

Video Lecture 7 *(with slides)*

Fundamental movements in PT: the structure and purpose of RAMP, benefits of periodisation

Knowledge & Application
of Personal Training

LECTURE **7**

Hello, and welcome to Video 7

on Knowledge and Application of Personal Training

Hello and welcome to Video Number 7 on Knowledge and Application of Personal Training. We're looking through the resources that are going to help you complete the booklets and the underpinning understanding that you need to have for "when a client walks in until the client walks out".

What do you need to be able to note?

What do you need to be able to do to offer a Level Three Personal Training session?

I thought I'd do a bit of a recap at the start of this video - again, just underpinning the purpose, the processes, and the journey you should be on as a student. So, through these videos, what you're going to get is the knowledge and understanding that is going to help you towards your practical assessment. And it's going to also help underpin the knowledge that you need to answer the questions within these booklets.

Now, these booklets are not just there to test you - they're there to teach you and support your learning. And then again, you can apply that to the days when you're having in-house training, being delivered by your teachers - here we're taking this comprehension understanding and applying it to a commercial setting. That's what we're trying to achieve between all the avenues of study. So, you've got the resources: you've got the videos for Anatomy and Physiology, you have the resources and videos for Nutrition, you've got this information that will help you towards the Fitness Session, Training, and Programming. And subsequently the other two booklets as well. All that knowledge together will help you to become a safe and effective personal trainer.

So, what we've done so far:

- we've gone through the initial assessment (actually what questions and processes do we need to go through)
- an understanding of our clients to have an effective personal training session
- to make sure we get that starting point
- what types of tests you're going to do and
- how are you going to go about setting and agreeing some SMART targets with your client
- how are you going to keep them motivated and engaged
- how are you going to break up those targets and fitness ambitions your client might have? So, we've gone through the breakdown of that
- we've gone through how you're going to want to potentially set up your services
- how are you going to review the journey that a client makes with you prior to signing up and all the systems going towards training. And then again, perhaps how you'd link and loop those programmes through.
- We've been looking at terminology, and definitions, and language when it comes to components of fitness - factors that affect physical fitness, fitness training methods, and all the methods, again, broken down a little bit further.
- So, how we can take something that our client tells us, how we can put that into identifying components of fitness, identify the correct training methods in order to train those components of fitness, and then how we can progress, regress, and adapt what it is that we're doing.
- Again, we've got the FITT principle, which is geared more towards individual sessions – and that is what we're going to be looking at today. We're also going to be looking at the factors that influence our programme in that little bit more in depth. So, we've gone from FITT and we've looked at sports as well and how that impacts our individual training sessions and our overall training programmes. There's a little bit of anatomy and physiology behind the justification of our processes as well where, again, we do talk about specific training and being specialized in our training, but actually not being trapped in the specializing role.
- So, there is a careful balance to walk with everything that we're doing. We want to be progressing. We want to overload, but again, we don't want to injure our client. So, how do we get that balance with what we're trying to achieve - elements between individual and group training.

- We talked about a training session and the kind of concept you might be more familiar with if you're training a team, but when we see a conditional-fitness phase and when we see a skill team-play phase, maybe consider if your training sessions where you're doing one-on-one with members of the public are a little bit too training focused. Could you bring in more coordination, gameplay, some fun elements into your personal training sessions - something to think about.
- We looked at the training year, training structure, factors that we need to consider, whether we're training top elite sports performers, or all the way down to our members of the public.
- We looked at performance-related fitness where, again, it's not too different to our components of fitness and our generalized training. Also, if you look at doing any sort of rehabilitation and strength rehabilitation, rehab with athletes, or with members of the public.
- We looked at the concept of testing. How would you want to test? What types of clients are you going to be working with? How would you want to test them? We could start to look at tests that are very scientific, very aimed at elite performance. And how can we dumb them down to be more appropriate for the clients that we want to train with? You might be training with someone who has a professional career, might be Monday to Friday, 9 to 5. It might be shift work, but they also take part in elite sports training. I've known people that work in catering, but then run with elite women's time when it comes to marathon training. So, again, you might have to have that balance between how are you going to test and train that person?
- Understanding terminology when it comes to testing and how we can adapt and change our tests, but making sure that we're working in a sound way that's going to further influence our training and programmes. Whatever it is that you do from the initial consultation, all the way through in the adaptations you might have in your services, you've always got to think about:
"What's the point? What's the impact? What am I trying to do by asking these questions?"
- If you're going to do a particular test, you're going to have data from that test. Will that data have any impact on the decisions you make with the training and programming? If it doesn't, that's when you might have to think that actually, it's not valid and necessary to do it at that moment in time with that particular client. It might be appropriate with a different client, so don't completely disregard something just because it is inappropriate for one.

