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Effectiveness of Contract-Relax PNF Technique versus Dynamic Oscillatory Stretching on Active Range of Motion and Balance in Collegiate Basketball Players

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Abstract

Aims: The purpose of this study was to compare the effect of PNF contract-relax technique and dynamic oscillatory technique. **Materials and Methods:** Thirty male (N=30) collegiate basketball players (from stadiums and colleges of Ludhiana District of Punjab) between the age group of 18 to 24 years voluntarily participated in the study. The subjects were assigned to two groups on the basis of random sampling with 15 participants in each group. Group A was given contract relax PNF stretch and Group B was given Dynamics Oscillatory Stretching (DOS) of dorsiflexors and plantar flexors. **Results:** The Mean Difference of ankle dorsiflexion of Group A was 24.67 and for Group B was 14.33.The Mean Difference of ankle plantarflexion of Group A was 21.33 and for Group B was 13.33. No significant differences in effect on dynamic balance of players were observed. **Conclusion:** In conclusion, effect of PNF Contract-Relax Technique and Dynamic Oscillatory Stretching of ankle plantar flexors and dorsiflexors in collegiate basketball players both were efficient in increasing active range of motion of dorsiflexion and plantarflexion but PNF Contract-Relax is more effective than dynamic oscillatory stretching. There was no significant difference in effect of both the approaches on dynamic balance in the athletes.

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Key words: PNF Contract-Relax, Dynamic Oscillatory Technique, Active Range of Motion, Star Excursion Balance Test(SEBT)

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Introduction

Basketball is a sport which includes both aerobic and anaerobic activity which includes explosive activities like jumps, dribbles, turns and low potency activities such as walking, stopping and jogging (Utku 2012). Among all the joints ankle joint is more prone to get injured specifically because of activities like running and jumping are involved in the game of basketball (Kristen et al., 1997). As the season passes the tendency to get tighter muscles increase specifically the muscles in the back, hip, ankle and groin gets tightened. This tightness is the result of exhaustion caused by the regular training and practices by the athletes (Angela et al., 2017). To maintain an optimum level of performance in sports many factors are required which include flexibility and balance. In regulating physiological capacity, physical fitness plays a principal role. Basketball is a sport which is played as a unit by the members of the team and it requires high level of mastery and proficiency in the skills and strategic ability in which composite motoric features such as changing positions, coordination, good reaction time, strength and endurance are required (Omer 2006). Favorable outcome in all composite movements with rapidly changing direction might have a powerful link to balance and proficient range of motion (Ozhan 2016). Muscle Pliability is reviewed as a beneficial