

Effect of caffeinated drink on endurance performance of the athlete

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Abstract

The main purpose of the study was to find the effect of caffeinated drink on endurance performance of the athlete. For the data collection researcher selected the subjects of Bharati Vidyapeeth College of physical education. The researcher considered following procedures for the research on a sample of 14 athletes with the age of 18 to 25 years. The selection of sample is purely on the random sampling method. The researcher experimented on the collegiate level athletes of B.V.D.U C.O.P.E, and explained the test to the group. Only one group was examined. After the researcher took the pretest of the group, one day full recovery period was given to the group. Next day the subjects were given caffeinated drink (instant coffee) 3-5mg per kg body weight and after 30 minutes of the drink taken, the group was taken for the test. The test taken was 12 minute run/walk test for the cardiovascular endurance. Once the stretching and warm up was done the group undergone posttest and hence data was collected. The result was formulated using independent T-test. The result revealed that statistically there was no significant difference in the variable (Table 't' value > calculated 't' value). It was seen that the short term effect of caffeinated drink (instant coffee) does not improve the performance.

Keywords: caffeine, cooper test, cardiovascular endurance etc.

Introduction

Caffeine is a diuretic, meaning that it increases urine production, which could theoretically exacerbate dehydration during exercise. However, exercise negates this effect if caffeine. In a recent scientific review, researchers from the University of Connecticut wrote, "Dieticians, exercise physiologists, athletic trainers, and other sports medicine personnel commonly recommend that exercising adults and athletes refrain from caffeine use because it is a diuretic, and it may exacerbate dehydration and hyperthermia. This review, contrary to popular beliefs, proposes that caffeine consumption does not result in the following: (a) water-electrolyte imbalances or hyperthermia and (b) reduced exercise-heat tolerance. Caffeine is commonly used by endurance athletes 30 to 60 minutes before races to enhance competitive performance. The ergogenic effect of caffeine is dose-dependent. The maximum effect is seen with doses of 5 to 6 milligrams per kilogram of body weight. For a 150-lb runner this translates to roughly 340-400 mg, or the amount of caffeine you'd get in 14 to 17 ounces of drip brewed coffee. The minimum amount of caffeine the average runner must consume for a measurable ergogenic effect is about 2 mg per kilogram of body weight. It makes less sense to use

caffeine as a daily workout performance enhancer, for two reasons. First, workouts are seldom maximal efforts. Second, the ergogenic effects of caffeine consumption decrease with habituation. For this reason, if you are a regular coffee drinker, you should cease coffee consumption four to six days before participating in a race.

Methodology

14 athletes from age group of 18 to 25 years were selected from Bharati Vidyapeeth College of physical education. The test conducted was 12 minutes run/walk test where students have to continuously run/walk till 12 minutes. The distances covered by the students were measured in meters. The score in meters is determined by multiplying the number of complete lap's times the distance of each lap (450 meters), plus the number of segments. For the data analysis independent 't' test was used as statistical tool. The level of significance was 0.05.

Method of measurement of variable

For the purpose of establishment reliability of the data the tests held coopers 12 minutes run/walk test. One day recovery was given to the subjects between pre and posttest.

Data Analysis

Table 1: Comparison of pre-test and post-test 9 min run/walk test of the group

Performance	Mean Pre-Test	Mean Post- Test	S.D (Pre & Post)	'T' Table Value
12 min run/walk	1855.286	2222.786	363.186,306.296	1.771

*Significant at. 05 level. T 0.5 (13) =1.41693

Discussions and Conclusions

Many researchers claimed that intake of caffeine before the competition does not increase the performance.

Following conclusions were drawn after the analysis of the data:-

- There is no significant difference in pre and post-test of the group. Hence caffeinated Drink did not show any effect after intake.
- Intake of caffeinated drink does not affect the cardiovascular endurance of athletes after intake.

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