



## **Fitness Assessment Protocols for Futsal Players in emerging Nations and Associated Activities to improve Fitness**

### **Introduction**

As Futsal has grown more rapidly in the last few years than at any time in history, so the volume of research and data available to Futsal Coaches has grown alongside it.

What most of the analysis has identified, however, is that the similarity in physiology between football and futsal players has led to the adoption of many football-specific assessments being utilised for the identification of suitable benchmarks for Futsal.

In “emerging nations” – countries where futsal is not a traditional activity or is displaced by other forms of activity (football, regional variations of 5-a-side football etc) – then these benchmarks can hinder the development of the sport.

What these have identified is that the key elements in both sports, endurance, speed, strength and power are generally similar, but that in terms of leg strength and power Futsal players return poorer results than their football counterparts.

There may be a number of reasons for this, such as;

- Many futsal players (in the case of emerging nations) are new and late to the sport and do not receive sport specific training until they have received football-specific training for an extended period of time. There is very little youth or child futsal activity of a suitable sport-specific nature on a regular basis.
- Many futsal players in emerging nations come to futsal following a football career as they are older (thus age-related deterioration of physiological ability)
- Most futsal players in emerging nations are “amateur” or “semi-professional” – they do not train futsal-specific activity often enough to improve physiological ability at the same level as their football counterparts; ie even amateur or semi-professional football players train more regularly than their futsal counterparts.

Players transferring to the sport from football are deemed to perform well in fitness assessments which in the main are designed specifically for them as footballers. This fails to acknowledge the very different physical attributes required by the sport of futsal so there is a danger that in “emerging” nations, the selection of players who perform well in football-specific assessments can hinder the involvement of players who may be more suitable for the sport.

In nations where the selection of players is based initially on their fitness levels – where coaches lack the necessary understanding of the game from a technical and tactical perspective, so they benchmark players from a physical basis as a starting point – then the likelihood is that fit football players are selected ahead of fit and more technically capable futsal players. This results in some of the talented technicians who are not yet as fit as they could be being cast aside and potentially lost to the game. The technically better players can be made fitter, but it is unlikely that the fit football players can improve technically specifically for futsal – most being too old to benefit and adapt to futsal specific training.

This paper will propose a futsal specific fitness assessment protocol (with specific testing for goalkeepers) and subsequent suggested activities for the physical improvement of players.

## Recent research and identification of Futsal-specific fitness demands.

Barbero-Alvarez et al reported that futsal is a multiple-sprints sport in which there are more high-intensity phases than in other intermittent sports. (1)



The work-to-rest ratio in futsal is approximately 1:1, where rest means the player is stationary, walking or jogging, and work means the distance covered at medium, high or maximum speed.

The intensity of match play of futsal was shown to be higher than soccer, possibly as a direct consequence of the unlimited substitution rule during futsal. Professional futsal players cover 13.7% of their total distance at high-intensity (speed greater than 15 km/h) and 8.9% sprinting (speed greater than 25 km/h) with players performing 8.6 activities per minute of match play.

It has been shown that the total distance covered at a high-intensity and maximum speed is greater in futsal than soccer,(4),(5), basketball,(6), or handball,(7) thus reflecting the high-intensity nature of futsal

Futsal is considered as a high intensity sport and therefore the physiological and physical requirements are major factors that concern coaches and trainers. Moreover, teams with a high physical condition show a greater ability to apply the trained tactical actions than teams with low physical condition (Gheorghe & Ion, 2011) (16)

There are clear specific requirements of futsal players inherent within the sport, and it is these physical fitness requirements which should be reviewed when undertaking talent identification and player physiology assessments.

- 1 Aerobic Capacity VO2 Max
- 2 Anaerobic Fitness
- 3 Repeated sprint and recovery
- 4 Body composition/flexibility
- 5 Strength/Power/core strength

### Summary

In countries where Futsal has been introduced in recent times – and in particular countries where football is the predominant sport – there remains a reluctance to invest the time and commitment to educate and promote the sport in its own right. Clearly, the reluctance to add further training to an already busy schedule for many players – by having players participate in both sports – is a valid concern for participants.

There is also a concern that players may opt to participate in futsal at the expense of football; and were there adequate cost-effective facilities in many of the emerging nations then this may be reasonable.

It is apparent that the sport of futsal is very much more physically demanding than many other indoor sports and is played at a much higher intensity than football. Therefore, players must have their physical condition assessed based on their suitability to play the sport, and not as a reflection of their suitability to play a different sport.

The condition of the game in countries like Scotland, for example, where almost every player plays football and trains regularly at that sport, will undoubtedly demonstrate that football players perform well in any array of current tests for either sport (as they are in most cases the same); the key for the futsal coach is to educate the players in the demands of the sport of Futsal, assess them in a suitable manner and demonstrate the value (in improved performance in the fitness assessments) of a sport specific training regime. It is proven that sport specific fitness enhances the players abilities with technical and tactical actions and enables players to perform at a higher level later in games. Clearly this is advantageous in competition.

Managing a sport specific fitness programme alongside the demands of other sporting activity can be challenging, but players will connect with the process on a results basis – when they see better results during games through

improved anaerobic fitness for example, they will be motivated to continue. Following a programme which motivates (through game playing in particular and court-based activities) will also help encourage the athlete.

The sport must have participants who understand the game, the physical demands, the technical and tactical aspects and the psychological expectations of coaches and team mates, and what better start than identifying the differences between a football players fitness requirement and that of the dedicated futsal player.

### **References**

1. Barbero-Alvarez J, Soto V, Barbero-Alvarez V, et al. Match analysis and heart rate of futsal players during competition. J Sports Sci. 2008;26:63-73.
4. Bangsbo J, Nørregaard L, Thorsoe F. Activity profile of competition soccer. Can J Sport Sci. 1991;16:110-116.
5. Bloomfield J, Polman R, O'Donoghue P. Physical demands of different positions in FA Premier League soccer. J Sports Sci Med. 2007;6:63-70.
6. McInnes SE, Carlson J, Jones C, et al. The physiological load imposed on basketball players during competition. J Sports Sci. 1995;13:387-397.
7. Alexander MJ, Boreskie SL. An analysis of fitness and time-motion characteristics of handball. Am J Sports Med. 1989;17:76-82.

*This article is taken from a complete document written by Futsal Scotland Technical Director Mark Potter as part of a successful UEFA B Futsal Diploma coursework presentation. A full copy is available by contacting Mark via the Futsal Scotland website. [www.futsalscotland.co.uk](http://www.futsalscotland.co.uk)*