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A Study on the effect of Ten week conditioning and four week deconditioning program on body composition and cardiorespiratory responses of made students

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Introduction :

Body composition is one of the important physical fitness components which affect the performance of the gemnastics in competitons. Hence, modern research in the field of physical education and sports has shown interest to find our the body composition of the Gemmastics. It is a fact that the body composition changes as the physical activity changes and it is essential for a coach or a physical educator to pay attention to body composition in order to schedule a training program for improving one's performance. This apart, it also helps to assess the intensity of training program.

Body composition as it is known constitution of the body parts is concerned with the obesity of an individual as it divides the total body weight into two components lean body weight which is the muscle, bone and vital organs and the fat body weight. The lean body weight serves as an active energe resource, whereas the false cells do not manufacture ATP, but their primary purpose is to store lipids. The relative degree of fat free body weight is not only valuable from the health point of view but also an important factor contributing to higher levels of performance in physical activities where the total body weight must be moved. The study (Wilson 2011) confirms the above statements in addition studies have shown that high percentage of body fat not only serves as adead weight, but also it lessens the relative ability to supply oxygen to the working muxles thus reducing one's cardio vascular endurance (Wong 2004).

It is a common observation that regular physical activity or the lack of activity can alter body composition. There are various studies (Katch 2003: Blake et at 2000 slobodam 2002) which have demonstracted that fat free body weight to fat weight ratio increases during periods of physical training. Also redsultes of several researchers (Liszka, 2005, Wisloff,etc at 2005: Pascel et al 2005. Thompson et all 2006) on the body composition changes during various typs of physical training programs, have shown the shift in the fat free weight and fat weight ratio that tends to increase as the activity level increases. The main purpose of the study was to find out the effect of ten weeks condition program on body composition and cardio respiratory response and also to find out the effect of four weeks deconditioning on body composition and cardio repiratory response.

Methodology:-

The subjects for the study were twenty male students undergoing the Bachelors degree in G.S.Science, Arts and Commerce College Khamgaon and were residing in Khamgaon. The selected subjects mean age ranged between 23.45 and 20.31 years skin fold caliper was used to measure the assessment of the body fat on two sites i.e. triceps and iliac crest to the nearest millimeter. Body weight was recorded in kilograms Cooperis 12 minutes run and walk test was administered to assess the cardio respiratory responses. Data for the test was recorded y the above test items and the test commenced just the beginning of the course. Conditiong program was administered to the subject for a period of 45 minutes per day six days a week for 10 weeks. A post test was conducted after the completion of the training program on all the measurements.

After the post tet, four weeks of detraining ws scheduled and at the end all the measurements were recorded for the students again. The variables which were selected for body composition were Body Densi (BD), Percent body fact (% fat), Total body weight of fact (T.W.F.) and lean body weight (LBM) Body density was calculated by using sloan and wier nomogram and percent fact was calculated by the nomagram of keys and brozek 1963. Mean, standard Deviation and "T" test were the statistical tools which were used for the analysis of the data.

Results And Discussion:-The data of the study is analyzed and presented below.

Table 1

	Ten Weeks Conditining				Four Weeks Deconditioning	
	Before		After		After	
Variable	Mean	S.D.	Mean	S.D.	Mean	S.D.
B.D.(gmicc)	1.0204268	+.0012737	1.03	03258+03341678	1.05220414	+00431322
% Fat	17.67	+1.24	16.62	+1.21	17.28	+1.08
Total Weight of Fat (Kg)	8.12	+2.00	7.27	+1.98	8.41	+1.98
LWB (Kg)	35.85	+2.43	38.51	+2.98	31.21	+2.31
C.R.Responsecmis	1662.60	+450.50	2317.17	+530.21	2376.55	+656.70
Body Weight	47.99	+.37	41.9	+4.49	45.80	+4.36

Table 1. 1 revealed that there is an increase in the mean values with regard to the physiological variables of body density lean body weight and performance in cardio respiratory response. There was a decrease in the mean values in percent fat and the total weight of fat due to the conditioning program.

