Why Injuries Keep Coming Back: Load, Capacity & Recovery Explained Transcript

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Introduction to Dr. Stefi Cohen.)

If you've ever If you've ever trained seriously —whether it's powerlifting, —whether it's powerlifting, CrossFit, running, or CrossFit, running, or just lifting just lifting weights at your local weights at your local gym—you know that gym—you know that injuries don't just happen out of injuries don't just happen out of nowhere. They are the nowhere. They are the result of certain result of certain patterns. And the patterns. And the two most persistent of two most persistent of them are low them are low back pain and back pain and rotator rotator rotator cuff problems. People cuff problems. People go through go through go through rehabilitation, rehabilitation, rehabilitation, thinking that everything is thinking that everything is fine.

fine. fine. They return to They return to training, and boom— 3 months later the pain 3 months later the pain returns. Why? returns. Why? What exactly is going wrong What exactly is going wrong? What's going wrong?

? What's going wrong? To help us To help us understand understand understand the causes and learn the causes and learn how to prevent this in the how to prevent this in the future, my future, my guest today is Dr. Stephy Cohen.

Dr. Stephy Cohen. She is a She is a world- world- world- record-holding powerlifter and also record-holding powerlifter and also holds a doctorate in holds a doctorate in physical therapy.

physical therapy. She spent ten She spent ten years at the intersection of years at the intersection of elite strength elite strength training and training and clinical clinical clinical movement science. She has worked with movement science. She has worked with thousands of athletes and thousands of athletes and coaches, coaches, coaches, trying trying trying to understand why to understand why injuries recur injuries recur and what actually and what actually prevents them from prevents them from returning. This is a returning. This is a conversation about conversation about injury mechanics, when to injury mechanics, when to get a diagnosis and when to just and when to just move smarter, and how to move smarter, and how to make your body make your body immune to the immune to the workouts you workouts you love. Dr. Stephie, welcome to the, welcome to the show. Okay, Dr.

show. Okay, Dr. Steph, Steph, Steph, welcome to the show. welcome to the show. Thank you. Thank you very much for Thank you. Thank you very much for inviting me.

inviting me. I am grateful. Now, to I am grateful. Now, to make sure, which way is more make sure, which way is more convenient for you? Should I address convenient for you? Should I address you as Steffi, Dr.

you as Steffi, Dr. Steffi or Dr. Cohen??? Stephie—that's good. Oh, Stephie—that's good. Oh, Steph—that's good. Okay, Steph—that's good. Okay, I want to start with a I want to start with a question that I don't question that I don't think think think anyone has asked you before.

anyone has asked you before. Good. Good. Because I know it's Because I know it's possible, because we're possible, because we're going to talk about going to talk about your past. You have your past. You have so many world so many world records in records in powerlifting, and some of the ones powerlifting, and some of the ones I've seen are literally four are literally four times your body times your body weight, maybe more, weight, maybe more, and you're aiming to and you're aiming to bench press 600 pounds.

bench press 600 pounds. That's still the goal, right? That's still the goal, right? Yes. Are you an alien?? Oh my God. Oh my God. I will not I will not judge you. I'm not judge you. I'm not going to judge you.

going to judge you. I will not I will not judge you. And I judge you. And I promise, I will delete the promise, I will

delete the post if necessary. post if necessary. But.

But. No, I just think No, I just think I'm a very motivated I'm a very motivated person who has found what person who has found what she was she was made for.

Good. This is a good Good. This is a good answer that will answer that will protect me from the FBI protect me from the FBI and all those people who and all those people who want to reveal my want to reveal my secrets. I do secrets. I do n't want this either. I just want. I just want to check. I just to check. I just want to make sure because want to make sure because I need to know where I need to know where we're starting from. And we're starting from. And your answer was your answer was really great, because I really great, because I really want to talk really want to talk about how you got to this point about how you got to this point, because, because most people have most people have been been been in the gym for a while, right? People in the gym for a while, right? People train, train, train, lift weights, lift weights, get stronger, and get stronger, and then there comes a point then there comes a point when you hit a when you hit a certain limit. But you really got into strength got into strength training and training and competitive competitive competitive powerlifting. You powerlifting. You know that most of the know that most of the physical therapists physical therapists I know are I know are athletes themselves, right?

athletes themselves, right? But you have reached a But you have reached a completely different level. completely different level. So now that you understand that understanding the body… let me let me approach this approach this differently. First, I want differently. First, I want to know how you to know how you came to this and how came to this and how you combined it with you combined it with your education.

Combining strength training and physical therapy.)

Good. First of all, I don't Good. First of all, I don't remember who remember who said it, but I said it, but I read or heard that read or heard that quote somewhere. The future quote somewhere. The future belongs to those who belongs to those who acquire skills and acquire skills and combine them creatively. And combine them creatively. And it really changed it really changed my perspective on how I my perspective on how I approach my approach my life. I always knew I life. I always knew I wanted to do wanted to do something related something related to movement, fitness, and to movement, fitness, and helping others. So helping others. So from an early age I from an early age I acquired skills in acquired skills in different fields, different fields, you know? This includes you know? This includes communication, communication, communication, marketing, marketing, marketing, sports physiology, my own, my own training experience, and then training experience, and then physical therapy. I physical therapy. I simply went through life simply went through life trying trying trying to improve in to improve in all of these areas, and all of these areas, and eventually eventually eventually purposefully purposefully purposefully built the exact built the exact life I wanted.

You know, it's a combination of my You know, it's a combination of my own sporting own sporting experience, sharing experience, sharing my journey with my journey with others, and now I'm others, and now I'm sharing everything I've learned sharing everything I've learned with my colleagues, with my colleagues, hoping to hoping to hoping to inspire them and inspire them and help them do the help them do the same. To turn same. To turn their passion for their passion for health, fitness, and health, fitness, and helping others into something helping others into something they can they can monetize.

monetize.

Why injuries happen in active people.)

Perfectly. Ideally. Here's the Perfectly. Ideally. Here's the thing: most thing: most people, especially in their 20s and 30s people, especially in their 20s and 30s, go to the gym and, go to the gym and work out, but in work out, but in my opinion, what my opinion, what stops many on the stops many on the path to fitness and path to fitness and strength training is injuries. You see, is injuries. You see, this is usually the first this is usually the first obstacle, and while it obstacle, and while it happens that people happens that people are distracted by family or are distracted by family or work, for work, for many, injuries many, injuries become the main barrier become the main barrier. So, for you,. So, for you, as you work as you work at the intersection of strength at the intersection of strength training and

a training and a clinical approach, clinical approach, what is the what is the pattern? What do you pattern? What do you see first when see first when people say, "Hey, is people say, "Hey, is this normal?" because there this normal?" because there 's often a difference between an 's often a difference between an acute breakup and acute breakup and something slow, something slow, insidious, that insidious, that develops develops develops gradually. Do gradually. Do you see patterns in people like: “Hey, I work out with “Hey, I work out with weights. Everything weights. Everything hurts. Is this "and hurts. Is this "and then it then it turns into turns into trauma"? Is there anything trauma"? Is there anything you can pay you can pay attention to?

The biggest mistake athletes make when training.)

attention to? Yes, definitely. So I Yes, definitely. So I think the main thing is people's obsession with is people's obsession with quickly achieving quickly achieving their goals. The time their goals. The time factor is usually the factor is usually the trigger.

trigger. trigger. So whenever So whenever someone rushes to a someone rushes to a result, result, result, bad bad bad things happen. Why? Because things happen. Why? Because people don't build up the people don't build up the proper proper proper tolerance or tolerance or capacity capacity capacity they need to they need to reach that ceiling.

reach that ceiling. Yes? We become Yes? We become obsessed with chasing obsessed with chasing performance metrics and what performance metrics and what I call " the ceiling," but the ceiling," but we forget that in order to we forget that in order to get there get there whole—and that should whole—and that should be the ultimate goal be the ultimate goal —and to eventually —and to eventually reach ever higher reach ever higher ceilings, you need to ceilings, you need to build a solid build a solid foundation. There's an incredible foundation. There's an incredible research paper research paper published by, um, published by, um, Gabbit. I actually Gabbit. I actually forgot his name right forgot his name right now. It flew out now. It flew out of my head. But what he's of my head. But what he's actually saying is that actually saying is that we don't know, we can't pinpoint exactly what pinpoint exactly what caused the injury in caused the injury in each specific each specific case, but we do case, but we do know some things know some things that increase that increase the likelihood or the likelihood or risk of injury.

There are internal There are internal factors, there are external factors, there are external factors, and they all factors, and they all increase increase increase a person's susceptibility to a person's susceptibility to injury. And then when injury. And then when all of that meets a all of that meets a triggering event, triggering event, whether it's a deadlift that's too heavy whether it's a deadlift that's too heavy, or a, or a sprint that's too fast, sprint that's too fast, or too many or too many sprint reps, whatever it sprint reps, whatever it is, that's when we is, that's when we get injured.

However, we know from research However, we know from research that the main that the main factor that factor that increases the susceptibility increases the susceptibility to injury is the to injury is the ratio of ratio of ratio of acute to acute to chronic chronic chronic workload. So, in workload. So, in other words, other words, trying to achieve trying to achieve something too quickly.

something too quickly. So over the course of my So over the course of my career, I've career, I've changed my views a bit. changed my views a bit. Of course, when I first Of course, when I first started playing started playing sports, being sports, being young, you think young, you think you're invincible. You you're invincible. You think injuries think injuries happen to other happen to other people, not you.

people, not you. So, of course, I've So, of course, I've had my share of had my share of injuries simply because I thought I was thought I was indestructible. But indestructible. But later I realized that it's later I realized that it's not about how not about how fast you can get fast you can get strong, it's about how strong, it's about how long you can long you can stay injury-free.

stay injury-free. And if you stay And if you stay injury-free injury-free injury-free long enough, you eventually long enough, you eventually approach approach approach your true your true maximum maximum maximum potential, if potential, if you can keep yourself you can keep yourself from getting hurt. So, creating or creating or spending

enough spending enough time building that time building that foundation, that foundation, that foundational foundational foundational level of ability, not level of ability, not letting it letting it drop to drop to the basement when you the basement when you take a break or take a break or get injured, and then get injured, and then gradually gradually gradually building up to building up to your limit in a timely manner.

So, adjust So, adjust the load and the load and progress wisely, progress wisely, without sudden jumps in without sudden jumps in training volume. This is the real. This is the real formula. I think formula. I think many people overcomplicate things by trying to play by trying to play trauma detective and trauma detective and look for a specific look for a specific answer to a answer to a multifactorial event, and of course they, and of course they fail.

fail. In the end, it's In the end, it's really that simple: really that simple: how much are you doing and how much are you doing and are you ready for it, are you ready for it, right? Injuries right? Injuries occur when the occur when the applied applied applied load load load exceeds the resistance exceeds the resistance or capabilities of or capabilities of the tissues. It really is that the tissues. It really is that simple. So all simple.

