Video Lecture 4 *(with slides)*

Components of a Training Session - warm-up, training year, factors associated with sports performance, performance-related fitness, planning training

Knowledge & Application of Personal Training

LECTURE 4

Hello, and welcome to Video 4

of your training for Knowledge and Application of Personal Training

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We're going into session design and programme design.
A little bit of a recap, what we've done so far.

- We've done the initial client assessment processes
- Questions that you might be asking
- How to develop paperwork and documentation,
- How that'll influence choices in the testing and applications element.
- We've looked a little bit at the psychology of why and justifying why we do the processes and where the variables and the variations are there for the applications of collecting and storing data.
- How the influences within small goals, applications, SMART goals, construction of SMART goals,
- How we relate that to training and the training tools that we're going to select and what we selected at what places.
- And also a little bit of the anatomy and physiology behind our selections.

We're now going into Training and Programme Design and looking at those elements there. We're going to talk a little bit about top-end training and how that then filters down to the members of the public that you'll be working with as well. And sometimes how those actually blend, because there are so many people now who perhaps have professional jobs from Monday to Friday, with a 9 to 5 shift, and who are performing at top levels. There are a lot of training facilities now, there are 24-hour access gyms and people are training seriously and they're doing some really competitive elements. There are obstacle courses that you can do at different times of the year. And lots of people are going into lots of different types of training.

So you've got a training **session** and you've got a training **programme**. And what are the differences? Well, training sessions are very different to programmes. You may have joined a commercial gym where they've said,

> *"We're going to do your gym induction. We're going to write you a programme. And that programme will consist of going in and doing a bit of cardio to warm up, a little bit more cardio for maybe 10 minutes or so during a series of eight resistance-based exercises working different parts of the body and seeing what you're comfortable doing. And then doing some cardio at the end as well. And each week, every, sort of, three to four weeks, we put the weights up a little bit and just try and push a little bit more."*

That's not a programme. It's not a bad thing - but it's a session. It's a training session that would just increase in difficulty each week. And it's a very generalized training session. Now it's not bad, but why is it not a programme? **Because it's not taking into account the specific needs and wants of the individual client**.

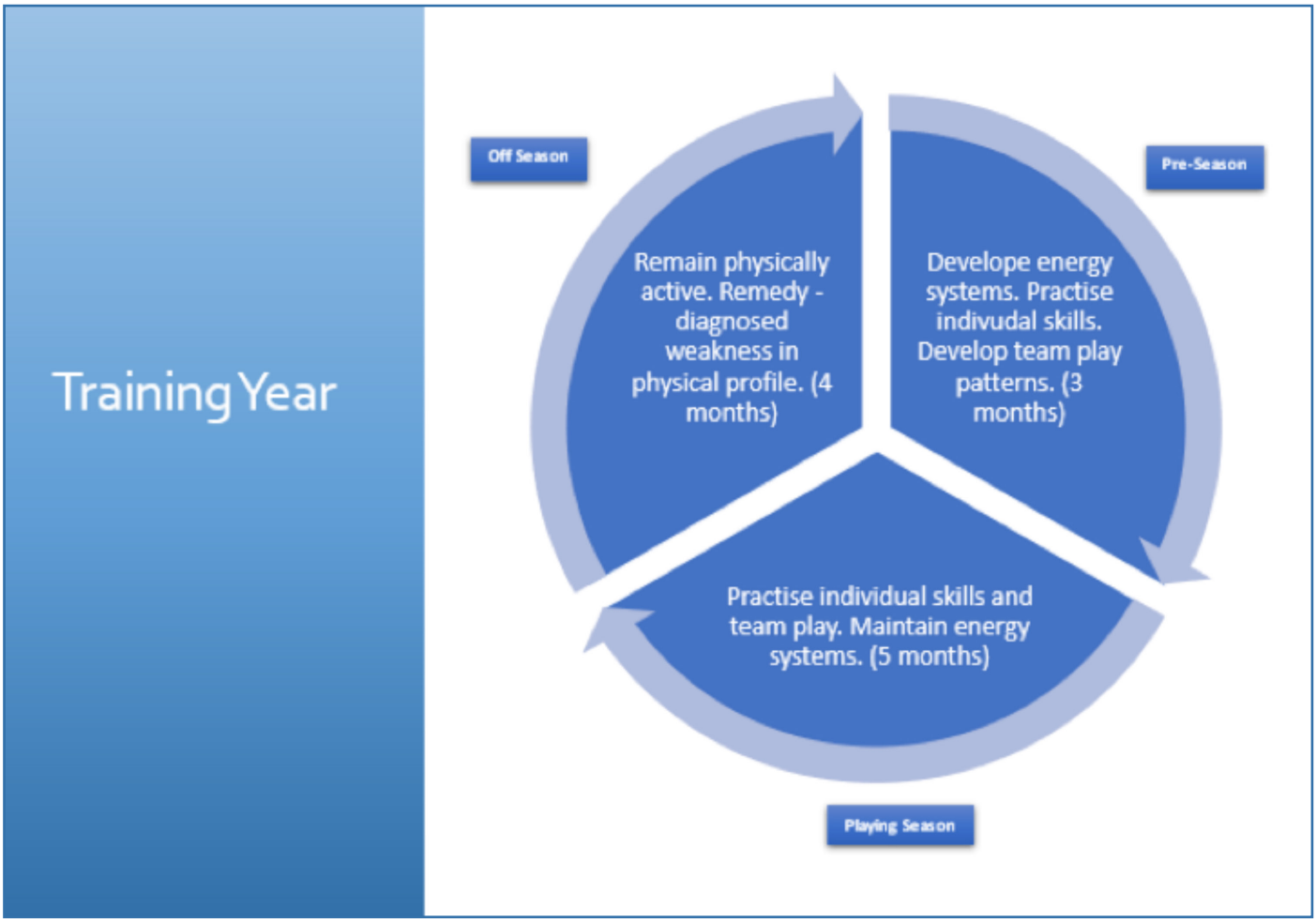
If you're working with a sports team, you're going to have generalized training, but you're going to have very specific individualized elements as well. So, a training session when we're working with sports teams, will consist of:

