Ovidius University Annals, Series Physical Education and Sport / SCIENCE, MOVEMENT AND HEALTH,
Vol. 10 ISSUE 1, 2010, Romania
Our JOURNAL is nationally acknowledged by C.N.C.S.I.S., being included in the B+ category publications, 2008-2010.
The journal is indexed in: 1. INDEX COPERNICUS JOURNAL MASTER LIST. 2. DOAJ DIRECTORY OF OPEN ACCES JOURNALS, 2009

EFFECT OF SPEED TRAINING UPON THE BLOOD PARAMETERS OF YOUNG MALE SOCCER PLAYERS

İLYAS OKAN[1], SAVAS SEYFİ [1], ÖMER SENEL[1], OKTAY ÇİMEN[1], MEHMET LEVENT AKSU[2]
[1]Gazi University, School of Physical Education, Ankara/TURKEY
[2]Gazi University, Faculty of Education, Department of Chemistry, Education Ankara/TURKEY

ABSTRACT

This study was carried out to determine the effect of speed training upon the blood parameters of young soccer players. The study was participated by 14 players playing in Ankaragücü football club young team with an average age of 15.21 ± 0.80 years .The participants in the experimental group were subjected to a 8 week sprint training 1.5-2 hours a day three says a week. The test group was subjected to a some physical and blood tests before and after the exercise. The data obtained were evaluated by paired simple t test and 11.0 SPSS test in order to determine the differences between the pre and post training values. The results showed that there ware significant values between the pre and post training blood values of the experimental group. ($p<0.01$) table:2

Key words: soccer, speed, blood - physical parameters.

Introduction

Speed is described as the "The capacity of one from one place to other place as fast as possible" or "skill of carrying out the movements as fast as possible "(Y. Sevim.,et al, 1997). Speed in a physical sense is distance covered in a specified time. (C. Acıkada, et al,1990) According to the training theory speed is the virtue of moving the the part of the whole of the body as fast as possible .

According to Ross et al., 2001, the sprint has three phases as acceleration, reaching to the maximum speed and maintenance of it. (A. Ross, M. Levedtt, S. Riek, Little and Williams, 2005) subjected 106 professional players to 10 m and 20 m sprints and zigzag movement agility and found no significant relations between them.(T. Little, A.G. Williams, 2005). Ribero and Sena,1997, 82 divided 82 players according to their positions. Each group was subjected to 1.5 minute rest, then five 30m sprint and determined that the fastest ones were the forwards and the slowest ones were the goal keepers (B. Ribero, P. Sena, 1997). Young et al. (2001) subjected 36 male players to 30m sprints and runs with changing the directions. The sprint tests were found to be more beneficial upon the speed than the runs made with changing the directions. The aim of this study is to determine the effect of the speed training upon the blood parameters of young players.

Material and the Method

The study was carried out upon 14 participants playing in the young team of Ankaragücü soccer team with an average weight and length of 15.00 ± 0.35 years and 172.39 ± 8.01 cm. They were subjected to a 8 week sprint training 1.5-2 hours a day three says a week. The participants were adequately briefed about the importance of the study. The physical and anthropogenic features of the participants were determined before the study. They were then subjected to specially selected physiological tests by taking 5 cc venous blood before and after the study. The physical parameters of the participants were determined before the start and after the completion of the study for comparison purposes.

Sprint training given to the experimental group

Table 1 Sprint program given to the participants [2]

1.week	2.week	3.week	4.week	5.week	6.week	7.week	8.week
3x10m	4x10m	5x10m	3x30m	4x30m	5x30m	5x30m	5x30m
3x20	4x20	5x20	3x40	4x40	5x40	5x40	5x40
3x30	4x30	5x30	3x50	4x50	5x50	5x50	5x50
3x40	4x40	5x40	3x60	4x60	5x60	5x60	5x60
3x50	4x50	5x50	3x70	4x70	5x70	5x70	5x70
Total 1 set= 450 m	Total 1 set= 600 m	Total 1 set= 750 m	Total 1 set= 750 m	Total 1 set= 1000 m	Total 1 set= 1350 m	Total 1 set= 1350 m	Total 1 set= 1350 m

Results

It was found that 8 week sprint training caused statistically significant changes on the hematocryte , erythrocyte hemoglobin and creatine kinase values of the young football players (P<0.01).