Why pain should not be ignored.)

So all we need is we need is enough time to enough time to go from go from foundation to limit, foundation to limit, gradually gradually gradually increase increase increase the load, and the load, and plan plan plan it wisely to achieve the it wisely to achieve the goal. Yes, that makes sense goal. Yes, that makes sense because I think what because I think what happens to happens to a lot of people, and I a lot of people, and I can speak from can speak from personal experience, is personal experience, is that slight that slight discomfort and you discomfort and you think, "it's nothing." think, "it's nothing." Something barely perceptible. And Something barely perceptible. And I think you mentioned I think you mentioned this, it's also a this, it's also a matter of preparation, matter of preparation, especially as an especially as an athlete. It's like we're athlete. It's like we're trained to overcome pain.

trained to overcome pain. Like, "ah, it's nothing." "I Like, "ah, it's nothing." "I will continue on." "These are small things." But I "These are small things." But I believe the problem believe the problem arises when we arises when we talk about the transition talk about the transition from an acute condition to a from an acute condition to a chronic one. This is when chronic one. This is when that slight pain, that slight pain, discomfort, or ache discomfort, or ache stops being just stops being just an annoyance and becomes a an annoyance and becomes a constant sensation.

constant sensation. And I think you And I think you mentioned an important thing mentioned an important thing about knowing when to about knowing when to step back, when step back, when to rest, when to to rest, when to make changes. I think make changes. I think it's hard for a lot of it's hard for a lot of people because of that people because of that mentality, you know, the mentality, you know, the "no "no "no day off" approach, even though day off" approach, even though sometimes your body tells sometimes your body tells you to take a break you to take a break or at least or at least lower the lower the lower the intensity.

intensity. intensity. Of course. Especially for Of course. Especially for athletes, this whole athletes, this whole "no "no "no pain, no pain, no results" mentality. I always results" mentality. I always say: “no pain, more results”, more results”, right? After all, pain is just a signal is just a signal telling you to check your “ engine,” engine,” engine,” right? You can't right? You can't ignore it. He is ignore it. He is telling you something. This is your…What is pain?

. This is your…What is pain? Pain is literally, Pain is literally, um, a reaction or um, a reaction or signal from your signal from your body that there may body that there may be a potential be a potential threat. So, you threat. So, you can't just can't just ignore it. You ignore it. You need to reassess need to reassess the situation. Hey, what am I the situation. Hey, what am I doing now? How, how doing now? How, how much do I train? Am much do I train? Am I really I really recovering from recovering from the workouts I the workouts I do? Or, am do?

Understanding low back pain and recurring injuries.)

Or, am I forming the adaptations I forming the adaptations necessary to necessary to sustain this in the sustain this in the long long long term? term?

term? This makes a lot of This makes a lot of sense. And that's good. sense. And that's good. You're absolutely right You're absolutely right about how injuries about how injuries progress from acute to chronic progress from acute to chronic. just one. just one thing that may not thing that may not seem important and seem important and then turns then turns into a much bigger into a much bigger problem.

problem. problem. And then instead of And then instead of taking a day off, taking a day off, you now have to you now have to take a month take a month off, right? Or off, right? Or maybe longer, because you can't function fully now. Which is a function fully now. Which is a nice transition to nice transition to one of the one of the most common most common injury complaints that I see injury complaints that I see here in the clinic and that here in the clinic and that probably affects probably affects millions of people, which is lower back pain, because back pain, because the lower back is a weird the lower back is a weird place, and you know that, place, and you know that, right? Because when someone right? Because when someone says they have says they have back pain, even I had back pain, even I had great doctors who great doctors who taught me, and it's like, taught me, and it's like, "Well, what "Well, what exactly is this?" Is this the sacroiliac joint? Is this L4- L5? Is this the quadratus L5? Is this the quadratus lumborum (QL)? Are these lumborum (QL)? Are these paravertebral paravertebral paravertebral muscles? Is this a disk? And all muscles? Is this a disk? And all that, but then again, that, but then again, these things happen these things happen so often. But for you, as someone from the, as someone from the world of strength world of strength training, your training, your life, your life, your training, just as a training, just as a physical therapist, physical therapist, why are low back injuries why are low back injuries so common among so common among people and why is it people and why is it so difficult for people to overcome them? This may be too? This may be too broad a question, broad a question, so please tell me how you so please tell me how you want to want to break it down.

break it down. Yes. Um, look, I Yes. Um, look, I mean, 80% of the world's population world's population experiences low experiences low back pain at some back pain at some point in their lives.

point in their lives. Why is this Why is this happening? Well, I happening? Well, I think we think we use our use our backs for literally backs for literally everything we do.

everything we do. Um, they take on a Um, they take on a significant portion of the significant portion of the load. Our load. Our spine literally spine literally defies gravity defies gravity 100% of the time. Oh, well, except 100% of the time. Oh, well, except when we're sleeping, but when we're sleeping, but the rest of the time it the rest of the time it defies gravity.

defies gravity. So, if we So, if we rely on the rely on the fundamental fundamental fundamental equation of injury, where the equation of injury, where the applied applied applied load load load exceeds the current exceeds the current tolerance, you tolerance, you get an injury. Everything we do essentially puts puts puts strain or strain or stress on our backs. So a stress on our backs. So a good way good way to think about it is to to think about it is to imagine low imagine low back pain as a back pain as a kind of bowl. A cup kind of bowl. A cup has a limited volume into has a limited volume into which which which water or any other water or any other liquid can be poured. And if everything liquid can be poured. And if everything we pour into a cup we pour into a cup eventually fills it eventually fills it to the brim, then we have to the brim, then we have two options. We either two options. We either remove something from the remove something from the cup. We pour out cup. We pour out the liquid or take a the liquid or take a larger cup, that is, larger cup, that is, increase the capacity. The problem lies in. The problem lies in some some some misunderstanding about misunderstanding about back injuries: why back injuries: why they happen and what they happen and what approach to treatment is approach to treatment is best. There are so best. There are so many conflicting many conflicting opinions from different opinions from different experts. A surgeon experts. A surgeon will say one thing, a will say one thing, a chiropractor chiropractor another, a massage therapist another. And I believe that another. And I believe that as a consumer of as a consumer of information, as information, as a patient or client, it is a patient or client, it is very difficult very difficult to navigate what to navigate what exactly to do.

When an MRI does not explain your pain.)

At least for me, At least for me, look: I look: I had a lower back injury had a lower back injury that I thought would

that I thought would put an end to put an end to my career. This was my career. This was in 2017. I was in 2017. I was building my career as a building my career as a powerlifter and powerlifter and studying to be a studying to be a physiotherapist at the same time.

The combination of a sedentary The combination of a sedentary job, stress from job, stress from studying, sleeping two studying, sleeping two hours a day, and hours a day, and intense intense intense training for competitions training for competitions simply destroyed me. What surprised me most was that the surprised me most was that the MRI MRI MRI showed nothing. But I showed nothing. But I felt such felt such intense pain. I'm talking about the fact that I could n't even put on my n't even put on my own shoes.

own shoes. That's how That's how bad the pain was. I bad the pain was. I was on the verge of was on the verge of being expelled from being expelled from school because it school because it required me to lift required me to lift at least 40 pounds.

at least 40 pounds. Physically, I couldn't Physically, I couldn't even even even adjust the footrests of the chair because I couldn't bend over. because I couldn't bend over.

I couldn't bend over. I I couldn't bend over. I couldn't couldn't couldn't help or provide help or provide insurance for anyone insurance for anyone during practical during practical classes. So I almost got classes. So I almost got kicked out because of my kicked out because of my back pain, which is back pain, which is crazy crazy crazy considering I was considering I was studying to be a studying to be a physical therapist. It physical therapist. It was such a was such a frustrating and frustrating and confusing moment because confusing moment because I was like, "Okay, I've I was like, "Okay, I've reached out to all the reached out to all the physiotherapy professors at physiotherapy professors at my university." Everyone expressed a." Everyone expressed a different opinion about what different opinion about what might be wrong with my might be wrong with my back. Then I back. Then I had an MRI and had an MRI and the results showed the results showed that everything was fine. And it was at that everything was fine. And it was at that point in my that point in my career that I realized career that I realized how ambiguous it all how ambiguous it all really is really is really is, how little, how little we know, and how we know, and how confident people confident people seem in their seem in their knowledge. And this is the knowledge. And this is the most dangerous most dangerous most dangerous position—to think that position—to think that you know, when in you know, when in reality we reality we know nothing. We can't say for sure whether it's the say for sure whether it's the paraspinal muscles, paraspinal muscles, or the sacroiliac or the sacroiliac joint, or the facet joint, or the facet joint, or whether it's a disc. We joint, or whether it's a disc. We really can't. We really can't. We can look at an can look at an MRI, and it will show us MRI, and it will show us what appears to be " abnormal," in abnormal," in quotation marks. But ultimately, what quotation marks. But ultimately, what we see on an we see on an MRI is the result of the MRI is the result of the normal normal normal aging process, of a normal aging process, of a normal biological being biological being interacting with its interacting with its environment and time, environment and time, right? This is what we right? This is what we see. So how see. So how can we confidently can we confidently say that what say that what we see on an MRI is we see on an MRI is the real culprit the real culprit or source of pain, and not or source of pain, and not just a normal just a normal occurrence in the body that is occurrence in the body that is unrelated to unrelated to pain? So, it's pain? So, it's so complicated and so complicated and ambiguous that it's ambiguous that it's ultimately difficult to ultimately difficult to pinpoint anything.

Yes. And it's fascinating that Yes. And it's fascinating that a man told a man told me this a long time ago: me this a long time ago: If you live If you live long enough, you're long enough, you're bound to get a bound to get a herniated disc, just herniated disc, just if you live to a if you live to a certain age. But certain age. But the problem is that the problem is that many people have many people have herniated discs without any pain. They any pain. They don't have sciatica. They don't have sciatica. They do an MRI, or do an MRI, or sometimes it's like, "Oh, sometimes it's like, "Oh, my pain is on the right," my pain is on the right," you do an MRI—and the hernia is you do an MRI—and the hernia is on the left.

Which makes no sense at all Which makes no sense at all, and yet there are, and yet there are people with severe low people with severe low back pain and sciatica who have who have minimal disc damage.

minimal disc damage.

Should you rely on imaging or function?.)

