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Raymond Verheijen – Dispelling the Myths of Soccer Fitness

By James Davieson January 22, 2015, Interview, Technical

*Raymond Verheijen is a professional coach from the Netherlands, who has been on national team coaching staffs at 4 World Cups and 4 European Championships – with the Netherlands, South Korea and Russia. He has worked with several club sides, including Barcelona, Zenit Saint Petersburg, Chelsea and Manchester City. Raymond became a UEFA Pro-licence instructor in 1998. His first course as instructor was with coaches Ruud Gullit, Frank Rijkaard, Ronald Koeman and Johan Neeskens. Primarily concerned with player fitness, Raymond wrote *The Complete Handbook of Conditioning for Soccer* and currently lectures around the world on periodization and training methods. He has worked with and advised on several top level European players – including Craig Bellamy and Arjen Robben.*

You've been outspoken about the dangers of over-training players. How should a coach factor it into planning their sessions?

Overtraining has to do with fatigue. To understand what is important you must understand the characteristics of football in the context of developing players. At a higher level of the game you find that there is less space and less time – you must execute the same football actions in a shorter period of time with greater speed. What this means is that **football is an intensity game, it's a speed of action game, and not an endurance game.** If it was an endurance game then more would be better – we would train teams longer. As it is an intensity sport, less is more. **Training smarter with a higher intensity is more effective. This is not an opinion to be debated, it is objective fact.** If speed of action is your objective then your worst enemy is fatigue. If you are still tired from your last training session then you will start with a lower than 100% speed of action. You will not stretch any boundaries or reach 101%. Fatigue within a training session is normal, but fatigue as a result of the previous session is your worst enemy. Between training sessions players should get rid of all of the fatigue so that they start at 100% at the next session. Only then can you improve yourself, from the perspective of performance.

What impact does it have on injuries?

From an injury prevention point of view it is also important. **When you accumulate fatigue your nervous system becomes slower and signal from the brain to your muscles arrives later.** The muscles around your joints contract during explosive actions to stabilize your body – for example your knee. The muscles around the knee contract to keep everything in place during a rotation, landing etc. If you make a landing action and the signal arrives late, then you start to rotate with a relatively unprotected knee, and that is often how we see ACL injuries. People think ACL injuries are bad luck or they blame the turf (external factors) rather than blaming themselves for overtraining players.

We see coaches who are dedicating parts or all of their session to specific “fitness” training without a ball. Is there ever a place for that in youth soccer?

They should totally stop it. What these people do is isolate fitness from football. If you think it is an integral part, you develop it during football training. Tactics is an integral part of the game, trained by coaches. Technique is the same. Then fitness is trained outside of practice by specialist coaches, which is very strange. One of our missions is to bring football home to the football world – make it an integral part of training. **Fitness is not something you need to play football, it is something you develop by playing football.**

How do you define and improve fitness for soccer?

Fitness in football is two things: playing with a higher tempo, which means more actions per minute; and playing for longer, which means maintaining the tempo for 90 minutes. If you want to train with a higher tempo, you play with less players. With 11v11 players make 2 actions per minute. If you want to overload that you play 7v7 where they make 4 actions per minute. Or you play 4v4 where they make 6 actions per minute. So reducing the total number overloads the players and increases the demands upon them. For the other component you just play for more minutes. So this week you might play 4x4 minutes of 6v6 and next week you play 4x4.5 minutes, then 4x5 minutes and so on. By simply increasing the number of minutes you are training the ability to maintain the tempo for longer. What you see is that when you define fitness in football action language, you will end up with football exercises from football coaches. If you call “fitness” more actions per minute, you will get a small sided game. If you think it is playing for longer, you will get bigger sided games for more minutes.

If you define football in fitness words like aerobic and anaerobic, you will get general non-contextual exercises like the running laps around the pitch, which they do at one tempo. In football when you want to go to a higher level, the speed is higher, you make more actions per minute. At the lower level you might make two actions per minute, which gives you 30 seconds to recover from each. At the higher level you could make 3-4 which means 15-20 seconds recovery time. **This challenges your body to develop the ability to recover more quickly between actions. As you run laps you are not catching your breath because you are staying at the same pace – the only time you recover is afterwards** when you have 48 hours to recover until the next session.

Some clubs have specific dynamic functional movement routines they do during their warm up to improve form and help prevent injuries. Do you see benefit to doing that for typical youth soccer teams here?

Professional teams should maybe be doing that, but at your level it is a total waste of time. Give the players a ball and just do dynamic football actions. At your club you only train three times each week so time is very valuable. If you are taking up to an hour each week for these movements you are losing an hour. At Chelsea where everything is already perfect, the specialist might add 1-2% but at the level where you only train 2-3 times each week there is no place for the specialist. **The football coach should use every minute to develop football, so do a warm up where they immediately have a ball, and increase their body temperatures by dribbling. Do little technical exercises with moves where you are also preparing players for changes in direction.**

What about at the end of the session: is it important to have any form of cool down or stretching?

If you cool down for five minutes with jogging or other things, it is good to bring your heart rate down, get rid of adrenalin and waste products, but again don't overemphasize on things like that. If you spend too much time on it you are losing valuable minutes of their limited time. If there are 48 hours between practices the body will recover itself without the need for it. The professional teams training every day might need it more. In Holland we say “don't shoot the mosquito with a cannon” – keep it simple.

Here in the US we have a different ratio of games to practices than is common in Europe. What is your view of the overemphasis on games here?

Because of the system here you are developing slow football. It is impossible for those players to play at 100% because they can't recover between the games. They start the next one while they are still tired, which reduces their speed of action, and it is cumulative from one game to the next over the weekend in a tournament. **Basically you are conditioning your players to play slower football, rather than getting them ready to play at the highest tempo that they can.** You are focusing on quantity rather than quality. Why play four games in a weekend when you could play one? To play one game at 100% for the entire game is already a challenge, so why play two?

We see the professional teams playing two or more games per week in some leagues (England over the Christmas/New Year). Maybe they are emulating that model?

Treating youth football like it is first team football is a mistake. Youth football is about improving, not winning. When the kids are on the pitch they want to win – that is the meaning of the game and we shouldn't touch on that. But for the coaches and administrators it should be about improving and developing the players. When that is the priority decisions should be made for what is good for development, and that means one game per weekend.

We have players here doing more than one sport at once. Do you see that as a problem?

If you do more sports, the overall training load in the week increases. They will carry fatigue from one sport to the next in the same way that they would between too many football training sessions. Even if the sports are during different seasons it can be a problem. **Players need an off-season to recover the brain and to think about things other than sport.**

How about teams who are doing lower intensity training sessions during the off-season?

People think that when you train light you can do technique training. **What people should understand though is that you are only improving technique at the speed that they are doing it at. In the game you need maximum speed. These people assume that training in a live session at low speed that there is a transfer to technique at high speed, but we shouldn't assume that. Train at maximum speed. Train less, and train better.** To increase the pressure you reduce the pitch size so that opponents are closer to you, which will take them less time to pressure and you have less time to execute the actions.