David Dunne

#327: David Dunne
Behavioural Science in Nutrition

SIGMA NUTRITION RADIO
with Danny Lennon

Episode 327

DANNY LENNON:	David, welcome to the podcast. Thanks for doing this, man.
DAVID DUNNE:	No worries at all. Look, thanks for having me. Yeah, look a pleasure to be on, and yeah, really keen to get into some discussion.
DANNY LENNON:	Yeah, I've got plenty that I want to ask you about. But, I suppose, to set the stage and give people some context for some of the stuff we're going to talk about, maybe can you give a brief overview of your background as a practitioner, and then also where you are in terms of some of your current interests related to your doctoral work?
DAVID DUNNE:	Sure. So I'm Irish originally but then moved to the UK straight after school, so I did my undergrad in both sport science and nutrition over at University in London, carrying on to do a postgraduate through the Olympic Committee, I'm now doing a PhD up in Liverpool John Moores. I was quite fortunate early on, I finished my undergraduate and managed to jump straight into the field and started off in professional rugby league with Bradford Bulls, as well as in football with Queens Park Rangers and some Olympic sports, British fencing. And then I suppose, since then, I've just really carried on a journey

throughout different sports from going through golf to canoeing going from rugby league to rugby union, and sort of working from the UK and across to the US as well in some professional sports over there like athletics and basketball. So I've been really lucky so far, I managed to get work early and stay in working, yeah really enjoyed my experience and have dived back into the research side in more recent years to hopefully find something new or novel at least explore something in a little bit more detail.

DANNY LENNON: Maybe if we focus on that for the moment, because when we try to think, what was it, last August, when we sat down in London and you talked me through some of the work you're doing and some of the research you've been going through, which was absolutely fascinating, so if we explore some of that, how would you explain to people what you're currently looking at and what this research essentially focuses on?

DAVID DUNNE: I suppose, like with any PhD, the title changes. Sometimes it can change quite rapidly, but originally I started off and I was exploring the impacts of social media on behavior change in performance nutrition, but now it's been made a bit broader so we're really looking at digital health and behavior change, so how we can use digital technologies to influence health and nutrition related behaviors in athletes.

DANNY LENNON: So if we take some of those, I think most practitioners probably listening to this, will be, at least from a conceptual perspective, realize that there is a kind of clear difference between having knowledge of nutrition science, physiology, metabolism, etc., versus the actual implementation of clear ideas into athlete practice. From what you have looked at and the way you tend to think of this, and this will also include your experience as a practitioner, what seemed to be the primary barriers that are in place for implementation of certain strategies for athletes – and I realize that's a quite a

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generic question, so feel free to bring in whatever direction is useful – but what are the first things that you would lead off with?

DAVID DUNNE: If we're asking an athlete to do something, it's important to recognize that we need to have a relationship with that athlete first and foremost. So for them to want to listen to us, they need to, I suppose, respect us, trust us, know that we care. So there's definitely a certain amount of, regardless of, I suppose, science aside, of time we need to invest with each individual to help to build those relationships. but as you've alluded to there that education more than often actually isn't enough and it really depends on the individual. Unfortunately, this is probably a pitfall of the university system at the minute where we start to go through our undergraduate and our postgraduate qualifications and we learn a huge amount of information, like you said, exercise, physiology, biochemistry, but how we deliver that, some people may have more innate skills to be able to have conversations, some people may be able to, I suppose, help bring an athlete on a journey more effectively than others. So I think some of the biggest barriers to practitioners at the minute are really understanding behavioral science and how we can deliver behavioral interventions to try to influence the athlete adopting that behavior and help them to adopt out of the long term behavior as opposed to just improving their education by delivering some knowledge to them or improving their knowledge, I should say, by delivering an education based intervention.