So, it seems, if I understand you correctly, that it is not always understand you correctly, that it is not always appropriate to equate appropriate to equate imaging findings with imaging findings with functioning or the functioning or the source of pain. This is a source of pain. This is a good transition to the good transition to the topic: if you topic: if you look at look at an athlete who says, "I have, "I have lower back pain, right here, lower back pain, right here, I have some kind of I have some kind of radiculopathy," he radiculopathy," he does an MRI, and it does an MRI, and it doesn't doesn't doesn't confirm anything, what confirm anything, what happens then? Are we happens then? Are we just dismissing just dismissing MRI, or are MRI, or are you just using it you just using it as reference as reference material?

material? material? But if in this But if in this case the MRI data case the MRI data contradicts what contradicts what you see in you see in the athlete, the athlete, what do you do next? Because the picture that? Because the picture that emerges is emerges is not at all what you not at all what you see.

see. see. Mhm. Absolutely. And, Mhm. Absolutely. And, supporting your supporting your point, you don't point, you don't have to be an have to be an elderly person to elderly person to have hernias. We see have hernias. We see that among people between the ages of that among people between the ages of 20 and 30, 56% of asymptomatic individuals asymptomatic individuals have some type of have some type of herniated or degenerative herniated or degenerative disc, which is just disc, which is just incredible, right? You don't have to be that don't have to be that old to have it old to have it. Um, I. Um, I mean, personally I would mean, personally I would just use this just use this as a starting point to as a starting point to maybe compare maybe compare results in results in a few years. But the a few years. But the approach I approach I usually take is usually take is focused on focused on functionality.

functionality. functionality. So I just want So I just want to know what exactly is to know what exactly is making your pain worse. I making your pain worse. I call this " functional functional functional advantage." What exactly advantage." What exactly makes your pain worse and what does makes your pain worse and what does n't? And that's what I'm focusing on n't? And that's what I'm focusing on.

.. Ultimately, the Ultimately, the most important thing is to most important thing is to focus on focus on the person in front of the person in front of you, not on the diagnosis you, not on the diagnosis or the image, but on the or the image, but on the person. How are you person. How are you feeling today? What is your? What is your subjective subjective pain level from 0 to 10? Why is it that pain level from 0 to 10? Why is it that you did what you did you did what you did yesterday? What did you do before yesterday? What did you do before this? What is your this? What is your stress level? How are you stress level? How are you sleeping? How is your sleeping? How is your diet? You know, diet? You know, things that are more things that are more tangible and, I would tangible and, I would say, subject to say, subject to change. What exercises you change. What exercises you do and don't do, your do and don't do, your sleep, what foods you sleep, what foods you eat and don't eat, eat and don't eat, your water balance. These are your water balance. These are much more much more tangible and accessible tangible and accessible things than a snapshot, things than a snapshot, you know, a find in you know, a find in an image that doesn't an image that doesn't really really really tell much about tell much about that person's story.

that person's story.

Coaching athletes through pain and injury.)

But here's a good But here's a good question because I want to question because I want to make sure make sure everything is clear here. So, right everything is clear here. So, right now you're obviously now you're obviously training on your own, training on your own, preparing for competitions. Do preparing for competitions. Do you work with other you work with other trainers? Do you have trainers? Do you have clients? Are you clients? Are you involved in any work involved in any work outside of your own outside of your own business? Are you working in business? Are you working in this field, or are you currently this field, or are you currently just focused on just focused on preparing for your preparing for your performances and everything performances and everything else?

else? else? You mean You mean professionally, right? professionally, right? Yes. Yes. That's right. Yes. Yes. Uh.

Yes. Uh, yes. Now, I just, yes. Now, I just started a company started a company called " called " Strength Training Institute," and Strength Training Institute," and basically, I train basically, I train trainers and trainers and instructors on how to instructors on how to help people who are in help people who are in pain. I pain. I call this call this trauma-safe trauma-safe trauma-safe programming. Um, programming. Um, basically I take them basically I take them through a full program, through a full program, starting with the basics of starting with the basics of anatomy, anatomy, anatomy, biomechanics, biomechanics, biomechanics, the art of coaching, the art of coaching, the principles of the principles of the principles of programming, and programming, and moving on to the modern moving on to the modern science of pain and, science of pain and, actually, working with actually, working with injuries and their injuries and their management. I also management. I also take on clients, I take on clients, I don't like to call them don't like to call them patients, but I patients, but I work with those who work with those who have tried everything and have tried everything and nothing has helped.

So the most difficult So the most difficult cases usually cases usually end up with end up with me. me.

Why deadlifts do not cause injuries.)

Of course. Clear. That's why Of course. Clear. That's why I ask this I ask this question, because question, because I feel like many I feel like many people have difficulty people have difficulty when we talk about when we talk about back pain. One back pain. One thing or one movement that thing or one movement that many people many people have trouble with is the deadlift.

is the deadlift. And it seems that this is what And it seems that this is what causes causes causes back pain in many back pain in many people. It may not be the people. It may not be the source of the problem, but source of the problem, but it can make it worse.

it can make it worse. So, from your So, from your perspective, you work perspective, you work with trainers, with trainers, clients, and clients, and train yourself. Why do train yourself. Why do so many people so many people get injured while get injured while deadlifting?

deadlifting? deadlifting? They don't get injured They don't get injured from deadlifts, from deadlifts, because there are no movements that are because there are no movements that are harmful in themselves. There are only movements. There are only movements you are not ready for.

you are not ready for. So again we're So again we're back to back to inappropriate or inappropriate or incorrect incorrect training load, right? And to training load, right? And to poor poor poor load management. Ultimately, load management. Ultimately, you are doing more than you are you are doing more than you are willing to endure.

willing to endure. It's not that the It's not that the movement itself is bad. movement itself is bad. The fact is that you The fact is that you progressed at such progressed at such a speed and in such a a speed and in such a time frame that your time frame that your body did not have time body did not have time to adapt. And you to adapt. And you find yourself in a find yourself in a situation where situation where internal and internal and external factors external factors increase the risk of increase the risk of injury, combined with a injury, combined with a triggering event, triggering event, which was the which was the deadlift. And now you deadlift. And now you want to blame the deadlift want to blame the deadlift. But. But in reality, it was in reality, it was n't about the movement itself.

n't about the movement itself. The thing is, your The thing is, your planning is off planning is off, you weren't, you weren't prepared for that much weight, prepared for that much weight, or your ego got the better of you or your ego got the better of you, or something like that.

, or something like that. I think a lot of people I think a lot of people do this: they don't have any order in their any order in their workouts at all. They workouts at all. They feel good.

They may They may feel good, feel good, so they go to the gym, so they go to the gym, do whatever they want, and do whatever they want, and then add more and more then add more and more weight, aiming weight, aiming only for only for results, without results, without considering whether considering whether they are building a proper

they are building a proper base that can base that can support that support that level of exertion.

Is there really a u201cperfectu201d lifting technique?.)

Got it. Because you Got it. Because you work with clients, work with clients, and I'm sure you and I'm sure you visit gyms and visit gyms and see videos on see videos on social media. Here is social media. Here is the question. What the question. What percentage of people do percentage of people do you think actually know how to do the how to do the deadlift correctly, this deadlift correctly, this particular movement, right?

particular movement, right? Because it seems like there's a Because it seems like there's a technique here to avoid technique here to avoid turning this into a turning this into a cause of injury. But cause of injury. But realistically, how many realistically, how many people even people even do it correctly do it correctly or safely?

or safely? Can you define what Can you define what proper proper proper technique is? technique is? Well, I can't, because that's actually why Well, I can't, because that's actually why you're here.

you're here. OK. So, I can't OK. So, I can't, I'm not the person to, I'm not the person to talk to. You talk to. You know, I've know, I've been injured so many times.

been injured so many times. No, dude. Do you know No, dude. Do you know how many times I've how many times I've been injured doing been injured doing deadlifts? This is deadlifts? This is just madness. It's just madness. It's literally like I'm literally like I'm doing something wrong. I've doing something wrong. I've worked with several worked with several physical therapists, and I physical therapists, and I think the problem is think the problem is my tight my tight hips because I hips because I sit too much. I think what's happening is that happening is that you've kind of told my you've kind of told my story, because the back will, story, because the back will, of course, do what it's of course, do what it's supposed to do. She supposed to do. She will guide you through the will guide you through the motions. She will guide motions. She will guide you through the you through the squats. She squats. She will guide you through the will guide you through the deadlift. But deadlift. But the problem is that the problem is that if the load if the load is wrong, these is wrong, these small muscles that small muscles that shouldn't be doing the shouldn't be doing the work end up work end up doing most of it doing most of it. And that. And that causes a lot of causes a lot of stress and pain.

stress and pain. So again, I'm not the So again, I'm not the person to person to ask, dude. I still haven't ask, dude. I still haven't figured it out. I didn't understand a damn thing about figured it out. I didn't understand a damn thing about this this this.

.. Years passed. I am learning. I'm still Years passed. I am learning. I'm still in the process. But at the same time in the process. But at the same time, it's a good, it's a good question. Is there a question. Is there a correct technique? Is there a correct technique? Is there a right way right way to do this and a to do this and a wrong way?

wrong way? Well, there are Well, there are a lot of a lot of good things in what you just said. I'll good things in what you just said. I'll try to approach try to approach them one by one so I don't them one by one so I don't forget anything forget anything you said, because you said, because that was brave. Ahem.

First, we cannot First, we cannot define what is the define what is the correct movement. This is correct movement. This is impossible. And since no impossible. And since no one has done it, there is no direct, there is no direct connection between connection between correct and correct and incorrect incorrect incorrect deadlifts. It's deadlifts. It's just a matter of whether just a matter of whether you're ready for it you're ready for it or not.

or not. An article was published An article was published about construction workers, where about construction workers, where they were divided into two they were divided into two groups. One group groups. One group was left as is. They were was left as is. They were simply allowed simply allowed to carry the boxes as to carry the boxes as they normally would they normally would. In the second. In the second group, they intervened, group, they intervened, changed the way they changed the way they lifted the boxes, and lifted the boxes, and taught them the taught them the correct method.

So, keeping your back So, keeping your back straight, you know, lunges, straight, you know, lunges, straight back, etc. And straight back, etc. And it turned out that the intervention group had intervention group had more cases of low more cases of low back pain and injuries. And back pain and injuries. And the reason is that you the reason is that you take a person from their take a person from their usual posture, movement, usual posture, movement, speed, speed, speed, load, and load, and execution style, to execution style, to which they which they have adapted and have a have adapted and have a margin of safety, and margin of safety, and force them to change force them to change that pattern to one that pattern to one that you consider " correct" but for correct" but for which they are not which they are not trained – that is why trained – that is why they they they get injured. So, get injured. So, this can literally be this can literally be applied to applied to everything. It's not that everything. It's not that there is a " good" or "bad " way to perform the " way to perform the movement. There's a way movement. There's a way you're ready for it and a you're ready for it and a way you're not way you're not ready for it, that's all.

