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Scientific Abstract

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Comparison of the Immediate Effect of Two Different Types of Trunk Exercises on Dynamic Balance Among Trained Football Players – A Pilot Study

Haripriya S¹, Bhaskara Bhandary², Cyanna Joseph D'souza¹

¹Laxmi Memorial College of Physiotherapy, India; ²A J Institute of Medical Sciences, India

Objective: Trunk exercises, such as trunk stabilization exercises (SE) and conventional trunk exercises (CE) are performed to improve static or dynamic balance and are often used as part of warm-up programs. A few studies have demonstrated the immediate effects of SE and CE on static balance. However, there is a dearth of research on its immediate effect on dynamic balance. Hence, the purpose of this study was to compare the immediate effect of SE with that of CE on the Y Balance Test (YBT).

Methodology: 23 male soccer players (24.43±1.34 years) participated in this crossover study, wherein each participant completed three kinds of testing sessions: SE, CE, and non-exercise (NE), each consisting of three steps: pretest, intervention and posttest, over three weeks. To assess dynamic balance, the YBT score in the anterior, posteromedial, and posterolateral directions, normalized with leg length, was measured before and 5 minutes after each intervention program.

Results & Conclusion: The YBT composite score was significantly improved after SE ($p<0.05$) as compared to CE and NE ($p<0.05$). Furthermore, in SE condition, YBT scores of the posterolateral and posteromedial directions significantly improved at the post-test ($p<0.05$). This study demonstrated the immediate improvements in the posteromedial and posterolateral directions of the YBT after the SE. This result suggests that SE can be effective in immediately improving dynamic balance