



W S A V A L E C T U R E

Companion animals and human health: an overview

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INTRODUCTION

The natural history and great antiquity of keeping animals as companions have been reviewed comprehensively (1, 2, 3). Today, companion animals are associated with 50 percent of all households in the Western world; therefore any effect that these animals have on human health could be far reaching. Health benefits from companion animals have been the subject of a number of reviews (4, 5, 6), and, although there are also some potential negative aspects of pet ownership, there are many ways to minimize them. Education of owners by veterinarians is a key route.

PHYSIOLOGIC AND PSYCHOLOGIC EFFECTS OF COMPANION ANIMALS

One of the best known physiologic effect of pets is the lowering of blood pressure of people under moderate stress while in the presence of friendly dogs (7, 8). This and the relaxing effects of watching ornamental fish (9) have resulted in further work on pet animals as an anxiolytic (10); for moderating stress in the elderly (11); and as a relaxant for hypertensives (12). Perhaps equally well known is the impact of companion animals on human survival following myocardial infarction (8, 13). Pet owners who had suffered

a heart attack were more likely to survive the year following release from the hospital than a non-pet-owning group. Although many of the people owned dogs and could have benefited from the exercise of dog walking, increased survival was also noted in people who owned other pets.

More recently, a study of nearly 6000 people in Australia showed that pet owners had lower levels of the physiologic risk factors associated with heart disease (14). Pet owners aged 20 to 59 had lower systolic blood pressure and plasma triglyceride levels than the non-owners. In addition, male pet owners had significantly lower systolic blood pressure and plasma cholesterol than the non-owners. Among women over 40 (the group most vulnerable to heart disease), systolic blood pressure was lower for the pet owners than the non-owners.

Although pet owners may be shown to be more healthy than non-owners, it is possible to argue that this effect occurs because only healthy people own pets. This issue was addressed by observing changes in behavior and health status of 71 adults over a 10 month period, following the acquisition of a cat or dog, and comparing this with a group of non-pet-owners over the same period (15). Significant improvements in psychologic well-being were observed in the first 6 months of ownership, and for dog owners this was maintained for the whole study. Dog owners also increased their feeling of self-esteem, were less anxious about becoming victims of crime, and exercised more. Both dog and cat owners reported a reduction in minor health problems in the first month after acquiring a pet, and this effect was sustained in dog owners until the end of the trial.

PETS AND SOCIAL DEVELOPMENT

Many studies have explored the positive socializing effects of companion animals on children (for a review, see 16). Children who are brought up in the presence of animals can show benefits such as better nonverbal communication and social competence (17) as well as higher levels of self-esteem compared with those from non-pet-owning families (18). In addition, key life events such as reproduction, birth, illnesses, and death are often encountered for the first time by children when they live with pet animals. Some research has reported that pets can play a particularly important role in the lives of children who have inadequate or destructive social

environments (19, 20, 21) or can benefit those who have learning difficulties (22). Childhood pet ownership has also been correlated with concern for animals and membership of animal welfare charities (23).

Measuring the impact of pets on children can be problematic as children develop at different rates and are strongly influenced by their parents. To obtain more information on the impact of pet ownership on child development, long-term longitudinal studies of child development in which factors such as parental style are taken into account are needed (16).

THE ROLE OF ANIMALS IN THERAPEUTIC PROGRAMS

In the late 18th century, inmates of an asylum known as the 'York Retreat' were encouraged to learn self-control by caring for animals (1). A number of other 'institutions' used similar strategies in later years, but it was not until the 1960s that the concept of Pet Facilitated Therapy was crystallized by Boris Levinson, a child psychiatrist in the USA. Levinson found that his patients responded positively after they had developed a rapport with his dog, which used to sit in his office during treatment sessions (20). Similar successes were noted by Corson and others (24) who introduced animals (mainly dogs) into hospitals with patients who had severe psychologic disturbances.

