



Efficacy of g series prime 01 on aerobic performance.

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Abstract

INTRODUCTION: Prime 01 is a new pre-workout Gatorade beverage that is highly concentrated in carbohydrates that is promoted to enhance aerobic performance. The purpose of this study is to evaluate the effects of Prime 01 on aerobic performance through time, heart rate, RPE, and blood lactate measurements.

METHODS: There were a total of 5 collegiate female athletes (mean age 20.4 ± 0.89 years) that participated in this study. Participants were given specific instructions to follow prior to testing, completed a questionnaire, and informed consent was obtained. Participants were tested on two different days and were not told which day would be the placebo beverage, and which day would be the experimental beverage. Each day, the participants ingested a beverage similar in consistency and color to further eliminate the skewing of data. Resting heart rate values were measured before testing began. 15 minutes after ingesting the beverage, the participants ran 2 miles (18 laps on the track in the MAC building) while being monitored. The participants' RPE values were taken at laps 6, 12, and 18. After completing all 18 laps, their time, heart rate, and blood lactate values were recorded.

RESULTS: The average time (seconds) for the placebo beverage was 1146 seconds with a standard deviation of ± 201.62 . The average time (seconds) for the experimental (Prime 01) beverage was 1124 with a standard deviation of ± 205.60 . Time was the only variable that was statistically significant ($p < 0.05$), with all other variables presenting not significant ($p > 0.05$) values.

CONCLUSION: Results from this study display that Prime 01 of the Gatorade G series do not show a significant improvement on aerobic performance. Time was the only variable that showed any significance.

Purpose

The purpose of this study was to evaluate the effects of Prime 01 on aerobic performance through time, heart rate, RPE, and blood lactate measurements.

Methods

- 5 collegiate female athletes (mean age 20.4 ± 0.89 yrs, weight 145.6 ± 15.45 lbs, and height 65.2 ± 2.40 in) participated in this study.
- Participants were given instructions to be followed prior to testing in regards to restricting carbohydrates and caffeinated beverages.
- Participants were given a questionnaire and informed consent document to fill out before testing. The questionnaire included questions asking the participants' workout schedules, and what they had ingested the day of testing and the day before testing.
- Demographic information was collected such as age, weight, and height.
- Day 1-Experimental beverage (Prime 01) was ingested. The participants were not told if they were being given the placebo or experimental beverage.



Methods (cont'd)

- Resting heart rate values were recorded before 2 miles began by checking the individuals' radial pulse.
- 15 minutes after ingesting the beverage, participants proceeded to run 2 miles (18 laps on track in MAC) while being closely monitored.
- RPE values (6-20) were recorded during laps 6, 12, and 18. The participants were shown the Borg's perceived rate of exertion prior to testing to understand what each number signified.
- Immediately after the participants' completed running 18 laps, their heart rate (radial pulse) and time completed was recorded.
- Blood lactate values were recorded 5 minutes after the 2 miles was completed in the cardiovascular research laboratory.
- Day 2-Placebo beverage (Kool-Aid Sugar Free Tropical Punch Drink Mix with water) was ingested and all variables and same tests were recorded.



Results

Placebo	Mean	SD	Range
RESULTS:			
Time (sec)	1146	± 201.62	401
HR after exer. (bpm)	148	± 19.03	48
RPE (lap 6)	7.8	± 0.45	1
RPE (lap 12)	10.8	± 2.20	5
RPE (lap 18)	13.4	± 3.36	7
Blood Lactate	8.56	± 3.31	7

Prime 01 Gatorade	Mean	SD	Range
RESULTS:			
Time (sec)	1124	± 205.60	408
HR after exer. (bpm)	139	± 16.30	34
RPE (lap 6)	8.8	± 1.10	2
RPE (lap 12)	10.8	± 2.05	4
RPE (lap 18)	13.4	± 3.05	7
Blood Lactate	7.14	± 2.63	7.2

Results (cont'd)