It doesn't mean you might not be doing it in the future. So, you might have to think about the advantages and the disadvantages of training - thinking about what can we take from elite performance training that we can drill down to our clients that we're working with - whether it's something because you're looking for a little bit of variety or if you're looking for more pinpoint training as well - or you just want to diversify your systems, and maybe just have a bit of a play around with your client and see what works for them. You're letting them explore the different options as well.

- We've looked at terminology and making sure we have a good understanding of what the terminology and definitions are, and how that's going to influence our training. We've looked at definitions very specific to what it is that we're doing between health and fitness, what they are, and how our services are aiming to meet them.
- We then looked at why we assess for health and why we assess for fitness.
- And then also medical conditions, really acute and chronic medical conditions, and how exercise can either prevent those or reduce the symptoms, or often completely remove the need for treatment as well.

How to Structure a Session

And so what we're going into then today is we're going to go back and return to how we structure a session. How do we structure a session and a programme, and what is it that we're trying to achieve? In previous sessions, I talked about the "curve" (a training curve), and I've also talked about the fact that we're not going to just give you a book of 5000 exercises.

"There's your glossary. Off you go - you're a personal trainer".

We need to have an underpinning - a bit of a starting point. Where do we start with our client?

Now, of course, you might start with the goal - and that is where we want to start.

- What is the goal that they're looking to achieve?
- What is that fitness ambition?
- How can we relay that into components of fitness?
- How do we prioritize what it is that we're going to train with?

And that's when we can look a little bit at periodization as we go through the session today.

FUNDAMENTAL MOVEMENTS



Now you might just want to focus on movements and actually how we structure movements.

These are types of movements that you see here that you should be looking to achieve with any client that you train, because if you can do any movements that involve specifically:

- Push
- Pull
- Twist
- Rotate
- Squats

without any pain or discomfort, you're probably in a very good, healthy position. To widen that a little bit, (really as a bit of a push and a bit of a high ambition when you're thinking about the broad range of clients you could be working with), all of these fundamental movements your clients should be able to do. The whole population should be able to do all of these to a certain degree and a certain intensity without pain or discomfort. If they cannot, there will be pain. If there's pain present, there will be an injury lurking, if not already present. So, we may need to have to incorporate that into our training and base it on these fundamental movements.

When we think about a one-off training session, here we've combined cardiovascular and resistance training within the one session. But even if we just removed the components for a moment between cardiovascular resistance, strength-based training and then just look at the overall structure, there are certain timings that have been put in. And this is a guide.

Oftentimes, they're just there because we need to start and we need to finish. If you look at a lot of training venues today that run class timetables, their classes will not be 60 minutes long. They'll be 45 minutes. This is for the sole reason that you can offer a wider range of classes within the one timetable and different time slots as well. It gives the trainer an opportunity to close down and then reset for the next class.

So, when it comes to timings:

