Dr. Parveen Kumar
Assistant Professor
Guru Nanak Khalsa College
Yamuna Nagar Haryana, India

Effect of cross training programme on blood glucose level of female athletes

Dr. Parveen Kumar

Abstract
Biochemistry is the study of the chemistry of life process. Cross training also called conditioning training, is performed for enhancing athletic and sports execution. In this present study researcher made an attempt to explore the Effect of cross training programme on blood glucose level of female athletes. The study was conducted on female athletes of 22- 26 years age group. A total twenty (N=20) female athletes were selected as subjects from Punjabi University, Patiala to check effect of cross training programme on blood urea level. After collecting the data paired t- test was applied with the help of SPSS-16. To test the hypothesis the level of significance was set at 0.05. On the basis of findings of present study, it is concluded that the results powerfully prove significant difference between pre and post-test of Blood Glucose Level in female athletes.

Keywords: cross training programme, blood glucose, female athletes

Introduction
Biochemistry is the study of the chemistry of life process. Since the disclosure that biological particle such a urea could be integrated from nonliving segments in 1828, researchers have investigated the chemistry of existence with awesome power (Jeremy *et al*. 2015) [5].
Cross training also called conditioning training, is performed for enhancing athletic and sports execution. The athletic execution or as whatever other kind of human execution, is not the result of one single framework or part of human identity (Rachna, 2001).
In this present study researcher made an attempt to explore the Effect of cross training programme on blood glucose level of female athletes.

Procedure and Methodology
Selection of the Subjects
The study was conducted on female athletes of 22-26 years age group. A total twenty (N=20) female athletes were selected as subjects from Punjabi University, Patiala to check effect of cross training programme on blood glucose level.

Selection of Variables
- Dependent Variable**:** In consultation with the experts in the field, minutely gleaning through the literature available and considering the feasibility criteria in mind, especially the availability of instrument. The following Biochemical variable was selected as dependent variable for the present study.

Blood Glucose (Random Blood Sugar)
- Independent Variable: To know the effect of cross training programme on blood glucose level of female subjects, Six weeks cross training programme was selected as independent variable for the present study.

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Criterion Measures
For the purpose of present study the measurement unit of the selected variable given below

Variable	Test analyzer	Unit of measurement (milligrams per deciliter)
Blood Glucose (R.B.S)	Erba Chem-5 V$_2$ plus	mg/dl

Design of the Study
One-Group Pretest Post-Test Group Design was used as experimental design in present study.

Statistical Procedure
In order to find out the effect of six weeks cross training programme on blood glucose level of female subjects, after collecting the data paired t- test was applied with the help of SPSS-16. To test the hypothesis the level of significance was set at 0.05.

Findings

Table 1: Mean, Standard Deviation and 'T' Value of Pre and Post Test of Blood Glucose (Random Blood Sugar)

Group	N	Mean	Standard Deviation	t-value
Pre test	20	98.07	14.08	
Post test	20	91.45	13.26	2.45*

The table & figure 1 reveals that the mean of pre and post-test of random blood sugar were recorded as 98.07 & 91.45 whereas the standard deviation was 14.08 & 13.26 respectively. The calculated t-value for pre and post conditioning training programme of athletes was 2.45*, which is greater than the tabulated t-value (2.04) at. 05 level of significance. So, it implies that there was significant difference found between pre and post value of random blood sugar.
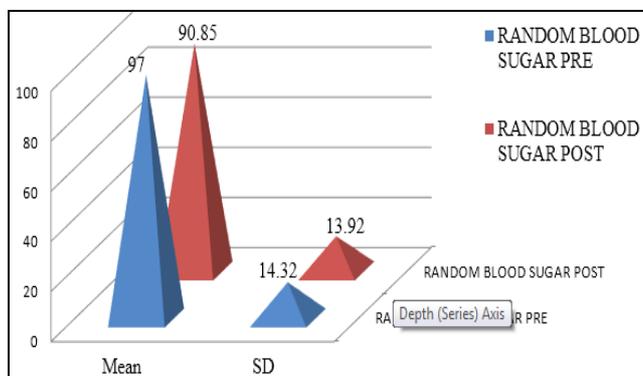
Fig 1: Mean and Standard Deviation and 'T' Value of Pre and Post Test of Blood Glucose (Random Blood Sugar)

Conclusion of the Study
On the basis of findings of present study, it is concluded that the results powerfully prove significant difference between pre and post-test of Blood Glucose (Random Blood Sugar) level in female athletes.

References
1. Cheraghi F, Shamsaei F, Mortazavi SZ, Moghimbeigi A. The Effect of Family-centered Care on Management of Blood Glucose Levels in Adolescents with Diabetes. International journal of community based nursing and midwifery. 2015; 1(1), 3(3):177-86.
2. Cross country. Runners world the training of Champion Retrieved, 2010, 2016. https://www.runnersworld.co.uk/health/cross-country-the-training-of-champions.
3. David C, Nieman. Exercise Testing and Prescription: A health related approach fifth edtton Publisher McGraw Hill Higher Education. ISBN-0-7674-2786-6, 2003, 40.
4. David L, Nelson MC. Lehninger Principles of Biochemistry Sixth Edition Publisher Susan Winslow, 2013, 859-864.
5. Jeremy MB, John LT, Gregory JG, Lubert S. Biochemistry eighth edition Publisher by kate Ahr Parker, 2015, 1.
6. Lu P, Tao J, Lu Q, Han Z, Tan R, Gu M *et al*. Long-Term Follow-Up of Renal Function in Living Kidney Donors in a Single Center. Journal of Annals of transplantation. 2015; 19(20):694-7.
7. Manna I, Khanna GL. Effect of Training on Selected Biochemical Variables of Elite Female Swimmers. *American* Journal of Sports Science and Medicine. 2013; 1(2):13-16. 10.12691/ajssm-1-2-1.