



Pets and The Aging

Science Supports the Human-Animal Bond

Authored by

PAWSitive InterAction

P.O. Box 79231

Atlanta, GA 30357

www.pawsitiveinteraction.org

Table of Contents

Introduction	3
The Challenge	4
The Pet Prescription	4
Pets and “Happiness” Hormones	6
Pets as Social Support for the Elderly	8
Conclusion	9

About PAWSitive InterAction

PAWSitive InterAction, created in May 2001 to promote and celebrate the human-animal bond, is a nonprofit alliance of the following premier Atlanta organizations:

Atlanta Humane Society

Founded in 1873, the Society exists for the purpose of preventing cruelty, relieving suffering, providing humane treatment for animals and encouraging the human-animal bond on a regional basis in Georgia.

Happy Tails Pet Therapy

Founded in 1991, Happy Tails is a nonprofit organization of dedicated volunteers and their pets who perform animal-assisted therapy visits for healthcare facilities, social agencies and special needs programs.

Merial

One of the world's leading veterinary pharmaceutical and vaccine companies, Merial is committed to enhancing through innovation the health and well-being of animals. The company produces and markets leading pet products FRONTLINE® and HEARTGARD®.

Pets Are Loving Support (P.A.L.S.)

Founded in 1990, P.A.L.S. is a nonprofit organization whose mission is to provide ongoing care and support for pets of persons living with HIV/AIDS, critical illnesses and other disabilities in the Atlanta area.

Zoo Atlanta

Founded in 1889, Zoo Atlanta is empowered to exhibit, interpret, study and care for wildlife in superior environments; to conserve biodiversity throughout the world to educate, enlighten and entertain the public; and to contribute to the cultural life of the community.

For more information on this unique public-private partnership, and to access the widely distributed white paper from the 2002 summit, *A Scientific Look at the Human-Animal Bond*, visit www.pawsitiveinteraction.org.

Introduction

In April 2003, PAWSitive InterAction held its second annual educational summit — “Think PAWSitive! 2003: Pets and The Aging” — in Atlanta, Georgia, to explore current scientific thinking about the important role pets play in the lives of people as they grow older. With 76 million aging baby boomers in the United States today, the summit provided vitally important information by bringing together thought leaders in the field to explore the science behind the human-animal bond.

The 2003 summit, hosted at Emory University in collaboration with the Emory Center for Health in Aging, brought together experts in geriatric medicine, oncology, psychiatry, veterinary medicine and senior living to discuss scientific research, case studies, anecdotal evidence and trends that validate the therapeutic benefits of the bond between humans and animals. This paper is a summary of the key presentations at the summit.

Presenters included:

- Dr. Edward Creagan, professor, Mayo Clinic Medical School, American Cancer Society Professor of Clinical Oncology, The John & Roma Rouse Professor of Humanism in Medicine and member of the Advisory Board for PAWSitive InterAction
- Dr. Rebecca Johnson, associate director for research, Center of Excellence on Aging, University of Missouri-Columbia

In addition, Dr. Sandra Barker, a professor of psychiatry and director of the Center for Human-Animal Interaction at Virginia Commonwealth University, and member of the Advisory Board for PAWSitive InterAction, led a panel discussion with local experts on “Pets as Social Support for the Elderly.”

The Challenge

Americans are living longer than ever. A woman in good health at age 50 today can expect to live another 45 years. A man who reaches the age of 65 can anticipate another 20 years of life. Most women will spend the last 12 to 15 years of their lives alone. A pet can alleviate the loneliness that many seniors experience. But pets also can provide demonstrable health benefits to the elderly. Scientists are increasingly providing hard data to show the ways in which the human-animal bond improves health. The results of the research can contribute to changes in policy across the medical, insurance and gerontological fields that ultimately will officially recognize the real contributions pets make to their aging owners, including enhanced health, reduced depression and increased happiness.¹

The fervent hope of PAWSitive InterAction is that the research brought to the attention of the public through its summit meetings will result in needed changes in policies and procedures around the nation to take advantage of the significant, concrete and demonstrable health benefits of the human-animal bond and facilitate the increased use of animals in caring for the elderly.

The Pet Prescription

For 30 years, Dr. Edward Creagan has been writing prescriptions that instruct cancer patients to get a pet. A renowned professor of oncology at Mayo Clinic Medical School, Creagan said pets can help patients cope with cancer, and that, in addition, animals can be a significant factor for successful aging.