- a warmup (and there's different elements of the warmup we need to look at).
- A conditioning phase – say, a fitness element,
- skill, team-play phase
- and then a warm down or cool down.

So what are we going to be doing with our clients?
We need to warm them up and we need to make sure our warm-up is valid. And we'll talk about warm-ups a little bit later on in the session.

But - warm up. What we're looking at is:

- there is a **RAMP** element of warmup (see below for the meaning of RAMP)
- and there is the **generalized** element of warmup.



But what is the difference? It's just more terminology really. We want to increase the heart rate. We want to get the muscle body ready for activity. We want to mobilize the joints, getting the synovial fluid moving in our joints so we're ready for impact work and get the muscles moving in the manner which they will be doing in their training programme.

So if you're going to do a shoulder workout, going into a gym and spending 10 minutes on a bike warming up, isn't going to prime and get those muscles ready. So we do have this element of **RAMP**, which is:

- **Raise** the body temperature,
- **Activate** the muscles,
- **Mobilize**, and then
- **Potentiate**.

“Potentiate” - some people would find it a little bit difficult what is meant by potentiate, but we need to raise the body temperature and we need to raise the heart rate. And that has to match and be valid to the type of training we're about to do.

Think about what your heart rate does when you're lifting heavy weights and the way in which we're lifting - whether it's going to be strength or power work. Or when you go for a run - if you're doing sprint training, what the difference is.

Depending on what we're doing in the session, we need to make sure we're getting our heart rate up to match the state that we're going to be performing at. So taking it from the steady state from when we walk into the gym, to the training we're about to do.

We need to **mobilize** joints. So often, we might be quite sedentary in our day - we're not taking our joints through all its range of movements. Think about the shoulder joint being a ball and socket and everything that the shoulder joint can do. Often when we train in gyms and we do resistance training, we don't train it in all the ways in which you **can** do. That's why there's such a big demand now for working with bands, kettlebells, TRXs and applying resistance in so many different ways. And it's important to make sure that we do that. So think about what you're going to do in your training. Does your training match the demands of life and is your warm-up then matching the demands of your training?

Then you've got **activation** - actually activate those muscle groups, apply pressure in the same way. Be progressive but apply that pressure.