Going back to Going back to your thoughts on your thoughts on where where where the forces are directed, how you the forces are directed, how you load your back, load your back, what structures are taking the what structures are taking the brunt of the brunt of the load, and so on load, and so on. Ultimately, you are. Ultimately, you are right. The body right. The body truly chooses the path of truly chooses the path of least resistance. It least resistance. It just works that way.

just works that way. Every exercise has some kind of Every exercise has some kind of key key key element or element or speed limiter. The more you The more you perform this movement, perform this movement, for example, within a for example, within a set, the more set, the more fatigue accumulates fatigue accumulates during the movement, the during the movement, the closer you get closer you get to this limit, to this to this limit, to this margin of error, to margin of error, to this limiter. Do this limiter. Do you agree? Ultimately, you agree? Ultimately, global muscles global muscles will always outweigh will always outweigh smaller ones. So the smaller ones. So the paraspinal or paraspinal or intertransverse muscles—I intertransverse muscles—I don't even know if I'm don't even know if I'm pronouncing that correctly pronouncing that correctly —but the small muscles —but the small muscles around the transverse around the transverse processes of the spine processes of the spine rarely take the rarely take the brunt of the load. These are usually larger,. These are usually larger, more durable muscles.

However, um… It However, um… It shouldn't shouldn't shouldn't matter if those matter if those muscles are trained and muscles are trained and ready for that kind of ready for that kind of strain. They strain. They should be able to should be able to withstand that withstand that load without load without reaching that limit, reaching that limit, right?

right? So what we see is, are there any So what we see is, are there any rules for what a deadlift should look like? Certainly. But I Certainly.

Efficient movement vs. perfect form.)

But I don't like to don't like to call it the " correct" way to correct" way to deadlift or a " good" movement. I good" movement. I like to call like to call it effective movement.

it effective movement. If your goal is to move the to move the to move the most weight from most weight from point A to point B point A to point B during a deadlift, you during a deadlift, you want to make this want to make this movement as movement as efficient as possible. And what efficient as possible. And what does efficiency mean? Efficiency? Efficiency means expending means expending the least amount of the least amount of energy to energy to demonstrate the demonstrate the demonstrate the greatest strength. So greatest strength. So what does this mean? This what does this mean? This means keeping your means keeping your center of mass within the center of mass within the support area so you support area so you can have more can have more stability. Greater stability. Greater stability stability stability proximally means that you that you can produce can produce more force distally. So, more force distally. So, that's the first one. Have more that's the first one. Have more control and control and stability, or stability, or be able to be able to keep your center of keep your center of mass over the support area mass over the support area and resist the force and resist the force acting on your body acting on your body during the deadlift. This is the first thing. The second is the lever arms. The is the lever arms. The lever arm is the lever arm is the perpendicular perpendicular perpendicular distance between distance between the load

and the the load and the joint on which joint on which it acts and on which it it acts and on which it creates a creates a torque. So in this torque. So in this case, the main case, the main joint that should joint that should do the main do the main work during the work during the deadlift is the deadlift is the hip extensors. So hip extensors. So everything really has to everything really has to revolve around revolve around your hips.

your hips. Leverage is the distance Leverage is the distance between the between the hip extensors and the bar. The hip extensors and the bar. The closer the bar is, that is, closer the bar is, that is, the shorter the the shorter the lever arm and the smaller this lever arm and the smaller this distance, the less distance, the less effort you effort you will have to make will have to make and the less and the less load load load these muscles will receive these muscles will receive. Whatever the case,. Whatever the case, you can have you can have the shortest lever in the shortest lever in the world, but if you're the world, but if you're not used to it, don't not used to it, don't train with it, and haven't train with it, and haven't developed a developed a developed a tolerance to tolerance to it, you increase your it, you increase your risk of injury.

But we see a lot of But we see a lot of people, I know guys who have people, I know guys who have terrible form terrible form or technique, what you or technique, what you would call bad would call bad technique, but they've technique, but they've never had a never had a back injury. They do back injury. They do deadlifts without a deadlifts without a belt, with their belt, with their backs strongly arched, and backs strongly arched, and everything is fine with them. I've everything is fine with them. I've noticed—I don't have any noticed—I don't have any solid solid solid research to research to back this up—that back this up—that usually the people with " ugly" ugly" ugly" deadlifts or deadlifts or unconventional styles who don't get who don't get injured are the ones who injured are the ones who are good at creating are good at creating stability and stability and rigidity in these rigidity in these awkward positions. That is, these are people who,. That is, these are people who, say, do deadlifts say, do deadlifts without a belt with a round without a belt with a round back, but start back, but start and finish the movement in a and finish the movement in a fixed, fixed, fixed, stable stable stable position, and position, and have trained like this for have trained like this for years. That's why they don't have years. That's why they don't have back pain. They've back pain. They've never had never had back pain and they back pain and they lift 800 pounds.

It's impressive because, It's impressive because, you know, we've probably you know, we've probably all seen a all seen a guy or girl like that in the guy or girl like that in the hall. I always hall. I always call it that. They call it that. They look like a black look like a black cat that has been scared.

cat that has been scared. The perfect letter "C". The perfect letter "C". I think: who scared I think: who scared this cat? this cat? And while they're And while they're lifting, they're lifting, they're shaking like a shaking like a stripper in stripper in church. I just church. I just think: oh my god, you're think: oh my god, you're bent. You're bent. You're shaking all over. I'm like, "Oh my shaking all over. I'm like, "Oh my god." It's like… I'm waiting.

god." It's like… I'm waiting. Well, here it is. Medical Well, here it is. Medical assistance. I'm leaving now. I am assistance. I'm leaving now. I am here. And they here. And they bring it up, and I'm bring it up, and I'm like, "Oh my god, how did you like, "Oh my god, how did you do that?" You do that?" You literally looked literally looked crazy doing crazy doing that." And it's like…but like that." And it's like…but like you said, if they're you said, if they're able to control the able to control the movement, all that stuff, they don't movement, all that stuff, they don't get injured. I get injured. I understand. But it understand. But it just scares me just scares me when I see such an " arc". I'm like, "Oh." arc". I'm like, "Oh." The key is that they The key is that they must be able to start must be able to start and finish the movement in a and finish the movement in a stabilized stabilized stabilized position. Those moments position. Those moments when you think, "Ah, that doesn't when you think, "Ah, that doesn't look right.

" These are cases where " These are cases where they start out they start out normal and then as soon as the normal and then as soon as the barbell barbell barbell leaves leaves leaves the floor, the back becomes the floor, the back becomes more and more more and more rounded. This is a pretty rounded. This is a pretty good indicator good indicator that a person is at that a person is at high risk high risk of injury because they are of injury because they are not stabilizing. What are not stabilizing. What are they doing? They they doing? They rely on rely on passive tissues to passive tissues to stabilize the spine.

stabilize the spine. They rely on They rely on ligaments to make the ligaments to make the spine bend like a spine

bend like a fishing rod. But what actually fishing rod. But what actually has to do the has to do the work? Hip extensor muscles. But extensor muscles. But what is happening?

what is happening? Back straighteners Back straighteners take take take the load—the path of the load—the path of least resistance. least resistance.

Their hip extensor muscles are Their hip extensor muscles are weak. The hips are not weak. The hips are not stable enough. The center of stable enough. The center of stability in the stability in the hip joint is hip joint is not doing its not doing its job. Therefore, all the force job. Therefore, all the force goes to the spine, to the goes to the spine, to the passive tissues of the passive tissues of the spine, and not to the spine, and not to the active tissues. If active tissues. If these are active tissues, that's fine. Our spine is fine. Our spine is actually actually actually adapted and can adapted and can be stable be stable even in a curved even in a curved position. We can position. We can stabilize in a stabilize in a rounded rounded rounded position. We can position. We can stabilize ourselves when leaning sideways stabilize ourselves when leaning sideways. We. We can can can stabilize when stabilize when extending. We can extending. We can do it. You can do it. You can do anything do anything if you if you practice enough. It's practice enough. It's a skill. Clear.

a skill. Clear. Got it. Makes sense. I Got it. Makes sense. I understand. The choice of understand. The choice of supplements can be supplements can be confusing. There are confusing. There are hundreds of brands. There are hundreds of brands. There are conflicting claims, and conflicting claims, and it's impossible to know what's it's impossible to know what's actually good and what will actually good and what will really improve really improve your health. That's your health. That's why I created the why I created the Dr. Supplement Store. Jones. Every product in the. Every product in the store for energy, store for energy, gut health, gut health, sleep, hormonal sleep, hormonal optimization, optimization, optimization, recovery, and more is recovery, and more is personally reviewed, tested, and, tested, and recommended. These are the recommended. These are the formulas that I formulas that I use myself and use myself and recommend to my recommend to my patients, friends, and patients, friends, and family. So go family. So go to drjonesseupplements.com, to drjonesseupplements.com, sign up for our sign up for our newsletter, and you newsletter, and you will receive a 10% discount on your will receive a 10% discount on your first order. You will first order. You will also receive also receive exclusive exclusive exclusive protocols and insights protocols and insights that I share only that I share only with my community.

with my community. So let's cut out the unnecessary and So let's cut out the unnecessary and focus on what focus on what really works. We're really works.

What to do during the first 72 hours after a back injury.)

We're almost done with the almost done with the lower back section, lower back section, but I have one more but I have one more question: Let's say question: Let's say you're working with someone, you're working with someone, they've been they've been training hard, everything's going training hard, everything's going great, and then all of a sudden— okay, maybe it's not the okay, maybe it's not the first time, but they have a first time, but they have a sharp pain in their sharp pain in their lower back again, right? And he lower back again, right? And he appeared. And now they're appeared. And now they're in this critical—I would n't say n't say critical, but, critical, but, you know, in that you know, in that first 24-72 hour first 24-72 hour window after that, window after that, right? Looking at right? Looking at some of the current some of the current research, should research, should rest be advised rest be advised until the pain subsides? Is this still sound this still sound advice, or is it better advice, or is it better to choose active to choose active recovery over recovery over rest when the rest when the first first first pain appears? What do experts say about this pain appears? What do experts say about this? Do you know if it's? Do you know if it's really beneficial really beneficial to rest until to rest until the pain is completely gone? I think this is an? I think this is an outdated outdated outdated approach, but you are the approach, but you are the expert here. So, how do expert here. So, how do they feel about this they feel about this now?

now? Listen, what Listen, what happens when happens when someone has a total someone has a total hip replacement hip replacement? What is the? What is the medical recommendation medical recommendation or, let's say, what is the or, let's say, what is the protocol? They protocol? They get up as soon as they get up as soon as they wake up, wake up, literally literally literally start walking right away.

start walking right away. They are in pain, uncomfortable, and They are in pain, uncomfortable, and dizzy dizzy dizzy, but they are, but they are still put on their feet still put on their feet and forced to walk.

and forced to walk. So movement is medicine. I So movement is medicine. I think the main thing is to avoid positions, to avoid positions, movements, and loads movements, and loads that increase your that increase your pain, but always pain, but always try to do try to do at least something, because you at least something, because you can always find an can always find an activity that doesn't activity that doesn't cause pain or cause pain or causes it causes it minimally. Ultimately, minimally. Ultimately, when recovering when recovering from an injury, your from an injury, your goal should never be to wait for the pain wait for the pain to go away completely. Your to go away completely. Your goal is to gradually goal is to gradually desensitize desensitize desensitize yourself to pain. And this yourself to pain. And this means that at first means that at first you will feel a you will feel a lot of pain, and you will lot of pain, and you will just have to just have to deal with it. You deal with it. You just need to just need to accept it. The main thing is that accept it. The main thing is that people think they are people think they are getting worse when they " work through the pain," work through the pain," but in reality they are but in reality they are making themselves better.