So I think it's really important for practitioners to distinguish between a behavioral intervention and just an education and knowledge based intervention, because we know we can improve somebody's knowledge, somebody might know what to do. Let's say, it's protein intake, for example. We're trying to make sure somebody has the right total amount of protein evenly distributed

throughout the day as well as incorporating an acute recovery strategy. They might know all the benefits of this, but for some reason they still might not actually do the behavior, and so that's where I think it's really important for practitioners to revert back to theory, and I think the barrier has been, we haven't been taught about these theories during our education, our formal education. And some people now in the field like Dan Martin and Megan Bentley are doing some great work in this field as well. They've used their PhDs to revert back and hopefully share lessons with the field. If we look like behavioral clients, a great place the start is actually the behavior change wheel, and I think for most practitioners, this is a nice tool that they can use to fill their deficit for the time being.

The behavior change wheel is really, it's a synthesis of 19 behavior change frameworks that draw on a sort of wide range of disciplines and approaches, but at the core of that framework is a behavioral system called the COM-B and that basically states that for a behavior to occur, an individual needs not only the capability which is generally what we're looking at in terms of their education, so capability can be both physical and it can be psychological, they also need the motivation, reflective and automatic mechanisms that could activate or inhibit the behavior, and they also need the opportunity, and again the opportunity could be physical or social. And, if we look at traditional nutrition interventions, we generally deliver knowledge based interventions or we might help teach them how to cook and prepare food which again that could be a skill based intervention, both of those are psychological – well, knowledge is a psychological, I suppose, skill, and then teaching someone how to cook is a physical skill. So we're still focusing on that capability and with completely missed opportunity and motivation. So I think for practitioners at the minute I think the biggest barriers are, one, not being aware of these other frameworks and

these are the fields of practice that we now need to incorporate and acknowledge, and like I said, it's not necessarily our fault. And then, two, it's just the training and how we can bring them to life; I'm a firm believer in collaboration and that we shouldn't be a jack-of-all-trades, I've been very lucky personally to be exposed to some great behavioral scientists who have really taken me under their wing and are continuing to train me. But by myself, we will never be a PhD in behavioral science. I need to collaborate with those that have them with those that are within computer science and really work as a team. So I think for me, the biggest barrier is that awareness and that ability to collaborate at the minute or two things that would be great to address.

DANNY LENNON: Particularly from a formal education standpoint, I think there's a degree of a level playing field when it comes to exposure to the knowledge and the scientific theory. But then in terms of being a competent practitioner, like you said, there's, for some people they are, let's say, lucky enough to have a set of natural skills or characteristics, let's say, that may make them a more effective communicator or be able to relate to people in a way that makes behavior change more likely; but for others, where that isn't inherently the case, there can be a kind of shortfall in terms of competency and practice. And so rather than just leaving that up to thinking of this as, oh that's just the way things are, it's natural, what you've kind of discussed here as well, no, we have this whole field around behavioral science and theory that if we look at this as nutritionists, we can build this into our practice before engaging with people or before creating content and you specifically mentioned a behavior change wheel and this interaction between – or the use of capability, opportunity, and motivation. So in terms of being able to develop those three things in relation to athlete's behavior around food, let's say, are there certain types of techniques that seem to have efficacy or what are some examples that practitioners can think of, of

what strategies can be used to try and cultivate those three things?

DAVID DUNNE: We might approach this just with a high level example and then maybe delve into how to get there, I think would be will be pretty useful. So like we've alluded to already, we can deliver education based interventions to help people's psychological capability to improve their knowledge, we can deliver cooking classes to improve physical skills to show them how to cook how they actually chop onions, crush garlic, etc. When we're looking at motivation, again, we really need to come back to, I suppose, what is the job of the intervention with a resource of what we're delivering. So let's say, it's protein intake again. We'll use that as a consistent example going forward. I might deliver an infographic that has the information as to why protein is important, how it should be distributed throughout the day and the total amount that they require. However, I might deliver another resource, but instead I might have an image on this resource that might be showing what happens if somebody under-consumes protein, it could be somebody who's lost muscle mass, it could be somebody who has high levels of muscle soreness, has had an increased risk of infection. I'm not mentioning anything about how to do what you should do. It's more a case of I've created this negative imagery or positive imagery. We're [inaudible 00:14:02] more salience of consequences, and really what we are telling people there is that this might spark an interest in somebody or spark them to go, okay, I don't want to be like this, I need to avoid this situation. We're not telling them what to do, we are just providing some positive or negative imagery to influence their beliefs about their consequences of the behavior and then shift that. And again, opportunity could be both social and physical. Obviously, you might have social influences from the social circles you hang around in, but physical could be is a lot simpler. So it actually could be restructuring their environment. So what food do they have available, how available

