

Maintaining Fitness

Soccer, like most sports, is seasonal. There are periods of preparation (pre-season), competition (in-season), and recovery (off-season). Pre-season and in-season training are the domain of the coach, but the off-season is often the player's responsibility. What you do in the off-season can impact the next season. The old coaching adage says "it is easier to stay in shape than it is to get in shape" is true, but most players have difficulty maintaining their fitness without a coach to supervise them. Proper planning of a year-round training program requires an understanding of the periodization of training concept.

Detraining

The first real work on detraining studied responses to bed rest and later studied people recovering from heart attacks, surgery or immobilization. Currently, there is a lot of work on detraining as directed toward zero gravity and space travel.

Training leads to two major adaptations in the body. First is the ability of the cardiovascular system to deliver oxygen to your muscle cells, and second is the ability of the cells to use the delivered oxygen. What research shows us is that the central cardiovascular system's ability to deliver oxygen to the muscles improves slowly while the muscle cells improve their ability to use the delivered oxygen pretty quickly. When training is stopped, the muscle cells lose most of what they have gained fairly fast (10 days to 2 weeks is the general range), but the cardiovascular system detrains slowly. You may have experienced this when you work out after being off for a short break. That first workout doesn't feel too bad. During that workout, the cardiovascular system takes up the slack from the cells that detrained so quickly. Lay off for a month or more, and you are starting back at zero in terms of endurance fitness.

Now, the question arises as to what can be done to maintain fitness: what is the least one can do and still keep most of their fitness? While you may not have thought too much about it, you know that training is a mixture of three factors: training frequency (days/week), training intensity and training duration (minutes/day). All three factors have been studied, and all three have to be considered when figuring out how to maintain fitness. Studies like this are difficult. First a group has to be trained, then one factor is changed while keeping the other two constant. One week of no training does not significantly reduce endurance.

Reduction in frequency: If you reduce training days by 1/3 or 2/3 (that is, from six training days per week to four or two days per week) and maintain the training intensity and duration (work as hard and as long as before), you can maintain your endurance.

Reduction in duration: If you reduce the minutes per session by 1/3 or 2/3 (or from 40 minutes/session to 26 or 13 minutes per session) and maintain the training frequency and training intensity (work as hard and as often), you can maintain your endurance.

Reduction in intensity: If you reduce training intensity by 1/3 or 2/3 and maintain the training frequency and duration (work as frequently and as long), there are significant losses of endurance fitness.

These results show that training frequency and duration can be reduced with little effect on overall endurance. However, when you train, you need to train at a training intensity similar to what you trained at during the season. The quickest way to lose endurance is to reduce training intensity.

Other off-season considerations:

Calorie intake: During the off-season, if you reduce training volume (as days per week and/or minutes per day), you will be reducing the number of calories burned during exercise. To maintain weight (or to keep from putting it on too quickly) during a period of reduced training, you may need to reduce your food intake.

There are some players who may need to lose weight to improve their performance. First, don't make this decision without some sound advice on whether weight loss is desired and get advice on nutrition and weight loss goals. Once this decision has been made, the season for weight loss is the off season, not in-season. Trying to lose weight in-season is a quick way to poor performance and possible injury. Save weight loss for the off-season.

Strength Training: Strength is one of the many factors that make up the concept of physical fitness, and most athletes can be better in their sport if they are stronger. Strength training does some things, but not others. For example, the stronger player will be able to resist physical challenges better and be more resistant to injury, but strength training will not necessarily make someone. However, strength training is not real effective at adding distance to your goal kick or power to your shot. The off-season is the best time to improve strength and power. Once the season begins, the goal of strength improvement gives way to the goal of strength maintenance.

Rest: There is a genuine concern among the soccer community that players compete in too many games each year. Games for school teams, club teams, as well as tournaments can mount up to the point where the only rest a player gets is when they get injured. There needs to be planned periods of rest followed by a planned re-establishment of fitness for the next season. Rest is important, so take some time off - play Ultimate Frisbee, roller-blade, cycle, hike or any number of other activities - by being active, but be away from soccer. Both your body and your mind need the rest.

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