The longer you avoid The longer you avoid facing your facing your pain, the longer you pain, the longer you will be stuck in will be stuck in this vicious this vicious cycle. There is a well-known cycle. There is a well-known phenomenon phenomenon phenomenon called the called the fear- fear- fear- avoidance cycle or fear-avoidance pattern—it is essentially a fear-avoidance pattern—it is essentially a loop where a person loop where a person starts with pain and starts with pain and then begins to then begins to catastrophize.

catastrophize. catastrophize. They think the They think the worst about injury. They worst about injury. They think they will always think they will always feel pain.

feel pain. They think they won't be They think they won't be able to do all these able to do all these things. So they things. So they stop moving. stop moving.

They lose their They lose their physical shape. They get physical shape. They get depressed depressed depressed because they can't do because they can't do all the things they love. And all the things they love. And then their level of then their level of physical fitness physical fitness decreases. Eventually, decreases. Eventually, the pain goes away, because that's just how it the pain goes away, because that's just how it happens. But happens. But now they are in a state of now they are in a state of complete complete complete distraining.

distraining. distraining. Now the pain is gone. Now the pain is gone. Now they are starting to Now they are starting to try to try to try to get back into the movement.

get back into the movement. But now they are in a But now they are in a doubly doubly doubly untrained state, untrained state, even more so than even more so than before. Because why did they before. Because why did they get injured? Because get injured? Because any any any load was load was more than they more than they could bear. So now they have a now they have a double negative, double negative, entering the circle again, entering the circle again, trying to do the same thing as trying to do the same thing as before, and before, and staying in that staying in that cycle. So the bottom line is that the sooner you the sooner you accept the trauma and accept the trauma and dare to move dare to move on, the sooner you on, the sooner you will get out of this cycle.

And we know the health benefits of exercise, right? health benefits of exercise, right? So we want So we want people to start moving, people to start moving, at least walking. So what at least walking. So what I advise people I advise people who come to who come to me with acute lower me with acute lower back pain is to back pain is to simply walk. I simply walk. I like to tell like to tell them to walk with an active them to walk with an active arm swing because then arm swing because then they also get they also get some movement in their spine.

Even with Even with two or three pound dumbbells in their hands, two or three pound dumbbells in their hands, walking in a way that walking in a way that looks a little weird —literally with —literally with excessive excessive excessive arm swinging while walking, or arm swinging while walking, or even walking at even walking at an angle—and 10 an angle—and 10 times out of 10 they times out of 10 they feel better feel better afterwards.

Therefore.

afterwards. Therefore. I like it.

Why shoulder injuries are so common.)

I like it. I like it. I like it. Let's move on to the Let's move on to the rotator cuff, rotator cuff, because it seems like almost because it seems like almost every serious every serious athlete athlete athlete will encounter will encounter shoulder pain sooner or later. It seems like this is shoulder pain sooner or later. It seems like this is not a question of "if" but " when" and how when" and how seriously, right? But seriously, right? But the shoulder is our the shoulder is our most mobile most mobile joint. It joint. It moves in almost moves in almost all directions, right?

all directions, right? You'd think something You'd think something so mobile, with so mobile, with that range, would that range, would be pretty be pretty stable. But what stable. But what makes it so makes it so vulnerable, especially vulnerable, especially for people who for people who perform bench perform bench presses, especially presses, especially overhead presses?

overhead presses? Mhm. If you look Mhm. If you look at the anatomy of the shoulder, the at the anatomy of the shoulder, the humerus humerus humerus rests on the rests on the scapula like a scapula like a golf ball on a stand. The surface area that the surface area that the humerus humerus humerus actually contacts with the actually contacts with the glenoid cavity of the glenoid cavity of the scapula is very small. And scapula is very small. And because it has because it has so many different, uh, so many different, uh, ah, arcs of motion or ah, arcs of motion or ranges of motion and ranges of motion and such a small area of such a small area of contact of one contact of one structure with another, structure with another, it is also the most it is also the most prone to all sorts of prone to all sorts of problems. So, that's the problems. So, that's the first one. The second is the first one. The second is the number of structures number of structures that pass through this that pass through this small area, small area, right? There's the right? There's the biceps tendon, there's biceps tendon, there's all these different ligaments, all these different ligaments, there's all the there's all the rotator cuff muscles rotator cuff muscles going going going in, through, and in, through, and in front of it. So in front of it. So irritation of these irritation of these structures is a very structures is a very common occurrence, common occurrence, whether whether whether it's due to excessive it's due to excessive strain that strain that you weren't you weren't prepared for or just prepared for or just natural natural natural aging, right? As we aging, right? As we age, tendons and age, tendons and ligaments thicken, ligaments thicken, and if there's not enough room, and if there's not enough room, everything gets pinched and everything gets pinched and starts to starts to starts to get irritated. So get irritated. So I think the shoulder is I think the shoulder is one of the one of the most complex most complex most complex joints in the human joints in the human body for this very body for this very reason. There are so many reason. There are so many small elements, small elements, so much mobility, so much mobility, so little so little stability, ahem, and stability, ahem, and just so many just so many opportunities for opportunities for something to go wrong.

something to go wrong. Oh, definitely. We'll Oh, definitely. We'll talk about talk about regenerative regenerative regenerative injections a little injections a little later. But for me, later. But for me, if I do PRP therapy or therapy or prolotherapy of the shoulder, I'm prolotherapy of the shoulder, I'm kind of giving advance kind of giving advance warning: look, warning: look, I'm going to I'm going to inject into your entire inject into your entire shoulder, all the shoulder, all the attachment points, you attachment points, you know, the infraspinatus, know, the infraspinatus, supraspinatus muscles.

supraspinatus muscles. I mean, the joint, the I mean, the joint, the biceps tendon— because of this complexity. because of this complexity. Most likely, if Most likely, if one part of this one part of this structure has been structure has been damaged, damaged, damaged, compensation occurs. And I want to compensation occurs. And I want to strengthen everything strengthen everything possible, right?

possible, right? Because it is a very Because it is a very complex system. And complex system. And especially with especially with prolotherapy, again prolotherapy, again, we'll talk about that later, we'll talk about that later. If I. If I can eliminate can eliminate the loose connections the loose connections in the entire structure, in the entire structure, you will have a better you will have a better chance of getting back chance of getting back to what you

want to to what you want to do.

do. do. Because this is a complicated Because this is a complicated thing, and it thing, and it happens often. happens often. But that's the thing, But that's the thing, because, again because, again,,, so much goes over the shoulder so much goes over the shoulder. You know, we. You know, we have the anterior have the anterior rotator cuff muscles, the rotator cuff muscles, the biceps tendon, the biceps tendon, the pectoralis major, from the back—there's all these different all these different muscles. Like, when that muscles.

When shoulder pain needs more than exercise.)

Like, when that client or another client or another athlete was talking athlete was talking to you, when you to you, when you start thinking, " wait, is this just wait, is this just inflammation or inflammation or dysfunction, or dysfunction, or maybe hey, buddy, maybe hey, buddy, you should get a you should get a scan because this could scan because this could be more serious than be more serious than you think"? Is there something you think"? Is there something you often you often observe that observe that makes you lean makes you lean towards this even towards this even more than in the case more than in the case of the lower back?

of the lower back? Honestly, when it comes to shoulders, it all depends on how long a person how long a person has been experiencing pain. There is something about the has been experiencing pain. There is something about the shoulder shoulder shoulder joint that, for some joint that, for some reason, makes it very reason, makes it very difficult for it to heal on its difficult for it to heal on its own. I'm sure you own. I'm sure you see this all the time.

see this all the time. For example, my shoulder is the For example, my shoulder is the only part of my body only part of my body that I have never been that I have never been able to able to rehabilitate with rehabilitate with exercise alone. I don't know if exercise alone. I don't know if it's because of its it's because of its complexity or complexity or something else, but if I see something else, but if I see someone with someone with shoulder pain that lasts more than shoulder pain that lasts more than two months, I immediately two months, I immediately advise them to forget about advise them to forget about imaging and go for imaging and go for regenerative regenerative regenerative medicine. We now medicine. We now have the technology to have the technology to literally take literally take your pain away in one your pain away in one session. Why not session. Why not do it? One or two do it? One or two sessions, $600 or sessions, $600 or $1,000—and you will feel $1,000—and you will feel much better than having to much better than having to endure this endure this pain all the time, because we know that pain all the time, because we know that the longer you the longer you feel pain, the feel pain, the longer it takes to treat it, longer it takes to treat it, and the more difficult it will be to and the more difficult it will be to get rid of it due to get rid of it due to neuroplasticity.

neuroplasticity. So I think that's probably the issue —the length of —the length of time that time that people feel pain. people feel pain. It's like an endless It's like an endless circle, an endless circle, an endless loop. The longer you loop. The longer you feel pain, the feel pain, the harder it will be to harder it will be to get rid of it. Then you get rid of it. Then you lose your physical lose your physical shape, stop shape, stop doing the usual things, and it becomes very difficult to get out of it.

becomes very difficult to get out of it. So, I think that's the So, I think that's the reason. reason. reason. Absolutely, I think of Absolutely, I think of these these these rotator cuff tendons as like a rubber band analogy. You stretch rubber band analogy. You stretch it, you stretch it, and if you it, you stretch it, and if you let go, it let go, it almost never almost never returns to returns to its original its original elasticity, like elasticity, like most rubber bands, right?