is it in their fridge, those kind of things can be done to help people restructure whether that's an online delivery of an adequate amount of protein rich foods for the weak. If it's there, at least I have a higher likelihood of doing it, replacing what might be in their digital environment.

So looking at what app they are using and then making suggestions around resources that we can have to restructure their digital environments to also help increase their opportunity to do that behavior, so there's, I suppose, really high level, and if we are looking at this COM-B behavior system, the behavior change wheel also maps it against something called the theoretical domains framework which is an integrative framework developed from the, I suppose, the synthesis of psychological theories as a vehicle to help apply these theoretical approaches to interventions that are aimed at the behavior. And when we start to see that, we can knock things like motivation against goals, intentions, beliefs about consequences, optimism, self-efficacy. So that's a really good place to start for these things as a high level, but I think some great research for, now that we all have a lot more time on her hands, for nutritionists to delve back into now is once they make their way through that 2011 paper by Susan Michie and the team from the UCL Center for Behavior Change, it was actually a paper published in 2013 and again in 2015 and there specifically, I suppose, titled changing eating behavior, what can we learn from behavioral science. And so there's a huge amount of information within those that I think practitioners could learn from and adore that line a nice six-step process to help us actually build a behavioral intervention.

And I think from my research so far, step one is probably what most practitioners are struggling with, and step one is just selecting the target behavior because behaviors don't exist in a vacuum, they occur within a context

or within a system of behaviors. So they can be very complex. But if we start by defining what we're actually trying to improve, that is the first step as opposed to saying, okay, this person needs to improve their protein intake, they need to increase their micronutrient intake, they need to improve their sleep hygiene, their hydration, we need to be really specific. And then once we've been specific on that behavior, let's say, it is acute recovery strategies and it's specifically the intake of protein and carbohydrate post-session, then we just specify that behavior. So try to define it, try to give it the context what context does it actually exist in; and then once we've done that, we should really try and understand it, so for me, that's step three of understanding is really about, for us as intervention designers, understanding what needs to change, what are the potential barriers as to why that behavior might not be occurring, they might forget to put something in their bag, they might not have it in the house in the first place, they might have had a bad session, and they might not care about anything to do with their recovery. There are all the things we need to really make a list of to start to give a good idea of how this behavior exists; and then once we've got this together, then we can work towards building the intervention and actually start to map this against, okay, of all these different opportunities, barriers, or enablers that we may have within this behavior for it to occur or not to occur, let's knock them against the COM-B and the theoretical domains framework and see what areas of capability, opportunity, or motivation do we need to change.

And once we have that, that's when we can start to specify intervention content, because now I know, okay, the job of this resource I am developing, or the job of this phone call; or the job of this meeting or coffee or Zoom or Skype, given the current circumstance, is to improve capability or motivation or we need to hit a few of these. But fundamentally, for a behavior to occur, that individual will need the capability,

the opportunity, and the motivation. Then we can deliver, then we can say, okay, we're going to deliver this via mobile app, we're going to deliver this via our private WhatsApp groups. So I think those two papers are a great place for practitioners to start, go back, and it really does give you a system that brings to life these theories to follow, and makes life a lot easier.

DANNY LENNON: If we have a process like that and, let's say, we get to the point where someone is able to work their way through some of those steps, put in place a intervention or create a piece of content, whatever we're talking about, that has a specific reason for – what's the best way to check if that is actually doing its job, if it's being effective, how do you suggest people use metrics or results to check if it's actually doing the job it's supposed to be doing?

