

The Effect of Short-Time Pre-Season Intensive, Neuromuscular Training On Postural Stability On Elite Men Football Players

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Summary:

Research of stabilization and prevention ankle injuries in football players

Abstract:

Adequate neuromuscular training is proven to be extremely important in preventing injuries.

It enhances the ability to use somatosensory information, which in turn improves postural capabilities, reduces injury ratios and boosts player's sport performance.

BACKGROUND

We hypothesized that short-time (3-week) intensive neuromuscular training can significantly improve postural balance of professional football players. We also hypothesized that the non-dominant leg of football players will show better level of stability than the dominant leg (kicking leg).

MATERIALS & METHODS

32 professional soccer players participated in the study.

16 of them underwent a 3-week training programme and 16 remained in a capacity of a control group. They were all tested before and after the 3-week period. Neuromuscular training programme was conducted by physiotherapists and consisted of 3 levels of difficulty. Players had exercised 15 minutes twice a day for 3 weeks. Exercises were a combination of different football skills such as shooting, jumping, and landing. The study was performed with the use of stabiligraphic platform which is based on the measurement and analysis of the center of pressure movement (COP). Players were tested during one leg stance with eyes opened and closed.

RESULTS

After a period of neuromuscular training football players showed statistically better postural control ($p < 0.05$) for, both, the dominant and non-dominant leg for the test with eyes open. The non-dominant leg did not show any improvement as far as stability.

CONCLUSION

The postural stability of professional football players was better after the 3-week intensive neuromuscular training. A combination of balance, coordination, agility, core, and trunk control appears to be a successful training protocol aimed at improving postural balance and reducing injury in football players.