Table: 2 The physical values of the experimental group

N=14		**Year (year)**	**Length (cm)**	**Body weigh (Pre test) (kg)**	**Body weigh (Post test) (kg)**	**Comparison of the pre and post test body weights**
Experimental group	**X**	15.21	172.39	61.56	60.07	t= 8.17 P=0.00*
	ss	0.80	8.01	6.47	6.38	
	ss	0.73	9.60	10.88	10.72	

Comparison of the t-test results of the pre and post test blood values of the experimental group

Table: 3 Pre and post test blood values of the experimental group according to t- test

Parameters N=14	**Group**	$\overline{X}$	**S**	**r**	**t**	p
HCTS Hematocryte (%)	Pre test	39.18	1.37	0.60	-4.67	**0.00***
	Post test	41.42	2.23			
RBCS Erythrocyte (10^6/mm^3)	Pre test	5.08	0.29	0.66	-4.37	**0.00***
	Post test	5.38	0.32			
HGBS Hemoglobin (g/dL)	Pre test	14.24	0.63	0.89	-5.61	**0.00***
	Posttest	14.97	0.96			
CK Kreatin kinase (U/I)	Pretest	535.28	320.50	0.35	3.54	**0.00***
	Posttest	250.78	136.63			

*** P< 0.01**

The comparison of the pre and post test blood values of the experimental group revealed statistically significant differences between hct, rbc, hgb and ck results. P<0.01

Discussion

According to the result the HCTS pre test value of 39.18 ±1.37 ug/l to 41.42 after the test . The difference between them was statistically significant (p<0.01) . RBCS pre test value also showed a statistically important change from 5.08 ± 0.29 ug/l to 5.38 'e ± 0.32 ug/l. The pre and post test values of HGBS were 14.24 ±0.63 ug/l and 14.97 ± 0.96 ug/l which is also a change with statistical importance (p<0.01) . CK values also changed from 535.28 ± 0.98 to 250.78'e ± 0.96 ug/g. This is also of statistical significance (p<0.01).These values showed good parallelism with the literature values.[1, 9 – 13]

REFERENCES

ACIKADA, C. ERGEN, E., 1990, *Süratin geliştirilmesi. Bilim ve Spo*r, Büro-Tek Ofset Matbaası, s.557–560, Ankara, (in Turkish).

BOYADJIEV, N . TARALOV Z., 2000, *Red Blood Cell Variables In Highly Trained Pubescent Athletes*: A Comparative Analysis ,Br J Sports Med ,34:200–204

GUNAY, M. et al., 1998 *İki Farklı, Tipteki İnterval Antrenman Programlarının Aerobik, Anaerobik Güç, Vücut Kompozisyonu, Solunum Fonksiyonları, Kan Lipitleri, Kan Basıncı Ve İstirahat Nabzı Üzerine Etkileri*.", Kastamonu Eğitim Dergisi.163–172.4/6.Ekim. (in Turkish)

GUNAY, M. et al., 1996, *Farklı Aerobik Nitelikli Antrenmanların Serum Enzimler, Serum Elektrolitler,* Üre, Kreatin, Total Protein, Fosfor Ve Ürik Asit Üzerindeki Etkileri Ve İlişki

Düzeylerinin Belirlenmesi", Beden Eğitimi Spor Bilimleri Dergisi, 1(2), 37–46, (in Turkish).

GUNAY, M. et al., 1994, *Farklı Aerobik Nitelikli Antrenmanların Vücut Kompozisyonu, Esneklik, Kan Lipitleri, Kan Basıncı Ve İstirahat Nabzı Üzerindeki Etkileri Ve Aerobik Güç İle Olan İlişki Düzeylerinin Belirlenmesi",* H.Ü. Spor Bilimleri III. Ulusal Kongresi, Ankara, (in Turkish).

