Lawrence Neal: James, welcome back to Corporate Warrior.

Dr. James Fisher: Lars, thank you for having me.

Lawrence Neal: So we were both at the amazing Resistance Exercise conference a few weeks back it feels like many years ago now and I'm already a bit sad that it's over because it was such a great time. your presentation sadly was right at the end to the second day and I was already destroyed from the early morning workout so I couldn't, couldn't really lets say focus quite as much as I'd like to and take it all in so I'd love for you to just reiterate and provide kind of a brief overview of your presentation and maybe we can start digging into the some of the topics that you talked about.

Dr. James Fisher: Yeah, so yeah yeah that early morning workout will do that right it kind of takes, take the edge off the rest of the day. So my presentation yeah Luke's got a tendency to put my presentation last on the second day as a kind of a wrap up of the conference and sometimes it's a bit heavy going with things for people but that's the nature of why I do it so I kind of run with it and let people take all they can take or I will send the slides out if they want them. So my presentation at the Resistance Exercise Conference talked about heterogeneity which is variation in adaptation or disparity and adaptation between different parts of the population. Periodizations there's been a discussion around a couple of recent review papers talking about periodization and more through the things that I haven't included than the things that I had included. And then there was a bit of talk about what's called the strength endurance continuum which is this idea of training with a heavier load for strength or a lighter load for endurance. And again it was a bit of a not so much a criticism but I'm a more open discussion of that to say maybe it's not as black and white as we previously thought as far as strength or endurance maybe they're a bit more aligned than we think. And then at the very end of the presentation I threw in a recent paper that we had published in Peer J that looked at the acute responses between traditional cardiovascular training using a recumbent cycle and traditional resistance training using a light press. So that was quite, it was quite a lot

of research I think there is something like thirty seven different studies talked about through the forty five minute or fifty minute presentations, that's a lot for people to take in so I understand that you didn't get it all down.

Lawrence Neal: I tried.

Dr. James Fisher: Do you want me to go into the kind of different...

Lawrence Neal: Yeah, let's say, do you want to, do you want to start I guess in like maybe like a chronological order, like start with heterogeneity and just go through the kind of the different sections and the findings.

Dr. James Fisher: Yeah, sure. So the idea of talking about heterogeneity really is to give people, I know when such a variation in the adaptive response to resistance training and I talk at the start about a paper by Donna in ninety four where they took a group of male clerks and they divided them. I think it was about seventy seven male clerks and they put ten of them as a solid or a mesomorph group and about ten or eleven as a slender actinomorphic group and they highlighted straight away there was about fifteen kilos difference in their body mass that was almost all fat free masses, it was almost all muscle. And then looked at how they adapted to a resistance training program and they kind of identified the mesomorphic group lost, lost more fat and added more muscle than the actinomorphic group and so forth. And the other studies I talked about two thousand and five is a key one, Erskine twenty ten is another great one. I looked at kind of, I measured the dynamic strength using a one repetition max and isometric strength and they used ultrasound or MRI some of the studies. And they looked at the variation in the strength response and the muscle sixe response to resistance training to these in the upper and lower body. And the key thing really was that even way you might see say a five percent increase in muscle cross-sectional area the variation either side of that might be as much as minus one or two percent some people actually lose muscle size and some people show an increase in size up to maybe twenty

percent. And similar, similar responses in strength as well the average strength increase for one of the studies was about sixty eight percent but some of them were showing increases of, of of a hundred or two hundred percent in dynamic strength and some as low as of five percent. So there's quite a large variation and the key with, the key with all of this is that it helps us kind of temper our expectations a little bit to people that a lot of you when you walk in the gym say how much do you bench bro. Itas kind of wasted because no two people are going to bench the same thing and if they do then their adaptation to, the adaptation to resistance training is not going to be the same even if they do the identical workout because purely because of their genetics for one. But then the other thing that I kind of talk about was the variation might be differences in sleep, differences in nutrition, differences in stress level and things like that. So we know that different people are going to respond differently and I think that knowing is, is a key part of strength training. Just to add on to that there was also the research also suggests that if you are a poor responder in strength that doesn't necessarily mean you're a poor responder in muscle size and vice versa, if you're a poor responder in muscle size you might not necessarily be a poor responder in muscle strength. And I think one of the study said that only two percent of the participants were a low responder in both muscle size and strength. And then just to kind of briefly wrap up that section I presented a couple of papers that show that irrespective of a muscle size and strength adaptation there seem to be positive adaptations, positive health adaptations irrespective in every participant across two quite large studies. There was one by Tyler Churchward Venne from a few years back with Luke Van Loon and they showed that every single participant, older adults, older men and women over sixty five years showed a positive adaptation in either lean body mass, muscle size, by biopsy strength or chair rise and and and function and that a similar, similar outcomes from 07:01 [inaudible] Brazil that myself and James are co-authors on. So almost irrespective of whether we're seeing the strength, the muscle size adaptations that we might want to see, we know there are functional benefits and there are positive health adaptations regardless.