“Studies suggest that pets can do more than keep you young at heart,” Creagan said. “They can help keep your heart — and the rest of you — younger and healthier.”

“If pet ownership was a medication, it would be patented tomorrow.”

*Dr. Edward Creagan
professor
Mayo Clinic Medical School*

¹ *Journal of the American Gerontological Society*, March 1999, vol. 47.

Rx for Successful Aging

- Health is crucial. The key is walking 30 minutes a day, stretching religiously and weight training.
- Nutrition: “We should eat like a rabbit.” (Focus on vegetables)
- Have a purpose and meaning in life. “We need something to make us feel part of something over and above ourselves.”
- Relationships.
- Spirituality, a sense of a higher power.
- Sleep — six to eight hours a night.
- Get a pet. “The pet that you rescue will really rescue you.”

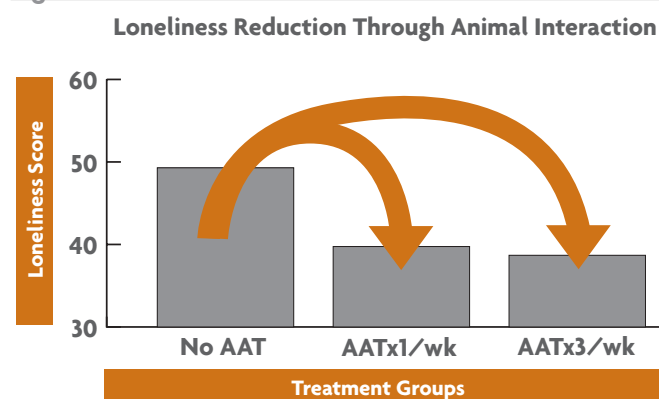
Dr. Edward Creagan
professor
Mayo Clinic Medical School

Pet ownership can help lower blood pressure, decrease the number of visits to a physician, reduce depression, increase heart attack survival and decrease loneliness.²

“Now if I were the CEO of an HMO looking at the bottom line, this would really get my attention,” he said. “If pet ownership was a medication, it would be patented tomorrow.”

Animal-assisted therapy has clearly demonstrated that even once-a-week exposure to a pet can produce a significant reduction in an elderly person’s loneliness. A study of three groups — one with no animal-assisted therapy, another with one 30-minute animal-assisted therapy session per week and a third with three 30-minute sessions — showed that therapy with animals significantly decreased loneliness in patients who interacted with the animals.³ (see figure 1) “This was a real biological effect, and it didn’t happen by serendipity,” Creagan said.

Figure 1



Banks and Banks, *Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 2002.

Creagan cited a study of patients a year after they suffered heart attacks that found that a person can increase fourfold his or her odds of being alive a year after a heart attack by having a pet. “If you had a pet, nine patients out of 10

² Generations, vol. XXV, no. 2, Summer 2001; *New York Times*, July 24, 2001.

³ Banks and Banks, *Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 2002, 57(7), M428-432.

were alive one year after a heart attack. If you did not have a pet, only seven patients out of 10 were alive at one year,” he said. In examining deaths, the study found that “for individuals who had no pets, 28 percent were dead at one year. If you had a pet, only six percent were dead.”⁴ (see figure 2)

In a study of stockbrokers with high blood pressure, all of the subjects were given the medication lisinopril, and half of them were given a pet. Those with a pet experienced half the increase in blood pressure under stress as those without a pet. “Interestingly, the stockbrokers who did not have pets went out and bought pets,” Creagan said. “The moral of the story is, pills plus a pet will help you achieve a meaningful and creative life.”^{5A, 5B}

The presence of an animal can even provide benefits to Alzheimer’s patients. A Purdue University study found that the simple presence of an aquarium with fish at mealtime increased the appetites of Alzheimer’s patients, who often undereat. “This is rock solid proof that eating in the presence of fish has a calming quality and helps people increase their caloric intake,” Creagan said. (A chart illustrating this study appeared in the 2002 PAWSitive InterAction Summit white paper: *A Scientific Look at the Human-Animal Bond*. To download the paper visit www.pawsitiveinteraction.org.)

