

POSTER PRESENTATION

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# The effects of a caffeine-containing beverage on muscle explosiveness during ballistic bench throws

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## Background

There is limited information available regarding the effects of caffeine-containing drinks on high intensity exercise performance. We hypothesized that Redline<sup>®</sup> energy drink would significantly increase ( $p < 0.05$ ) muscle explosiveness in bench throws (BT) when compared to an identical placebo (PLB) in recreationally fit subjects ( $n = 16$ ).

## Methods

After a day of dietary control and caffeine abstinence, otherwise fasted subjects performed four individual ballistic bench throws under two conditions (Redline<sup>®</sup>, PLB), with trials being separated by 48-96 hours. The peak force (FOR), peak power (POW), peak velocity (VEL), peak displacement (DSP), and maximum rate of force development (RFD) of the Redline<sup>®</sup> trial were compared to PLB.

## Results

Early results suggest a significant increase in FOR (Redline<sup>®</sup>  $329.6 \pm 108.8$  N vs. PLB  $322.9 \pm 107.1$  N [ $p = 0.015$ ]); POW (Redline<sup>®</sup>  $468 \pm 177$  W vs. PLB  $446 \pm 175$  W [ $p = 0.001$ ]); and VEL (Redline<sup>®</sup>  $1.82 \pm 0.18$  m/s vs. PLB  $1.76 \pm 0.19$  m/s [ $p = 0.0035$ ]); and a trend in the data ( $p < 0.10$ ) for DSP (Redline<sup>®</sup>  $0.92 \pm 0.08$  m vs. PLB  $0.90 \pm .10$  m [ $p = .0665$ ]); and RFD (Redline<sup>®</sup>  $529 \pm 262$  N/s vs. PLB  $493 \pm 219$  N/s [ $p = 0.0685$ ]).

## Conclusions

These preliminary data supported our hypothesis that muscle explosiveness in the bench throw would increase under the influence of Redline<sup>®</sup> energy drink.

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