

A Randomized Trial Comparing the Weight Loss of Canines That Walked With and Without the TrimDog Exercise Belt

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KEY WORDS: Dog, Weight loss, Exercise Belt

ABSTRACT

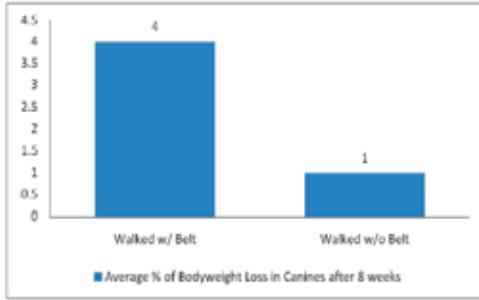
This study was conducted to determine if adding a weighted belt to a canine's walking regimen could result in greater weight loss. Twelve canines, aged 2-10 years, classified as overweight by their veterinarian, were randomized into two groups: canines that walk with the TrimDog Exercise Belt and canines that walk without the TrimDog Exercise Belt. Their owners were instructed to walk five times per week for 30 minutes a walk at a brisk pace, for a total of 8 weeks. All participants were instructed to make no changes to their existing diets during this time period. Weigh-ins were conducted at Atlantic Animal Hospital by their staff prior to the start, Week 4, and upon completion. The weight of the TrimDog Exercise Belt is determined by size of the canine. Sizing of each canine is specific to the circumference of the canine through the torso, specifically at the inferior costophrenic angle of the rib cage. Canines measuring 7-10 inches are considered X-small and the weight belt weighed a total of 7 ounces. Eleven to

sixteen inches are considered small, and the weight belt weighed a total of 7 ounces. seventeen to twenty four inches are considered medium and the exercise belt weighed a total of 11 ounces. Twenty five to thirty two inches are considered a large, and the weight belt weighed a total of 16 ounces. After week 8, canines that walked with the TrimDog Exercise Belt lost an average of 4% of bodyweight. Canines that walked without the TrimDog Exercise Belt lost an average of 1% of bodyweight.

INTRODUCTION

According to 2006 statistics from the *International Journal of Applied Research in Veterinary Medicine*, 34% of dogs in the United States are estimated to be overweight or obese.¹ That represents one in three dogs. The primary causes of obesity in dogs are essentially the same as in people: poor diet, inadequate portion control, and lack of exercise. The diet and portion control are easily addressed by changing foods and properly measuring food portions. However, increasing exercise can often be a bigger hurdle to overcome. Many dog owners are reluctant or unable to change the duration

Figure 1. Comparison of Average Weight Loss between Weighted and Non-Weighted Groups



and frequency of their dog’s walks due to time constraints in their everyday lives.

If we are not able to satisfactorily alter frequency and duration, then we need to address the possibility of increasing the intensity of each walk in a dog’s exercise program. This will allow them to burn more calories per walk to prevent them from becoming overweight or help an already overweight dog achieve a healthier weight.

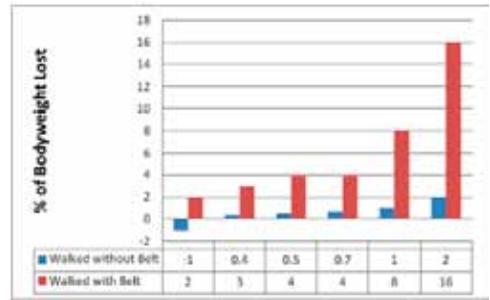
A study entitled, “The Effect of Weighted Vest Walking on Metabolic Responses and Ground Reaction Forces” conducted by The American College of Sports Medicine in 2006² first introduced the idea of modifying the intensity of a walk to burn more calories in humans. The study concluded that wearing a weighted vest could increase the metabolic cost, relative exercise intensity, and loading of the skeletal system during walking. These results validated the efficacy of intensity modification using increased resistance while walking to produce an environment of greater caloric expenditure. In order to reproduce the same effects in canines the ergonomically designed TrimDog exercise belt was constructed in place of the weight vest that was used for humans.

The purpose of this study was to demonstrate whether or not canines would lose more weight while walking with the TrimDog Exercise belt than canines that walked without the TrimDog Exercise Belt.