Lawrence Neal: What type of, can you just elaborate on the protocols that were done.

Dr. James Fisher: Yeah, so the protocols varied across the studies, some of them looked at upper body so the 07:28 [inaudible] study used, was interested in biceps naturally so preacher curl, concentration curl, biceps curl. They also this and tricep extension, some tricep based exercises to kind of balance the bicep tricep element. The Erskine study was knee extension exercises. There was a study by some guys over at Uva Scholar, I probably butchered that name over in Scandinavia and again they had used the knee extension and leg press exercises. And they were reasonably typical sort of two to five sets, probably five to twelve reps, sixty to eighty percent of warner am training, I think most of them were training twice a week for twelve to twenty four weeks things like that. So, the only study that really compared anything in volume-wise was the last study that I talked about was the 08:30 [inaudible] Genteel study, those in older adults. And that study actually aimed to compare high volume versus low volume and high volume was two to four sets per exercise and that was two sets for upper body and four sets for lower body compared to one to two sets per exercise, so one set for upper body, two sets for lower body. And there was no difference in the volume so all the data was kind of pulled but that was three hundred seventy six people with a mean age of sixty nine years that all showed a positive response to chair rise or six minute walk test, sit and reach test things like that so.

Lawrence Neal: Kool. So that's pretty interesting so kind of cover off that first part, so for me some of the key takeaways include if you look at this from an equals one point of view how individual you really are and how you can, there is like one frequency or one protocol that works best for everyone and how you really do have to kind of self experiment and track and to figure

out if you're, if you're really obsessed trying to optimize for yourself, would you, would you agree that in the context of this?

Dr. James Fisher: I think that there is, that could be an interpretation of it definitely yeah. I don't necessarily think that there is an ideal protocol for everybody that possibly is, I don't know that people like Bradshaw and Feldons and Co would argue that you shouldn't use one size fits all approach to strength training. But I think that actually a better conclusion from all that is to say that if everybody does the same thing everybody's going to get different adaptations, now if everybody did different things they might still get different adaptations. So we can't, we can't say that well some people need more volume or some people need less frequency or more frequency or whatever. It's probably fair to say they do because of their genetics but we certainly can't conclude that from this data or all we can say here is that if you take a large sample of some people then you'll see quite, quite disparate adaptations in strength and muscle cross sectional area so. And it probably is a good argument for applying some variation to our own training certain intervals I don't agree with people doing different things week in week out but maybe every six or eight weeks applying some variation might be beneficial to see if we can stimulate other adaptations, yeah.

Lawrence Neal: Yeah I hear what you're saying and I think and I know when I talk about all that kind of fine tuning stuff we are kind of splitting hairs and I guess to what you're saying I suppose so if you've got loads of people doing a big five type approach where you're doing maybe five for those that don't know the big five it is a multi joint compound exercises, big movements. And the point here is that you're going to see such a wide variety in adaptations and outcomes from that, everyone's going to respond so differently in a sample of trainees and that's one of the key takeaways is that just because not everyone's blowing up or getting the desired response

that you might expect , it doesn't mean that they're not all improving in some way and that's one of the key things here isn't it.

Dr. James Fisher: Yeah, absolutely, absolutely. And I think that I mean I'm thirty nine years old and I know that I'm still chasing this dream of bigger biceps and so forth but I know that even though I might not be moving further down that track that there are health benefits to the resistance training that I'm doing . I know that a lot of guys will a lot of my students comment on how much bigger arms and they really can do any resistance training protocol and get bigger or stronger they can look at weights and get bigger and stronger. But I know that from my point of view my genetics predetermine my growth, my adaptation but the health my genetics don't necessarily or might not necessarily predetermine the health adaptations that I can get so.

