CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY

Name(s)

Nicole M. Poirier

Project Number

36051

Project Title

Active Dog, Healthy Dog: Using Treats to Keep Vet Bills Down

Abstract

Objectives/Goals

Dogs typically don't get enough exercise during the day, which leads to diabetes, heart problems, ligament failures, and other health and behavior issues that cost Americans $15.73B per year in vet bills. The objective of this experiment was to understand how much exercise a dog gets and to add devices into a dog's environment to increase the amount of exercise, thereby lowering obesity and improving the dog's health and behavior.

Methods/Materials

Twelve dogs were observed in their own homes. For a one-week period the dogs were outfitted with a Fitbit and their activity tracked set a baseline for their normal activities. For a second week the home was outfitted with a custom treat shooter designed to go off each hour, calling the dog with the owner's voice and then dropping a treat. Low, medium, and high activity levels, and amount of steps taken were collected on an minute by minute basis and compared for each dog both before and after the devices were added, and across all the dogs as a group.

Results

The experiment showed that you could increase the amount of exercise by adding devices to the home. Addition of a puzzle toy had 83% of the dogs partially or fully engaged all week. Adding the custom treat shooter engaged 100% of the dogs. For 67% of the dogs, their amount of exercise was increased by the combination of the custom treat shooter and puzzle toy. Of the owners questioned, 100% felt that their dog was getting more exercise than they actually were, and only 17% of the owners were even close to guessing the amount of exercise recommended for their dog by the American Kennel Club

Conclusions/Discussion

The Active Dog-Healthy Dog Experiment was created to look at ways to increase the well-being of our beloved four-legged friends and to decrease the chance of sickness and disease in their lives. The experiment examined ways to keep dogs active throughout the day, which would increase their level of exercise, improve their health, and preventing them from bad behaviors. By adding devices like the custom treat shooter and the puzzle toy to the dog's home, over a long period of time the added activity should result in reduced chances of injury or illness, increase the dog's life span, and create and a happier pet.

Summary Statement

This experiment tested the effectiveness of adding a custom treat shooter and puzzle toy into a dog's daily life to increase the amount of exercise and improve their health.

Help Received

My dad helped with building the custom Treat Shooter, My teacher Mrs. Gillum helped with reviewing and editing experiment, Dr Kurowski, Veterinarian helped with providing guidance on experiment, and Donald Robinson, Phd. with reviewing the data.