METHODS

16 canines were chosen to participate in the

Figure 2. Head to Head Comparison of Weight Loss between Weighted and Non-Weighted Groups



clinical trial. The canine’s ages ranged from 2-10 years old. The breeds of the participants in the trial included (2) Bichon Frises, (1) Basset Hound, (2) Beagles, (1) Jack Russell Terrier, (3) Labs, (1) Chihuahua/Mix, (1) Maltese, (1) Lab/Mix, (2) Pugs, (1) Shih-Tzu, (1) Beagle/Mix. All canines were classified as overweight by a veterinarian’s physical examination.

The canines were randomized into 2 groups: canines that walk while wearing the TrimDog Exercise Belt and canines that walk without wearing the TrimDog Exercise Belt. Both groups were instructed to walk 5 times per week for 30 minutes a walk over 8 week’s time; for a total of 1,200 minutes walked. All walks were to be executed at a “brisk” pace. “Brisk” was defined as a continuous pace with infrequent stops to elevate the canine’s heart rate above a normal resting rate. All participants were instructed to make no changes to their dog’s existing diets during this time period. Weigh-ins were conducted at Atlantic Animal Hospital by their staff prior to the start (0 days elapsed), Week 4 (30 days elapsed), and upon completion (60 days elapsed). All weights were recorded in pounds to the nearest ounce (Ex. 12.4 equaling 12 pounds, 4 ounces).

The human companions of the canines that walked with the TrimDog Exercise Belt were given a brief tutorial on how to properly apply the TrimDog Exercise belt to their canine. The weight of the TrimDog Exercise Belt worn by each canine was determined by size of the canine. Sizing of

each canine is specific to the circumference of the canine through the torso, specifically at the inferior costal angle of the rib cage.

Canines measuring 7-10 inches are considered X-small, and the weight belt weighed a total of 7 ounces; 11-16 inches are considered small and the weight belt weighed a total of 7 ounces; 17-24 inches are considered medium and the exercise belt weighed a total of 11 ounces; and 25-32 inches are considered large and the weight belt weighed a total of 16 ounces. It should be noted that the X-small belt weighed the same as the small belt due to the fact that no X-small belt was available at the initiation of the trial and was custom made for that dog.

RESULTS

The study began with 16 canines, 12 of which completed the trial. Four canines were dropped due to their inability to maintain the prescribed walking regimen of five times per week. After 8 weeks, canines that walked with the TrimDog Exercise Belt lost an average of 4% of their bodyweight, while canines that walked without the TrimDog Exercise Belt lost an average of 1% of their body weight. The group that walked with the TrimDog Exercise Belt had a minimum weight loss of 2% and a maximum weight loss of 16% of body weight.

The group that walked without the TrimDog Exercise Belt had a maximum weight loss of 2% and a minimum weight loss of positive 1% gain of body weight. The largest weight loss number was not used in determining average weight loss in order to reflect a more accurate depiction of results. There was no correlation between the age of the dog and weight loss found after review.

DISCUSSION

Although overall results indicated that the TrimDog Exercise Belt is a successful weight loss tool, the trial did have limitations that should be taken into consider-

ation. It was determined that neither the Chi-square test nor Fisher's exact test could be used for accurate statistical analysis due to the small testing population. It is recommended that a follow-up trial with a population of 100+ participants be conducted to further validate the results.

Another limiting factor of the trial is that the participants were on different diets and may have inadvertently received a higher or lesser caloric intake. The canine's owners were instructed to maintain their dog's current diet in order to maintain homeostasis. By maintaining homeostasis, the differences in weight loss between the two groups could have only been contributed to the addition of the TrimDog Exercise Belt.

The results clearly indicated that dogs that walked while wearing the TrimDog Exercise Belt lost more weight than dogs that walked without wearing the TrimDog Exercise Belt. Never has there been a clinical trial to measure the weight loss in canines without the manipulation of their diet. The biggest strength of the trial is the fact that it is the first time a canine exercise apparatus used for weight loss has been clinically tested. Exercise is not only a major component of weight loss in dogs, but also a huge factor in the prevention and/or treatment of heart disease, diabetes, and osteoarthritis.¹ The study has given new incite as to why a walking regimen using the TrimDog Exercise Belt should be considered as an adjuvant therapy when prescribing weight management food to overweight dogs.

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