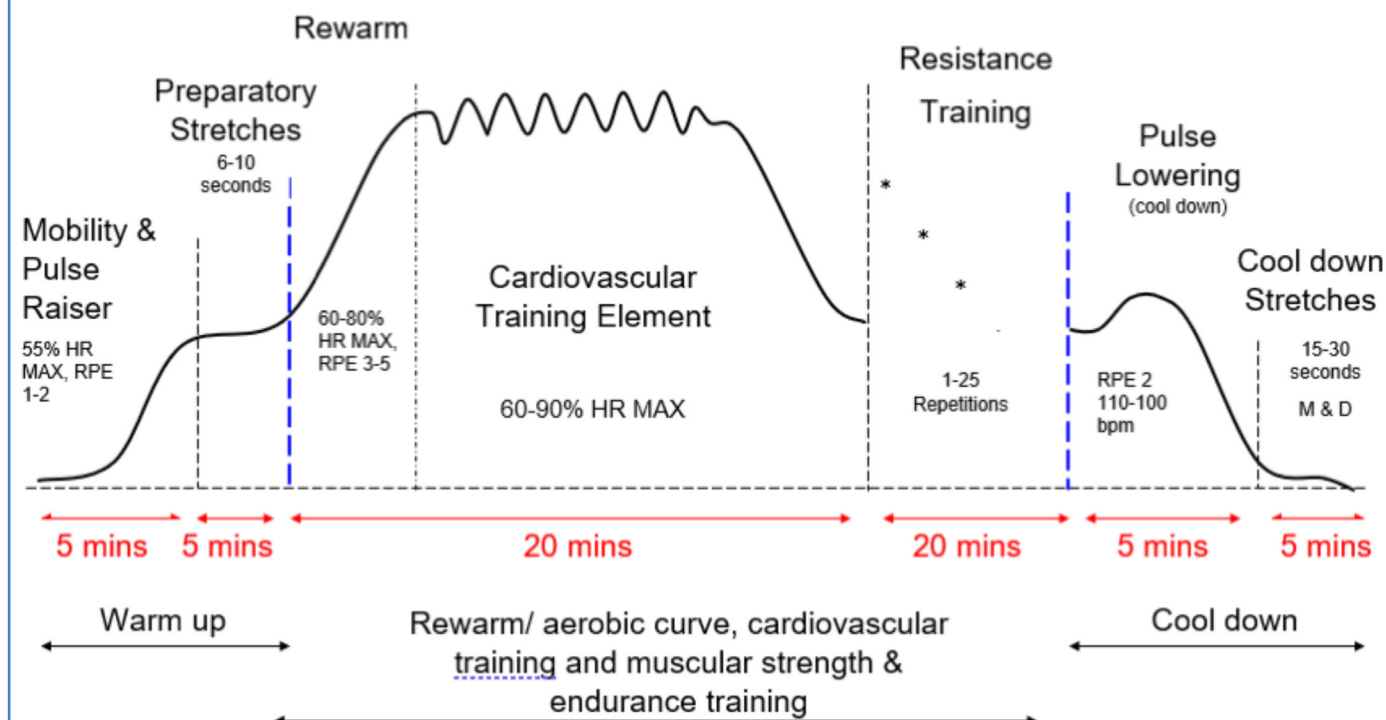
If we're thinking about cool-down, stretches, developmental stretches, people will say,

"This is how long you should hold a stretch for".

Whereas in fact, holding a stretch is actually very individualized to the people that you train - when you actually hold onto a stretch... (we'll talk a little bit about stretching further down the line).

If you do a static stretch - a basic quad stretch where you grab your ankle, you're standing on one foot, bringing the heel of that foot that you're holding, into your glutes and the quadriceps there: that stretch - what you should be doing is taking that stretch, having them bending the supporting knee, pushing the hips forward until you feel a resistance. After a while, that resistance will dissipate and be removed. And then you'll push that range a little bit more. The point that resistance gets removed is very individualized and therefore a time cap cannot be put on it. With the timings that we have here, this is relating to good management of a class where you've got lots of people in the session that you can then manage, but you might fluctuate with these and that's okay.

Teach a 60 minute Cardiovascular and Resistance Training Session (RPE = Rate of Perceived Exertion)



So, why am I showing you this diagram? Well, why I wanted to show you this is the timeline from when a client walks in to when a client walks out and what should happen. The client will come into you from a steady state. Now they might've been driving in traffic and would be quite stressed out. It might be first thing in the morning they've just walked in. This is what we call our steady state. And the client should have a progressive arch from their warmup, going into their session all the way through, and on the return out - again, we want to bring them as close to the steady state that they originally walked in with.

And then the choices and decisions we make on that will have an impact as to how much of an effective personal trainer you will be. So, looking at the left-hand side of the diagram, we're looking at that pulse rate. We want to increase the heart rate. We want to increase mobility within the joints - taking the joints progressively through the motions that they can do. Preparation stretches, or dynamic movements is what we call it, so again, really preparing the body to go through all types of movement.

