CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY

Name(s)

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Project Number

J1207

Project Title

Exercise in the Equine

Abstract

Objectives/Goals

The objective of the project, is to determine the pre and post exercise pulse, respiration, total protein, and hematocrit in horses ridden in a 90 minute riding lesson.

Methods/Materials

Measure resting pulse, and respiration in 5 test horses and 1 control horse. Take pre exercise blood sample from the jugular vein of each horse with vacutainer needle and EDTA tube (Dr. Cronin drew the blood). Exercise horses in lesson. Take post exercise pulse and respiration. Do post exercise blood draw. Using micro-hematocrit tubes, centrifuge, and refractometer. Establish total protein and hematocrit.

Results

All horses in pre and post respiratory rates were within normal limits, as were pre and post heart rates. Pre and post total protein and hematocrit measurements fluctuated but all remained within normal limits. Our control horse had an unusually high "pre" total protein.

Conclusions/Discussion

As expected the horses heart and respiritory rate went up with exercise to varying degrees. Hematocrit and total protein varied but stayed in normal limits. We think the variations may have somthing to do with breed,temperament and age.

Summary Statement

We monitered pulse, respirartion, total protein, and hematocrit, in 5 horses before and after moderate exercise.

Help Received

Dr. Cronin drew blood and we used her lab to do blood work. Horse owners allowed horses to be in experiment. Instructor allowed experiment to take place.