most rubber bands, right? And here And here the question arises: how to the question arises: how to strengthen it? strengthen it? How do I learn How do I learn to use my to use my joint properly again? How to get joint properly again? How to get everything back to normal? It's hard because…

because… because… You know, there's You know, there's blood flow there, but it's like it blood flow there, but it's like it just just just passes through, if passes through, if you think about the structure. There are you think about the structure. There are n't very many n't very many blood vessels there. In a blood vessels there. In a way, it's almost

like a way, it's almost like a knee. There are knee. There are not enough blood vessels there not enough blood vessels there to ensure to ensure healing and deliver the healing and deliver the necessary necessary necessary growth factors and growth factors and nutrients. This is where regenerative regenerative injections come to the rescue. So I injections come to the rescue. So I think this is where think this is where we can we can help many help many people. But there's a kind of people. But there's a kind of fear of it, fear of it, you know? It's like I'm already you know? It's like I'm already feeling the pain. You feeling the pain. You stick the needle in, and stick the needle in, and I'm like, "Well, you gotta I'm like, "Well, you gotta do it, man." It's like, do it, man." It's like, this is the way we this is the way we get back to get back to normal.

normal. normal. This brings me This brings me such relief. This is such relief. This is so nice. As soon as so nice. As soon as the needle was in my shoulder, the needle was in my shoulder, I immediately felt I immediately felt better.

better. better. This is amazing. This is amazing. Yes. Yes. Yes. Oh my God. Oh my God. Simply incredible. Simply incredible. I think people, especially I think people, especially with shoulder injuries, don't train overhead positions at all. And then you. And then you see them see them doing external doing external rotations with bands and rotations with bands and stuff to increase stuff to increase rotator cuff stability, rotator cuff stability, when really, if you when really, if you remember the concept that remember the concept that stability is the stability is the ability of a joint to ability of a joint to resist forces, you resist forces, you have to have to put it in an put it in an unstable unstable unstable position first. So the position first. So the most most most unstable unstable unstable position for the shoulder position for the shoulder would be the overhead position would be the overhead position. How often do you. How often do you see people see people performing overhead movements performing overhead movements correctly, with correctly, with good amplitude, good amplitude, taking the time taking the time to really to really access these positions, rather than forcing themselves?

, rather than forcing themselves? You very rarely You very rarely see this. So I think it see this. So I think it all comes down to all comes down to people people people taking the time to taking the time to develop proper develop proper shoulder function, shoulder function, accessing the accessing the positions they need, positions they need, developing developing developing mobility, and mobility, and stabilizing in stabilizing in unstable unstable unstable positions. I rarely positions. I rarely see anyone see anyone do that. So, again do that. So, again, the wrong, the wrong program, program, program, inappropriate movements, inappropriate movements, lack of exposure to lack of exposure to unstable unstable unstable positions that positions that actually require the actually require the rotator rotator rotator cuff to perform its cuff to perform its direct purpose — to hold the — to hold the humerus in the joint humerus in the joint cavity.

cavity. cavity.

Recognizing the warning signs of a serious shoulder injury.)

Just keep it Just keep it there. I think another there. I think another thing when I talk thing when I talk to people who to people who come in for an come in for an initial initial initial consultation and we consultation and we discuss their discuss their pain, especially in their pain, especially in their shoulder, is the nature of shoulder, is the nature of that pain. We often that pain. We often see this: okay, is see this: okay, is he stupid? Aching? Or he stupid? Aching? Or just just just annoying? Is it annoying? Is it sharp? Like, I'm doing a side-to- sharp? Like, I'm doing a side-to- side handstand. Oh side handstand. Oh my god, it feels like someone my god, it feels like someone stabbed me. We stabbed me. We need to stop. This is need to stop. This is very important to me, right? If it is, right? If it is acute, if it acute, if it stops you, it indicates a stops you, it indicates a more serious more serious pathology, because it is pathology, because it is no longer a small thing. As you no longer a small thing. As you said earlier, your body said earlier, your body is trying to tell you something is trying to tell you something. Like: " Listen, stop." " That's enough," right? You That's enough," right? You need to need to figure this out. And I figure this out. And I believe this is a believe this is a point that should not be point that should not be ignored, especially ignored, especially when that range of when that range of motion is limited. It's like, motion is limited. It's like, you know, you're limited in you know, you're limited in that. You can that. You can only do a certain only do a certain part. I can't part. I can't lift more than 15 lift more than 15 pounds with this arm. It's like pounds with this arm. It's like, okay, listen, it's, okay, listen, it's time to dig into this.

time to dig into this. Um, and one more point Um, and one more point about visualization: about visualization: I was again I was again very lucky with my very lucky with my mentors. It's mentors. It's simple: see simple: see if you've already had if you've already had orthopedic orthopedic orthopedic testing, done testing, done all the Hawkins, all the Hawkins, Neer tests, and other great Neer tests, and other great tests. If you tests. If you think an MRI will think an MRI will make a difference, well, again make a difference, well, again,,, manual manual manual testing can testing can pinpoint where the pinpoint where the problem is.

problem is. And if I believe the And if I believe the results of results of results of the examination will change the examination will change my approach to my approach to treatment, then, of course, treatment, then, of course, do it.

do it. But if I see that it's But if I see that it's clearly the supraspinatus muscle clearly the supraspinatus muscle or the or the biceps tendon, let's biceps tendon, let's just work on it.

just work on it. I completely agree with I completely agree with this. So, as someone from this. So, as someone from this world of strength this world of strength training and coaching, training and coaching, do you think I'm do you think I'm on the right track —I'm not saying you —I'm not saying you have to have to have to agree? I mean, will agree? I mean, will this change anything, or should this change anything, or should I just I just cure you? And what do you cure you? And what do you see in real see in real life, in your world?

life, in your world? Absolutely. So, do Absolutely. So, do you need you need visualization? If visualization? If your treatment plan won't your treatment plan won't change based change based on the results of on the results of the exam, and you the exam, and you can get a can get a very specific very specific answer with answer with special tests, special tests, then just do it, then just do it, right? Ultimately, our right? Ultimately, our job is to identify the job is to identify the structure that can structure that can be engaged and be engaged and create a plan that create a plan that will relieve this person of their will relieve this person of their pain. And most of the time pain. And most of the time the plan will be the same the plan will be the same whether it's the supraspinatus or the whether it's the supraspinatus or the infraspinatus muscle, right?

infraspinatus muscle, right? Whether it's subscapular—it does Whether it's subscapular—it does n't matter. The n't matter. The treatment plan will be the same treatment plan will be the same. The exercises I. The exercises I prescribe will be the same prescribe will be the same. So. So it doesn't matter.

it doesn't matter. Got it. Got it. Got it. Got it. Yes. And I feel like Yes. And I feel like we're not we're not against imaging— I'm not against screening.

I'm not against screening. I am not against MRI. I I am not against MRI. I believe there believe there is a time and place for everything, and in the is a time and place for everything, and in the right situation right situation it has value. But it has value. But sometimes it's not easy: sometimes it's not easy: hey, you have to do hey, you have to do it on day one, it on day one, especially if you're still especially if you're still functional, functional, functional, right? If you are right? If you are particularly at risk of particularly at risk of traumatic traumatic traumatic injuries, I think you should get an MRI should get an MRI if you fell off your if you fell off your bike. Got bike. Got into a car accident, like into a car accident, like, let's, let's see see see how how how serious it really is.

serious it really is. Mhm. Yes. I was like: Mhm. Yes. I was like: I can't I can't move my arm at all. move my arm at all. Like, no, she's here. Like, no, she's here.

She is as good as dead. Yes, She is as good as dead. Yes, it's time for an MRI, right? it's time for an MRI, right?

Regenerative medicine, PRP, prolotherapy, and peptides.)

You know, come on, You know, come on, let's talk let's talk about this. about this. Yes. So let's Yes. So let's get to the point that get to the point that when it comes down when it comes down to it, there's to it, there's rehabilitation, there's rehabilitation, there's rest when it's rest when it's needed, there's all these needed, there's all these cool tools, cool tools, but when it comes to but when it comes to returning to returning to functionality, you functionality,

you mentioned earlier that there's a mentioned earlier that there's a whole new whole new world of regenerative world of regenerative medicine.

medicine. Whether it's prolotherapy, PRP, stem cells,, stem cells, or peptides, where do you or peptides, where do you see these see these things in the context of athlete recovery and prevention, and on athlete recovery and prevention, and on top of that, I top of that, I think I saw on think I saw on your Instagram that you've your Instagram that you've done done done prolotherapy before.

I did everything. I did everything. Oh, you did. OK. Oh, you did. OK. So, what So, what regenerative regenerative regenerative injections have you had and injections have you had and what was your experience?

what was your experience? So, I did So, I did prolotherapy, PRP, prolotherapy, PRP, stem cells, stem cells, exosomes, stem exosomes, stem cells with exosomes, cells with exosomes, ozone therapy, ozone therapy, intravenous intravenous intravenous stem cells.

I've tried almost everything. Um, and I've tried almost everything. Um, and I like it. I I like it. I think I would think I would like people to like people to be less be less skeptical about skeptical about it and more it and more open-minded, and for it to open-minded, and for it to be more accessible.

be more accessible. I guess if people I guess if people had more had more information. I don't know. information. I don't know. Every time I Every time I recommend that a client recommend that a client turn to turn to regenerative regenerative regenerative medicine, I always medicine, I always encounter some encounter some resistance. Like, they're resistance. Like, they're skeptical about skeptical about whether it'll work, whether whether it'll work, whether it's FDA approved, whether it's FDA approved, whether they really need it, whether it'll actually, whether it'll actually make a difference. Um, make a difference. Um, and for me again and for me again, because I, because I understand the science of pain, I understand the science of pain, I want people to want people to get out of pain get out of pain as quickly as possible. So as quickly as possible. So if you have pain for if you have pain for a long time, honestly, a long time, honestly, if you have if you have pain for longer than 2 months, pain for longer than 2 months, just do the just do the regenerative regenerative regenerative therapy because it's therapy because it's not worth it. It's not worth it to cement that cement that feeling in your feeling in your brain and then brain and then spend three or spend three or four times as long trying to four times as long trying to get rid of it.

Not to mention, Not to mention, well, I don't know if well, I don't know if you add lidocaine when you add lidocaine when you do prolotherapy you do prolotherapy or not?

Um, I usually, it Um, I usually, it depends on depends on where I inject, where I inject, yeah. I tend to prefer prefer ropivacaine over ropivacaine over lidocaine simply because ropivacaine is slightly ropivacaine is slightly less chondrotoxic. Yes, lidocaine. Yes, lidocaine can can slightly damage cartilage when used repeatedly.

slightly damage cartilage when used repeatedly. There are some studies There are some studies that support this. that support this. So I'm not a fan of So I'm not a fan of one injection, we one injection, we do a series. Agree.

do a series. Agree. So I lean towards So I lean towards ropivacaine, it's ropivacaine, it's a little better for a little better for these scenarios. There are these scenarios. There are other options, I have other options, I have a lot of protocols, and a lot of protocols, and sometimes if I'm working sometimes if I'm working outside the joint, I might outside the joint, I might use procaine, use procaine, but it all depends on the but it all depends on the case, although I case, although I personally personally personally prefer ropivacaine.

