity. So I mean I'm nowhere near like the sort of World Cup people, but you'll see like in those races when they fall, it's always like the last 15 seconds. Their races are long. They're like two minutes, two and a half, which I think, and something to me. But the combination, the mental fatigue and, and you just sort of run out of gas and.

Ashley Selman

Yeah, yeah, yeah, you should try. Have you ever tried BFR like minute minute sprints quote unquote sprints. That's not really strong.

David

My God I can't I'm just trying to like I've, I've recently I had Stacey Sims on the show.

Ashley Selman

Oh great. She's awesome.

David

We were talking about sprinting so I put that in and a 32nd all out sprint. I do it on a bike. And you know the first 10s, you're like, yeah, I got this. I'm going to crush this thing. Oh well then you sort of like your anaerobic is done.

Ashley Selman

Right? Right.

David

And then you got another 20s. Oh that's unpleasant. The thought of doing that with BFR, I may do that. Let's see what that what happened?

Ashley Selman

Well, I might write up some carryover to your racing. Just that little bit more endurance and that minute fatigue.

David

Talk to me a little bit about are there gender differences with how BFR affects people.

Ashley Selman

Yeah. So what I've really found women in particular going through perimenopause and menopause. This is to me the most amazing solution for them. Because what's happening for women, they're losing hormones quickly, where men lose their hormones more gradually as they age. And when their estrogen drops quickly, their human growth hormone drops with it. And that's where they lose strength.

Ashley Selman

They lose muscle, they lose bone, they gain visceral fat. Often human growth hormone is the antidote to all of those things. So I have had some life changing stories of women. I had one woman who she was on estrogen blockers because she had breast cancer and kind of was thrown into menopause, gained weight. She was a lifetime exerciser, including lifting heavy weights, not just cardio, but the whole thing couldn't stop gaining weight.

Ashley Selman

She would try to lose weight. The best she could do was maintain started using BFR and within four months lost 22 pounds that had been impossible for her to lose before her thyroid started functioning. She had Hashimoto's, which is low thyroid and it's changed her life. So it is like helping your hormones function better. So as women lose that hormone function for men, I notice it like I have some men in my program that are like in their 60s and they love it.

Ashley Selman

I feel like men who are younger, as long as they don't have injury, that's deterring them from going heavy, then most men like there's also a little bit more culture thing, like a lot of women aren't familiar with lifting heavy where men might be more familiar with that, you know, depending on their past. So I feel like the sweet spot, not that it wouldn't benefit men younger than that, but like, mentally, I feel like that's where men start being like, oh, I want to try this.

Ashley Selman

And it's really helping me. One of my clients had blood cancer and was in the hospital for five weeks. Had a stem toe transplant, completely atrophied. We started very gradually back in BFR, and in three months he got his muscle mass back and his doctors were literally like shocked. And he was like in his mid 60s. And I mean, that's an extreme case of someone that had an illness.

Ashley Selman

But like that just shows you the power of how it can help. So I think it used to be thought of only for those extreme cases, but now we're willing for the average person who's just trying to maximize their longevity, which I know is a lot of your listeners just like that. What BFR will do, it will help your mitochondria.

Ashley Selman

It will help your muscle mass, your bone density, all the things that we worry about as we age, it will just make it easier for you to maintain or even build those things in some cases.

David

So I ultimately tell you, my experience with deadlifting. Okay, I love and hate deadlifting doing actual heavy deadlifts. I only do them no more than once a week movement like once every two weeks because they are so impactful on my body. It takes me a really long time to recover from them. But on the other hand, I do five at 300 and I feel awesome.

David

Oh yeah, it's just so great to like, pick up the stupid heavy thing and set it down. Yeah, the difference though with BFR. So then the bar is going to be much less like a 45 on each side. So we're like 135. And with the BFR is maybe

I'll do 10 or 12. I mean, it's really uncomfortable. It's not fun because you're doing it slower too.

David

But the regular deadlift is just like, get the thing up as quickly as you can. And BFR, since I like that, right. It's more of a slow, controlled movement, but that doesn't have the sort of systemic hormonal exhaustion is all I can explain from doing like really heavy deadlifts. I don't get that. I get most of the benefits.

David

It's not as fun, guys. It's not as fun. I know we like to pick up heavy things and drop them. It's really fun.

Ashley Selman

That's interesting. I do have some people that think BFR is really fun, but I guess it just depends on what you're. Yeah, maybe because it's new or maybe because they feel so good or they get like a, you get like a runner's high after work. So there's like that kind of buzz. But that's interesting what you say. So I do, I do one day of heavy lifting a week and deadlift for one of my favorite to do, and I've gotten generally stronger my deadlift since.