Potentiation. We've got to think about that if you're going for a run - and a lot of people don't warm up before they go for a run or they don't map their warm-up to the demands of the activity they are about to do. If you remember, I was

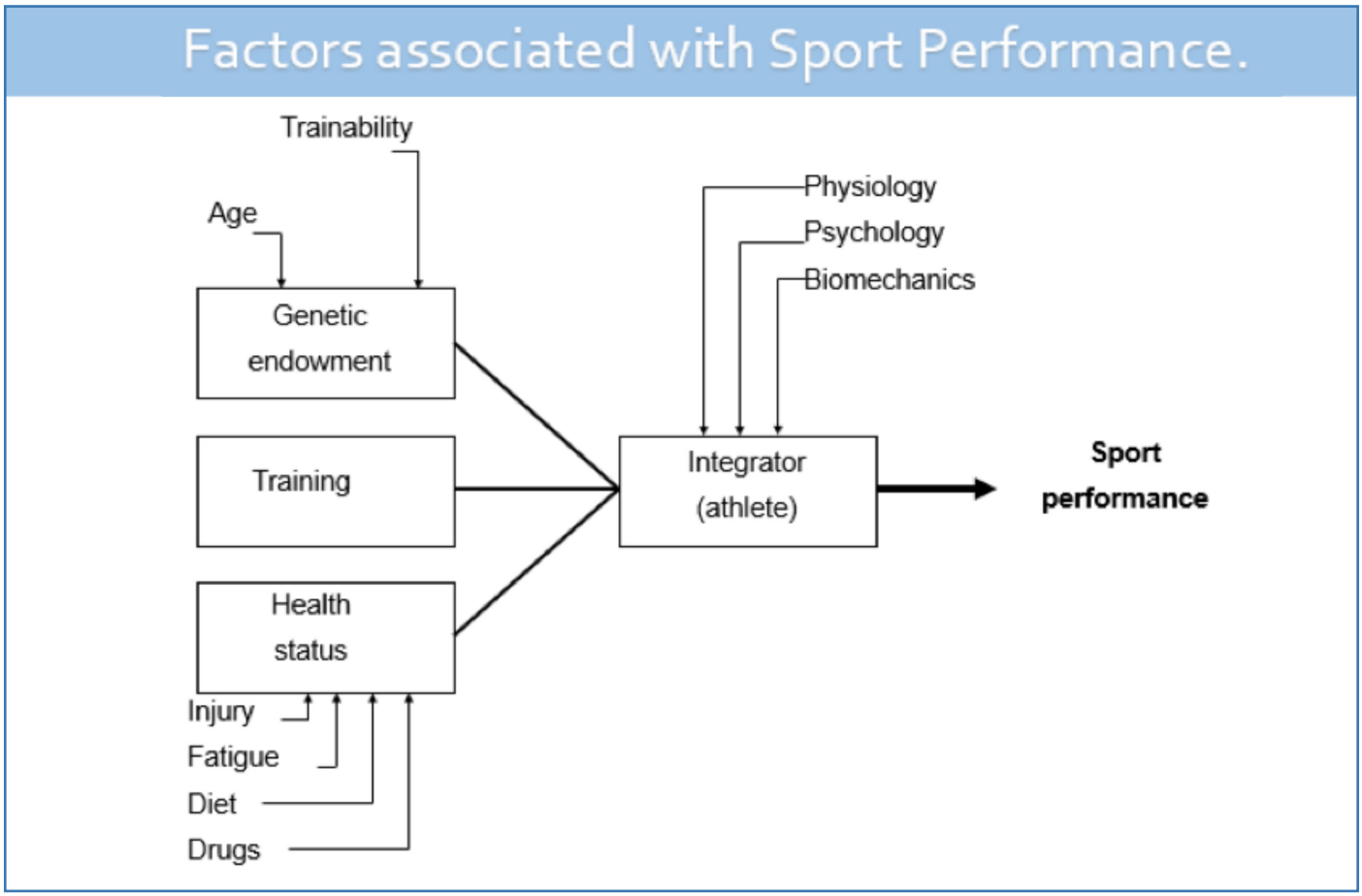
saying that you can stand on one leg and hop on the spot - that's basically the type of impact you're putting through your body. So should you not warm up for that? And how can you map your warm-up to that type of activity? So that's the potentiation point that we're looking at.