Mean and standard deviation of all the variables of body composition and performance in cardio respiratory response before and after Ten weeks conditioning and four weeks deconditioning program.

Furtheremore, a comparative result between Ten weeks conditioning and four deconditioning training showed that the mean values of body density lean body weight and performances of cario respiratory response decreased whereas the mean values of percent fat total weight fat increased due deconditioning.

Table 2

Variable	After Ten Weeks Conditioning	"T" Value	After 4 Weeks Deconditioning	"T" Value
Body Density	.379% increase	7.41**	.120% decrease	3.88*
Percent (%) Fat	8.67%	6.55%**	2.62% increase	4.37*
Total Weight of Fat	7.389% decrease	6.21**	2.98 increase	4.71*
Lean Body Weight	4.327%	6.41**	.808% decrease	1.21*
Performance in C.R.Response	46.512%	13.20*	5.294% decrease	1.267
Body Weight	1.61% increase	2.82*	.141 % decrease	.39*

** Significant at the 0.01 level where "t" 19df is 2.70* Not Significant.

Increment /Decrement in percentage (%) and "T" values of all the variables to body composition and performances in cardio respiratory response after Ten weeks conditioning and four weeks deconditoning program.

In Table 2 it is found that after Ten weeks of conditioning there is an increase in the percentage of body density, lean body weight. Performance in cardio respiratory response and body weight and all these variables are having a significant increase at the 0.01 level. Also there is a decrement in the percentage fat and total weight of fat but the increment of body weight may be due to increment in muscle girth and uncontrolled diet.

Subsequenty, after 4 weeks of deconditioning the data analyzed showed that body density, lean body weight, performance in cardio respiratory response and body weight decreased. The decrement in body weight. May be due to the non availability of sufficient diet for subject in their homes on the other hand there was increment in percent of fat and total weight of fat which was insignifant at 0.01 level. An interesting feature of the findings of the study was an insignificant negative correlation (-39) between the percent fat and

performance in cardio respiratory responses. The above finding was to some extent related to the study of (Christopher et al-2007: Poivier et al-2006, ACSM-2009)

Conclusions:-

With in the limitations of the present study the following conclusions are drawn.

1. Physical activity if undertaken regularly will have a positive effect and may change radically one's body composition and improve performance.
2. The body composition which had changed after indulging in conditioning may be reverted back due to inactivity.
3. The training intensity, within this conditioning period proved justified.

Refernces:-

1. A study on the effect week conditioning and four week deconditoning program on body composition and cardiorespiratory response of female students Dr. Y.S.Kishore, Principal , Dept of Physical Education Nagarjum University, Guntur,Prof,Syd Ibrahim, Dept of Physical Education, King Fahad University Saud Arabia.
2. Liszka, H.A. Mainous, A.G.3rd King. D.E. Everett C.J.Egan B.M. (2005) Pre hypertension and cardiovascular morbidity. Ann fam Med 3:294:249.
3. American college of sports Medicine Position stand on the appropriate physical activity intervention stragtegies for weight loss and prevention of weight regain for adults (2009) Med Sci.Sports Exerc. 41.459 71.
4. Siobodan J (2002) Muscle strength testing use of normalization for body size sports med.32:615-3.
5. Blake A, Miller WC. Brown D.A.(2000) Adiposity does not hinder the fitness response to exercise training in obese women J sports med Phys fitness 40:170-7.
6. Katch Frank 1 (2003) pre and Post Test changes in the factors that influence computed body density changes. Research quarterly 42:280.
7. Christopher L Gentile, Jeb S.Orr, Brenda M Davy and Kevis P Davy (2007), Cadio respiratory fitness influences the Blood Pressure response to experimental weight gain, obesity 15,3005-3012.