



# A Scientific Look at the Human-Animal Bond

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## Introduction

In May 2002, PAWSitive InterAction held its inaugural educational Summit – THINK PAWSitive! – in Atlanta, Georgia to promote and celebrate the positive impact of the human-animal bond. The two-part event was the first of its kind in the Atlanta area. PAWSitive InterAction, born in May of 2001, is a non-profit 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 the state of Georgia.
- **Happy Tails Pet Therapy:** Founded in 1991, Happy Tails is a non-profit organization of dedicated volunteers and their pets who perform animal-assisted therapy visits for healthcare facilities, social agencies and special needs programs.
- **Merial:** An innovation-driven animal health leader, Merial is committed to enhancing the health and well-being of animals. Merial, maker of FRONTLINE® and HEARTGARD® brand products, is one of the world's leading veterinary pharmaceutical and vaccine companies.
- **Pets Are Loving Support (P.A.L.S.):** Founded in 1990, P.A.L.S. is a non-profit 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.

Experts in the areas of medicine, psychiatry, veterinary studies and epidemiology came together to discuss scientific research and case studies that validate the therapeutic effects and benefits of human-animal relationships. This paper is a summary of the key discussions at the summit.

Presenters included:

- Dr. Alan Beck, Director of the Center for the Human-Animal Bond at the School of Veterinary Medicine at Purdue University
- Dr. Sandra Barker, Professor of Psychiatry and Director of the Center for Human-Animal Interaction, School of Medicine at Virginia Commonwealth University
- Dr. Marty Becker, Veterinary correspondent for ABC-TV's *Good Morning America* and author *The Healing Power of Pets*

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- Dr. Edward Creagan, Professor at the Mayo Clinic Medical School, American Cancer Society Professor of Clinical Oncology and The John and Roma Rouse Professor of Humanism in Medicine

Award-winning journalist Steve Dale facilitated a panel discussion with these experts during the Summit.

The wealth of research on the power of the human-animal bond tells us one thing: the healing power of pets isn't anecdotal anymore, but scientific. It is our hope that as hard evidence on the positive effects of the human-animal bond grows and becomes more widely understood, the medical field will embrace nontraditional pet-assisted treatment approaches where appropriate, to the benefit of humans and animals alike. It is our fervent wish that more and more people will understand the scientific basis of the human-animal bond and appreciate the roles animals play in improving the quality of our lives. By their dedication to taking care of the health needs of animals, we believe that veterinarians and their staff play a vital role in keeping the human-animal bond alive. Likewise, we value the role of health professionals who research the benefits of human-animal interaction and look for innovative ways to incorporate companion animals into healthcare treatment. We are grateful. As part of the community, we also appreciate and give thanks to the people, shelters and rescue groups who save animals on a daily basis. They too are enabling human-animal bonds to survive.

## **Health Effects of Animal Companionship**

Why are animals good for our health? According to Dr. Alan Beck, director of the Center for the Human-Animal Bond, School of Veterinary Medicine at Purdue University, animals offer an array of health benefits.

"The companionship of animals decreases loneliness and stimulates conversation," Beck says. "By encouraging touch and giving humans a sentient creature to care for, interaction with animals stimulates physical reactions that are very necessary and important in humans."

"Many times, pets give attention to a person who otherwise might not receive as much," Beck says.

"They stimulate exercise, encourage laughter, and facilitate social contact," he explains. "These benefits add up to an improved sense of well being."

The tangible benefit of owning pets is one likely reason pet ownership is on the rise. In a survey conducted by the American

Pet Products Manufacturers Association in 2001, 94% of those surveyed indicated that companionship, love, and company are the top benefits of owning a dog. But there are many other rewards that we are only just beginning to understand:

### **Benefits of Owning**

#### **Dogs**

- **Companionship, love, company**
- **Fun to watch**
- **Like a child, family member**
- **Relaxation/relieves stress**
- **Good for family's health**
- **Good for children, teaches responsibility**

**- Dr. Alan M. Beck,  
Pioneer in the field of  
Human-Animal Bond**

- *Social Benefits:* When people engage in conversation, or enter into a social situation, often times those involved experience a rise in blood pressure and anxiousness. Pets help increase our ability to affiliate with others around us by stimulating conversation and aiding in the reduction of anxious feelings people may experience.
- *Behavioral Benefits:* Animals introduce responsibility and a nurturing behavior into the lives of children as a family pet is often considered a child's child. Some 48% of families consider their pet a family member.
- *Emotional Effects:* Because our pets are often the center of attention, and because they are, after all, animals, they usually do things that make us laugh.
- *Physical Effects:* Animals encourage more exercise, which results in better physical health. The elderly for example, walk more often and have a much more positive exercise experience when it is with their pet.