Now, your warm-up has to be mapped and be valid with what you're doing in your activity. You're going to have your activity and you're going to have a peak of the activity. If you think about a session being an hour long - how do you split that up? You're going to have an arch of intensity which increases as you work through your session. So when you walk into the gym, you're at a steady state and you start to climb up that curve and start getting to the peak of your session. Then you're going to start coming down the curve at the other end.

Now what you do in and around that is completely up to you: you can be doing some conditioning, you can be doing some skill-relations stuff as well. And actually doing that with members of the public will bring in that enjoyment factor. You might do some pad work and boxing work. You might start having things like lights on the floor that your clients have got to hit to turn them off or make them move on to different things. Again, the content of the session is up to you - what you put in between your warmup and your cool down has to be related to the client's needs. So think about the structure of session - as long as you warm up and you've got your cool-down, whatever you put in the middle (as long as it's structured) - that's your training session. And of course, you can have a group of people turn up and you can do a boot camp on the beach. You can do lots of different settings and have lots of different targets and progressions. But the idea is that if they're coming week on week, that is not built in as part of the overall programme or training session or season.

Now - imagine you've got somebody that might turn up and say, “I'd like to run the London Marathon.” The London Marathon often takes place in April before or after Easter, depending on when Easter falls - so anything between usually the 15th, 16th, 17th of April. They've come to you in April, but they don't want to run until the following year - in the following competition. So you've got 12 months. How are you going to start to build up the miles and the legs and get a training programme together that's going to peak in April next year. That’s a programme. And you're taking into account where your current client’s fitness levels are at the moment. Have they run a marathon before? Are we looking just to get a marathon done or do we want to get it done in a particular time?

How are we going to progressively increase the load to get them ready for when they're about to run – when they’re about to perform. And there's quite a lot of misconceptions with marathon training and fun-run training that novices make when they're first coming in. So we need to build that up with them. Rather than looking at what they do in a week, let's look at what they do over four weeks. Going for a run once a week will account for so many miles in a month. And actually, we don't want to be doing over the mileage of 26.4 miles.



So we need to really gauge our training towards that. They need to be doing some sort of strength training and looking at their recovery, as well as looking at their nutrition. The Frequency, Intensity, Time and Type (FITT) of the training and how that will change throughout the next 12 months leading up to the run.

So looking at the slide above, if we think about a sports team, we'll have the playing season, we'll have their off season and then we'll have the pre-season. And looking at the types of things that we're looking to attain within that. Now try and apply that to someone who works Monday to Friday, 9 to 5. We often don't have a season that we're working towards and that's when we can have burn out. That's when we can get injuries or that's where we can lose motivation.

We're not saying that we need to apply a season to everybody. We just need to be mindful that not everybody has a season that they work towards. If you commonly look at a football season, that's really influenced by tradition but then also the demands of the media and competitions. And if you talk to a lot of sports people that work in different sports teams, there's this element of pressure where they're trying to make their athletes optimum for games and keep their training level up. But looking at that volume and looking at the recovery as well, a lot of sports teams actually only have a couple of weeks in August where they're not training.

And then if you think about what people are like - we go on holiday in the summer and that's when people say, “Great, I'm going to start training and I'll go for runs on the beach”, or “I'm going to do X, Y, and Z” - whereas professional athletes do nothing. They completely stop and allow that recovery. Now, as members of the public, we don't have an off-season really - or when people train, we build it as part of our continuous lifestyle. And so we should - but we need to bear that in mind, when we're mapping. You will need a peak and you will need a period of time where you're not training. That has to be based on individual variables, so you really need to analyze what your client is doing and what they're aiming for, to start to build your sessions into a programme, into a season for that client.

Again, we're looking at factors associated with sports performance (and I like that word “performance”) because we do take a lot of our training and our training knowledge from what people are doing at elite levels. But life is a performance and we want to be efficient in our performance. And that's why I like to change the language. Rather than talking about fitness testing, I like to use the word “assess”. Let's assess our clients - where are they at? So that takes away the formality of fitness test. Let's assess them. Let's look at their efficiency rather than fitness.