Lawrence Neal: I don't know I think you are pretty jacked James from what I have seen of you. But no, this reminds me of and I've had, done a few podcasts recently as and I've really and that I will leave as a tease for the listeners because they've been sensational, that really remind me just how big this genetic component is and it also brings me back to the whole my stay in deletion thing where they did it with, was it whippets and did it with Wendy the whippet and the Belgian bulge you remember. Did they delete or I can't remember they did something to that gene and modified it so that both animals would just, they look like Arnold Schwarzenegger had mated with whip it in one case and a bull in the other and yet these these animals are bench pressing they're not doing anything it's just they're just genetically predisposed to look like that and it just reminds me of how big that component is for muscle hypertrophy.

Dr. James Fisher: Yeah I mean Belgian blue Cotswold are allegedly myostatin deficient, we're moving a bit outside my area of expertise but there are allegedly myostatin deficient which means that there's no kind of ceiling on the amount muscle that they can grow and myostatin is kind of the genetic element that stops us from growing too much muscle essentially. And it makes perfect sense from an evolutionary perspective because muscle is not, it is very inefficient from a cost point of view. there are other

examples Flex Wheeler actually a bodybuilder from I think the ninety's and maybe early twenty first century claimed that he had diminished myostatin response and that's how he grew such large muscles and I think that's an interesting claim as a pro bodybuilder.

Lawrence Neal: Yeah that's hilarious because I don't know you, I kind of remember you told me this, I might have read it in a book somewhere and that they try to, they obviously have this theory that all pro bodybuilders have some kind of deficiency or omission of that gene and none of them would get tested .

Dr. James Fisher: Yeah, right yeah. Yeah well I mean a couple of tutors during my master's class through a new guy I cited them in a in a paper I published in two thousand and eleven because they published quite a nice review on kind of the genetics and molecular regulators of a muscle growth and strength and they estimated in that paper I mean their papers a few years old now but they estimate that genetics probably account for about eighty to ninety percent of the variation in muscle size and strength so it's pretty much a done deal for the way we're going to grow and the way we're going to respond to resistance training is already, is already done before we walk in the gym so which kind of sucks. I know a lot of people use that as the of the case of well why bother but I also think that actually it's quite nice to know that a well you can work hard and almost fight against those genetics and achieve what you can for your genetics based on your ceiling . I might never run a two hour two and a half hour marathon but it would be interesting to know what I could run or triathlon or whatever might be, so I think it's interesting to know what you can achieve within your limits.

Lawrence Neal: Yeah I actually find it very liberating we spoke about this before with you and with James Steele and James Steele is very much on the same page. And I find it liberating because firstly you are not chasing something

that is completely unachievable which can be very detrimental on your psychological health. And you find new ways to keep you motivated I mean for example I'm doing an experiment right now where I'm increasing my protein intake to one hundred sixty five grams per day which is a pound of, so I weighing about one fifty five at the moment so it's a it's a gram per pound of desired body weight and will it make any difference who knows right maybe not alongside my resistance training program but it's just some, it's just an experiment to see what happens and if nothing happens I'll probably dial it back down or and continue as normal but the point I am trying to make is there are other things to then focus on. I know and James Steele is huge on the meditative aspects of training and the the ability to cope with great suffering in the form of ulcers. I think there are other things you can get out of this and focus on rather than being so obsessed and stressed out about all I need to find the exact correct protocol for me because the reality is it probably doesn't exist.

Dr. James Fisher: Yeah, yeah I completely agree and I think it's nice to let you said have that experimental approach to our own training, so that's a very intelligent approach, yeah.

Lawrence Neal: Kool. So, the other things you mentioned periodization and the strength endurance continuum do you want to elaborate on the periodization aspect of your talk which I do remember and find that I found a very interesting actually.

Dr. James Fisher: Yeah so the periodization was quite interesting, there's a couple studies came out there's a paper by Williams at the end of twenty seventeen and a paper by a Gergich at the end of twenty seventeen as well and the Williams paper was looking at strength and it suggested that there was a benefit to periodized training. And the paper by Gergich was looking at muscle hypertrophy and cross-sectional area and it suggested that probably wasn't a benefit to periodization training. And just for clarity for the listener