An important study on how animals affect Alzheimer's disease patients was unveiled at this Summit. A common side-effect of Alzheimer's is a reduction in weight and a loss of appetite. The study, conducted by Dr. Alan Beck, looked at a group of Alzheimer's patients who were placed in front of fish tanks during mealtime. The study showed that by simply watching fish during normal eating times, the patients became fascinated, experienced an increase in appetite and demonstrated metabolic gains in their weight (See Figure One). This is a definitive study and a valuable addition to the growing body of scientific evidence about physiological responses in humans brought about by interacting with animals. Dr. Beck was also a key member of the research teams that showed in earlier landmark studies that pets lower blood pressure<sup>1</sup> and prolong the survival rates of people with heart disease (See Figure Two).<sup>2</sup>

## **Mental Health Benefits of Interacting with Companion Animals**

A significant body of research exists documenting the psychological benefits of animal companionship on mood, well-being and behavior. More specifically, studies have examined the effect of

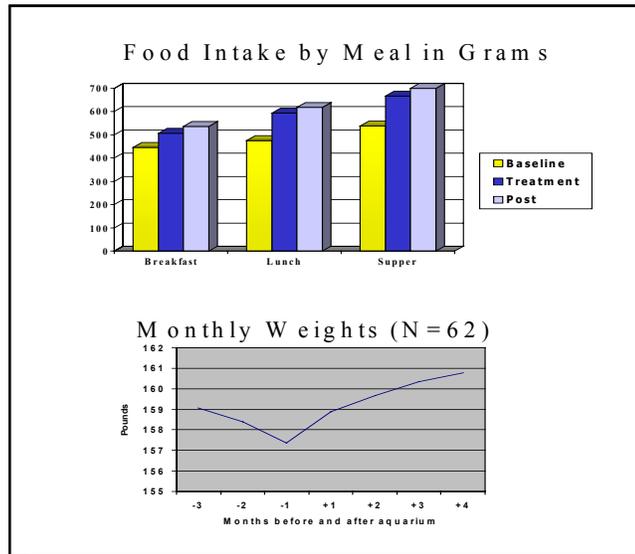
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<sup>1</sup> Katcher AH, Friedmann E, Beck AM, Lynch J: *New Perspectives On Our Lives with Companion Animals*, University of Pennsylvania Press, Philadelphia, 1983, Ch 31: 351-359

<sup>2</sup> Friedmann E, Katcher AH, Lynch, JJ and Thomas SS: *Public Health Reports*, 95,307-312, 1980

## Fish Observation and Metabolic Weight Gain in Alzheimer's Patients

Figure One



Dr. Alan Beck  
PAWSitive InterAction Summit, May 2002  
Reprinted with permission from Sage Publications  
Edwards, N.E., & Beck, A.M. Western J. of Nursing Research Oct. 2002 **24**/5, pp.697-712

## One-year Survival after a Heart Attack

Figure Two

	<b>All Pets</b>	<b>No Pets</b>	<b>No-Dog Pets</b>	<b>Total</b>
<b>Living</b>	50 (94%)	28 (72%)	10 (100%)	78 (85%)
<b>Dead</b>	3 (6%)	11 (28%)	0 (0%)	14 (15%)
<b>Total</b>	53	39	10	92

Dr. Alan Beck  
PAWSitive InterAction Summit, May 2002

One-year survival rate after a heart attack was found to be 94 percent among pet owners (50 out of 53 pet owners were alive one year after a heart attack). Among those who did not own pets only 72 percent survived. This effect was also seen among pet owners who had pets other than dogs.

the human-animal bond on many areas of mental health: how depression, anxiety, and loneliness are affected by interacting with animals; and how pets can positively influence social interactions.

“We now know that stress is implicated as an important factor in the development of cardiovascular and other chronic diseases. This means that the link between animals and mental health has great therapeutic potential and deserves further examination,” says Sandra Barker, Professor of Psychiatry and Director of the Center for Human-Animal Interaction in the School of Medicine at Virginia Commonwealth University.