DAVID DUNNE: Yeah, it's a great question, and I think it's really important because obviously if we're going to build an intervention, it's important that we can actually measure its impact. So I think when you're setting out the intervention at the very start, and obviously there's inherent problems in measuring dietary behavior, we do rely on a lot of self-report whether it's food diaries, 24-hour recall or image based food diaries, snap and send, obviously collecting some food diaries pre and post is important for us. But actually when we start to look at the individual components of the intervention, has somebody's knowledge improved, we should look at a small pre or post knowledge questionnaires. If it's somebody's motivation, we should be looking to capture, let's say, it might be beliefs about consequences, do they believe that this is actually worthwhile for them to change. All of these are available in the literature as it stands, and that might be five or six questions, and I just think we have to capture them overtime to look up where the tipping point is and how these things change, the same when it comes to things like people's self-efficacy, do they actually believe they have the ability to do it. So when it comes to say,

weight loss, somebody might have had a bad experience in the past, so they might have a really low level of self-efficacy. So before they even start, they've tried and failed before, so they don't think they can do it. So these are the kind of, I suppose, psychological measures that are great to pick up over time as well as the actual primary outcome behavior which would be picked up via changes in dietary intake.

So I think that's what I'd really look at, would be whatever areas you're targeting, you know, have a few questions alongside that that you might even capture every other week, and it might just be a very short form that they can fill out, and it just helps to provide a little bit of signal amongst the noise. Now, if you are delivering this in a digital environment, it might be a bit easier as well because you might look at, I suppose, effective engagement, so there's a big difference between engagement and effective engagement. So even if somebody looks at something, if they are looking at something regularly, is it then impacting that end behavior ultimately. So I think when we walk through the six-step process, outlined by Susan Michie and Louis Atkins, it does allow you to also pick up, I suppose, they already called them the active ingredients of the intervention or the behavior change techniques; and there's actually a taxonomy of 93, I suppose, hierarchy clusters, techniques where it does allow you to say, okay, are we focusing on grade and tasks, are we looking to provide an instruction on how to perform the behavior. When we have those active ingredients, we know what the intervention functions are, we know what part of that wheel we're trying to influence, we should look to the literature to pull together a few short questionnaires, resources, or things that we might even drop in in conversation. So conscious not everyone is doing this for academic reasons. So privately having to do this for academic reasons where I need to be very precise and reporting, I would build these questions into conversations and just sort of

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ask somebody how confident do you feel at doing this, and then we might ask the same question with regards to planning that behavior, how confident are you to even plan to do it, or to resist relapse, when you're tired, does it go out the window. I think we can learn over time to build these into conversation, in particular, if you're an applied practitioner, and then they can go into our own note-taking, but they don't need to be as formal as, I suppose, reporting an academic literature unless, of course, you're carrying out research.

DANNY LENNON:

Right, yeah, and that was actually a question I wanted to ask you about, but just before I get there, because just to recap for people, I know you've mentioned several of those steps from the Susan Michie paper, and I definitely encourage people to go and read that for themselves, but just to give some context, can you just recap just briefly over those six steps so people are kind of aware what we're referring to if they missed some of those?

DAVID DUNNE:

Sure. I'll try to be a lot shorter and a lot snappy over this time. Well, I suppose, the first step and the most important step is to select the target behavior, so just to make sure that you actually have clearly defined what you're trying to change or what that behavior is, then we specify it, so just make sure, yeah, like we said before, behaviors exist, they don't exist in a vacuum, they exist in a context and a system of behavior. So what exactly is that, then we try to understand it, so that would be step three, list everything that might get in the way of that behavior occurring, might help that behavior to occur or what needs to change in order to bring about that behavior. And then when we move from there, we move on to, I suppose, the second half which is really building the intervention, and that is from what we've developed so far, starting to map that against the COM-B behavior system and the theoretical domains framework, and we can start to see what needs to change to bring about the desired behaviors and where they sit in regards

to capability, opportunity, or motivation. Once we move from there, we moved to specifying the content, so now we're looking at what are these behavior change techniques, where do they sit against the COM-B and the TDF, and then we look to deliver the intervention which is the final part. So that's really putting it together to say, okay, we're going to deliver this in a digital environment of the content we've built, it will now come in this form or it might come over a phone call, and the behavior change wheel does suggest intervention functions on an outer, I suppose, layer outside the COM-B itself, so we might be delivering things for persuasion, coercion, enablement. But broadly speaking, there are those six steps.

