

Animal-Assisted Therapies

When companion animals or therapy animals – or pets - walk into a room, people often brighten up. Most of us have encountered someone with a service dog, seen a therapy dog at work, or experienced the healing power that can come from having a pet. For many people, animals are central to their overall health.

This clinical tool focuses on the health benefits of pet ownership and, more specifically, animal-assisted therapy (AAT). How might animals contribute to a person's health?

Animals and Health: A Background

According to the National Pet Owners Survey, 68% of households owned a pet as of 2017. This is up from 56% in 1988.¹ 40% of Americans own a dog and 29% own a cat.² There are 90 million dogs, 94 million cats, 139 million freshwater fish, and 20 million birds that are pets in the US.

The biophilia hypothesis holds that human beings are genetically predisposed to have an affinity with other organisms. The hygiene hypothesis posits that being around pets leads to exposures to allergens that strengthen the immune system, and therefore being around animals, especially as a child, can give rise to certain health benefits.³

Humans have been connected with animals since before recorded history, as is evidenced by cave paintings from around the world. The first documented use of animals therapeutically was in ninth-century Belgium, when people with disabilities were asked to care for farm animals. Animals were used in the 1700s at the York Retreat, a progressive “lunatic asylum” for its times. In the 1800s, Florence Nightingale recommended animals as companions for the infirm.³

Animals can contribute to health in the following contexts:⁴

- As pets
- As resident animals—living in a facility and being cared for by its staff, residents, or volunteers)
- As service animals—examples include dogs that assist people with visual impairments
- As pets that visit people with no specific therapeutic goal on the agenda—known as animal-assisted activities (AAAs)
- As the focus of animal-assisted therapy—the use of an animal in a therapeutic setting to bring about a specific set of goals (AAT can be provided in a variety of settings, to both groups or individuals. It is delivered under the supervision of a trained human service provider.)

The term *animal-facilitated therapy* may be used to include both AAT and AAA.⁵⁻⁷

Licensure and Education

Most states allow animals to enter health care facilities—except in food preparation and serving areas or in places where conditions must remain sterile. Some states require health certificates for animals. Many programs, including many online academic institutions, offer training in AAT. On course completion, a person might receive a Certification in Animals and Human Health or one of many other AAT degrees. The website <http://www.animaltherapy.net> contains a number of links to certification courses and therapy dog training programs.

Efficacy

Of course, most people do not need research to convince them that pets and other companion animals enrich our lives, but studies do confirm what we instinctively know—they do. One way they help is at a social level. For example, kids in wheelchairs receive more positive attention from other people when they are accompanied by service dogs.⁸

Physiological Effects

Connections between humans and dogs affect both species. Oxytocin and other hormones linked to affection, behavior, and empathy increase. Beta-endorphins, dopamine, prolactin, and other substances also increase for both. A dog-human relationship decreases cortisol levels for both as well; this likely indicates that the dog-human relationship has the potential to decrease stress levels in both.⁹ Mirror neuron activity (discussed in the “Family, Friends & Coworkers” overview) also seems to play a role.¹⁰

Clinical Studies of Pet Ownership

Pet owners—particularly dog owners—exercise more and have lower cardiac disease risk.¹¹ Dog owners also, according to many studies, have lower blood pressure, total cholesterol, and triglyceride levels.

Cats have their benefits too. The National Health and Nutrition Examination Survey Mortality Follow-Up surveyed 4,435 Americans from ages 30 to 75 and found that cat ownership led to a 30% reduction in the risk of fatal heart attacks.¹² Other studies have not shown positive relationships,¹³ but overall, there seems to be benefit.