> *“How efficient are you when you’ve finishing your working day and you get home. Do you have adequate energy levels to make your own dinner, to do the housework, do the other demands made on you. If you've got a family, not got a family, if you want to go out and socialize with friends, have you the efficiency within your body to do that? And if not, how can we then try and develop that?”*

So balance in work life and leisure is a performance. And people do things. They wake up in the morning and they're having energy drinks. They're having high caffeine because they obviously haven't had adequate sleep and adequate recovery from the demands of their life. And then they go into the gym dehydrated and not eating efficiently and wonder why they have excessive delayed onset muscle soreness from any physical activity they do. They might do a weekend of garden work and they really burn out from that because haven’t eaten properly and they’ve put a lot of stress on their body. That's lifestyle performance.

Look again at the above slide. We've got **Age** and **Trainability**. Look at the **Genetics** of the person, look at the **Training** and crucially, look at the **Health Status** as well. Have they got any injury? What's their fatigue? What's their **Diet** like? When we're looking at **Drugs**, that can be anything from prescription drugs to caffeine and alcohol - other elements like that which are going to influence their health and impact on their training. And their **Genetics** which then help the overall physiological, psychological and biomechanics. And then linking that all towards their lifestyle performance.

So everything is relevant. We can take quite a lot from high-level sports performers. Looking at people who are playing sports to an elite level past the age of 35 and older, there’s quite a lot we can learn from the changes they make to their training approaches and how they're adapting their training approaches. There's quite a lot we can learn from those types of people, taking snippets of what they do. And often, people who are still playing at elite-level sports at 35 and older, put a lot of emphasis on their hydration (optimum hydration) throughout their day and in their lifestyle. They look at reducing caffeine intake and look at eating a broad range of vegetables and colours of vegetables. They don't look at doing overload training and excessive weight training, but look at quality of movement and look at their recovery regimes and their quality of sleep - how they support that. So if that's what people are doing at elite levels, who are 35 and older, why are we not doing that for the younger athletes? Why are we not doing that for our average day-members of the public to support their lifestyle performance?

So - coming back to the idea of “performance-related fitness”, it’s not too different from “physical components of fitness”. If you work with an athlete, these are the things that they're looking at. Athletes are always looking at the 1% advantage. Generally, everything's so finely tuned. What athletes do is they look at psychology.

- What can they take from psychology to get that edge?
- What are they not doing?
- What's the science telling them?
- What can they get from their nutrition?
- What's that 1% thing?

They're probably doing everything right. It's just the 1% thing they're not doing that can give them that edge.

- What can they get from their training?

Athletes are doing so much with recovery and looking at the applications of hot and cold treatments, looking at helping to reduce injury risk and optimum performance. So they're always looking for that 1%.

Now we as individuals (Average Joes), we can look at the 1% but there's no point looking at the 1% if your 99% isn't intact either. So there has to be that balance. We can still look at these elements and think:

> *"Well, this is what the athletes are doing. What am I not doing that I can make some quick wins and pick that low-lying fruit to get the achievement I'm looking for with my general lifestyle performance."*

