



EFFECT OF SWISS BALL TRAINING ON AGILITY AMONG ST. CYRIL'S COLLEGE PLAYERS

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Abstract: The purpose of the study was to find out the effect of swiss ball training on agility among St. Cyril's college players. To achieve this purpose of the study, thirty men students were selected as subjects who were from the various games inter collegiate players, St. Cyril's college, Adoor, Kerala. The selected subjects were aged between 19 to 24 years. They were divided into two equal groups of fifteen each, Group I underwent swiss ball training and Group II acted as control that did not participate in any special training apart from their regular sports and games practices. The subjects were tested on selected criterion variables such as agility prior to any immediately after the training period. The selected criterion variable such as agility was measuring by shuttle run test. The analysis of covariance (ANCOVA) was used to find out the significant differences if any, between the experimental group and control group on selected criterion variable. The 0.05 level of confidence was fixed to test the significance, which was considered as an appropriate. The result of the present study has revealed that there was a significant difference among the experimental and control group on agility.

Keywords: agility, netball, swiss ball training, university players.

1. Introduction

An exercise ball is a ball constructed of soft elastic with a diameter of approximately 35 to 85 centimeters (14 to 34 inches) and filled with air. The air pressure is changed by removing a valve stem and either filling with air or letting the ball deflate. It is most often used in physical therapy, athletic training and exercise. It can also be used for weight training. The ball, while often referred to as a Swiss ball, is also known by a number of different names, including balance ball, birth ball, body ball, ball, fitness ball, gym ball, gymnastic ball, physioball, pilates ball, Pezzi ball, sports ball, stability ball, Swedish ball, therapy ball, or yoga ball (1). There are many benefits to incorporating ball exercises into your workout. First of all, ball exercises require little and inexpensive equipment. To perform the majority of ball exercises presented on this website you'll only need access to an exercise ball and nothing more. However, the biggest benefit to training using ball exercises is that they are very effective at targeting core muscles, those muscles that are essential for stability and good posture but are often overlooked when exercising with fixed position equipment such as those found in gyms.

Strengthening your core is one of the best ways to get fit and is very helpful in many sports, like football and parkour. In fact, core muscles are engaged in all activities making them extremely important muscles to keep strong and healthy. They're the ultimate in core training, the key to increased muscle isolation, improved balance, greater dexterity, and enhanced strength. Swiss balls--colorful balls that come in various sizes to suit different bodies and routines--are today's hottest workout trend. General information covers choosing the right ball; gentle warm ups; and exercises for each area of the body, plus cardiovascular routines. Boost the effect of abdominal curls by doing them while gripping the ball with both legs. Or do a two-legged bridge with feet resting on the ball to tone the hamstrings, buttocks and lower back. The programs incorporate yoga and pilates to enhance mind/body awareness too. Once you've mastered the basics, try more advanced routines that use additional equipment such as weights and an elastic resistive band. Core muscles include all of the muscles of your mid-section including your abdominal muscles (front, side, and deep) low-mid back muscles and all of the hip muscles (glutes, hip flexors, pelvic floor muscles). You'll find some exercises focusing on

those muscles listed here. Following the tips can go a long way in strengthening your core safely and effectively. In recent years, fitness practitioners have increasingly recommended core stability exercises in sports conditioning programs. Greater core stability may benefit sports performance by providing a foundation for greater force production in the upper and lower extremities. Traditional resistance exercises have been modified to emphasize core stability. Such modifications have included performing exercises on unstable rather than stable surfaces, performing exercises while standing rather than seated, performing exercises with free weights rather than machines, and performing exercises unilaterally rather than bilaterally. Despite the popularity of core stability training, relatively little scientific research has been conducted to demonstrate the benefits for healthy athletes. Therefore, the purpose of this review was to critically examine core stability training and other issues related to this topic to determine useful applications for sports conditioning programs. Based on the current literature, prescription of core stability exercises should vary based on the phase of training and the health status of the athlete. During preseason and in-season mesocycles, free weight exercises performed while standing on a stable surface are recommended for increases in core strength and power. Free weight exercises performed in this manner are specific to the core stability requirements of sports-related skills due to moderate levels of instability and high levels of force production. Conversely, during postseason and off-season mesocycles, Swiss ball exercises involving isometric muscle actions, small loads, and long tension times are recommended for increases in core endurance. Furthermore, balance board and stability disc exercises, performed in conjunction with plyometric exercises, are recommended to improve proprioceptive and reactive capabilities, which may reduce the likelihood of lower extremity injuries(2).