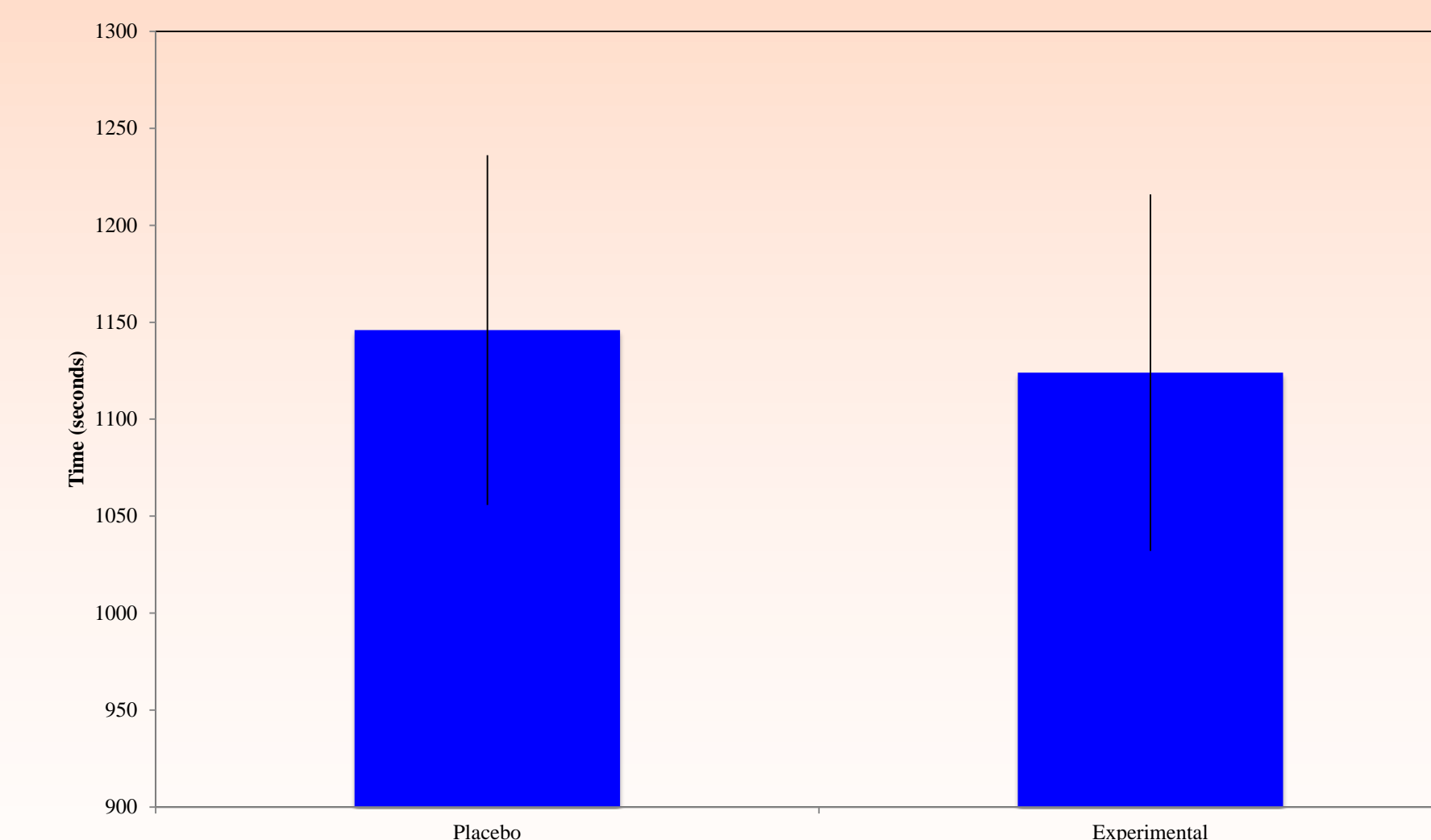


Figure 1: Relationship Between Placebo vs. Experimental Beverages Against Time