Now, the Cardiovascular Training Element: how high should we go with this? Well, it's got to be relevant to what you're about to do. And if you are going to go into a cardiovascular training and it's got elements of spike in, you want to bring your clients up near the top so that you can train. And then be very progressive on the return out.

If it was just going to be a continuously resistance-training session, you may not take the session all the way to the top. Depending on the types of reps and sets, and weights, and explosive movement you may or may not do, you might take your warmup relevant to further down, again, making sure it maps to what you're about to do with your client.

Often when you see people going through a training session in the gym, they will go in, they will warm up - it's not a progressive time factor - it's very high up. And then we have a dropdown where we do a little bit of resistance, a bit more cardio, and then we just go out of the gym.

So, again, what we want to do is that progressive arch. And how we balance that with them will determine the choices of movements that you do. And the reason why we're basing it on movement is because we've got the FITT principle: frequency, intensity, time, and type.

WARM UP STRUCTURE & APPROACH

R.A.M.P

R- Raise heart rate.

A- Activate/awaken muscles (so think work with mini bands etc, Glute and core activation on the floor).

M - Mobility, some on the floor then transitioning to up on their feet moving dynamically.

P- Prime/potentiate, using explosive drills, jumps, hops, powerful skips, to Prime their muscles for more explosive work.

When you alter these, that will have an impact on the components of fitness that you're impacting on. However, whenever we're looking at training, we're thinking about movement and how we move, whether that be resistance training, whether that'll be high performance training. It's all about movement, and the quantity and quality of that movement. So, the factor of weight resistance and intensity that we're putting on is irrelevant for a lot of the population. We just want to move and move well.

When I think about high elite sports performers that I've worked with, when we're doing any type of strength work with the legs, we do a squat with an Olympic bar. The majority of them are not doing the deep, full range of motion that is possible within the joints when they're training. And actually what I would say is that we need to challenge people on their movements and the quality of their movements, because if we move better, we're going to avoid injuries and we're going to perform more efficiently as well, which is a big factor really.

We want to look at making sure that our training programmes have a balance of all these movements, because if we don't have a focus on all of these, that's when injury will occur. Now on the slide above, we talked about how you might warm up. And this is perfectly fine in a sense of ideologies and focus, but you might be thinking about what is the content. What am I actually going to do in my warmup? So, again, what we have here is we do have

the R.A.M.P system (Raise body temperature /Activation of muscles /Mobility/ Potentiation). And if your warmup also includes these types of movements, you know you've done a full, effective, and safe warmup.

When we're thinking about the structure, we want to raise the heart rate. We want to activate or awaken the muscles, working with mini bands, glutes, core activation on the floor.

We want to do a bit of mobility as well. That's going to match the type of mobility that we're going to do (in the session). And we want to prime (potentiate) those muscle groups as well with certain drills of jumps, hops, powerful skips to prime the muscles for more explosive work. Once you've got those elements in, between that and your session with your movements - and if you've got all three elements which are the structure of the session, that's linked from a training method that has a component of fitness linked to their training goal - well do you know what? That's what personal training is.

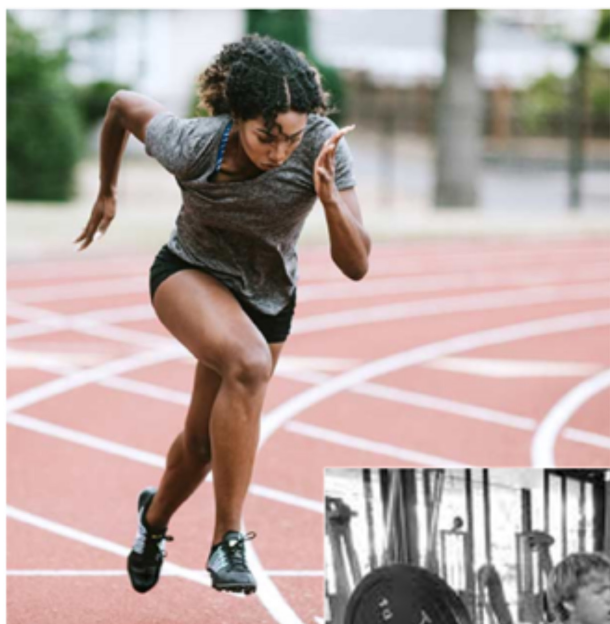
- You have a goal.
- You identify that goal to a component of fitness.
- From a component of fitness, you have your training method.