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conducted to demonstrate the benefits for healthy athletes. Therefore, the purpose of this review was to critically examine core stability training and other issues related to this topic to determine useful applications for sports conditioning programs(3). Based on the current literature, prescription of core stability exercises should vary based on the phase of training and the health status of the athlete. During preseason and in-season mesocycles, free weight exercises performed while standing on a stable surface are recommended for increases in core strength and power. Free weight exercises performed in this manner are specific to the core stability requirements of sports-related skills due to moderate levels of instability and high levels of force production. Conversely, during postseason and off-season mesocycles, Swiss ball exercises involving isometric muscle actions, small loads, and long tension times are recommended for increases in core endurance. Furthermore, balance board and stability disc exercises, performed in conjunction with plyometric exercises, are recommended to improve proprioceptive and reactive capabilities, which may reduce the likelihood of lower extremity injuries(4).

2. Methodology

The purpose of the study was to find out the effect of swiss ball training on agility among St. Cyril's college players, Adoor, Kerala. To achieve this purpose of the study, thirty men students were selected as subjects who were from the various games inter collegiate players, St. Cyril's college, Adoor, Kerala. The selected subjects were aged between 19 to 24 years. They were divided into two equal groups of fifteen each, Group I underwent swiss ball training and Group II acted as control that did not participate in any special training apart from their regular sports and games practice. The experimental group underwent the training programme for three days per week for eight weeks. Among the selected variables such as agility was measuring by shuttle run test. The data were collected at prior and immediately after the training programme for the selected variable. Analysis of covariance (ANCOVA) (5) was applied for analyze the data. In all the cases, 0.05 level was used to test this significance.

3. Results

The mean and standard deviation scores of pretest, posttest and adjusted posttest of agility on swiss ball training and control group are given in table.

'F'ratio test computed in regards to the agility on swiss ball training and control group in the pretest, posttest and adjusted post test are also presented in table.

Table: 1
MEAN STANDARD DEVIATION AND 'F' RATIO
OF SWISS BALL TRAINING GROUP AND
CONTROL GROUP ON AGILITY

Variable		Swiss Ball Training		Control		'F' ratio
		Mean	S D	Mean	S D	
Agility	Pretest	7.4	0.52	7.23	0.51	0.78
	Posttest	6.79	0.51	7.46	0.77	7.71*
	Adjusted	6.74		7.51		12.73*
	posttest					

Table shows the analysed data of agility. The agility pre means were 7.4 for the swiss ball training group and 7.23 for the control group. The resultant 'F' ratio of 0.52 was not significant at .05 levels indicating that the two groups were no significant variation. The post test means were 6.79 for the swiss ball training group and 7.46 for the control group. The resultant 'F' ratio of 7.71 at .05 level indicating that it was significant. The difference between the adjusted post-test means of 6.74 for the swiss ball training group and 7.51 for the control group yield on 'F' ratio 12.73 which was significant at .05 level.

4. Discussion

The findings of the study showed that there was no significant difference between the pretest of agility.

The findings of the study showed that there was a significant difference between the posttest and adjusted posttest of agility.

The results of the study have shown there was a significant difference among swiss ball training group and control group on agility reference to the past studies on abdominal strength in accordance with **Cosio-Lima (6)**, **willardson and Staton (7)**, **Reaburn and Humpries (8)**.

5. Conclusion

With so many exercise systems and machines available, finding an inexpensive, safe way to exercise can be difficult. Exercise balls are perfect tools for low-impact training. Traditionally, training balls are made of puncture-resistant, soft, elastic material filled with air. They are used for full-body exercises, specifically for balance, strength, agility, and flexibility training. However, exercise balls have changed and evolved over the last few years, and a variety

of balls now offer a huge selection of exercise options.

6. References

1. P. Chek, *Swiss Ball Training*, Paul Chek Seminars (CA, La Jolla, 1996).
2. Beate Carriere, *The Swiss Ball: Theory, Basic Exercises and Clinical Applications*, (New York: Springer-Verlag Berlin Heidelberg, 1998).
3. Maureen Flett, *Swiss Ball: for Strength, Tone and Posture*, (New York: PRC Publications, 2003).
4. B. Sekendiz, M. Cuğ and F. Korkusuz, "Effects of swiss-ball core strength training on strength, endurance, flexibility, and balance in sedentary women",. *PMID*: 20940644.
5. David H. Clarke and H. Harrison Clarke, *Advanced Statistics*, (New Jersey: Prentice Hall Inc., 1988).
6. LM Cosio-Lima, et. Al., "Effects of Physioball and Conventional Floor Exercises on Early Phase Adaptations in Back and Abdominal Core Stability and Balance in Women", *J Strength Cond Res.*, 2003: 17(4) 721-25.
7. JM . Willardson, "Core Stability Training: Applications to Sports Conditioning Programs", *J Strength Cond Res.*, 2007: 21(3) 979-85.
8. R. Stanton, PR. Reaburn and B. Humpries, "The Effect of Short-Term Swiss Ball Training on Core Stability and Running Economy", *J Strength Cond Res.*, 2004: 18(3) 522-28.