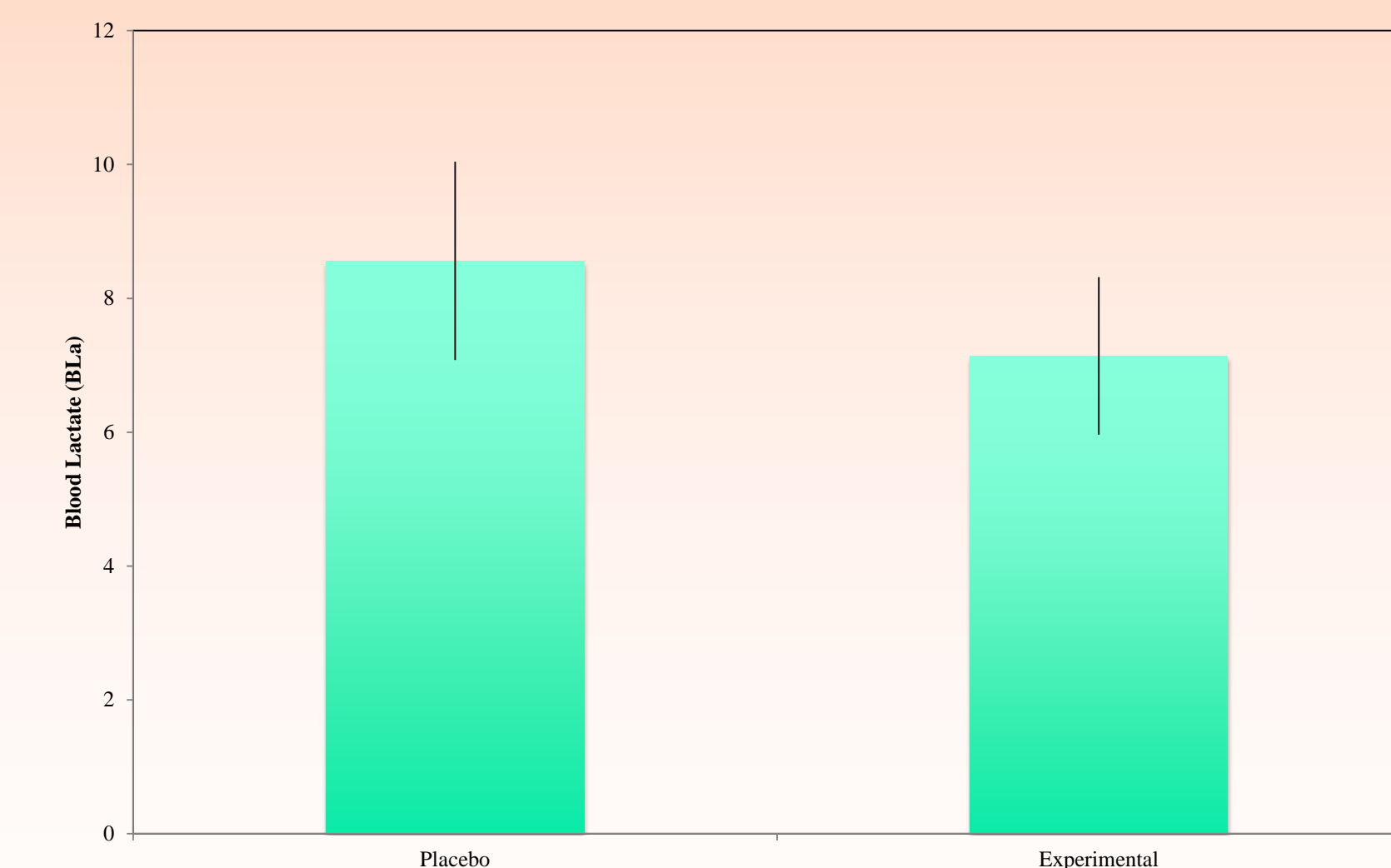


Figure 2: Relationship Between Placebo vs. Experimental Against Blood Lactate