As the level of professionalism in this area increases, terms such as 'pet therapy' and 'pet-facilitated therapy' have begun to be abandoned in favor of terms that did not suggest that simply any 'pet' could perform therapy work (25). There is also increasing awareness about selecting appropriate animals and many organizations have developed guidelines for screening and training to maintain the health of both the humans and animals involved in this work. A distinction can be made between animal-assisted activities (AAA) and animal-assisted therapy (AAT). AAAs can be passive, such as watching aquaria or aviaries, where people do not handle the animals and benefits are received from simply having the animals present. For example, in rehabilitation units for geriatric adults, the presence of companion birds has been shown to decrease the depression of residents significantly (26). More interactive types of AAA include residential or visiting pet programs. In residential programs, the animals live at the facility with care provided by staff or residents. Visiting pet programs allow specially screened and trained owners and their animals to enter the facility at prearranged times. Although these programs are more restrictive than residential programs, animal visits are more appropriate in facilities where staff are involved with in-depth resident care (such as in hospices or hospitals), in facilities where proper care of resident animals would be insufficient, or where there is a high turnover of staff or residents. In contrast to AAA, AAT is a goal-directed intervention in which an animal is used as an integral part of the treatment process. The therapy is delivered by a health professional with specialized expertise, with goals such as increasing desirable behaviors or decreasing inappropriate behaviors (25).

Therapeutic riding can also be used to improve the quality of life for people with disabilities (25). This activity can generally be split into three categories. The first is riding as an adapted sport or recreation, where the disabled person can gain increased feelings of self-esteem and well-being. The second is remedial riding, where riding is used to enhance the treatment environment and the emphasis is to teach not only riding skills but also to incorporate therapeutic goals into the program. The final category is the use of the horse in medical settings to treat patients with physical dysfunction, where the goal is to improve the patient's posture, balance, mobility, and function. This use of the horse is called

hippotherapy, although the term is often incorrectly used to mean all forms of therapeutic riding.

ASSISTANCE DOGS

For many years dogs, have been trained as guides for blind people. More recently, dogs have been trained to carry out a variety of tasks for disabled people (25) and as a group have been called 'Assistance Dogs', also referred to as 'Service Dogs'. Some are trained to alert deaf people to sounds such as the door bell or a fire alarm. Others are trained to help people with mobility impairments, for example, by retrieving dropped objects or opening doors for people confined to a wheelchair or acting as a support for people requiring assistance with walking.

Some studies have shown that these dogs provide benefits other than their trained tasks. Disabled children were shown to receive more friendly contact from passers-by when their dogs were present than they did without their dogs (27). More recently, a study in the United States (28) has shown that people confined to a wheelchair showed significant improvements in self-esteem and psychologic well-being and reduced requirements for help from humans when they were provided with a trained dog.

A new area of investigation is the ability of dogs to anticipate acute human illness. As a result, a profile of behavior has been built up on dogs that can anticipate human seizures (29). Work is now in progress to identify and reinforce the trait in dogs to help individuals with epilepsy. A number of cases have also been documented where dogs have shown a response to human diabetics who were in the early stages of hypoglycemia (30). The possibility of animals sensing other acute human conditions needs further investigation.

RESPONSIBLE PET OWNERSHIP

As has been indicated, pet ownership can confer positive benefits on the owner, but, in return, we have responsibilities to our pets and to society. It is important for potential pet owners to understand the responsibilities involved with pet ownership before they acquire their animal. While there are a number of communicable diseases shared between species (31), the risk of contracting a disease from a pet is low and certainly lower than the risks from other people. Diseases associated with pets often receive considerable media coverage, but are rarely a problem in animals receiving proper care. Guidelines from the World Health Organization (32) sum up a sensible attitude: *'Whilst irresponsible attitudes easily result in problems of surplus and straying animals, environmental pollution and an increased risk of zoonotic disease, companion animals which are properly cared for bring immense benefits to their owners and to society and are a danger to no one.'* Owners must, however, assume responsibility for ensuring that their animals are free from disease, and it is appropriate for veterinarians to educate new owners on the value of regular veterinary health checks.

It is easy for people to confuse nuisance from animals with more damaging hazards. Nevertheless, some nuisances can be irritating to both pet owners and nonowners, and it is important that owners are taught how to avoid them. The aesthetic offence of fecal pollution is very much greater than the real risks to human health and is easily removed if owners clean up after their dogs. Inappropriate behavior of companion animals is another issue that some owners face. Problems such as barking or aggressive dogs can be a considerable nuisance for both the owner and their neighbors. Such behavior can have a number of causes, and many problems can be resolved with an appropriate understanding of the underlying cause of the behavior. It is important that owners work with veterinary



behaviorists or other suitably trained professionals to discover the cause of the inappropriate behavior and discuss options for its resolution. Simply tackling the symptoms of the problem can cause more distress to the animal and rarely results in a long-lasting solution.