DANNY LENNON: Yeah, perfect. And to speak to your previous answer and actually what we've discussed even before that, when we think about those three factors, capability, opportunity, and motivation that are driving behavior and making sure that at least a practitioner can identify maybe which of those needs attention immediately or it may be hasn't been taken care of up to this point, is that something that should be an objective process through, let's say, specific questions that can be included in a consultation process or can that also be kind of a more informal use of the coach's intuition or how would you advise practitioners to build in some degree of reliable system that is able to identify which aspects may be needed to target that they can then go and use that stepwise process?

DAVID DUNNE: It's a really good question. I think in an ideal world, things are things are captured and systematically reported, but again, if you've got 5 to 10 minutes with an individual or a quick corridor conversation to check how things are getting on, I think, as practitioners, we have to be pretty agile and be able to sort of use those opportunities that become available to us, just to capture them as and when we get the chance. We don't always get the chance to sit down with everyone we want to for 20 or 30 minutes and go into as much detail as we would like

those opportunities do come, but not all the time, sometimes it's the quick corridor conversation. So I do think we have to be quite agile and I would encourage practitioners to not make us incredibly formal, because then I think, I suppose, from my experience, the consultation then with the individual might become a little too clinical. And in particular, in sport, where we're very fortunate to work in the world of working, we want all those relationships, we want to have fun, we still want to get worked on, but we don't want to feel like the consultation becomes a chore. So I do think we have to think of how we can sort of bring it into conversation ourselves and how we guide conversations and this might come back a little bit more to, I suppose, some other ideas around motivational interviewing and how we get people to change as well, or how we guide conversations book. I would encourage practitioners, at least at the start even just to have, before you go into a conversation, a quick glance, at the behavior change wheel and the theoretical domains framework and just listen to the athlete, you know, ask questions and just start to listen on keywords that they're picking up on, or that you might pick up on, that might help guide you as to the deficits. I think it can be picked informally, but you might just need to formulate a few questions to help you with that.

DANNY LENNON: If we talk about maybe some anecdote or example, and again this may be difficult to answer off the top of your head, but the reason I ask is that obviously you've been a practitioner working at a very high level for a long period of time, and there's no doubt that you've, through either purposely at the time or through a lot of practitioners using some degree of trial and error and intuition and your own coaching experience, to know what is needed with a certain athlete at the right time, I'm just wondering are there any examples that pop to mind that were things you did, certain interventions, or even just brief conversations that you've had with athletes that made a clear

impact in terms of behavior change, that maybe even retrospectively now that you've gone so deep on the behavioral science, you can kind of retrospectively explain why it worked a bit better, but are there are some examples that you can share with practitioners that might show a valuable interaction that led to real behavior change in an athlete?

DAVID DUNNE: Yeah, like I said, look, I'm no saint, I've made lots of mistakes, and I think the mistakes are equally as important along the way. I've definitely learned more from athletes than they've learned from me at this stage. So I think there's a couple of examples that jump to mind and there's probably – there's one example that really stands out, and I'll start off with how I got it wrong, which was again as a sort of a younger practitioner going into a conversation, an athlete wanted to, I suppose, I didn't really listen to what the athlete wanted at the start. I went in and I knew what was important based on doing an analysis of their needs, and they were at a particularly higher risk based on the amount of international travel that they were doing for picking up small infections, jumping through time zones, lots of international travel, lots of different foods in different continents, so I sort of went straight in and tried to deliver an education based intervention. And I said, this is really important, because X, Y, and Z, here's how to do it. And lo and behold, [inaudible 00:31:57] the other, they probably, if I ask them – well, not probably, when I asked them what to do, they were able to tell me what to do, no problem. But did they do it? No.

