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# Implementing Animal Therapy into Current Medicinal Practices

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# Implementing animal therapy into current medicinal practices.

Jenna Schiefelbein, ATC, PA-S

## Abstract

- The purpose of this study was to explore an unconventional intervention of medicine; specifically the integration of animals into current healthcare practices.
- The review of literature evaluated the implementation of animal therapy in medicine, both in the past and present.
- It was demonstrated that incorporating animal-assistance therapy into modern day medicine had a positive correlation with overall patient health, pain control, and disposition.



## Research Questions

- In patients suffering from varying disease or disorder, does animal therapy, versus no animal therapy, provide an overall benefit to the patient?
- Physiologically, how does animal therapy affect a patient?
- Can animal therapy decrease the perception of pain?
- What effect does animal therapy have on overall disposition and mood?



## Discussion

- **In patients suffering from long term disease, does animal therapy, versus no animal therapy, provide an overall benefit to the patient?**
  - Animal therapy shows potential benefit in three main domains: providing pain relief, alleviating depression and anxiety, and improving overall mood and disposition. Given the broad expanse and common occurrence of these domains, it is safe to say that many patients may benefit from animal therapy.
- **Physiologically, how does animal therapy affect a patient?**
  - Increased levels of oxytocin after an encounter with a pleasant animal have been shown to lower blood pressure, heart rate, and mean arterial pressure in adult patients.
  - In pediatric patients engaging in animal therapy, no decrease in blood pressure or heart rate was appreciated. This is likely due to the higher incidence of hypertension with advancement of age.
  - It is imperative to consider that the patients involved in animal therapy are receptive to the specific animals being utilized. A fearful or apprehensive patient would likely demonstrate different, or altogether reversed, physiological response.
- **Can animal therapy decrease the perception of pain?**
  - Pain reduction amongst hospitalized pediatric patients utilizing animal therapy was four times greater than those who did not receive any animal therapy.
  - Those receiving animal therapy after total joint arthroplasty reported a lower overall pain level as well as a more rapid decrease in pain after and between physical therapy sessions.
  - In the chronic pain outpatient setting, clinically meaningful pain relief was demonstrated by 22 % of patients engaging in animal therapy.
  - Pain relief was demonstrated in both the pediatric and adult inpatient population, both with and without regard to a specific disease process.
- **What effect does animal therapy have on overall disposition and mood?**
  - Increases in oxytocin after an animal encounter results in an increase in social interaction and empathy, as well as a decrease in aggression, depression, and anxiety.
  - Inpatients diagnosed with schizophrenia demonstrated an increase in positive psychiatric symptoms such as self-esteem and self-determination after participating in animal therapy.
  - Positive mood and disposition changes were noted in both the inpatient and outpatient settings, although studies were only performed on adult patients.
- **Current implementation of animal therapy.**
  - Shows promise in both the inpatient and outpatient setting, hospitals, assisted living facilities, hospice, clinics, and nursing homes.
  - Therapy Dog International is the most prominent society in the US for implementing therapy dog standards, training, and certification.
- **Bad candidates for animal therapy.**
  - Fearful or immunosuppressed individuals should not receive animal therapy.
    - Harper et al, 2014, referenced the incidence of zoonotic infections in hospitalized patients, citing two longitudinal studies with thousands of patients that did not include one instance of a zoonotic infection.

## Applicability to Clinical Practice

- Animal/handler teams are generally on a volunteer basis, providing free services to organizations as well as patients.
- Allows an opportunity for a “second chance” for many displaced or unwanted animals, especially dogs and horses.
- Could potentially decrease or altogether avoid the usage of pain medications in patients experiencing discomfort.
- May lessen feelings of depression or anxiety while promoting a more positive disposition.
- Implementing an animal therapy program is an effective, cheap alternative therapy with a low risk of adverse side effects that has shown mutual benefit to both the patient as well as the animal.
- Does your community or work place offer animal therapy? If so, could some of your patients benefit from their services? If not, would it be reasonable to implement such a program?

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## Introduction

- PubMed, The Cochran Library, and MEDLINE were utilized, using key words “pet therapy” or “animal therapy.”
- The above criteria produced research articles that utilized a myriad of different animals in the setting of varying disease processes, including but not limited to: dogs, dolphins, and horses, and their effects on cardiovascular disease, anxiety levels, mood disposition, and pain perception.
- No effort was made to discriminate between types of animals used, nor between specific disease processes for this project.

## Literature Review

- Beetz et al, 2012, theorized an increase in oxytocin is likely responsible for the positive effects seen from animal therapy. Levels of oxytocin were seen to increase after interaction with a friendly animal.
  - Oxytocin has shown many benefits, including stimulating social interaction as well as reducing aggression and depression. It also decreases anxiety, blood pressure, and heart rate by decreasing amounts of catecholamines in the body. Additionally, it increases pain threshold.
- Braun et al, 2009, demonstrated a significantly lower pain score for pediatric patients utilizing animal therapy during their hospital stay (p=0.006).
- Harper et al, 2014, performed a RCT on adult patients s/p total joint arthroplasty and established a lower overall pain rating after each physical therapy sessions (p<0.001) as well as a more rapid decrease in pain between sessions (p=0.003).
- Chu et al, 2009, conducted a RCT with schizophrenic adult inpatients and found that those engaging in animal therapy once a week demonstrated significant improvement in self-esteem, self-determination, and positive emotional symptoms (p=0.05).
- Nurenberg et al, 2014, demonstrated a decrease in violent behaviors when implementing equine-assisted therapy at an inpatient psychiatric facility (p<0.05).
- Marcus et al, 2012, demonstrated an improvement in pain, fatigue, stress, aggravation, anxiety, sadness, irritability, calmness, pleasantness, and cheerfulness when utilizing animal therapy with chronic pain outpatients (p<0.0001).

## Statement of the Problem

- While disease and illness is nothing new, there must be a continued effort to initiate and incorporate new and innovative forms of therapy to improve the quality of treatment offered to patients.

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