Ashley Selman

So I do BFR for hypertrophy, strength building muscle muscle strength building, and then I do heavy for just like I said, like five reps. I'm not really trying to get fatigued. I'm not really trying to work on hypertrophy. I'm just trying to get that heavy load, get it off the ground, get that normal coordination of, you know, maximum strength.

Ashley Selman

And it is it's a totally different feeling. And I think both are great for people that can do heavy. I'm not suggesting never too heavy. I think the combination is great. I just found for some people that there's a lot of people that can't do a 300 pound deadlift right? So if you're not able to, you know, it's just a great alternative.

David

There's also the safety involved, right. So like when anything when you start getting into really heavy weight technique is really important to keep yourself from hurting yourself. Yeah. With the BFR as you're doing here, fatigue definitely happens. But it's a different thing and it feels much safer to me. It's just easier to keep everything aligned. That because you tired, like you get a little tired with the really heavy, you got to stop.

Ashley Selman

Right? Right. Yeah. The risk goes up for sure. Yeah. I mean, the huge thing of BFR, the reason why I'm saying it's great for longevity is because it doesn't trust your joints. It doesn't tear down your muscles. It's not risk of injury. So that's the huge benefit of it is it is the results are going to be similar to lifting very, very heavy without the downside risk of lifting.

Ashley Selman

But your point if you're someone who's skilled at lifting heavy, you've done it for a long time and you love it like great, that's that's good. But but a lot of people that's not the case. And also if we're talking about longevity, you know, I mean, I already have a hip replacement. Like how many years of lifting 300 pounds.

Ashley Selman

Like what does that do to your joints long term? I don't know that anyone knows for sure. But we want to maybe, you know, like minimize that stress to a degree. What's that perfect balance between stress and benefit. And I don't know and nobody probably knows for sure. But trying to find that will work. We're not just doing heavy multiple times a week at our joints are paying the price for that.

David

One of the things that I find interesting that you mention is bone density, and I've always thought the way bone density increases is load, but you're finding bone density increase through. And people are doing Dexa scans to verify this.

Ashley Selman

Yeah. And there's been studies done on if someone breaks a bone and you use BFR on the other limbs and not the impact of limb, that the bone will heal significantly faster. And the reason is, is because of the human growth hormone.

And there's bone growth markers in the blood that circulate more with BFR. So I think that bone density comes from two ways.

Ashley Selman

One is the load, the physical load that you're exerting, but the other, I mean, our brain controls so much. Right. And like what what chemicals are coming out of the brain to help our body. Right. So in response to this human growth hormone is good. It's helping our bone turnover, cellular turnover faster with the human growth hormone. So it's able to increase bone density without lifting heavy which is pretty incredible.

Ashley Selman

Again I try to do both. So I'm getting it from both ends. But if you can't lift heavy up until now, the alternative is pretty like tough for a lot of women who are bone does issues who don't have experience lifting heavy okay where weight best and walk around a lot. Maybe that will help some, but I don't think at the level of lifting heavy.

Ashley Selman

So this is a great alternative to that. When you're really getting those those blood, the bone markers in your blood to increase so that you're getting that bone turnover, more studies need to be done on that. I want to say it's they still need to do more long term studies, but they have proven that a broken bone heals in five weeks, as opposed to eight weeks, like fully healed, where you don't even see it on the X-ray anymore.

Ashley Selman

And they have I have seen several individual DEXA scans where the bone was going down, and then it starts to go up after they use BFR.

David

Wow. That's great. These are things that I know a lot of people faced with these conditions. They give up and they say, there's nothing I can do. It's just the way it is. I love these sort of discovering these methods that actually we have agency. There's absolutely things you can do.

Ashley Selman

I'm so glad you said that. One of the biggest things I got out of BFR for me personally was hope. You know, I was starting to feel like I didn't have agency over my health anymore, and I was getting losing hope on what's my long term going to look like. And I have multiple other people I've talked to this like a big thing is like to have the hope and the kind of confidence that you can do something that makes a positive difference, and then that becomes motivating and reinforcing, and then you want to do more of it.

Ashley Selman

A lot of women that I work with, who've gone through menopause and are having difficulty issues, whether it's because they can't lose weight or they're losing muscle or their bone as they and they do, they kind of throw in the towel and be like, I've tried and nothing's working. So why do I even try anymore? And this, this is a great tool to give people hope and that motivation back that you can you can do something that's going to significantly help your health.

David

Let's talk a little bit about the research here. And yeah, so there's a couple of things that we've talked about here. There's the the hormonal effect with a lessening of the structural stress on the body. And I read a bunch of this stuff over the years ago, the research out of Japan, longevity, the vascular part so obvious about the vascular element of this.

David

Yeah.