what we mean by periodization is the, you tend to get too general approaches linear periodization is decrease if you consider a downward curve in maybe intensity of effort or intensity which unfortunately generally means low lifted and an upward curve in volume so you would see those two lines crossing over on a typical graph. So when you're lifting a very heavy weight you would do less volume and when you are lifting a much lighter weight you would do more volume. You then see variations of it so you then see undulating periodization which means that instead of them progressing only with one direction over time so as that of the intensity only decreasing and the volume only increasing or vice versa over time you see them kind of go up and down inflection in contrast to each other and there are the models around that. I think the key with periodization is to remember that it's geared around the idea of managing training with the goal of of a specific event, it's probably best thought of in that way. So if somebody is training for a marathon or if somebody is training for the Olympic Games or somebody is training for I don't know wherever else it might be, then you kind of set up plan and I think the I know that Jeremy Loaneckie has been quite critical of periodization I tend to agree with a lot of the things he's said in the specifics of it but as a larger perspective periodization really is just the concept of having a plan towards achieving something for a single event. As soon as you take away the single event it probably doesn't mean much to have, to apply periodization. If you're a powerlifter periodization has application for maximal strength for that powerlifting event, if you're a bodybuilder periodization might have application for a single competition. And those two things were even missed out in those two reviews they didn't mention power lifters and they didn't really mention bodybuilders, nobody else is, there, it would seem almost pointless for me to periodize my training for muscle hypertrophy or for muscle strength without there being a single event that I'm planning for. Because what's the point kind of I can just vary things anyway or I can just continue with the same protocol. Anyway, they talked about a couple of different things and it was more that I, it was more the things that they didn't talk about so neither of the studies had included in something called D Training. And in fact the reason that I kind of looked at this was because

one of the studies that was included how to format B training so there is a study by Herrick and Stone from ninety six and they had a progressive resistance exercise group that did three sets of six rm for fifteen weeks as a standard training protocol, fifteen weeks. And the other group did three sets of ten rm for eight weeks, took a week complete rest or a weeks rest with I think it was a low, low intensity aerobic endurance, so I think it was a cycle, cycle task or something like that. Then three weeks more training with a heavier weight and then a weeks rest and then three more weeks training with heavier weights stuff. And they found that both groups made similar strength increases but of course one of the groups had taken two complete weeks rest during that time so and they didn't really mention that. And that led me down the route of going back to a couple papers by some Japanese authors that looked at exactly this, they had a group that trained for fifteen weeks compared to a group that trained for six weeks rested for three weeks and train for a further six weeks and they found similar increases of the six week mark and at the fifteen week mark. And they repeated the study twenty four weeks so they did kind of six weeks on, three weeks off and cycled that three times and they found the six week at the fifteen week and at week twenty four so after each kind of six week block of training the both groups had the same increases in I think it was triceps and peck major muscle growth. So one of the key things for me this highlights is that we talk about a periodization and managing training volume and training intensity but actually in the late population what's more interesting is to say well what if you take a break from training, what Lars what if you were to take a three week break while you were travelling around the states.

Lawrence Neal: 23:05 [inaudible].

Dr. James Fisher: Yeah, absolutely right, forget the psychology of that. But imagine if you did take a three week break. Well, our perception is that we would lose muscle strength, lose muscle hypertrophy and so forth. But actually there's

a reasonable body of literature now that says that we can probably take that break and not lose much if anything and if we do lose anything then we can recover it quicker because of taking that rest, as long as it has been rest, as long as there's hasn't been three weeks of we've missed training because of stress and poor diet and illness and so forth. So as long as it has been a rest protocol, so and I think that's important for people to realise I know, I know a lot of people in our position that are so , dare I say obsessed with that training the they go on holiday and they find a way to do their training with bodyweight exercises or with tier racks or they find the local gym and things like that. And I do exactly that but it's nice to know that actually you can take, take some time off and eat well and sleep well and and come back kind of quite refreshed. So and anecdotal I spoke with Blair Wilson and Skyler Tanna at the conference and they were saying they follow almost this protocol they do I think was between four and six weeks of training and then tend to take a weeks recovery and show really great adaptations at then end of that....

Lawrence Neal: Nice.

Dr. James Fisher: at the end of that weeks rest.

Lawrence Neal: Well individually they do that themselves did they?

Dr. James Fisher: Blair was saying that he, a lot of his clients are doing the same so there's a lot going on there. During the parts of the periodization that I talked about were briefly, were the idea that if we decrease the intensity or decrease the weight being lifted that we're actually serving to decrease the intensity. So if we're preparing for an event then we could decrease the load lifted and that would serve to provide less fatigue perhaps. But one of the key, I presented a paper by Generimn Weston and they looked at the differences between heavy and light loads and they looked blood lactate and cortisone things like that and we've reported similar data with our light load training, if you train to momentary failure and I'm not suggesting that most people do in the periodize training protocol do but if they did training

to momentary failure would mean a higher volume load so a higher total work because of the number repetitions before the light load and and as a result that actually a higher blood lactate and a higher cortisol. So it is interesting to know the, as we approach maybe a specific event we decide to decrease the intensity to try and taper but actually we've got to be careful because we might actually be causing more metabolic stress to the muscle and more fatigue rather than less which is what we're trying to achieve, so.