Veterinarians can also play an important role in educating owners about the importance of selecting appropriate animals and their basic behavioral requirements. A full discussion of this area is beyond the scope of this article but has been discussed in other texts (15, 33, 34, 35, 38).

PET LOSS: THE END OF THE RELATIONSHIP

Most pet owners will have to cope with the loss of a pet at some stage. As there is considerable variation in person–pet relationships, we should expect variation in responses to the loss of that relationship. For some owners, the death of a pet may be a very stressful event; in a small proportion of cases, the severity of disruption may equate with levels associated with loss of a close human relationship and appropriate forms of support may be necessary. However, for the general population, the effects of loss, although intense at the time, are likely to have a lesser long-term impact and require a different kind of support, if any. Veterinarians and other practice staff can provide a valuable first contact for owners after the death of a pet. The veterinary profession is becoming increasingly aware of the need to be sympathetic and to make time to discuss the owner's feelings. Owners should be encouraged to feel that the veterinary practice is approachable for discussions about their reactions to the loss. Although practice staff will only be able to provide sympathy and clarify factual matters surrounding the pet's death, this may be all that is required in many cases. However, if an owner is displaying signs of intense emotional distress, or the veterinary staff have reason to believe that further help is required, they should advise the owner to seek professional help through their family doctor. Some owners may feel happier going to their family doctor if they are doing so on the advice of another professional or because it gives them an opening line: 'my vet said I should come to see you'. In some countries, telephone helplines manned by volunteers have been established to help owners with pet loss. Reports from these services suggest that most callers make only one call, which suggests that they felt a need for a listening ear and reassurance rather than a need for counselling or active support. For a more detailed discussion of pet loss see texts by McNicholas and Collis (36) or Fudin (37).

CONCLUSION

Close contact with companion animals is part of everyday life for many people. The reward for such activities is a combination of companionship, support, protection, and a focus of interest outside themselves. The negative factors that may be associated with these benefits are mostly nuisance and the risk of communicable disease, but with care and forethought these can be minimized and the benefits enjoyed by all. There is a clear role of the veterinarian to provide the guidance required to promote responsible pet ownership (34).

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WSAVA NEWS

Disaster aid

A meeting on the subject of 'Animals and Animal Welfare in Disaster Situations' will be held immediately before the WSAVA International Congress in Buenos Aires, on Tuesday, October 6, 1998. Catastrophes such as Hurricane 'Andrew' in North America and the Kobe earthquake disaster in Japan have very profound effects on the animal as well as the human population. Following the Kobe disaster of 1995, a pioneering meeting was held at the World Congress in Yokohama. This meeting reviewed the way the veterinary profession and many other organizations were mobilized across the country to cope with this terrible event.

In response to the earthquake disaster in Kobe, the Japanese veterinary profession responded magnificently. Veterinarians came to the site from all over Japan. In all, a total of 21,769 volunteers worked on the operation and 1,556 animals were rescued. Of these, 1,039 were dogs and 508 cats. A total of 702 dogs and 338 cats were rehomed, and 271 dogs and 91 cats were returned to their owners. In the period immediately after the event, there were 8,094 veterinary consultations involving the surviving animals.



Temporary accommodation for over 200 animals that survived the Kobe earthquake.

The meeting in Buenos Aires will review and update these findings. The speakers will be drawn from around the world. The aim will be to learn from their experiences in their own countries and to put together contingency plans to help deal with disasters as they arise. Among those invited to contribute will be Colonel Lynn Anderson, United States Army Veterinary Command Coordinator of Emergency Response. Colonel Anderson's presentation will be 'Veterinary Response to Disaster and Foreign Disease Outbreak in the United States'. Also to speak is Professor Estol of the Universidad del Salvador, Buenos Aires. He teaches animal welfare, ethics, and ethology at the Veterinary School and has the task of developing an Animal Welfare program at the National Service for Animal Health. Contributions are also anticipated from the Search and Rescue Dogs Association, as well as the Australian SPCA and the World Society for the Protection of Animals.



Hurricane damage to a veterinary practice in Florida.

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