Ashley Selman

Yeah. It's a great question because a lot of the research focuses on the muscle gain and that's been shown. But the for health is also huge. So what's happening is that you put the stress on the bachelor system. It kind of makes sense I mean that's how our body works right. If it's under a little bit of stress it will adapt.

Ashley Selman

It is under too much stress. You know that's not good. But if you put this moderate stress on your vascular system, your brain knows that not enough

blood is getting to your muscle. So it wants to get it there. So it releases things like nitric oxide is one of the big ones that helps to expand the vascular system.

Ashley Selman

So what this does as we age, when you wear BFR, your vascular has more regularly start to get this nitric oxide, which creates this expansion and flexibility of your vascular system. And as we age, as we know, our vascular system gets less and less flexible, more stiff. Arteriosclerosis is the extreme example of that. And this leads to blood clots, strokes, less blood flow to the brain.

Ashley Selman

Like there's there's all consequence is to stiffer vascular system. So BFR basically makes our vascular system more flexible. Again people's blood pressure will go down if you monitor your blood pressure and start doing BFR. And then look at the trends that will go down over time. So that's great. It increases cerebral blood flow because of both that and because we're creating more capillaries, it increases Bdnf one which is a stimulant to create new capillaries.

Ashley Selman

Basically our body's going we need more blood. What can we do. Expand the vascular system, create more capillaries, thin the blood like so. The result of blood flow restriction training is that you actually improve your blood flow. It's like the opposite result, right? Like our body's responding by we need to get better improving blood flow. And so the end result is your your system is more efficient at circulating your blood.

Ashley Selman

So the O₂ goes up, you know it's really incredible for the for the vascular system.

David

And I just want to point out the brain. So long term brain health this is really great. And the studies and like I said it's been a couple years since I've read them. But out of Japan's where they were originally testing this because they realized they had this aging population and they need to keep them, like as healthy as possible.

David

And what can they do that's safe? That's easy to do. And these studies maybe were in the tens of thousands of people, as I recall, and the effects on all forms of morbidity, heart cancer and brain diseases, really remarkable improvements. And if you if you think about the brain stuff, I'm an engineer. So I sort of think about it this way.

David

But so you got this pump your heart and it realizes there's an occlusion, like it needs to work harder, but it can't work harder just in one place. It has to work harder systemically. So it's also forcing the blood into the parts of your body that are not occluded, like your brain and your organs, and increasing that vascular elasticity at the tiny capillary level, which is what really helps with long term brain health.

David

I might have mentioned this to you. The bands I use, they're by a company called Katsu. There's a number of different flavors of these things. I take. The number one consumer of Katsu bands are these things called Face Jim's in Japan and the way the face teams work. I couldn't believe this when I heard this. What they what they do.

David

And this shows you how gentle so they learned this from the original research of elderly women in Japan, where they would just put them on their legs and basically not do much. Maybe walk around. I mean, they were doing training like you were describing. They were just sort of sitting there watching television or they walked to the whatever wasn't a lot of stuff, and they realized they were getting these really wonderful effects from this, that they were just doing, that they were seeing muscle mass increase and better vascular markers.

David

So in Japan, they have these things called I'm going to use the word face, Jim. There's a Japanese word for it. But essentially what happens is you go into this thing and they put the bands on your legs. It's mostly women who do this, and it's a 20 minute thing. You just lay there, you get, you put the bands on your legs.

David

I think what you're doing is you're using your face speaking vowels or something. Are you reading the alphabet? And you do this for about 20 minutes and you take the bands off your legs and and the thing is, again, your brain doesn't know all it does is it just like, oh, we have an occlusion. We have to subscribe to a bunch of growth hormone to help things out.

David

But the muscles you've been using are in your face. And so that's where the benefit goes.

Ashley Selman

It's amazing.

David

Which sounds insane to me. It's the same thing, like you were telling me, you have a broken limb. You put them on the other limbs, and the other limbs don't even really have to do much, you know, just a little bit of contraction or something. And then you take the bands off, you'll get this systemic flood of these hormones and the hormones and these growth factors are going to look for something to repair.

David

And oh, broken arm.

Ashley Selman

Exactly. Oh yeah. A lot of people think like, oh, does it just help your arm where the band is? Or the leg is like, no, it's the whole system. Actually, the guy who discovered it in Japan, he ended up breaking his leg and was in a full leg cast and he occluded his upper leg. And when they took off his guitar, you know, periodically to do our cousin is also just have it occluded, like you're saying, when they took off the cast six weeks later, his calf had not atrophied or very little, which is shocking.

Ashley Selman

I mean, usually that's and he couldn't even move his calf. He couldn't even his ankle. So it's not like he was working his calf. It just so it is it's pretty incredible. Yeah.

