SOCCER ROLES AND AGILITY
Benvenuti Cinzia, Tessitore Antonio, Capranica Laura
(DISMUS, IUSM of Rome, Italy)

Introduction
Team games performance strongly relies on the player’s ability to move according to the uncertainty of the game (Rosch et al., 2000, Benedek & Palfai, 1980). Recently, an agility field test developed to evaluate the athlete’s ability to run according to unexpected visual stimuli has been validated (Benvenuti et al., 2006). Thus, the aim of this study was to evaluate the ability of soccer players to accelerate, decelerate, and change direction of movement according to visual stimuli in relation to their role position.

Methods
Twenty-one (7 defenders, 9 midfielders and 5 forwarders) soccer players (age: 18±1 yrs; body mass: 72±7 kg; height: 177±6 cm) volunteered for the study. The experimental apparatus consisted of six spherical visual stimuli connected to a computer able to randomly generate a lighting sequence and to calculate the total time required to complete it. Four spheres were placed at the corners of a 12x12 pitch and two at a mid-distance of two opposite sides. Unaware of the sequence, the players started behind the sphere 1 and had to run as fast as possible to the lighted sphere to switch it off touching it with his foot. To avoid rest periods due to delays between visual stimuli, lights went on with a 2-second anticipation following diagonal runs and a 1-second anticipation following side runs. After completing the unknown test sequence, players were given plenty of time to learn it. Thus, after a 15-minute rest they were asked to repeat the test. A 2 (Sequence) x 3 (Role) ANOVA for repeated measures was used (p<0.05). A one factor ANOVA 3 (Role) was applied to delta values.

Results
A significant difference emerged for performances (p<0.01) and their interaction with soccer roles (p<0.05). As expected, better values were found for the known (13.79±0.66 s) than the unknown (16.85±1.32 s) sequence. While players showed similar values performing the known sequence, attackers were faster in the unknown situation. The Role effect (p<0.05) emerged for delta values, with attackers showing significantly better values (1.7±0.5 s) than defenders (3.6±1.4 s) and midfielders (3.4±1.3 s).

Conclusions
These results confirm the necessity to evaluate the agility of team sport players in relation to the uncertainty of visual stimuli. In fact, although the soccer players showed similar performances when required to follow a known sequence, the present test succeeded in discriminating the ability of attackers to better react to unknown visual stimuli. It could be possible to hypothesize that to have successful performances attackers have to react faster to the visual stimulus of the ball, while the defenders and the midfielders have to consider also the position of other players on the pitch before reacting.

References
Benedek & Palfai J (1980) Fussball-600 Uebungen, Bartels & Wernitz
Benvenuti et al. (2006) 11th ECSS Congress
Keywords: Speed Changes, Soccer, Visual Input

12th Annual Congress of the ECSS, 11–14 July 2007, Jyväskylä, Finland