PROJECT SUMMARY

NAME OF INSTITUTION (INCLUDE BRANCH/CAMPUS AND SCHOOL OR DIVISION)

Louisiana Tech University
College of Applied and Natural Sciences - School of Human Ecology
And
College of Liberal Arts – Department of Professional Aviation

ADDRESS (INCLUDE DEPARTMENT)

School of Human Ecology
Carson Taylor Hall, Room 251 Adams Blvd
P.O. Box 3167
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PRINCIPAL INVESTIGATOR(S)

Alice E Hunt, Professor, Nutrition and Dietetics
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Janet F Pope, Professor, Nutrition and Dietetics, Associate Dean Undergraduate Studies,
Applied and Natural Sciences

TITLE OF PROJECT

Effects of Carbohydrate and Caffeine Consumption on Pilot Performance in a Flight Simulator

ABSTRACT (DO NOT EXCEED 250 WORDS)

The purpose of this project is to determine if carbohydrate intake alone or carbohydrate plus caffeine influences flight simulator test scores of professional aviation students. The influence of the previous day’s diet will also be assessed. After an over-night fast, 24 subjects, half low and half moderate caffeine users, will ingest one of four treatments (placebo, caffeine, carbohydrate, or carbohydrate plus caffeine) before participating in four standardized 50-minute flight simulator tests. The flight simulator tests have been designed to require a high level of vigilance and concentration. Subjects will serve as their own controls and each will receive all four treatments in random order. ANOVA will be used to compare flight simulator scores among the four treatments and by treatment order. A t-test will be used to determine differences in flight simulator scores based on typical level of caffeine intake and high and low levels of carbohydrate, fat and protein from the previous day’s diet.