Lawrence Neal: So in a nutshell regard to periodization in terms of unless it almost sounds like unless you're training for a specific event then it is just not that necessary.

Dr. James Fisher: Yeah, I think that's really fair and I know, I know Gary Knight I talked about periodization and he was he was really critical of it. And his response to it was you look at these graphs and the stuff like this True Debomper wrote a book on it years back and as part of the book since then and you look at the tables and graphs that are used in periodization and that's so unnecessary complicated for the layperson. As soon as you move into somebody that has more complex elements in skill training and endurance components and strength of muscle size or even body weight if it's boxing or martial arts or things like that, that might be in need to manage all of these variables, that might be. But I would say that the this is best done by the practitioner not by the scientists and for the layperson who isn't training for a single event periodization is probably just variation in training which is just nice to do anyway if you, if you want that kind of mental break from things.

Lawrence Neal: Yeah and if you want to hear more from Gary's perspective you can listen to that episode it will be in the show notes and I remember it well, I remember Gary saying that essentially most personal trainers hide behind periodization as a sure way to cover up lack of progress which I have seen that in a lot of people I've spoken with and work with who then took talked

to other personal trainers and tell me about what they're doing, it's quite ubiquitous that type of approach unfortunately.
And so we've got, we've got a few more minutes James, I just want to see if we could cover off the strength endurance continuum aspect of your presentation.

Dr. James Fisher: Yeah, absolutely. So the strength endurance continuum basically this is, this is the idea of the NSC and the ACTS and most people are argue or present an opinion and we're told if you train with a very heavy load you optimize strength and a moderate load optimized hypertrophy and a lighter load optimizes muscular endurance. And that's been debunked quite a lot now hypertrophy you can train with a heavy or a light load and strength seems again you can train with a heavy or a light load, so with that in mind it's worth looking at muscular endurance. And the key with this is that there is two types of muscular endurance; there's absolute muscular endurance which is if you're lifting an absolute load and there is relative muscular endurance which is it if you lifting a relative load. I did a review of the literature which is, which is in review right now in the journal and really what the data suggests is that if you get stronger so if your one rm increases by a certain amount then when you lift an absolute load so if you go from lifting one hundred kilos to two hundred kilos your absolute load being fifty kilos then you increase the number of repetitions you can perform at fifty kilos because your strength has gone up. Whereas if you take fifty percent of your one rm so which, which is fifty kilos when your one rm is a hundred kilos or is a hundred kilos when your one rm is two hundred kilos then your repetitions about relative load almost doesn't change at all. And there's quite a body of literature that supports all of that and so says absolutely muscular endurance changes with strength, relative muscular endurance shows almost no change at all. And it's worth knowing track back through the literature to Thomas De Long he's often attributed to the strength endurance continuum. In his original was called research but actually he himself called it observations, Thomas De Long really is the

father of progressive resistance exercise and he worked with injured veterans post world war ll to, for rehabilitation. And really what he was saying was that if we're trying to rehabilitate strength and power we should do strength and power based training with a heavy weight rather than make people kind of walk up and down stairs or go cycling or walking or running or things like that. And that was taken to mean heavy, heavy weight repetition versus low weight high repetition, well I don't think anybody would call walking or cycling low weight high repetition they would just call that cardio. And unfortunately that's where he his kind of research has this been misinterpreted or misrepresented maybe and really his dates and really every study since then bar one or two have suggested that the absolute muscular endurance stays the same and relative oh sorry absolute muscular endurance changes with strength and relative muscular endurance pretty much stays the same irrespective of heavy or light loads, so.

Lawrence Neal: So the takeaway there being that so long as you're doing some kind of resistance training of a higher degree of effort I mean if you want correct my words here James you're going to get the strength and endurance benefits that you potentially are after or your clients are after.