Pets and “Happiness” Hormones

Scientists already have established that pet ownership is associated with lower depression in older adults; now they are trying to find how they can demonstrate that the human-animal bond helps people stay healthier, be more active, feel better and be less depressed — in other words, that animals can be a preventative measure in the aging process, according to

Figure 2

One-Year Survival after a Heart Attack		
	<u>Pets</u>	<u>No Pets</u>
Living	50 (94%)	28 (72%)
Dead	3 (6%)	11 (28%)
Total	53	39

Friedmann E, Katcher AH, Lynch, JJ and Thomas SS: Public Health Reports, 95, 307-312, 1980.

⁴ Friedmann E, Katcher AH, Lynch, JJ and Thomas SS: Public Health Reports, 95, 307-312, 1980.

^{5A} Allen, Izzo and Shykoff, *American Heart Association Scientific Sessions*, Nov. 7, 1999.

^{5B} Allen K, Shykoff BE, Izzo JL, Pet Ownership, but not ace inhibitor therapy, blunts home blood pressure responses to mental stress. *Hypertension*, vol 38:815-820, 2001.

Dr. Rebecca Johnson, associate director for research, Center of Excellence on Aging, University of Missouri-Columbia. (see figure 3)

Figure 3

Neurochemical Changes after Quiet Interaction		
Neurochemicals	Human with own Dog	Dog
Phenethylamine (Elation)	+	+
Dopamine (Energized)	+	+
Endorphins (Runner's high)	+	+
Oxytocin (Happiness)	+	+
Prolactin (Nurture)	+	+
Cortisol (Stress)	-	-

Presented at Mondial d ethologie, Lyon 1999. Published as: Odendaal JS. Animal-assisted therapy – magic or medicine? *Journal of Psychosomatic Research*, 2000 Oct; 49(4):275-280.

Johnson presented one of the most exciting studies to date in the human-animal bond field, one by Dr. Johannes Odendaal, a South African psychologist, physiologist and veterinarian. Dr. Odendaal focused on the effect of the human-animal bond on neuro-endocrine responses, not only in humans but in the dogs with whom they interacted as well. The hormone levels were measured before and after 30-minute quiet human-animal interaction periods. “What he found overall was that all of the hormones connected with happiness and well-being (such as phenethylamine, endorphin, oxytocin, dopamine) increased in dramatic amounts, and all of the stress hormones (such as cortisol) decreased in similarly dramatic amounts when people interacted with the dogs,” Johnson said.

Johnson’s research, based on Odendaal’s findings, is exploring the neurological effects of human-animal interaction to establish animals as complementary therapy in human health care, using both dogs and robotic pets.⁶ Preliminary findings are promising. They show beneficial reactions in three hormones: increases in endorphins, known as runner’s high, and serotonin, which alters and controls depression; and decreases in the stress hormone cortisol.

Serotonin, in particular, is important with respect to the use of antidepressants. “What do we know about antidepressants?” Johnson asked. “They are one of the more prescribed drugs in this society. Would it be possible to decrease their use by improving the patients’ serotonin levels with pets?”

The benefits of pet ownership seem to transcend race. Ethnic elders tend to depend more on informal support mechanisms, living with relatives rather

⁶ Johnson and Meadows, preliminary findings, University of Missouri-Columbia, 2003.

than moving into nursing homes and assisted living facilities. The key finding of a study based on ethnicity was that dog ownership was positively associated with emotional health for Latino and African-American elders, as well as Caucasians.⁷

“Instinctively, we know pets make us feel good,” Johnson said. “Scientifically, we can trace those ‘feel good’ emotions to chemical reactions in people that are triggered by pets. Such chemical ‘triggers’ can enhance human health and well-being in numerous ways and provide insights into delaying the aging process.”

Pets as Social Support for the Elderly

The panel on using pets as social support brought together touching stories about the importance of pets. Dr. Sandra Barker, the moderator, director of the Center for Human-Animal Interaction at Virginia Commonwealth University, told of a depressed, lonely, bedridden 95-year-old woman named Annie who was given a small dog named Pumpkin. “Annie quit crying. She started eating. In fact, she would get up from bed to go to the table to eat because she could feed Pumpkin at the same time.” Annie’s landlord sued her for violating a no-pet policy. When asked in a deposition what would happen if Pumpkin were taken away, Annie said, “I’ll die.”

“I think that says an awful lot in terms of the emotional and social support that a pet can provide for the elderly,” Barker said. “These warm anecdotes help bring the research we just heard to life. They put a face on that research.”