A study conducted on a geriatric rehabilitation unit found that when caged birds were introduced to the facility, patients had improved focus, enhanced social interactions, and left their rooms more frequently.¹⁴

Horses help too. For example, the Seaside Horses for Heroes Program found that caring for and riding horses regularly helped a group of veterans enhance communication, confidence, and assertiveness.⁵

Reviews of AAT

Overall, studies of AAT show a favorable benefit. A 2014 systematic review concluded that “AAT may be an effective treatment for mental and behavioral disorders such as depression, schizophrenia, and alcohol/drug addictions.”¹⁵ A 2011 review of multiple studies concluded, “Overall, ownership of domestic pets, particularly dogs, is associated with positive health benefits.” There are theories that this is due to improvements in mood and emotional state, as

well as changes in autonomic activity and endothelial function, which equates, among other things, to lower blood pressure and fewer cardiac arrhythmias.¹⁶

A 2013 review of equine (horse-related) therapies concluded, “In the aggregate, the evidence is promising in support of the effectiveness of complementary and adjunct interventions employing equines in the treatment of health challenges. Further studies are needed...”¹⁷

Furthermore, a 2012 review concluded that, in addition to many clear benefits for hospitalized children, AAT also has social, mental, psychological, and emotional benefits for hospitalized adults.¹⁸ The review found that:

- Cancer patients reported that AAT lowered their anxiety and distracted them in positive ways from the hospital environment.
- People living with mental illnesses—including schizophrenia and behavioral and mood disorders—had improved quality of life, self-efficacy, and ability to cope. They also experienced more social engagement.

People with acquired brain injury and cognitive impairment benefit from AAT in combination with other cognitive rehabilitation techniques.^{19,20} A growing body of research is showing promise for PTSD as well.²¹

Safety

Pet ownership and animal-assisted therapies are quite safe overall. Some people have allergies to animals and should not be exposed to them. Scratches and bites are extremely rare, but appropriate supervision always should be provided for animal-facilitated activities. Frail elderly patients, people who are prone to infection, and immune-compromised people may be at risk in some circumstances. Zoonotic infection risk and allergies should be borne in mind, but again, these are rare.²²

Of course, it also should be ensured that pets and therapy animals are treated humanely and not placed in danger. Therapists who provide AAT should be appropriately credentialed and comfortable working in health care settings. The decision to use AAT must be individualized based on patient needs.

Opinions

Overall, hospital staff tend to appreciate the benefits of AAT, though they may be skeptical before seeing it introduced into a hospital setting. People who seem to do the best with AAT are those who had experiences with animals as children, so it may be helpful to ask about previous pet ownership and childhood experiences with animals when taking a patient history. For many people, pets are members of their family. When you consider Family, Friends & Coworkers as part of a health plan, keep the potential of animal healing in mind.

Resources

Organization

- [Animal Therapy](#): Contains a number of links to certification courses and therapy dog programs.

- [National Center for PTSD](#): Has detailed information on “Dogs and PTSD.”
- [Pet Partners](#) (formerly the Delta Society): Nonprofit organization that compiles research results and trains volunteers and their pets (dogs, mainly) for participation in animal-assisted activities and animal-assisted therapy throughout the United States and other countries. Phone: (425) 679-5500

Book

- Sakson, Sharon. *Paws and Effect: The Healing Power of Dogs*. New York: Alyson Books, 2007. A good book for patients.

Author(s)