David

I have heard stories that major league athletes, baseball players, do they break a limb or something? If you're a professional athlete, you can't afford the downtime because you're not moving something. You lose. And the game part, it takes much longer. So if they can stay where they're at while not moving the limb. Super helpful.

Ashley Selman

Exactly. Yeah. It's much quicker to to return to full strength. That's the other thing. If you think about it, as we go through life, as we get older, you know we're destined to have some kind of injury, illness. Something happens, you know, then you got to come back from it, and then you have an injury or a surgery.

Ashley Selman

And as we age, it's like harder and harder to get to 100% after those things. It's like you get a little weaker and then maybe you get to 90% of where you were and then something else that we get. But with BFR, you can really get to that 100% so much easier and faster. And so I do think that's another huge way is like recovering from these kind of like blips that life throws at you and being able to get back to your best self, no matter what age you are, is pretty cool.

Ashley Selman

Pretty. Also, another thing that gives you kind of a little bit of hope and excitement about, you know, being able to have some agency over your health.

David

I have seen graphs of strength and muscle mass change. It's not a smooth curve. It's not a line, it's not a curve. There's step changes and the step changes tend to be, oh, I got the flu or I broke my foot or something. And exactly what you're saying, suddenly your capacity drops by 10% and now your new max is 90%.

David

What that was until the next bad thing happens. And then you step change down another ten. So if you can prevent that from happening or mitigate most of the effect of that, that's a really great thing.

Ashley Selman

Yeah, that's a great way to say it. The step changes. Yeah. And it's like I fell into that with my hip replacement. It was like this, this downward spiral of like, well I can only now work at this capacity and that's my max. But you can't like work hard enough to get past. It's like you're stuck in this loop of like, I can't push past to get back to where I used to be because I have this limitation or this, you know, or my whole fitness level is gone down.

Ashley Selman

And now how do I get it back? It becomes harder and harder. So it is that's a pretty cool effect of it is that, you know, and I started using it ten years after my hip replacement. I still had atrophy in my leg when I started using the band, my atrophy was 90% gone within a month of using the band.

Ashley Selman

And then I've continued to steadily build it from there, but it just put me at a completely like within weeks I was walking differently, I was walking better, I had less joint pain when I, you know, my endurance was better. Just like got me back to that level that I could not get to before I found BFR.

David

This is like a BFR infomercial.

Ashley Selman

Yeah, well, I know that is. Honestly though, why? What makes me so excited about it is that like, there is this legitimate science backed experience back benefit and, you know, Petey's know it and sort of like you have it, have a knee replacement. Well, let's use BFR so you don't atrophy. And we don't want to put stress on your joint.

Ashley Selman

But like if that's good for seems like that would be good any old time.

David

I'm not a doctor and I don't give medical advice, but very frequently people ask me about things like joint stuff, knee replacement, hip replacement. What I tell them is immediately go get yourself a set of BFR bands and really build everything up. It's not going to stress out the joint. Build that up because you want to be as strong as possible before you go into whatever sort of replacement surgery and coming out as quickly as you can.

David

You know, we're talking like a couple of days, get the bands on and just start working your feet back and forth. Just start sort of squeezing the muscles. And that's going to keep you in much, much better shape. Your recovery is going to be much faster. You can have other stuff to do. You can have elasticity issues with the tendons and the joint, all that stuff.

David

But the big stuff getting muscle back, especially as a woman when you're over 50, that's can be extremely challenging.

Ashley Selman

Yeah, yeah.

David

Actually, if somebody wants to connect with you, what would they.

Ashley Selman

Do? They could connect with me at the Sally strength.com. Sally is certainly the play on my last name. So Sally strength also on the socials. Sally strength on LinkedIn Facebook Instagram.

David

And where is your physical gym located.

Ashley Selman

In the Silicon Valley in Mountain View, California. It's called Evolution Trainers. We've been there going on 20 years.

David

Oh my gosh, that's a different talent. It was 20 years ago.

Ashley Selman

It is.

David

Amazing actually. Thank you so much for your time. And I'm hoping people out there who have again, this is a vector into how if you have problems, you have muscle issues and you're thinking like, oh, if I could only do that thing that I could do 20 years ago. I'm not saying you can exactly do that thing from 20 years ago, but there's a way this is a workaround towards getting back to that sort of feeling that you used to have.

David

And it's a way of, again, linguistics here. I don't like to say slowing the aging process, but we'll say increasing the good part of living longer.

Ashley Selman

I have had a couple people tell me that they feel like it's changed their trajectory of their aging process. That's right. Right. They're still aging, but that feels a lot more gradual. Instead of sometimes a steeper feeling. Yeah.

David

Don't like that.

Ashley Selman

Right.

David

Thank you so much.

Ashley Selman
All right. Thank you.

David
All right. Take care.