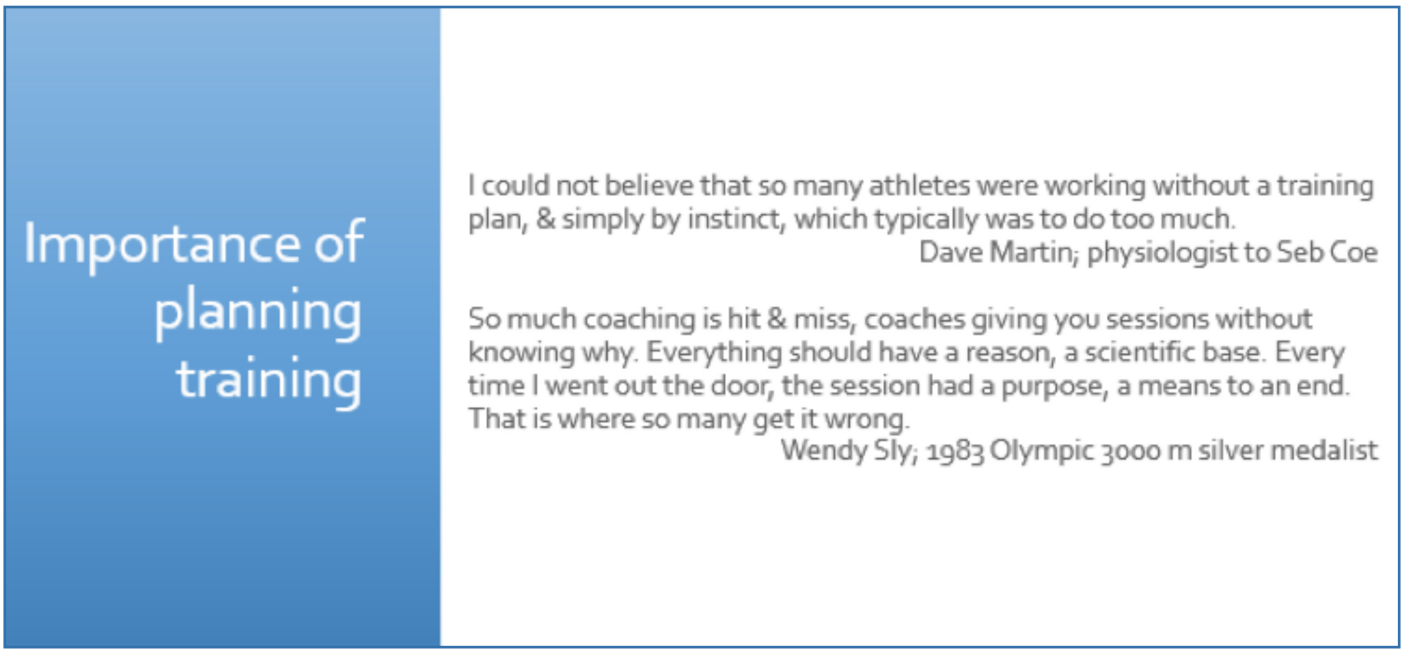
Something I talk about with supplementation with clients. Clients always want to talk about supplements. "What supplements can I take? What proteins - things like that I can get that edge for?".

And the clue is in the name. It's called supplementation. So we need to be supplementing what we're already doing. And I say to my clients:

> *"Look, if you're not getting your adequate water on board that matches your physiological and physical demands, if you're not getting seven to eight hours of sleep, if you're not getting your basic calorie intake and a calorie intake to match your activities, let's get that sorted first, before we start looking at any supplementation."*

And if that is all checked off and it's pretty good and they are getting that and there is still a little bit of fatigue-need, then I refer them to a nutritionist specialist who is qualified in nutrition. Someone who generally will have a degree in nutrition or a Masters degree in nutrition before I start fobbing them off with supplementation.

Maybe think about some of your practice and the conversations you're having with people and if you're matching that.



The importance of planning your training. Here, you can see that actually at elite levels, there are lots of people who are not planning their training and they're going by instinct or what they think they should be doing and constructing sessions with no purpose or building a tower of a wider training need.

Testing

So – we are going into testing now.

> *"If you're not testing, you're guessing and if you're guessing you probably haven't got a good starting point."*

We're going to look a little bit now at the fitness testing terminology. And from this, on completion, you should...

- know a range of lab-based and field-based fitness tests,
- know health-screen techniques
- know how to administer appropriate fitness tests,
- know how to interpret the results of fitness tests and
- provide feedback

And really look at your terminology. What does health actually mean?

- Health is a state of physical, emotional, and social wellbeing - and freedom from disease.
- Physical fitness is the basic requirements of life enabling us to carry out daily tasks with undue fatigue,
- the ability to cope within your own environment.

When we say "coping in your own environment", if your environment demands suddenly change, you're not fit anymore.

For example, let's take someone who works in construction, a construction worker with heavy work and long shifts. Maybe if you change their lifestyle all of a sudden to working in the National Health Service - maybe working in Accident and Emergency and look at the demands of shift work and things like that. If they can't cope with that work environment and cope with their lifestyle environment because we've made a slight change, all of a sudden that person comes unfit.

Then think about someone who's an office worker, 9 to 5, sitting in their office. If they're coping with that and when they get home, they've got a good energy level, that's fine - they're coping with that. They are fit within that environment. All of a sudden, if you add a newborn child to that or change their work or suddenly they want to start going for runs, start adding a physical activity, there's an element of fatigue now coming in. They've changed their environment and they're not now fit for that environment.

People always say "health and fitness" - they coin the phrase together. But what "health" is and what "fitness" is, are two very separate elements. And if you don't tick all the elements off within those two, you are not healthy and you are **not** fit.

So that is something to talk about when we talk about assessing and when we're talking about lifestyle performance. So join me on the next video because that's what we're going to start talking about -testing.