Is It Really Getting You Jack3D?

KINE 3325 – Undergraduate Research Methods – Research Project

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ABSTRACT

INTRODUCTION: More and more workout supplements are being introduced to the public without thorough testing, which is why more research is needed, especially for the supplements that are quite expensive. Jack3D is the supplement we chose to do our research on. **PURPOSE:** Our purpose is to test to see if a popular pre workout supplement like Jack3D, really increases your muscular strength, VO_2 max, and decreases your body fat percentage. **METHODS:** 6 college aged males that were moderately trained were split into 2 groups. One group training with the pre-workout, the other group without. Both groups were pre tested on their 1RM Bench Press and Leg Press, and VO_2 max. Then trained for 3 weeks, and post tested again. **RESULTS:** The changes mentioned that are worthy of recognizing are the 1RM max on the bench press and leg press. The Bench Press p=.007 and Leg Press p= .026. The body fat percentage and VO_2 max did not show enough significance to report (p= .606 and p= .220). **CONCLUSION:** The test possibly would have produced more results if the sample size of the subjects and duration of the test was longer. However, data that was found is still significant in the sense that any progress on a workout regimen over three weeks, gives a positive start for the future studies of this topic

PURPOSE

PURPOSE: Our purpose is to test to see if a popular pre workout supplement like Jack3D, really increases your muscular strength, VO_2 max, and decreases your body fat percentage. Our expectations are to find an increase in VO_2 max and muscular strength. However, a greater increase is expected in the test group using the supplement.

INTRODUCTION

Athletes worldwide are now using dietary supplements to increase sports performance. These dietary supplements contain ingredients that are believed to be beneficial to the human body to increase strength, speed, and endurance. The supplement industry is a 25 billion dollar industry that is loosely regulated by the FDA (C. Lasonde 2009). According to studies, up to 70% of college aged men are now reported to use at least one nutritional supplement or energy drink containing caffeine due to it's ability to alter exercise metabolism. By enhancing fat oxidation, caffeine preserves muscle glycogen content, which will lead to improved quality of resistance training exercise with delayed fatigue (AM Gonzalez et. al. 2011).

METHODS

Participants:

-6 College Aged Males (18-23yrs, old)

-Moderately Active (1-2 hrs. of recreational exercise a week)

Randomization:

-Groups were selected at random for both groups

Instruments:

-Dumbbells

-Body Power 40 degree leg press

-Cable Resistance Machine

-Bench

-Barbells

-TrueOne 2400 Metabolic Cart

-Skin Fold Calipers

-Treadmill

Procedures:

-Pre testing in the CardioPulmonary Lab before 3 week training

-Maverick Activity Center, 3 times a week, for 3 weeks.

-Recorded workout data on workout logs

-Post testing in the CardioPulmonary lab after 3 week training

Data Analysis: SPSS

RESULTS

	t	df	P-Value
Body Fat Pre – Body Fat % Post	1.4	5	0.22
VO2 ml/kg/min Pre - VO2 ml/kg/min Post	0.55	5	0.606
1RM Bench Press (lbs.) Pre - 1RM Bench Press (lbs.) Post	-4.339	5	0.007
1RM Leg Press (lbs.) Pre - 1RM Leg Press (lbs.) Post	-3.115	5	0.026

Table 1: The table above shows the t-values, degree of freedom, and the p-values for the 4 dependent variables that were tested. Note that in this chart, the 2 groups were not compared based on the supplement versus placebo groups, but rather all subjects pre and post test.

Exercise	Group	Mean	SD
1RM Bench Press (lbs.) Pre	1	196.67	54.848
	2	140	5
1RM Bench Press (lbs.) Post	1	210	43.301
	2	153.33	2.887
1RM Leg Press (lbs.) Pre	1	580	206.64
	2	363.33	45.092
1RM Leg Press (lbs.) Post	1	630	238.118
	2	406.67	80.829

Table 2: The table above shows the comparison between the pre and post tests means for Bench Press and Leg Press in the two groups.

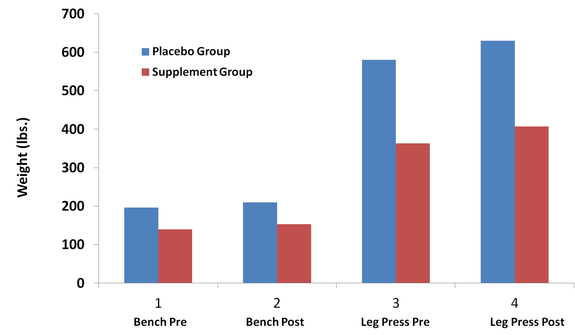

Figure 2: The figure above shows the mean for 1RM for both the Placebo and Supplement group for the pre and post tests for the Bench and Leg press.

Conclusion

There was no significant change to the placebo group and the supplement group when tested on body fat percentage, VO_2 max, and 1RM max on bench and leg press, pre and post tested. However, there was positive and significant change in all of the subject's results from their pre test to their post tests for the 1RM of the bench and leg press. A few flaws in our tests are the number of subjects that we had, the requirements of prior workout knowledge of our subjects, and the amount of time that we allotted to test them. If the subject sample size would have been much greater, the subjects be more alike in stature, and the length of the test be longer in duration, then greater significance in comparison of the two groups could be expected. Though, the data that was found is still significant in the sense that any progress on a workout regimen over just three weeks, gives a positive start for the future studies of this topic..

IRB Protocol #2012-0445