.. But the main thing is that it But the main thing is that it reduces pain, reduces pain, absolutely. So absolutely. So you get instant you get instant pain relief. You are pain relief. You are immediately taken out of immediately taken out of this vicious this vicious circle. Yes.

circle. Yes. This in itself is This in itself is incredibly valuable. Okay, and here I have to Okay, and here I have to remind people that remind people that Steffi is an alien, because most people may be a little sore may be a little sore for a for a while after prolotherapy. And I want to while after prolotherapy. And I want to make sure people

make sure people understand why she's understand why she's an alien. This an alien. This woman is not from this woman is not from this planet. But that's the planet. But that's the problem, right? Because you problem, right? Because you have to remember that have to remember that when you do when you do prolotherapy, you're prolotherapy, you're creating a local creating a local inflammatory response to inflammatory response to trigger the trigger the healing process, right?

healing process, right? Some people may be Some people may be a little sore for the first a little sore for the first day or so, unless you're, unless you're Steph. But I just Steph. But I just want to remind you, want to remind you, I think it's because I I think it's because I understand it, and I say, "Oh understand it, and I say, "Oh yeah, of course!" Let's call yeah, of course!" Let's call it inflammation. I love it inflammation. I love it.

it. it. Yes. Yes. Yes. Because you Yes. Yes. Yes. Because you know what happens after know what happens after that? that? that? Yes. Exactly. Have you ever Yes. Exactly. Have you ever tried dry tried dry acupuncture?

acupuncture? acupuncture? Oh yes. Oh yes. Oh yes. Oh yes. It feels It feels weird and a little painful, weird and a little painful, but I but I like it. I just like it. I just feel like it feel like it does what it's supposed to.

does what it's supposed to. I am one step closer, one I am one step closer, one day closer to a day closer to a life without pain. I think it life without pain. I think it all depends on the all depends on the point of view.

point of view. Oh, definitely. Oh, definitely. Certainly. And again Certainly. And again, I'm weird, dude., I'm weird, dude. I like to give myself I like to give myself injections. It injections. It brings me brings me so much joy— stabbing my own shoulder stabbing my own shoulder or knee. If I could or knee. If I could reach my reach my lower back, believe me, I would be lower back, believe me, I would be sitting here with a sitting here with a mirror and mirror and trying to do it. There's trying to do it. There's something satisfying about that. But, I. But, I guess I'm a weirdo, I'm in guess I'm a weirdo, I'm in solidarity with you here.

solidarity with you here. I need to get well. I need to get well. I don't have time for I don't have time for all these all these doctor visits. I have everything doctor visits. I have everything here. Let's do this. Yes.

here. Let's do this. Yes. This is very interesting. And This is very interesting. And because of the competition, are you because of the competition, are you even allowed to even allowed to use peptides?

use peptides? Yes, I compete in Yes, I compete in federations where there is no federations where there is no doping control. doping control. Oh, of course. Steeply.

Oh, of course. Steeply. Steeply. So, what is Steeply. So, what is your experience with your experience with using using using peptides during the peptides during the recovery process?

recovery process? Um, you know, I tried Um, you know, I tried BPC and TB 500, but I BPC and TB 500, but I didn't really feel didn't really feel much of a difference in terms of the in terms of the therapeutic peptides themselves. If I already have an. If I already have an injury and I start injury and I start taking them, I don't really taking them, I don't really notice the notice the difference. Ahem.

But as for But as for how how how effective they are in effective they are in reducing the likelihood of reducing the likelihood of injury, I injury, I can't say either. I don't know if I just started training smarter.

training smarter. Yes. Yes. I don't think Yes. Yes. I don't think they're necessarily they're necessarily magical, because as you magical, because as you pointed out, there are certain pointed out, there are certain conditions that lead conditions that lead to injuries. They won't to injuries. They won't be able to be able to prevent this. But for prevent this. But for many of us, let's say, let's say, ordinary people, they ordinary people, they work just fine. But that's work just fine. But that's entirely reasonable. You entirely reasonable. You are entitled to that are entitled to that opinion, aren't you? Because, opinion, aren't you? Because, again, there is again, there is no 100% success rate here, no 100% success rate here, right? Although I would right? Although I would really like to really like to say that these tools say that these tools help everyone.

help everyone. I had patients, I had patients, for example, my good for example, my good friend with a friend with a shoulder problem. She says, "Oh, I'll shoulder problem. She says, "Oh, I'll try this BPC." And try this BPC." And then he says: "Zero then he says: "Zero results." I results." I answer: "What, answer: "What, nothing at all?" We nothing at all?" We did an ultrasound, discovered did an ultrasound, discovered some interesting things, and some interesting things, and realized that realized that regenerative regenerative therapy was needed here.

Because sometimes it's better to start Because sometimes it's better to start with injections for with injections for regeneration, and regeneration, and use peptides as use peptides as support, support, support, increasing the increasing the increasing the therapeutic level, so this is also quite, so this is also quite fair.

fair.

Building resilience through smarter training.)

Before you go, Before you go, I want to summarize I want to summarize what was said: we what was said: we discussed low discussed low back pain and back pain and shoulder pain. Is there anything that shoulder pain. Is there anything that people can do—I hate this word, but —to become less —to become less vulnerable to injury? Is this more of a this more of a mobility job? Is it mobility job? Is it stretching? Is there more stretching? Is there more protein in the diet?

protein in the diet? Of course, Of course, it will be different for everyone. You it will be different for everyone. You know, of course, I don't know, of course, I don't want this to be want this to be taken as the taken as the ultimate truth ultimate truth, but is there, but is there generally anything that people generally anything that people can do to can do to prevent this? I prevent this? I think the approach to think the approach to training is the training is the most important most important most important factor. And factor. And I think I've I think I've said this before, but said this before, but yes, you yes, you need to approach need to approach training with a strength training with a strength base and a focus on base and a focus on functionality. So functionality. So what does this mean? Focusing what does this mean? Focusing on functionality on functionality essentially means that essentially means that you want every you want every joint in your body to work the joint in your body to work the way it's supposed to way it's supposed to, more or less, right? So we, right? So we know what know what normal internal normal internal and external rotation of the and external rotation of the hip is. We know what hip is. We know what normal normal ankle dorsiflexion is, right? So ankle dorsiflexion is, right? So staying as staying as close to these close to these normal normal normal ranges as possible is what ranges as possible is what I consider a focus on I consider a focus on functionality. And functionality. And also make sure that your joints that your joints are able to take the are able to take the positions that you positions that you load. I load. I think this is think this is extremely important.

extremely important. Obviously, if you're an Olympic Olympic weightlifter, for example, and you catch the weightlifter, for example, and you catch the barbell during a barbell during a chest press at the lowest chest press at the lowest point of a front point of a front squat, you're squat, you're holding a hell of a lot of 300 pounds in a 300 pounds in a front squat.

front squat. So you want to make So you want to make sure that you can sure that you can actually accept actually accept and control and control the positions that the positions that you ask your body you ask your body to be in. I think to be in. I think this is a priority. So, this doesn't mean that, this doesn't mean that stretching and stretching and mobility work are mobility work are mandatory or will, by mandatory or will, by themselves, reduce the risk of themselves, reduce the risk of injury; but if your injury; but if your joints are functioning as they joints are functioning as they should and the should and the loads loads loads are distributed exactly are distributed exactly as the as the exercise intended, then it exercise intended, then it reduces the likelihood of an reduces the likelihood of an event that could event that could lead to injury.

So, that's the first one. The So, that's the first one. The same goes for the same goes for the shoulder, for example, shoulder, for example, right? The true right? The true test of whether our shoulder is functioning properly will be the our shoulder is functioning properly will be the overhead position overhead position, as this is the, as this is the most unstable most unstable position for the shoulder.

So, if you can So, if you can fully assume an fully assume an overhead position overhead position with a full with a full range of motion and range of motion and can stabilize can stabilize that position, then that is that position, then that is proper function for the proper function for the shoulder. So you want to shoulder. So you want to make sure that you have, make sure that you have, so to speak, so to speak, dotted all the i's dotted all the i's for for for every joint in every joint in your body and that it your body and that it meets the demands meets the demands you place on it you place on it. The second is, um, a power base. A, um, a power base. A strength base strength base doesn't really mean doesn't really mean chasing a chasing a one- one- one- rep max in rep max in traditional basic traditional basic exercises. This doesn't exercises. This doesn't mean that everyone should mean that everyone should become a become a become a powerlifter and powerlifter and do squats, do squats, bench presses, and deadlifts.

bench presses, and deadlifts. This is not at all what is meant This is not at all what is meant. A strength base means strength base means that you have designated that you have designated periods of time when you periods of time when you purposefully purposefully purposefully increase the amount of increase the amount of work you are able work you are able to do. So it's to do. So it's more about more about fitness and fitness and performance, not performance, not necessarily about one-rep max, but you one-rep max, but you have to be conscious have to be conscious of your of your baseline level of strength, baseline level of strength, fitness, fitness, fitness, and endurance. There is a and endurance. There is a very interesting very interesting study, I forgot study, I forgot who the author was, which who the author was, which studied studied studied rugby and football players and rugby and football players and their susceptibility to their susceptibility to injuries. They found injuries. They found that athletes who that athletes who trained trained trained the most intensely, the most intensely, meaning they did meaning they did the most the most work—running, work—running, work—running, gym exercises, and gym exercises, and field training—had the lowest field training—had the lowest injury rates.