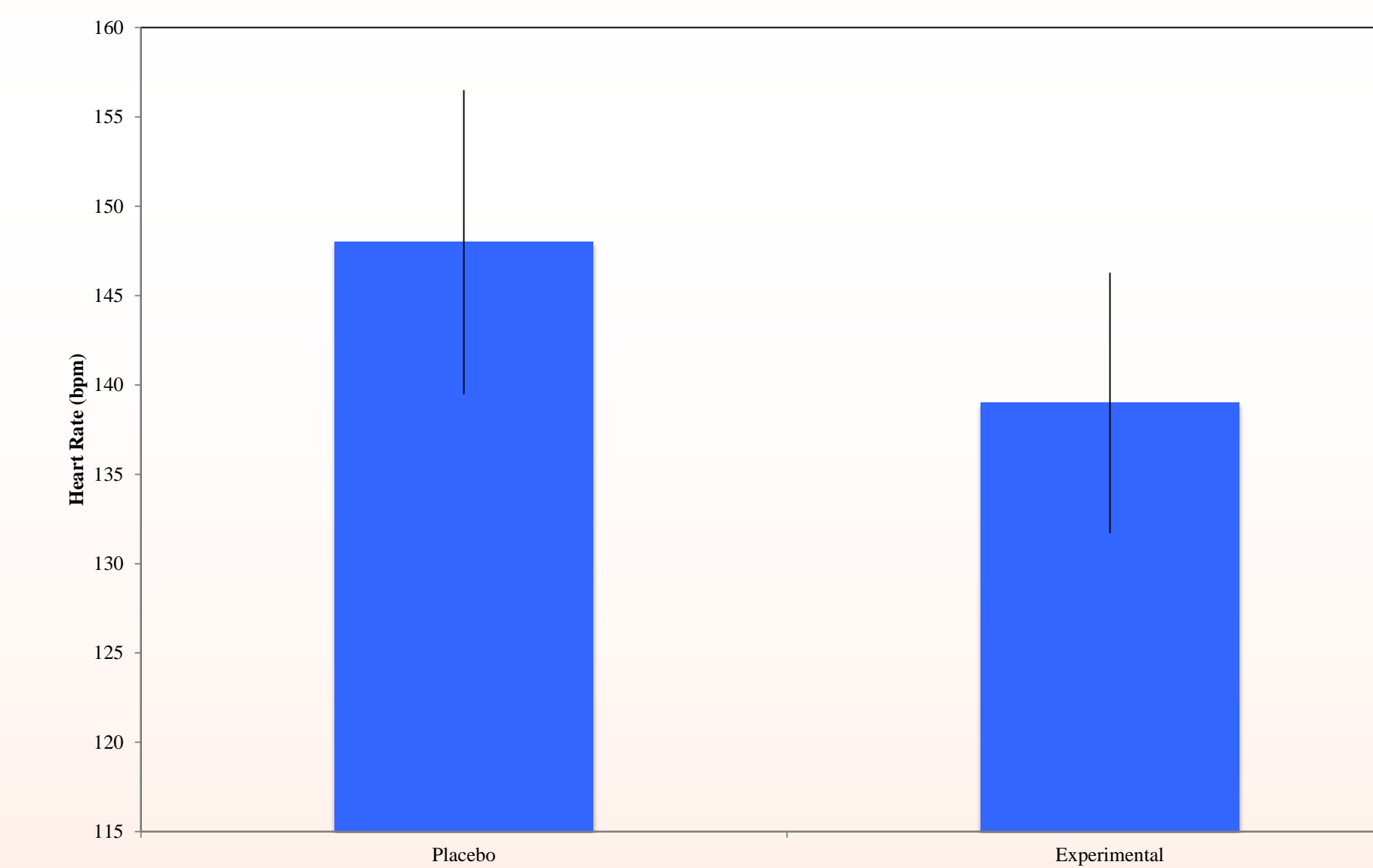


Figure 3: Relationship Between Placebo vs. Experimental Against Heart Rate Following Exercise