**“Research shows that even patients with chronic illnesses, including heart disease and HIV, can be helped through the human-animal bond and its physiological and psychological benefits.”**

**- Dr. Sandra Barker  
Psychiatry Professor,  
Human-Animal  
Interaction  
Researcher**

So how do animals figure in the stress equation?

The proof is in the research. In a 1998 study of 241 patients, researchers examined whether an animal-assisted therapy session would reduce the anxiety level of hospitalized psychiatric patients, and if reductions in anxiety differed by diagnosis.

One group of patients participated in animal-assisted therapy with a dog, while a control group participated in regularly scheduled therapeutic recreation sessions without animal-assisted therapy. It was found that the animal-assisted therapy sessions had a significant effect on participating patients, specifically bringing about a significant reduction in anxiety for patients with mood and psychotic disorders.<sup>3</sup>

Research has also been conducted to determine if the presence of an aquarium affects patients prior to electroconvulsive therapy, which is often used as a last means of treatment for severely depressed patients. Prior to this type of treatment, patients generally experience elevated levels of fear, depression, and anxiety. Results of the study showed a trend towards decreased levels of anxiety in the room with the aquarium.<sup>4</sup> Many doctors' offices have adopted this easy-to-incorporate approach for easing patient anxiety and have installed aquariums in their waiting rooms.

What experimental studies don't reveal is the powerful, qualitative impact of human-animal interaction on a single individual; numbers alone cannot measure these feelings or capture adequately the visible calming of agitated patients in the presence of a dog, or explain fully the smile that emerges on the face of a fearful and anxious child when a therapy animal enters the hospital room.

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<sup>3</sup> Barker SB & Dawson KS, *Psychiatric Services*, June 1998 49(6), 797-801

<sup>4</sup> Barker SB, Rasmussen KG & Best AM, 2001 (manuscript in preparation)

## **The Ability to Make Us Happy and Healthy**

When most people think of the human-animal bond, they think companionship: the tail-wagging hello at the end of a hard work day, the muzzle come to rest on a tired thigh, the Saturday walk in the park. But, we now know that the human-animal bond transcends companionship. It is a strong, positive and mutual interaction between humans and animals—a special bond that actually enhances human quality of life.

**“I believe having a pet has all the benefits of an antidepressant drug, and more - but without a single side effect.**

**Pets play a vital role in ameliorating the effects of chronic medical conditions.”**

**- Dr. Marty Becker  
Veterinarian, Author,  
Human-Animal Bond  
Guru**

Promoting human-animal interaction generates far-reaching benefits. Only during the past five years have researchers determined that animals are good for our health, lending scientific proof to the theory that pets do affect us emotionally, physically and psychologically.

“Pets play a vital role in ameliorating the effects of chronic medical conditions,” says Dr. Marty Becker, Veterinary correspondent for ABC-TV’s *Good Morning America* and author *The Healing Power of Pets*. “Researchers have discovered that children who are exposed to pets early in life actually develop fewer allergic reactions. Scientists now believe that the child-pet contact may help build up the body’s defense systems against certain allergens. This early interaction may keep children from developing chronic allergic reactions as they grow, rather than triggering them as once believed.”

Children benefit in other ways too. Pets and children are a natural combination of energy and playfulness. Many researchers now believe that children with attention deficit hyperactivity disorder (ADHD) can benefit from a large dog, which can provide an energetic playmate and a source of centering for a child with ADHD. Pets are also shown to provide emotional comfort and support for children whose parents are going through a divorce.

With the elderly, too, pets can play a pivotal role in health and well-being. Arthritis is a common condition among older Americans. Studies show that a small pet can be very beneficial to arthritis sufferers. Stroking an animal may make the animal feel better, but it also has a calming effect on arthritic inflammation and can prove to be very relaxing.

## **Pets, Not Pills: The Healing Power of Fur, Fins and Feathers**

There is no denying that pet owners have a strong bond with their animals. Even the tragically ill are determined to get home to see their pets, resulting in a stronger drive to rehabilitate after an injury or illness. Dr. Edward Creagan, a professor of medical

oncology at the Mayo Clinic, had a cancer patient who was very ill, but determined to make it home to see "Max."

"I thought he was talking about his son, Max, or Maxine, his wife," Creagan explains. "It turns out he was talking about his dog, Max. We can no longer ignore the medical significance of the bond people have with their pets. There is a rock-solid, indisputable mind-body connection that is vectored by our pets. Our pets create a balance between our minds and our bodies."