- From your training method, you're going to select exercises that hopefully will have these types of movements within a session structure like so.
- All in all, when that is focused and also reassessed to see its impact, that's being a personal trainer.

And that's all it is.

So, now we've simplified that process, I'm afraid I'm going to have to complicate it just a little bit more, but not too much more. What happens when our client keeps training with us - and training with us over a period of time?

We don't just want to have a lot of collections of sessions that don't relate to each other. We want to build these sessions into a journey that the client can see. There's a concept that's called periodization. You can study this at university level, (Level 4, 5 and 6), and you can study it for an extended period of time as well. It is a really interesting element and if you're going into strength and conditioning, this is something you'd look at as well. Periodization just simply means structure - that their training has some structure, that it's moving towards a peak, or a peak and optimum performance in training.



PERIODISATION

Periodisation means a progressive change in the type of training that is being performed to gain maximum fitness benefits.

It needs to be carefully planned and can show progression from one type of training to another.

A sprinter will focus on developing their strength base and muscular endurance in the autumn before working on improving power and speed as they get closer to the competitive season in the summer.

For people training in the gym, they can periodise their training by changing the volume and intensity of their training so that they train different energy systems and for different components of fitness.

BENEFITS OF PERIODISATION

Ensures continued physiological and psychological changes.

Prevents over-training injuries.

Prevents boredom.

Helps to achieve peak performance for key events.



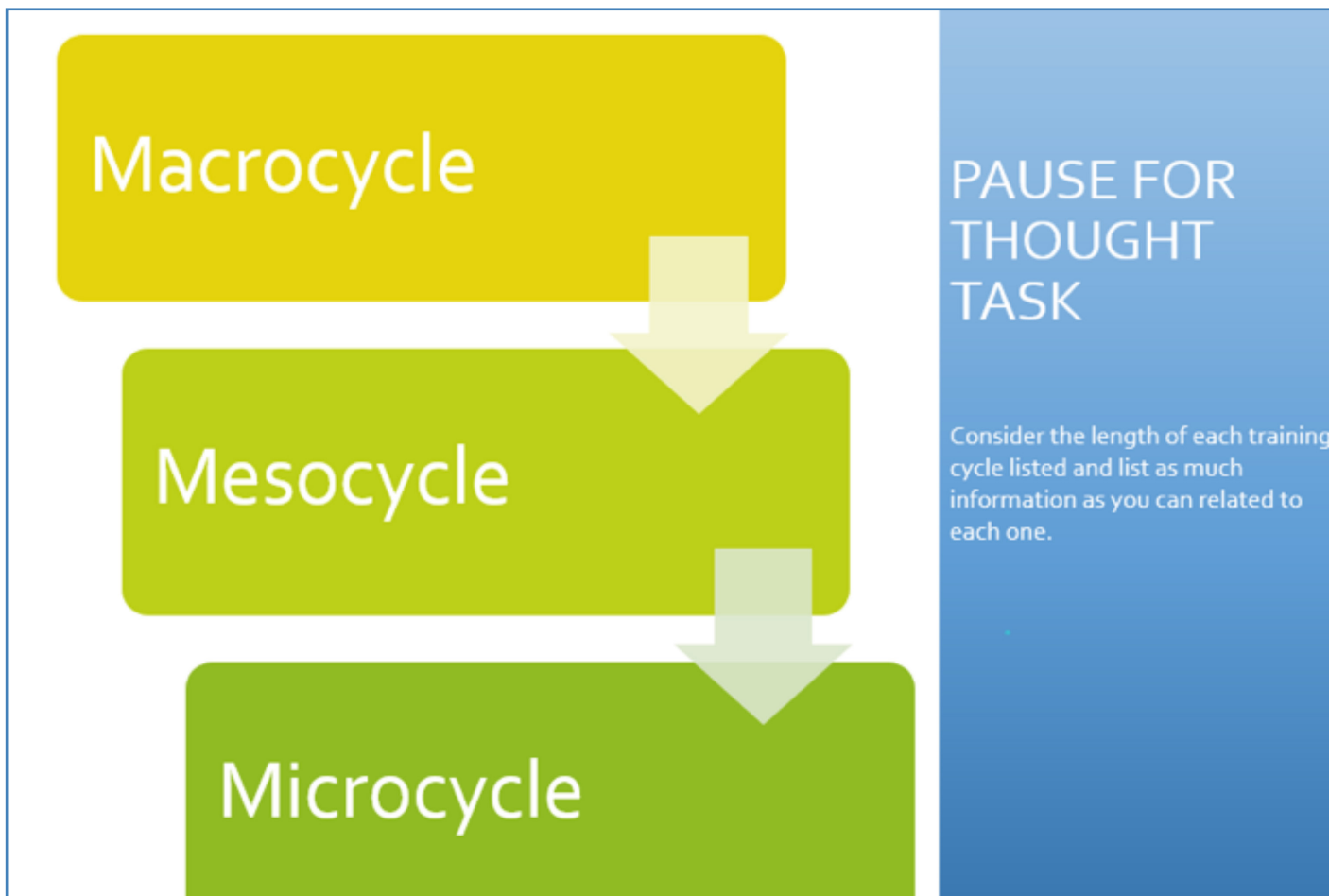
If you think about a footballer, they will be looking to peak weekly or bi-weekly for competitions. An Olympic athlete will be looking to peak at a four year optimum where they've actually performed within each individual year to particular competitions in training so they can get their entry and progression via their sport for the Olympics.

