World Academy of Science, Engineering and Technology
International Journal of Humanities and Social Sciences
Vol:10, No:07, 2016

Effect of Fast and Slow Tempo Music on Muscle Endurance Time

Authors : Rohit Kamal, Devaki Perumal Rajaram, Rajam Krishna, Sai Kumar Pindagiri, Silas Danielraj

Abstract : Introduction: According to WHO, Global health observatory at least 2.8 million people die each year because of obesity and overweight. This is mainly because of the adverse metabolic effects of obesity and overweight on blood pressure, lipid profile especially cholesterol and insulin resistance. To achieve optimum health WHO has set the BMI in the range of 18.5 to 24.9 kg/m2. Due to modernization of life style, physical exercise in the form of work is no longer a possibility and hence an effective way to burn out calories to achieve the optimum BMI is the need of the hour. Studies have shown that exercising for more than 60 minutes /day helps to maintain the weight and to reduce the weight exercise should be done for 90 minutes a day. Moderate exercise for about 30 min is essential for burning up of calories. People with low endurance fail to perform even the low intensity exercise for minimal time. Hence, it is necessary to find out some effective method to increase the endurance time. Methodology: This study was approved by the Institutional Ethical committee of our college. After getting written informed consent, 25 apparently healthy males between the age group 18-20 years were selected. Subjects are with muscular disorder, subjects who are Hypertensive, Diabetes, Smokers, Alcoholics, taking drugs affecting the muscle strength. To determine the endurance time: Maximum voluntary contraction (MVC) was measured by asking the participants to squeeze the hand grip dynamometer as hard as possible and hold it for 3 seconds. This procedure was repeated thrice and the average of the three reading was taken as the maximum voluntary contraction. The participant was then asked to squeeze the dynamometer and hold it at 70% of the maximum voluntary contraction while hearing fast tempo music which was played for about ten minutes then the participant was asked to relax for ten minutes and was made to hold the hand grip dynamometer at 70% of the maximum voluntary contraction while hearing slow tempo music. To avoid the bias of getting habituated to the procedure the order of hearing for the fast and slow tempo music was changed. The time for which they can hold it at 70% of MVC was determined by using a stop watch and that was taken as the endurance time. Results: The mean value of the endurance time during fast and slow tempo music was compared in all the subjects. The mean MVC was 34.92 N. The mean endurance time was 21.8 (16.3) seconds with slow tempo music which was more then with fast tempo music with which the mean endurance time was 20.6 (11.7) seconds. The preference was more for slow tempo music then for fast tempo music. Conclusion: Music when played during exercise by some unknown mechanism helps to increase the endurance time by alleviating the symptoms of lactic acid accumulation.

Keywords : endurance time, fast tempo music, maximum voluntary contraction, slow tempo music
Conference Title : ICMS 2016 : International Conference on Music in Society
Conference Location : Prague, Czechia
Conference Dates : July 07-08, 2016