So the exact same person then, within the next 12 months, and probably after I started reading a little bit more literature, we went back and we kind of had, you know, we obviously had ongoing conversations, but this one conversation came about, and we sort of got back to the same topic, but we just took it completely differently, so I just sort of started to ask them what was important to them, what

they really cared about, and then tried to help to guide that conversation where I could understand what was motivating them the most, and then be able to use that, so they were particularly concerned about not being able to compete. In this instance, competition was over a four-day period, and quite regularly. So now that we knew what their biggest, I suppose, motivation and fear was, instead of me telling you that, okay, here's a way to limit your day's last illness and injury, they have now come up with their own idea that this is really important to me, this is what motivates me. And then we can just guide that conversation to ask them, well, look what do you think, if this is really important, what do you think you can do, how do you think you can do it. And by the end of that conversation, the individuals have come up with the idea and this was more motivational interviewing, but it was motivational interviewing working towards getting them to feel motivated to do that behavior.

So we are really, by the end that of the call, it was more of a motivational as opposed to a capability focus call, because they always had the capability, but we were able to drill down into what was important to them that they thought of, how would like to target it, what their suggestions were, and then my job was really just to confirm and make sure that they were happy and ask them how they'd like to monitor the progress themselves, and actually that was a good success story, the incidence of illness and days lost in the coming 12 months was significantly less. We did track that as, I mean, days lost illness and injury is easy for us to track, it's one against the other over a to 12-month period. So I think that was fascinating for me just because we had the exact same conversation, except I tried to tell them the first time, I tried to just deliver education whereas the second time it was very much about motivational interviewing, listening, paraphrasing, and getting them to come up with their own idea of how they'd like to tackle

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it, and more guiding them even though it may have been your idea, they have to decide it, and then how you can support their journey, and really it was for them then believing that actually the beliefs about the consequences in this instance changed, because now it felt like it was really important to them. So it was more of a reflective motivation conversation as opposed to a psychological capability conversation.

DANNY LENNON: Actually, only recently, I've been talking to a couple of coaches, and when you look across various domains, not just nutrition, it seems to be quite consistent that you see better outcomes when there is a degree of autonomy for that client or athlete, which is kind of exactly what you've lined out there when you can build in their own views and decision making and feeling part of that process, and give them more autonomy – it seems that nearly universally that's almost a good thing in most cases, so it's interesting to see an example like that where, again, it's not just knowledge being the barrier.

DAVID DUNNE: Definitely, I think autonomy is really important and probably one of my favorite questions that I've seen in all the research was something that got thrown out from the human behavior change project, I think it was in 2018, and they put forward the question of what works compared with how well, with what exposure, with what behaviors, for how long, for whom in what setting and why. So the incredible level of specificity there really means we should be drilling down into things like autonomy, and you have people like Eline Smit, I think they're over in the Netherlands, put out a paper in – yeah, over in Amsterdam, called self-reliance to expert dependence, and they looked at mobile app users in the Dutch population, and it was a great sample size for a study, great bit of research that they managed to get out. Over a thousand people took part, and they were able to do a latent class analysis to identify subgroups within the mobile app base when it came to their need for autonomy, and I really

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like how they classed it, because I can see this in the applied world, like some people are expert dependents, they do need us to tell them, they need us to be there to help guide them the whole time and actually tell them what to do. Some people may be confirmation seekers and they may not need us all the time but they just might need us to say you're doing the right thing and confirm that their decision is correct, and some people may be the opposite. We have to solve the problem, we should guide them, we should create an environment where there may be enough nudges to help push them in the right direction, but fundamentally it's, if then, who's decided.

