

10 good reasons why (professional) soccer players better don't work out using strength machines!

Introduction :

Just a while ago a professional soccer trainer (Belgian First Division Club) asked me to teach their youth players how to work out using strength machines in the gym, while my studies in human movement and function taught me that we are not only losing precious time but this way of training might also have disadvantages for (professional) soccer players.

As a professional coach I am looking for the best training methods in injury prevention, performance training and rehab. By this article I would like to share my knowledge and experiences with coaches, physiotherapists, personal trainers, athletes, ...

We hope we can help others to improve the way they train and close the gap between our usual training methods and the 'task' of the soccer player.

Implementing better insights and techniques will only have advantages for our athletes, clubs, competitions and the level we are working at.

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Your trainer,
Willem Timmermans

10 good reasons why (professional) soccer players better don't work out using strength machines!

1. Our body is made to move in 3 planes of motion : sagittal, frontal and transverse plane, so it means forward-backward, lateral and rotation movements. Which strength machine do you know in the gym that works in those 3 planes of motion?
2. You have to sit mostly at the machines, while a soccer player performs his 'task' in stance, so there is not so much 'transfer' to soccer. The same idea with supine, prone, lying on the side position. Muscles react differently depending on their position with respect to gravity so please take this is into consideration while training.
3. You will get the best muscle reaction when you stretch it first. At which strength machine do you get a stretch before the muscle contraction? Bringing muscles in a stretched position (loading the muscle) before contracting (unloading) has also its advantages in flexibility and injury prevention.
4. If you like to have more advantages in playing soccer, first think it over what you want to improve (jump better, increase speed, injury prevention, become stronger, increase flexibility). Which muscles and movements do you want to improve to get better results and which strength machines/exercises look like soccer or soccer movements?
5. Is it possible that most strength machines and the movements you make using them don't look like soccer movements... and is it possible that you're making movements on these machines which you'll NEVER make in real life? So what are the advantages if still using them? And do they have disadvantages for the body and its results?
You can play the body as a violin, how do you want to play yours?
Making unrealistic and artificial movements which have nothing to do with reality might confuse our nervous system and can have a negative impact.
You can make very beautiful sounds and music on a violin, but at the same time it can make a lot of noise. How do you want to train your nervous system?

6. Fixed strength machines have their safety rules, stable settings and safe positions so that nothing can go wrong using them, and most of the time there is an instructor or trainer available helping you to use them optimally and correctly. If you consider our above comments, what is a safe or correct position for you? The question is if it is that safe and correct to position a soccer player in a certain posture and even limit the movement or range of motion? In how many positions do you end up while playing soccer? Thousands, millions, no? And is it that safe to make smaller movements (limited range of motion) in your training than in your sport? So if you're sitting at a certain strength machine, on a certain, safe position where we can only bend the elbows till 90° and not further because this is the protocol, what is the value of this training for a soccer player?

7. Fixed strength machines are dividing our body in pieces, an idea from the bodybuilding world from years ago (in which the most important goal is hypertrophy, muscle mass) and this way of working found its way to other sports. I'm sure you already saw enough examples of very muscled guys with low athletic performance and coordination because they ruined the muscle balance and maybe more important... the nervous system.

Even in bodybuilding they combine isolated training ('cutting the body in pieces') with integrated training ('putting the parts back together again') now, developing not only muscled but also athletic and well proportioned athletes. Because we are discussing a soccer player here, and because a soccer player has different goals in training, we prefer integrated exercises with a perfect timing for nervous system and muscles. Meanwhile, we have enough reasons to train the body as a whole, just consider the fascia/connective tissue which links our foot to our head.

8. An example : Adductors. In the gym you have the 'adductor machine' to train your adductors, a muscle which get injured quite a lot when playing soccer.



If you look at how the exercise goes, you will notice a sitting posture in which you have to push the legs inwards against resistance. So this machine only works in one plane (frontal) while the adductors have to work in the 3 planes when playing soccer. Because you sit down, the angles in hips, knees, ankles, ... change

and we don't have any stretch before the contraction. So we can ask ourselves the question if this exercise has advantages for a soccer player or... maybe also disadvantages.

9. An example : Hamstrings. In the gym we have the 'leg curl' to train our 'hammies', a muscle group which is often the victim of strains and tears when playing soccer.



The leg curl is a sitting machine at which you have to bend your legs against resistance. If you look back to our first example you'll have for sure a few concerns: only sagittal plane movement, no stretch/load, sitting position, ... Hamstrings work quite differently when playing soccer compared to the way we train them here...

10. An example : Quadriceps. In the gym you can find the 'leg extension' to strengthen the quads. Fortunately the number of quadriceps injuries is pretty low, so why do we want to strengthen them? To kick the ball harder? To jump higher? You'll notice that both activities also need other muscle activity than just the quads and training just one piece of a whole can create imbalance. Another disadvantage in training the leg extension is that you'll have a lot of pressure on your patella when you extend, while the pressure in playing soccer is there when you bend your leg. We're not going too much into detail but I'm sure you'll understand by now that there is quite a gap in training using strength machines and playing soccer.



You don't have to cancel your membership at your gym because there are a lot of very good tools, like pulleys and dumbbells, which you can use for efficient strength training in soccer.

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