Dr. James Fisher: Yeah, absolutely. The only, I mean yeah that's the key thing and I guess the point is if you're an endurance athlete if you're a long distance runner or triathlete then you don't need to go in the gym say well I am an endurance athlete so I've set the load very light and I can do thousands of thousand rack the load up to whatever you like and pretty much do whatever you want do as long as it's to a high degree of effort and you'll make similar adaptations. And I would probably argue that a heavy resistance is better because you're probably provide greater stress to bone and improve bone mineral density which lighter resistance training might not do. The only caveat to all of this seems to be that if you train with a

light enough load then you probably improve your ability to overcome discomfort. There was a study by a Olery which showed that light load or doing exercise which incurs a high degree of discomfort can improve your pain tolerance. So I guess if you're a marathon runner or an ironman, or pro athletes nine and what you're trying to do is put yourself in that pain environment because that's what you have to do in an event then doing a high, a very high number and I'm talking about a hundred to one hundred and fifty reps. put yourself in a very high rep environment to deal with the pain, discomfort might be beneficial.

Lawrence Neal: Interesting and just for the listeners as well there was a tiny bit that cut out when what I mean to the listeners and what James said there was a thousand repetitions. That's what you're saying, you're saying that's probably not ideal. Awesome James just before we wrap up I just wanted to hear about quickly about your workout with Jim Flanagan I saw some of the pictures looks like you're in a lot of pain can you talk about that and talk us through the workout quickly?

Dr. James Fisher: Yeah, yeah yeah Jim it's just a, he's just an believable trainer and just a real gentleman and just I'm just so blessed to have been able to spend any time around him, that's I think the second time or third time I've met him and the second time I've been trained by him, both workouts were completely different. We are, I can talk you through the workout we did a set on the duo squat in kind of the kinetic feature where you lift the load but then you hold the load elevated and resisting with your opposite limb, with your opposite leg and on the duosquat is just an absolutely brutal leg press. And from there straight into the knee extension and I've genuinely never felt that kind of discomfort in my quadriceps and after I reached failure on the knee extension Jim's sort of put his hand on me and said you are done, take a minute, grab a drink of water. And all I could think was well thank God my lower body is done there and at that point I saw him, I saw him start to put plates on to the medics Avenger leg press and I was just nearly crying the idea of now going to doing another leg press exercise and I'm pretty confident Jim just lifted the whole weight every

time he was helping me out a lot with that. And then I went through the rest of the protocol was a pullover an old northless plate with the pullover which is beautiful. Behind neck northless machine where you start with your arms basically directly above your head and then and then abducts your arms with roller pad against, kind of against your triceps so it works in that form up. I guess that doesn't help the listeners doing a practical demonstration but...

Lawrence Neal: You would hope that they know abduct means so, what would I need to do to demonstrate it for me.

Dr. James Fisher: And then it's a negative only chin up I think there's a thirty second negative chin up and then and then another and then Jim would give me kind of about a minute or two minutes rest every few exercises that was good. Did overhead press, did chest press, didto triceps extension, did bicep curl, just use some great some modern more recent medics equipment and some of the caustic old Northless pieces. And yeah I mean Jim is just, when you, when you get trained by someone like Jim Flanagan he's such a legend I would never say that my effort level could go up a notch because of the way I traditionally train but when you're put in that environment Luke Collinson stood there taking pictures and Jim Flanagan's kind of he doesn't growl at you doesn't shout at you he just gives you a clear instruction and boy you follow that instruction and that's it. And he coaches you when he needs to coach you but he doesn't over kill him out talking. He was just it's just a really great, just a really great workout and then we, Luke trained and then we all went and got some food and recovered for the rest of the day.

Lawrence Neal: Did you go to Christmas prime steak house they take you there?

Dr. James Fisher: We went to Christmas that evening and yeah I had some just unbelievable food and yeah it was just, I was really fortunate had about two or three days down there with Jim and his wife Marci and we stayed with Jim and Luke of course and hung out 37:08 [inaudible].

Lawrence Neal: Oh nice.

Dr. James Fisher: One afternoon and hung out Bob Sykora who's a strength coach with the Denver Nuggets years back as well. And yeah just these just, a real honor for me to be able to sit back and hear these guys tell their stories and learn from them and I don't just be around them so.

Lawrence Neal: Awesome James has been, yeah I mean I could talk about this stuff for ages but you've got important things to do, family family errands. So thank you so much for joining me again and just going through all of that I think it's going to be really really fun for the listeners. And for everyone listening to find the blog post for this episode oh actually I'm not going to leave yoa url because it's going to be, obviously within the private membership. So, yeah I may stitch some extra info on the end of this one which I can't think about right now but otherwise thank you very much for listening. Hey guys I hope you enjoyed the episode with Dr James Fisher I forgot to mention if you want to contact James regarding this podcast or any of the previous podcasts please feel free to e-mail him at to James.Fisher@solent.ac.uk. There will also be show notes and more information about this episode within the membership which will go live on the first of May.