DANNY LENNON: One thing that I did want to ask before we finish up, David, was specific, I suppose, to social media, given that that is one of the places where a lot of practitioners are going to try and reach athletes, either directly the athletes are working with or more globally trying to share good quality information, and I think there's a lot of pressure actually on a lot of nutrition practitioners right now to be putting out content, and to be doing that on a consistent basis. But I think perhaps the trap then becomes a lot of people can create content for content sake. And as you alluded to earlier, one of the main focuses that you've had in trying to say to people, look, ahead of time, you need to be able to have specific reasons for, let's say, creating this piece of content and knowing what is the end result supposed to be, like what is the goal of doing that. So for the nutrition practitioners listening, what kind of advice could you give that may be helpful in ensuring their use of social media or content creation more generally is actually effective for the end target user, what are some questions they can think through or what are some things that they can reflect on before starting that content creation?

DAVID DUNNE: Yeah, sure. So I think, look it's a great question, I think you've highlighted the answer as well,

which is practitioners have to ask themselves what job is this bit of content doing, am I just throwing it out because I'm an individual who's trying to build my profile or am I putting it on a private social media page for the athletes that I work with where I'm trying to improve some of their behaviors – I think that's probably first and foremost, they have to ask themselves what job do you want this to do, because obviously online communication is here to stay, but if you're putting it out for self-promotion or just showing your research, it becomes a lot simpler; if you're putting it out to your athlete, then you obviously need to sort of nail down, I suppose, am I trying to motivate them and sort of work back towards through the theoretical models, because these tools developed in behavioral science will play an important role in the design and evaluation of an effective intervention. So my number one piece of advice before anyone puts any content out is what job do you want it to do, and if you can answer that clearly and succinctly, then I think you're in a good place to start pulling that piece of content together; and if you're kind of doing it for the sake of doing it, well, then I don't actually think it's a very good use of time, because now digital environments are affording us great opportunities to reach people – on average, in the UK and Ireland at the minute, people check their phone a minimum, well, on average, sorry, 85 times a day. They spend – I think there was a study looking at Nottingham, in Nottingham, the average time people spend there was 162 minutes a day on their phone. So if people are going to be checking, and they're going to be going back and forth just to find the job of that piece of content that you're putting out – and I think those change from platform to platform, so Twitter seems to be more academic, academics having conversations with academics, and it might be more about sharing knowledge that you've created or getting involved in a conversation to ask questions further; Instagram you tend to see a lot more, say, athletes on there, there's so much information that's being ingested, how can you

	get something to jump out and speak to them; and same with WhatsApp, you might have private channels for your own groups where you're keen to deliver more adventurous content to specifically target those.
DANNY LENNON:	And before I get to my very final question, speaking of social media for people listening that want to keep up with what you're doing and connect with you online, where can they find you on social media or anywhere else in the internet you'd like to divert their attention?
DAVID DUNNE:	Sure. So I suppose, we've got two handles, we've got on – my personal handle is @thenutritionisr which was, there's a very brief funny story behind it which is on day one of working at one of the rugby clubs they gave me one title and they just spelt "nutritionist" wrong. So that was "nutritionisr" so yeah, it's nutritionist spelt with an R as opposed to a T at the end, and we're putting out lots of recipe content over on Instagram as well at hexis_performance.
DANNY LENNON:	And David, with that we come to the final question that I always end the podcast on, it can be completely outside of what we've discussed today, and it's simply: if you could advise people to do one thing each day that would have a positive impact on any area of their life, what would that one thing be?
DAVID DUNNE:	I would say, given the current circumstance of what's happening, I suppose, globally with the COVID-19, it would be get outside to exercise, get a good quality hour of exercise to help break up your day whether it's in the back garden, the front garden, as long as you're maintaining your social distancing, and following the guidelines. I think it's really important for people's psychological states at the minute and all of stuff with a little bit of routine.
DANNY LENNON:	And so there we are, thank you so much man for this conversation, I've really enjoyed it and

David Dunne

I find this work that you're doing really fascinating, and actually has a lot of very, very important implications for practice and will be useful to many practitioners. So thanks for coming in and sharing it.

DAVID DUNNE:

No worries. Look, big fan of the podcast, so thanks a million for having me, and hopefully, in the not too distant future, myself and a small group of practitioners will have some interesting findings from some more dynamic research that's going on in behavior too.