So, essentially, the So, essentially, the more work you more work you can do, the more can do, the more resilient and resilient and stronger you are, the more stronger you are, the more resilient you are and therefore resilient you are and therefore the less vulnerable to the less vulnerable to injury, which is not so injury, which is not so surprising.

surprising. This is quite logical. You This is quite logical. You need to have need to have dedicated time or dedicated time or periods where you periods where you purposefully purposefully purposefully work on your baseline work on your baseline level of strength, form, and level of strength, form, and performance, performance, performance, gradually increasing gradually increasing these indicators. True?

these indicators. True? Eventually, the body Eventually, the body adapts to adapts to the stresses it is the stresses it is exposed to. A exposed to. A clear distribution clear distribution of loads is needed. If you of loads is needed. If you don't approach it don't approach it consciously and consciously and try to constantly try to constantly raise the bar or raise the bar or at least at least at least maintain it at the maintain it at the level necessary level necessary for your goals, you will for your goals, you will fall out of shape or fall out of shape or be under- be under- prepared for prepared for what you plan to what you plan to do. So I think it's do. So I think it's safer to have safer to have periods where you periods where you really raise really raise your minimum your minimum threshold, your base. You are threshold, your base. You are actually increasing actually increasing the amount of work you the amount of work you can do, the weight you can lift, can lift, or any other or any other metric you are metric you are aiming for. These two aiming for. These two aspects—increasing aspects—increasing aspects—increasing endurance and endurance and stability, stability, stability, increasing increasing increasing workload, and workload, and joint functionality, where joint functionality, where not only normal not only normal range of motion is important, but also range of motion is important, but also control over control over body positions. I body positions. I believe that these two believe that these two points are points are extremely extremely extremely important.

important. important. Of course. Perfectly. Of course. Perfectly.

Key takeaways for preventing recurring injuries.)

So I want to So I want to make sure I understand everything correctly before we understand everything correctly before we end our conversation and end our conversation and dismiss our dismiss our audience. I think audience. I

think the first thing, and I really want to the first thing, and I really want to emphasize this emphasize this for people—what we for people—what we discussed today discussed today is not magic, it's is not magic, it's mechanics, right? In many ways, it's about functionality, functionality, understanding the body, and understanding the body, and understanding your own understanding your own body. If I body. If I understand understand understand everything we've been everything we've been talking about for the last 45 talking about for the last 45 minutes correctly, we're minutes correctly, we're built for stress; built for stress; we are created for we are created for improvement; we are improvement; we are designed to designed to become become become stronger. But when stronger. But when failure occurs, it's failure occurs, it's because we haven't because we haven't prepared prepared prepared properly or we increase the increase the workload too quickly. It's not workload too quickly. It's not because we can't because we can't do it, but because do it, but because our body was our body was n't ready for it at n't ready for it at that moment. The key to that moment. The key to success is understanding how to success is understanding how to get there, or get there, or knowing when to say, “ Hey, I’m not ready for this Hey, I’m not ready for this.” Let's.” Let's work on this some more.

work on this some more. And I'm grateful that you've And I'm grateful that you've given us a great given us a great roadmap for roadmap for prevention and prevention and recovery. Exactly.

recovery. Exactly. So again, the way So again, the way forward is not always about forward is not always about running to an MRI or running to an MRI or swallowing some swallowing some magic pill. It's magic pill. It's stability of movements and stability of movements and patience, patience, patience, right? And this is probably the right? And this is probably the most important thing. I want to make most important thing. I want to make sure I've sure I've learned this too, because learned this too, because I need to I need to heed this heed this advice myself. I mean, advice myself. I mean, listen, if I deadlift 600 pounds, then so be it deadlift 600 pounds, then so be it. May. May it be so. If it's within it be so. If it's within my power, then fine, my power, then fine, but I want to at least but I want to at least get to that level get to that level and not end up on and not end up on the floor, because that's the floor, because that's crazy, right?

crazy, right? My best My best result is in the result is in the deadlift. deadlift. deadlift. Yes. There Yes. There was 485 in all history. was 485 in all history. 485.

485. 485. And when I tell you that And when I tell you that I felt great, I I felt great, I also felt also felt like my bones were like my bones were going to turn to dust right now.

going to turn to dust right now. I had to I had to escape from there. Oh my god, escape from there. Oh my god, they're turning they're turning to dust. It was like, you know, it to dust. It was like, you know, it felt like my felt like my soul had left my body.

soul had left my body. But yes, friend. So, But yes, friend. So, it's ongoing and I got it's ongoing and I got injured. Actually, it injured. Actually, it happened in medical happened in medical school. I've school. I've been involved in sports all my life, been involved in sports all my life, served in the military, and have served in the military, and have never injured my never injured my back. I was at…

I think that place has I think that place has already closed. 24-Hour Fitness. already closed. 24-Hour Fitness. I do deadlifts, I do deadlifts, and it was something completely and it was something completely normal. I think it normal. I think it was around 280 or something? No, was around 280 or something? No, 365. That's a weight I used to 365. That's a weight I used to easily easily easily manage consistently.

manage consistently. I stand up and tell I stand up and tell you, honestly. I thought, you, honestly. I thought, "I think someone "I think someone just just just shot me." I shot me." I thought I was thought I was shot, and I was so shot, and I was so clinging to…

clinging to… Wait, what the hell? Wait, what the hell? Was this while Was this while studying at the studying at the medical institute, or when???

During your studies, during your During your studies, during your studies at the studies at the medical institute,

right? medical institute, right? Yes. Yes. At the institute.

Yes. Yes. At the institute. Why? Because of the Why? Because of the deadlift or because you deadlift or because you were in medical school, were in medical school, going through what was going through what was probably the probably the most stressful most stressful most stressful period of the period of the period of the most stressful times most stressful times ever.

ever. ever. The most stressful times of The most stressful times of all. And I had a all. And I had a wonderful guest. His wonderful guest. His podcast is podcast is coming out soon, Dr.

coming out soon, Dr. Christopher Ring, he Christopher Ring, he works with a lot of works with a lot of athletes in Europe. athletes in Europe. He deals not He deals not only with the physical only with the physical component of component of component of performance, but also with the performance, but also with the mental one, and how mental one, and how mental fatigue and mental fatigue and stress reduce stress reduce performance and performance and increase the risk increase the risk of injury. It's not of injury. It's not through the body, it's through the body, it's literally the mind, this literally the mind, this connection is amazing, and connection is amazing, and when you think about it, when you think about it, if there was ever a time when my if there was ever a time when my brain, my mind, and my brain, my mind, and my body weren't body weren't connected, it was connected, it was medical. Huge, medical. Huge, this, oh my god, this is this, oh my god, this is so absolutely so absolutely accurate. When you accurate. When you first asked first asked me, when you said, "Are you an alien or something?" I sincerely believe that?" I sincerely believe that the fact that I can the fact that I can generate such force, generate such force, such power, has a such power, has a huge mental huge mental component. I rehearse the component. I rehearse the movement and the weight I'm going to movement and the weight I'm going to lift lift lift over and over in over and over in my head, and when my head, and when I get to the gym, I have to I get to the gym, I have to consciously make consciously make the decision to lift it, the decision to lift it, as if I'm lifting it with my as if I'm lifting it with my mind before I mind before I lift it with my body. And you're lift it with my body. And you're absolutely right, if absolutely right, if I go to the gym mentally I go to the gym mentally tired or tired or disengaged, and disengaged, and just not in the mood, not just not in the mood, not in the resources that day, then there's no way in the resources that day, then there's no way I'm going to be able to I'm going to be able to lift what I need to lift what I need to lift. And if I lift. And if I even try, I even try, I know there's a high know there's a high chance of getting injured. I am chance of getting injured. I am tired. I am tired. I am exhausted. I guess I exhausted. I guess I didn't recover didn't recover properly. My properly. My brain just isn't brain just isn't connected to my connected to my body, my muscles, the way it body, my muscles, the way it normally is. I am not normally is. I am not coordinated. I don't coordinated. I don't really feel my really feel my body. My body. My proprioception proprioception proprioception is impaired. So 100%.

This is why we are now This is why we are now seeing changes in the seeing changes in the treatment of chronic treatment of chronic pain with pain with cognitive cognitive behavioral therapy, which is specialized, which is specialized specifically for pain, because specifically for pain, because a large part of it a large part of it comes from the brain, comes from the brain, thoughts, beliefs, thoughts, beliefs, context, etc.

Oh, definitely. That's a Oh, definitely. That's a big part of it. big part of it. So yes. Again, So yes. Again, these concepts that you these concepts that you brought today, I'm excited brought today, I'm excited about them. I about them. I really want to thank really want to thank you for bringing you for bringing this to our audience this to our audience and the community that and the community that follows me here. And follows me here. And I can't wait for you to share you to share this with your family, because this with your family, because you know, they'll be able to you know, they'll be able to see not only see not only how you lift this how you lift this weight, but also your weight, but also your genius. It's like, genius. It's like, you know, such a connection, you know, such a connection, because it's important because it's important to understand that it's to understand that it's not just about not just about how strong you are, how strong you are, but also how but also how prepared you are. So prepared you are.

Where to connect with Dr. Stefi Cohen.)

So I think it's great that I think it's great that you told you told everyone about it. So, for those everyone about it. So, for those who want to follow who want to follow your path, your path, find out what's find out what's next, study your

next, study your programs and all that, programs and all that, how can I find you?

how can I find you? You can find me You can find me on all platforms as on all platforms as Stephie Cohen, on YouTube as Stephie Cohen, on YouTube as Stephie Cohen, and also on Dr.

Stephie Cohen, and also on Dr. Stephie Cohen is my new Stephie Cohen is my new YouTube channel. YouTube channel. OK. And we'll add OK. And we'll add all of this to the release description all of this to the release description so you can stay tuned so you can stay tuned for updates. It for updates. It was wonderful. Before was wonderful. Before we let you go, is there we let you go, is there anything else?

anything else? No, it was cool, No, it was cool, really cool really cool to meet you. It to meet you. It was great was great to chat. to chat. I hope that when I I hope that when I restart my restart my podcast, you podcast, you will be my guest too.

will be my guest too. Oh yes, I'm all for it. I am Oh yes, I'm all for it. I am ready. I was just telling someone the other day. I say, " Dude, you know, when Dude, you know, when you have your own podcast, no you have your own podcast, no one ever one ever invites me to be a invites me to be a guest." I guess I guest." I guess I never get to be never get to be a guest, probably because a guest, probably because everyone thinks, "Oh, everyone thinks, "Oh, he has his own podcast." He won't go, but I." He won't go, but I want to be a guest too.

want to be a guest too. I have something to say. I have something to say. No, there are actually No, there are actually many topics for conversation. But anyway. But anyway, my friend, I want to, my friend, I want to thank you again.

thank you again. I appreciate your time. And until the I appreciate your time. And until the next meeting, next meeting, let's go. So, friends. let's go. So, friends.

This was another This was another episode of episode of Dr. Dr. Dr. Greg Jones' Optimization Academy. Greg Jones' Optimization Academy. Again, we'll Again, we'll leave a link leave a link so you can follow so you can follow Dr.

Dr. Dr. Stephie Cohen's journey and the Stephie Cohen's journey and the amazing things amazing things she's doing. I want to she's doing. I want to thank all of you thank all of you for listening and for listening and supporting the show. Until supporting the show. Until next time: next time: stay stay stay optimized, don't optimized, don't tear your damn tear your damn back or injure your back or injure your shoulder. Be shoulder. Be smart. So, smart. So,