If you think about what we do if the client, or the person that we're working with, gets injured during that periodization? How do we then change and fluctuate the variability around our training programme? Now, once you've written your training programme, and you might have set this out, my advice for a lot of people is not to go too far with your periodization. There are certain components that need to be programmed for a long-term basis, but just like any programme, or any training system, or any training preparation, you need to have actually planned it, and then actually come back to the plan again, and review and revisit it.

Think about the people that might be involved in that. When we're looking at elite sports, we could be thinking about coaching staff, physiotherapists, massage practitioners, or specific trainers. And then if we take this concept and apply it to members of the public, we can't just be on a training wheel - on a hamster wheel. There will be elements of peaking and there will be elements where we want to do some active recovery with our client. That may not be on a yearly basis, on a yearly review. It might just be on a weekly, four weekly, five weekly review.

That'll have to be agreed on the individual needs of that client.

(As I'm going through these PowerPoints, as I'm going through these slides, you may want to pause the video. You may want to go back. You may want to read some of the notes that I've put in here that go into that little bit more detail about what I'm discussing. And please feel free to do so.)



What we're also looking at now is we've got to have a "Pause for Thought" task.

So, these are terminologies when it comes to periodization: **macrocycle, mesocycle, microcycle**.

What I want you to do is consider the length of each training cycle and list as much information as you can that relates to each one. So you might want to pause the video at this point, think about what I've said so far, read the content on the slides as well, start to answer that question. If you're continuing to watch, or if you just hit pause, we're going to go into that now.

I've already said that a **macrocycle** could be for one year, or a four-year training cycle. So, that could be related to a footballer. It could be related to an Olympic athlete.

Micro, or weekly, or individual planned training sessions would come into your **mesocycles**, which will be a number of **microcycles**. And it will reflect the details of your Frequency, Intensity, Time and Type (FITT) towards training.

Macrocycle 1 year to 4-year training cycles

- The first layer of a training programme may be based on a **1-year to 4-year cycle**.
- A football player will train based on a 1-year cycle, from June to May, aiming to peak for a weekly or bi-weekly match.
- An Olympic athlete though, will have a 4-year macrocycle, aiming for peak performance to coincide with the Olympic games.



Micro cycle. Weekly or individually planned training sessions.

- Each mesocycle is divided into a number of microcycles.
- The microcycle should be planned with a specific goal in mind and should reflect the details of FITT training.
- Microcycles typically last for one week but can range from 5-10 days.
- Each micro cycle consists of a number of individual training sessions.



And at certain points of a season, certain points of training, or when it comes to competition, there'll be elements that we want to work on and we're going to need to prioritize these. And the priority of these might change as the season, as the year, as the weeks go on. Now, you might relate to it

"Well, these are the elements actually that I need to prioritize."

