

TIME TO GET FIT - Week 5

# Training needs science



**Joe O'Connor** looks at training. Follow his thoughts here and on his website [www.nisusfitness.com](http://www.nisusfitness.com)

## Should field players run laps?

This question raises debate on a local, national and international level. When a coach who gets his/her players to run continuous laps throughout the season claims that their team are fit we cannot argue with them.

YES they are fit, BUT are they fit for the sport they are required to play?

### It's not an endurance sport!

Long continuous running develops your aerobic capacity and endurance.

This means that at a *low to moderate* intensity you can keep going for longer. These are very good attributes for distance runners who need to be able to keep running for extended periods of time.

However, field players (Football, Hurling, Rugby, Soccer etc) require high intensity bursts with recovery periods as illustrated below for a professional soccer player. This is intermittent performance, not continuous performance.

Gaelic football rarely goes above 20 seconds high intensity work before a chance to recover presents itself.

### Different needs

Another issue is related to your neuromuscular function. This is the ability of your nervous system and muscular system to work together. This is most evident in skill requirements.

When you practise a skill, your nervous system develops a greater understanding of the muscle requirements thus your co-ordination and skill improves. Therefore the skills of the sport become familiar and easier to perform. When extensive running is performed your neuromuscular function is favoured towards the slow simple movements of running - not the fast, reactive requirements of the skills of field sports.

This is why some players refer to "losing their touch" earlier in the season when lots of running

is done.

### Fitness stages

So how is a coach going to do endurance training? Once again we will revert back to the components of fitness and the principles of training. With the principle of specificity in mind and the components of endurance, strength, speed and agility, we can look at integrated training. This is used to develop the required components without losing the skill elements of the sport. The simple examples here can be small sided games of various lengths and intensities.

### Starting

Earlier in the season we need to work more on endurance and as the season develops we need to increase the intensity.

A sample endurance session may be 3mins x 5 with 90 seconds recovery of a 5v5 conditioned game (1 touch, only hand pass etc).

This will develop endurance but maintaining the neuromuscular function required for the sport.

### Stepping up

As the season goes on the time frame and number of players can be reduced which will increase the intensity to that required in game play. These methods can be incorporated into the meso and microcycles of the annual training plan - see last week's article or check it on my website. Studies that looked at the difference between 5v5 and 3v3 intensity of play show that as the player number is reduced the intensity increases to heart rates in excess of 180 beats per minute which is similar to match play. Laps with teams often maxes out at 130bpm due to the nature of the activity, psychological effects and the perception of taking it easier because this will take ages. Therefore a player is fit at 130bpm but the sport requires fitness at 180bpm!!

### Right training-right time

To conclude, I am not knocking distance running for field sports completely.

This form of training is beneficial in early pre-season (Microcycles 1-4) in order to shed a few pounds of body fat and to develop an endurance base.

What I am saying is that it should not play the primary role in a teams pre-season training as it is not specific to the sport and in some cases can be counterproductive to speed, agility and skill.

Another concern is that many players receive overtraining and stress injuries such as shin splints from running on hard surfaces.

As stated in previous articles a coach should always note the required components of fitness and address the principles of training when designing training plan for his/her team or individual.



Ulster's Chris Henry (left) and Andrew Trimble in action during squad training.