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### SPORTS SUPPLEMENTS VS FAST FOOD RESULT IN SIMILAR POST-EXERCISE BLOOD RESPONSES AND SUBSEQUENT TIME- TRIAL PERFORMANCE

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## **SPORTS SUPPLEMENTS VS FAST FOOD RESULT IN SIMILAR POST-EXERCISE BLOOD RESPONSES AND SUBSEQUENT TIME-TRIAL PERFORMANCE**

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A variety of dietary choices are marketed to enhance recovery after physical activity. These include traditional sports supplements (SS) and even chocolate milk. Previous research indicates that rates of recovery are influenced by macronutrient composition, amount, and timing of ingestion. However, a majority of studies have utilized predominantly commercial SS products and neglect other commonplace options. **PURPOSE:** This study investigated the effects of SS vs fast food (FF) feedings during a 4-hour recovery period following a glycogen depletion ride on glucose and lipid blood parameters and 20k time-trial performance (TT). **METHODS:** In a randomized cross over design, 11 male subjects ( $4.1 \pm 0.62$  L/min  $\text{VO}_2$  max,  $78.8 \pm 13.6$  kg,  $31.5 \pm 11.5$  yrs), completed a 90-minute glycogen depletion ride on a cycle ergometer. Following 4 hours of recovery a TT was performed. Subjects were fed the same absolute amounts of macronutrients ( $1.54 \pm 0.27$  g/kg carbohydrate,  $0.24 \pm 0.04$  g/kg fat, and  $0.18 \pm 0.03$ g/kg protein) as either SS or FF items at 0 and 2 hours during the recovery phase with 7 days between trials. Blood draws to analyze glucose were obtained at 0, 30, 60, 120, 150, 180, and 240 minutes post exercise. Blood lipids were analyzed at 0 and 240 minutes post exercise. A visual analogue gastrointestinal discomfort questionnaire assessing feelings of hunger, fullness, sickness, discomfort, satisfaction, taste, and meal acceptability were administered at 0, 1, 2, 3, and 4 hours of recovery. **RESULTS:** No trial difference was observed for blood glucose ( $P > 0.05$ ). A feeding effect was observed at time points 30 and 150 minutes for blood glucose ( $P > 0.05$ ). There was an exercise lowering effect on cholesterol, HDL and LDL during both trials ( $P > 0.05$ ). There was no effect of trial on blood lipids. TT results for SS and FF were  $34.1 \pm 1.8$  and  $34.3 \pm 1.7$  minutes respectively ( $p > 0.05$ ) indicating no significant difference. The questionnaire displayed an increase in satiety between 0 and 2 hr feedings for FF ( $P > 0.05$ ). A feeding effect resulted in a lowering of reported hunger for both trials. **CONCLUSIONS:** These data suggest that the recovery impacts from SS and FF are not different when the macronutrient composition, amount, and timing of post-exercise feedings are held constant.