Then you have to think about how you're going to train those and the FITT principle that comes into that as well.

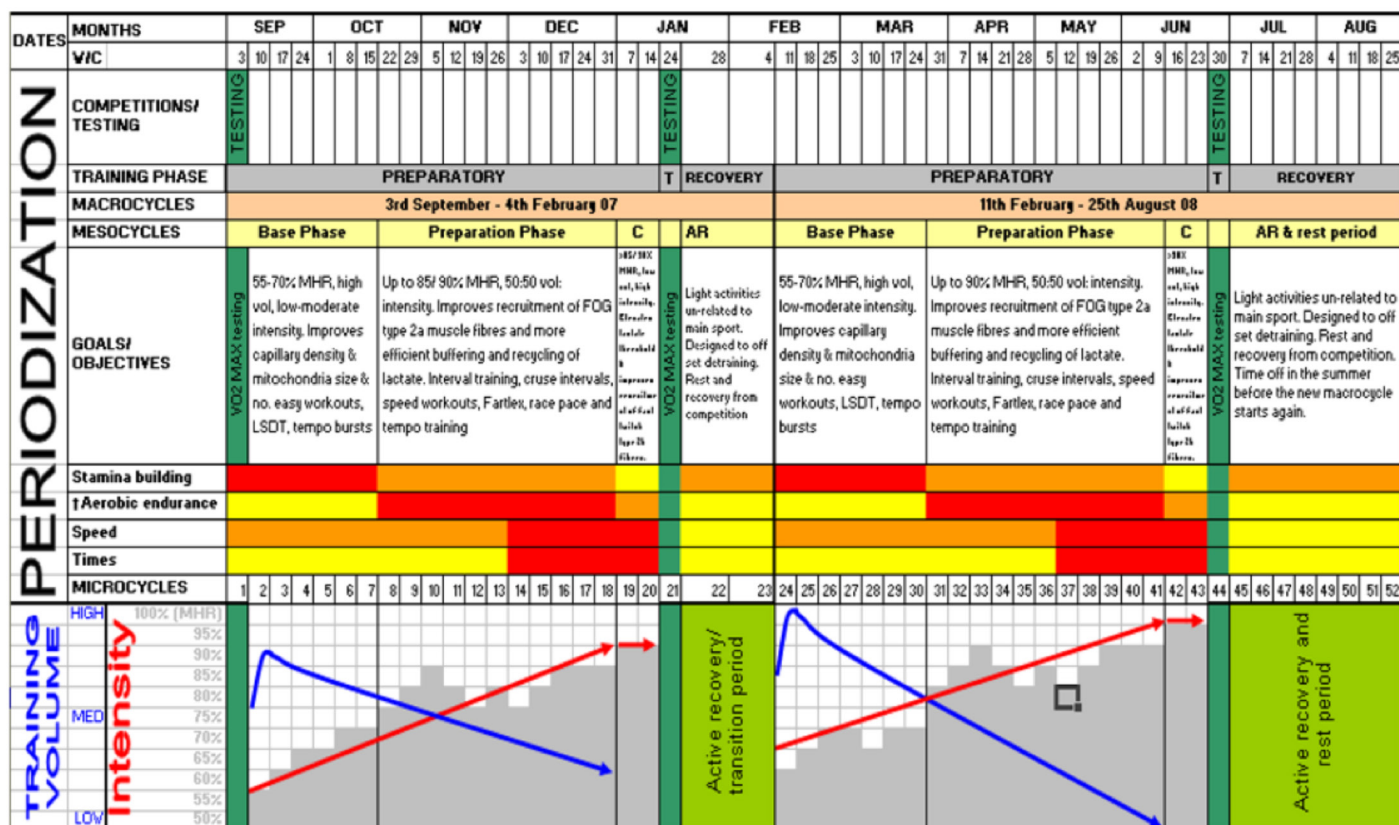


Components of Periodization Training.

What we're actually looking at is what needs to be developed, what is the physical potential, what is the command of techniques and tactics, and the balance of psychological and emotional awareness, and maturity of the person that we're training?