And balance is in great demand today, with stress in abundance. Not only are Americans experiencing physical exhaustion from life's everyday complications, but some 40 percent of Americans will be hospitalized from one of a host of psychological maladies, according to recent research. Thirty-three percent of Americans will experience an emotional breakdown, and 27 percent will experience suicidal thoughts.<sup>5</sup> Clearly Americans are worn out, and in need of an outlet to reduce stress.

**"Veterinarians take care of the entire family, they do not just treat the pets.**

**I prescribe pets to a third of my cancer patients to help them cope with the rigors of their terrible disease.**

**I consider getting a pet to be one of the easiest and most rewarding ways of living a longer, healthier life. "**

**- Dr. Edward Creagan  
Celebrated Mayo Clinic  
Oncologist,  
Human-Animal Bond  
Ambassador**

Pets provide the avenue for change. They play an important role in reducing stress by providing a vector of wellness, encouraging physical activity at the end of the day, and offering an opportunity to incorporate exercise into daily routines.<sup>6</sup>

And the human-animal bond is growing in importance within American families as well. A survey of 1,197 pet owners conducted by the American Animal Hospital Association found that 34 percent of pet owners say they talk about their pets when conversing with others, while only 20 percent say they talk about their spouses. Fully 78 percent report that it's their pet, not their spouse, who greets them first as they come home from work.

Physiological aspects of the human-animal bond now under investigation include the effects of pet ownership and ACE inhibitors on human hypertension, the effects of human-animal bonding on neurochemical indicators, the effect of dogs on children undergoing dental procedures, the impact of pet ownership of caregivers, and the effects pets have on elders.

Pets affect physiological health in a number of ways. Pet ownership can help lower blood pressure and triglycerides, aid in fewer physician visits, and decrease loneliness. Pets can also reduce depression, increase heart attack survival, and offer unconditional, nonjudgmental affection.<sup>7</sup>

In a one-year study of 1000 participants, researchers investigated how companion animals affect the health of older people. Results demonstrated that companion animals enhance health, decrease

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<sup>5</sup> Swenson R, *Margin*, NavPress, March 1995

<sup>6</sup> Associated Press poll, JCO, Ed Res, 1997

<sup>7</sup> Generations, Vol. XXV, no. 2, Summer 2001 & *New York Times* July 24, 2001

depression and increase happiness. Companion animals are a factor for successful aging among the elderly participants.<sup>8</sup>

## Conclusion

Research presented at the summit educated participants on the positive effects animals have on our physical, mental, emotional and psychological health. Leaders in the field of human-animal studies highlighted specific research on how animal-assisted therapy helps psychiatric patients overcome anxiety and depression; how heart attack victims experience lowered blood pressure while with an animal; how fish aquariums have a positive effect on Alzheimer's patients; how children bond with animals; and how pets overall contribute to relaxation, lowered depression and anxiety, and increased happiness. In addition to the research, presenters and community participants shared anecdotes and case studies with attendees.

**“The human-animal bond occurs in ways we don’t always think about.**

**Pets teach us to enjoy the simple joys of life.”**

**- Steve Dale,  
award-winning  
journalist**

Science has officially weighed in on the human-animal bond, and the evidence is clear. Research demonstrates that human-animal interaction benefits physical, emotional, and psychological wellness. In the next three to five years, researchers hope that patients will have greater access to their pets while in the hospital, to lend a healing paw when needed most. As researchers continue to explore the health benefits animals provide, more and more members of the healthcare community will recognize animals as a valid and effective form of therapy for humans of all ages.

## PAWSitive InterAction, Inc.

PAWSitive InterAction Inc. ([www.pawsitiveinteraction.com](http://www.pawsitiveinteraction.com)) is a non-profit alliance of premier Atlanta organizations dedicated to recognizing the positive effects of animals in our lives and celebrating and promoting the human-animal bond. The group's mission is to collectively connect people in the community with resources, expertise and education designed to further understanding of the positive benefits of interacting with animals.

## Additional Resources

1. Between Pets and People – The Importance of Animal Companionship - Alan Beck and Aaron Katcher, Purdue University Press, 1996.
2. The Healing Power of Pets – Marty Becker, Hyperion, 2002
3. Delta Society fact sheet – Healthy Reasons to Have a Pet  
<http://www.deltasociety.org/press.htm>

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<sup>8</sup> J Am Ger Soc 3-99



Founding Members of PAWSitive InterAction



**atlanta humane society**

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