GUNAY, M. et al., 1994, *Farklı Aerobik Nitelikli Antrenmanların Hormon, Kan Lipitleri Ve Vücut Yağ Yüzdesine Etkileri İle İlişki Düzeylerinin İncelenmesi"*, H.Ü. Spor Bilimleri III. Ulusal Kongresi, Ankara, (in Turkish).

GUNAY, M. et. al., 1994, *Farklı Aerobik Nitelikli Antrenmanların Serum Enzimler, Serum Elektrolitler, Üre, Kreatin, T. Protein, Fosfor Ve Ürik Asit Üzerindeki Etkileri Ve İlişki Düzeylerinin Belirlenmesi",* H.Ü. Spor Bilimleri III. Ulusal Kongresi, Ankara, (in Turkish).

ROSS, A. LEVEDTT, M., RIEK S., 2001, *Neural influences on sprint running—training adaptations and acute responses*. Sports Med., 31.409–425.

LITTLE, T. WILLIAMS A.G., 2005, *Specificity of Acceleration, Maximum Speed, And Agility in Professional Soccer Players,* Journal of Strength and Conditioning Research, 19(1):76 78.

RIBERO, B., SENA P., 1997, *Speed performance of elite young soccer players*. Coaching & Sport Science Journal, 2.14–18

SEVIM, Y., 1997, ANTRENMAN, BILGISI, GELIŞTIRILMIŞ BASKI, TUTIBAY, LTD. ŞTI, ANKARA, s.71, 18 (in Turkish).

YOUNG, W.B. MCDOWELL, M.H., BENTLEY, J. S. 2001, *Specificity of Sprint and Agility Training Methods*, Journal of Strength and Conditioning Research,15:315–319.
http://www.soccer-training-info.com/soccer_speed_training.asp (Download:16.04.2005).

SOME PERFORMANCE PARAMETER CHANGES DURING MENSTRUAL CYCLE PERIODS OF ATHLETES AND NON-ATHLETES

NECIP FAZIL KISHALI[1] , FATÝH KIYICI[2], GULEDA BURMAOGLU[2], MURAT TAS[2], YAKUP PAKTAS[2], FULYA ERTAN[2]
[1]Physical Education of Sport School, Ataturk University, Erzurum- TURKEY
[2] Gazi University, Ankara, TURKEY

ABSTRACT

The aim of this study was to determine athletes' and non-athletes' performance parameters during three menstrual cycle periods (pre-menstruation, during menstruation, post-menstruation). 40 athletes (age; 17.25±3.1 years) and 40 non-athletes (age; 17.29±0.7 years) who have a regular menstrual cycle period participated the study. Body weight, body fat ratio, resting heart rate, blood pressures, reaction time, hand grip strength, 20m sprint time and anaerobic power were measured in pre menstruation, during menstruation and post menstruation periods along 3 months. For the statistical analysis, student t-test was used to compare the performance parameters of athletes and non-athletes. One-way analyses of variance were performed to assess differences between menstrual cycle periods.

The mean body heights of athletes and non-athletes were 1.65±0.05 cm and 1.64±0.04 cm respectively. The mean body weights were 59.7±6.13 kg and 57.7±6.9 kg of athletes and non-athletes. The mean menarche age of athletes was 13.47±0.11 years and of non-athletes was 12.62±0.13 years. Menarche ages and resting heart rates were found significantly different ($p<0.05$) between groups but body fat ratio and blood pressures couldn't find significantly different ($p>0.05$). Vertical jump, reaction times, hand grip strength and 20 m sprint parameters were significantly different ($p<0.05$), but anaerobic power values were not found significantly different ($p>0.05$) between two groups. Performance parameters didn't differ between menstrual cycle periods in both athletes and non-athletes ($p>0.05$). It's concluded from this study that athletes attained menarche later than non-athletes. Menstrual cycle periods didn't significantly affect sportive motor performance of basketball, volleyball players, judokas and non-athletes.

Key Words: Menstruation, performance param.

Introduction

In Turkey there is some disagreement regarding sports participation during menses. However it has known that records were broken and medals were taken during all portion of the menstrual cycle. Because of the high intensity training some physical and physiological changes could happen. Changes in body weight, body fat ratio and hormonal secreting values could effect menstrual cycle (B. Bullen, 1985, C.