So, right at this point now, I've got this horrible chart (See the Periodization slide below) for us to look at, which encompasses everything when it comes to what we understand to be periodization. So, it looks really complicated. Looks like there's a lot of information here, but let's just start at the top.



This is a periodization for somebody who wants to run. Let's just say it's going to be a runner for argument's sake. And they've set it between their macrocycles. All we've got is the months of the year of when they're training. And they've got elements when they're going to be tested.

Let's just say this testing is that we've got a Half Marathon at the end of June. We've got a 10k race and we've got a 5k race as well. That's going to be our testing elements. So, the 5k race we're going to set as our baseline data there. And we're going to train towards our 10k and then use our 10k towards our Half Marathon.

We've got the Months, we've got the Weeks as well (the weeks commencing). Then we've got what we're going to call our Training Phase.

So, this is our Preparation phase. Then there's the Performance/Competition phase. And then we're going to have a Recovery element and so forth. This is what's been planned in. This is open to change as well, depending on how the client/person progresses.

Identifying the Macrocycles. Then we're going to split down into Mesocycles, so we're going to have a Base Phase within our Preparation. And then within our Preparation, we're going to up that as well. And we'll have a Competition phase of what it is that we're looking to achieve. That then goes to our Active Recovery and then breaks into our second round as well.

What we've got on the left-hand side of the table are the elements that they want to work on:

- stamina
- aerobic endurance
- increase in aerobic endurance
- speed and times as well.

And on the table, there's a traffic light system to prioritize what is a priority with:

- red being a high priority,
- amber being a medium
- yellow being a low priority as well

And how those change as they go along. When we look down the column there, how that progresses and what diversifies with that as well.

At the bottom, we've got TRAINING VOLUME and INTENSITY.

So, what we have bottom left is that the volume (blue line) will actually go down, (ie how much training we're actually doing) but the intensity (red line) will heighten. And that goes the same as we're progressing through to the next box as well. That's a Periodization.

Now I always say to the personal trainers I'm teaching,

"Don't get bogged down too much with tables, charts, and graphs, and things of that nature."

Start with an objective with your client that's going to be influenced by competition/performance. It's also going to be influenced by some of the elements that we discussed before where we're talking about where they are in their initial training: how old they are, what are their previous experiences - all those initial questions that we've gone through.

Periodization on this setting will not be relevant for all the clients that you work with. But if you are going to work with people that are either doing the Couch to 5k, Couch to 10k, or want to do Park Runs, Half Marathons, or some other form of regular sport-base competition, even if they might not see it as a competition, but you've got to incorporate that type of language to yourself when you're doing your training and your considerations for how are you going to balance their training as well.

When you do something like this, it helps you start to set the variety in your training as well, especially when you come from doing your Base Training, your Preparation, and your Active Recovery. How would you incorporate that with a client if you're training them two or three times a week, and you're just seeing them week in, week out? How could you incorporate all those needs within a weekly session, or a monthly session, or a bi-weekly session, depending on how often you are seeing the? And is your client just going to slowly become aware of what you're doing? Are you going to share this information with them and this journey with them in the setting that I have with you? You may not want to do that initially from Week 1, but you want to slowly build into that and start to share that with your client.

So, quite a lot of information to digest there. I appreciate that's quite a lot. I've tried to pinpoint some of the most important elements that I want you to take away from this, which is where we're looking at our session plan and how we're structuring our sessions, and the choices that we would make. You're going to have your goal, your fitness ambition that's going to be given to you by the client. You can relate that to components of fitness. You're then going to think about the training methods you're going to do.

- How are you going to put those training methods into a session?
- How are you going to look at your movements?

And just think, I haven't even talked about exercises yet, because the exercises to a certain degree are irrelevant because one exercise can be adapted and changed to meet a component of fitness, can be put into a different training method. You can add that variety. That's when that influence comes from you as a trainer. You might want to think about how you're going to structure the content of your warmup and your cool down. And then how all of those elements build into a long-term training programme that is structured and revisited. There is no perfect training plan that you can just take off the shelf. There might be influences by other things that you've done before and things that you've done yourself. However, they must be always revisited, always changed and adapted as you move through. So, respond to any variability that the client, or the environment, has presented.

I hope that's been a help, guys. I look forward to seeing you then on Video Number 8.