

Title

Summary

Introduction

Methods

A group of 60 mice were randomly assigned to one of five treatment groups, with 12 mice in each group. Four groups received a dose of Delta-9-THC (marijuana) and one group received no dose to act as a control. The four marijuana groups received 1, 2.5, 5, and 10 mg/kg doses, respectively, of Delta-9-THC.

Observers recorded the level of spontaneous activity and the change in body temperature in each mouse. Spontaneous activity is defined as the number of times a photocell beam was interrupted by the mouse during a 10 minute period, and the change in body temperature is defined as the difference between the body temperature measured 1 hour post treatment and that measured just prior to treatment.

To examine the control group, we use a 1-sample t-test to check the hypothesis that the change in body temperature is zero. We construct a 95% confidence interval for the measure of spontaneous activity.

In this report we establish the distribution of each of the measured variables using histograms and QQ plots. We provide summary statistics of the measured variables for each of the groups. To graphically show potential relationships between the measured variables and marijuana, we use a series of boxplots, one for each treatment group.

To examine the effect of marijuana, we conduct 2-sample t-tests between the control group and each of the marijuana groups to identify any significant changes in the measured variables. The validity of the t-tests is discussed with reference to their underlying assumptions.

All hypothesis tests are 2-sided and use a 5% significance level, with test statistics and *p*-values reported in all cases. Calculations are performed using R statistical software.

Results

Conclusions