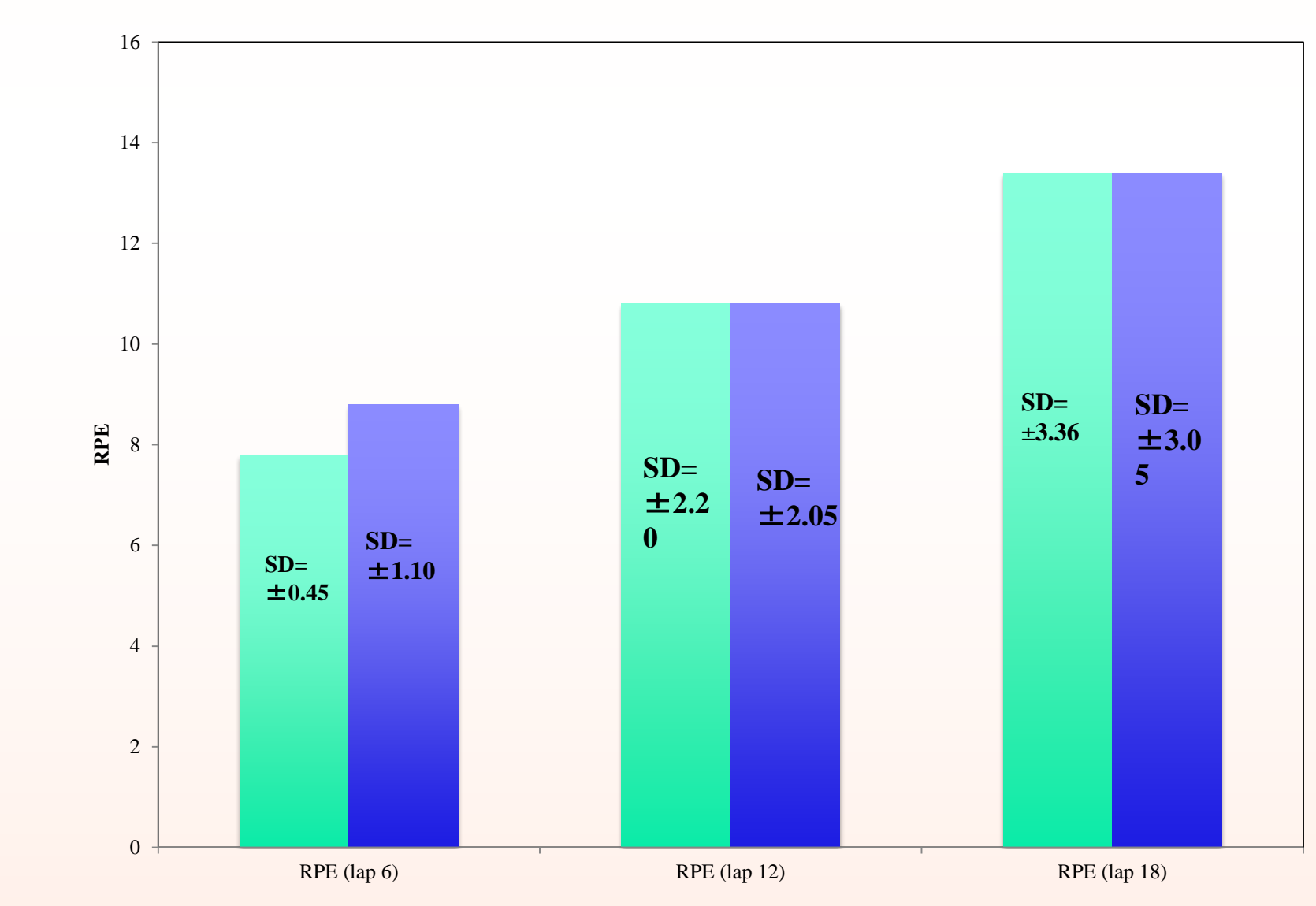


Figure 4: Relationship Between Placebo vs. Experimental Against RPE At Laps 6, 12, And 18.

- Time was the only statistically significant ($p < 0.05$) variable.
- Heart Rate, RPE, and Blood Lactate all displayed nonsignificant ($p > 0.05$) values.

Conclusions

It can be concluded from the results of this study that Prime 01 of the G series does not show a significant improvement in aerobic performance. Although the beverage allowed the participants to have better times, it is overall not as beneficial as it is promoted. It is recommended that this beverage be used for rehydration and not with the expectation of improving aerobic performance.