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References

1. Facts and statistics: pet statistics. Accessed October 17, 2018, <https://www.iii.org/fact-statistic/facts-statistics-pet-statistics>
2. Newport F, Jones JM, Saad L, Carroll J. Americans and their pets. Accessed October 17, 2018, <https://news.gallup.com/poll/25969/americans-their-pets.aspx>
3. Horowitz S. The human—animal bond: health implications across the lifespan. *Altern Complement Ther*. 2008;14(5):251-256.
4. American Veterinary Medical Association. Guidelines for animal assisted activity, animal-assisted therapy and resident animal programs. Accessed July 31, 2014. <https://www.avma.org/KB/Policies/Pages/Animal-Assisted-Interventions-Guidelines.aspx>
5. Matuszek S. Animal-facilitated therapy in various patient populations: systematic literature review. *Holist Nurs Pract*. Jul-Aug 2010;24(4):187-203. doi:10.1097/HNP.0b013e3181e90197
6. Healthcare Analysis and Information Group (HAIG). FY 2015 VHA Complementary and Integrative Health (CIH) Services (formerly CAM). Department of Veterans Affairs, Veterans Health Administration. Accessed September 27, 2018, https://sciencebasedmedicine.org/wp-content/uploads/2016/07/FY2015_VHA_CIH_signedReport.pdf
7. Department of Veterans Affairs, Veterans Health Administration, Healthcare Analysis and Information Group. 2011 Complementary and Alternative Medicine Survey. Accessed February 10, 2014, https://www.research.va.gov/research_topics/2011cam_finalreport.pdf
8. Mader B, Hart LA, Bergin B. Social acknowledgments for children with disabilities: effects of service dogs. *Child Dev*. 1989;1529-1534.
9. Odendaal J, Meintjes R. Neurophysiological correlates of affiliative behaviour between humans and dogs. *Vet J*. 2003;165(3):296-301.
10. Marcus DA. The science behind animal-assisted therapy. *Curr Pain Headache Rep*. Apr 2013;17(4):322. doi:10.1007/s11916-013-0322-2
11. Anderson WP, Reid CM, Jennings GL. Pet ownership and risk factors for cardiovascular disease. *Med J Aust*. 1992;157(5):298-301.
12. Qureshi AI, Memon MZ, Vazquez G, Suri MFK. Cat ownership and the risk of fatal cardiovascular diseases. Results from the second national health and nutrition examination study mortality follow-up study. *J Vasc Interv Neurol*. 2009;2(1):132.
13. Parker G, Gayed A, Owen C, Hyett M, Hilton T, Heruc G. Survival following an acute coronary syndrome: a pet theory put to the test. *Acta Psychiatr Scand*. 2010;121(1):65-70.



14. Falk H, Wijk H. Natural activity: an explorative study of the interplay between cage-birds and older people in a Swedish hospital setting. *Int J Older People Nurs.* 2008;3(1):22-28.
15. Kamioka H, Okada S, Tsutani K, et al. Effectiveness of animal-assisted therapy: a systematic review of randomized controlled trials. *Complement Ther Med.* Apr 2014;22(2):371-90. doi:10.1016/j.ctim.2013.12.016
16. Arhant-Sudhir K, Arhant-Sudhir R, Sudhir K. Pet ownership and cardiovascular risk reduction: supporting evidence, conflicting data and underlying mechanisms. *Clin Exp Pharmacol Physiol.* 2011;38(11):734-738.
17. Selby A, Smith-Osborne A. A systematic review of effectiveness of complementary and adjunct therapies and interventions involving equines. *Health Psychol.* 2013;32(4):418.
18. Reed R, Ferrer L, Villegas N. Natural healers: a review of animal assisted therapy and activities as a complementary treatment for chronic conditions. *Rev Lat Am Enfermagem.* 2012;20(3):612-618.
19. Stapleton M. Effectiveness of animal assisted therapy after brain injury: a bridge to improved outcomes in CRT. *NeuroRehabilitation.* Jun 18 2016;39(1):135-40. doi:10.3233/nre-161345
20. O'Haire ME, Guerin NA, Kirkham AC. Animal-assisted intervention for trauma: a systematic literature review. *Front Psychol.* 2015;6:1121. doi:10.3389/fpsyg.2015.01121
21. Mims D, Waddell R. Animal assisted therapy and trauma survivors. *J Evid Inf Soc Work.* Sep-Oct 2016;13(5):452-7. doi:10.1080/23761407.2016.1166841
22. Natural Standard Database. Pet therapy. Updated November 5, 2017. Accessed October 17, 2018, <https://naturalmedicines.therapeuticresearch.com/databases/health-wellness/professional.aspx?productid=1305>