Some eldercare facilities have already made the decision to allow residents to keep pets. “There is no downside,” said Dominique Siler, a member of the panel and director of Community Relations at Brighton Gardens assisted living facility. Siler’s facility in Atlanta has already adopted a pet-friendly policy.

Another panelist, Dr. Joseph Ouslander, director, Emory Center for Health in Aging, noted that, “The MacArthur Studies for Successful Aging have shown

“Would it be possible to decrease the use of antidepressants by improving the patients’ serotonin levels with pets?”

*Dr. Rebecca Johnson
associate director for research
Center of Excellence on Aging
University of Missouri-Columbia*

“The warm, real-life anecdotes about the emotional and social support that a pet can provide for the elderly help bring the research we just heard to life – they put a face on that research.”

*Dr. Sandra Barker
director
Center for Human-Animal Interaction
Virginia Commonwealth University*

⁷Johnson and Meadows, *Western Journal of Nursing Research*, 2002, 24(6), 606-608.

“Isolation is common in older people, and pets can be a very important factor in dealing with isolation.”

*Dr. Joseph Ouslander
director
Emory Center for Health in Aging*

one key thing to successful aging, and that is engagement in something. And I think this is where pets can play a big role. Isolation is common in older people, and pets can be a very important factor in dealing with isolation.”

“The importance of keeping pets healthy to fulfill their increasingly valued roles falls upon veterinarians — the other family doctor,” said panelist Dr. Gail Powell-Johnson, CEO, Atlanta Veterinary Eye Clinic.

Some institutions already have recognized the importance of the human-animal bond and are beginning to integrate it into the nation’s most advanced facilities for caring for the aged. One such facility is “Tiger Place” at the University of Missouri-Columbia, an experimental community for the aging where older adults will move in with their pets. Other facilities arrange for visits by therapy dogs and cats, or expose residents to the human-animal bond with field trips to zoos and nature centers.

Conclusion

For thousands of years, people have intuitively understood the benefits of the human-animal bond. Today, scientists are producing increasing amounts of solid scientific data that prove the beneficial effects of animals on the elderly. In the United States, the number of people 50 and older will double in the next 35 years.

“In an era of concern about the soaring price of medical care, the proof of the benefits of the human-animal bond has important implications for controlling costs and improving health in a growing population of senior citizens,” said Dr. Nalini Saligram, director, corporate communications, Merial, and Board Chair of PAWSitive InterAction. “Indeed, policies that encourage pet ownership among the aged, either at home or as they make the transition to elder living facilities, can absolutely improve some medical conditions and alleviate loneliness.”

Discussions at the PAWSitive InterAction summit were thought-provoking as the attendees left with the spirit of spreading the word to law- and policy-makers about the growing body of scientific evidence that indicates people can live longer, healthier, more enjoyable lives, while taking fewer medications, if they can interact with a companion animal. Among the issues that society must address are finding ways to fund animal ownership and veterinary care to help elderly people who wish to have pets but have limited budgets. Discussions touched on the issue of whether medical insurance and health maintenance organizations would begin to pay for the costs of pet therapy. Asked directly about when society would reach the point where insurance covered the cost of pet therapy, Dr. Rebecca Johnson declared: “When we continue to present findings that show that it actually works.”

And that is the purpose of PAWSitive InterAction: it will continue to provide a forum to showcase the evidence that pets are good for our health — at all ages.

“When are we going to get insurance companies to pay for pet therapy?”

When we continue to present findings that show that pet therapy actually works.”

*Dr. Rebecca Johnson
associate director for research
Center of Excellence on Aging
University of Missouri-Columbia*

Facts about Aging

- A woman in good health at 50 can expect to live to 95.
- A man who reaches 65 can expect to live to 85.
- Most women will spend the last 12 to 15 years of their lives alone.
- The number of people 50 and older in the United States will double in the next 35 years.
- Every six seconds someone turns 50.
- The number one killer of women today is heart disease, which kills one in three women. Pet owners are four times more likely to survive a heart attack than non-pet owners.
- Seniors with pets have 21 percent fewer physician visits, lower blood pressure and better coping skills.
- At any one time, 40 percent of the U.S. population is undergoing some type of psychiatric treatment. One in three people will have a clinical breakdown.
- Research shows that so-called “happiness” hormones increase and stress hormones decrease after quiet interaction with a dog.
- With 76 million baby boomers in the U.S., more Americans are seeking healthy ways to age.



Founding Members of PAWSitive InterAction



atlanta humane society