

How do you teach your pet(s) to "be good"? (example) _____

What happens when your pet misbehaves? (example) _____

Have you ever **seen** someone hurt an animal or pet? Y N

What happened? _____

Have you ever seen an organized dog fight? Y N

How old were you? _____

Tell me about it _____

Have **you** ever hurt an animal or pet? Y N

How old were you? _____

Tell me about it _____

What kind of animal? _____

Were you alone when you did this? Y N

Did anyone know you did this? Y N

What happened afterwards? _____

Have you ever been frightened, really scared or hurt by an animal? Y N

What happened? _____

Are you still afraid of this kind of animal or other animals? Y N
(Describe) _____

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See chapter for instructions on how to use the survey.

15 Human/animal interaction and successful aging

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15.1 Introduction

Human/animal interactions (HAI) have become an important part of the lives of many people of all ages. While many who engage in HAI believe in its usefulness, only in the last two decades have there been numerous studies that provide research data to support its beneficial effects, both physiological and psychosocial.

The increasing numbers of elderly and their longevity are supported by census data in many countries. While people are living longer and are in better health than in previous centuries, a number of elderly persons may be living at least part of their lives alone, having lost the companionship of spouses, children, other family members, and friends for a variety of reasons. While it is not suggested that animals can replace human family and friends, there are now data to support the fact that HAI can lessen the loneliness, reduce physiologic arousal, increase health behaviors, such as walking and other exercise, and improve the psychosocial status of many elderly persons. In addition, HAI has improved the lives of institutionalized elderly, both those who are cognitively intact and those with impaired cognitive ability.

15.2 Human companion/animal interactions and successful aging

Research has demonstrated that physiologic arousal lowers in response to human/companion animal interaction. Early research showed lowering of blood pressure when people interacted with dogs to which they were attached (Baun et al., 1984). More recently, Odendaal (2000) found that stress hormone (cortisol) levels decreased most when people quietly interacted with their own pet dog. Cortisol levels also decreased (but less) when people interacted with an unfamiliar, but friendly dog. Elevated cortisol levels have been linked with memory loss (Greendale et al., 2000) and as one component of "allostatic load," in which the body develops cumulative effects of repeated adaptations to stressors (Seeman et al., 1997). Allostatic load has been associated with overall physical and cognitive decline in older adults (ibid.)

Interacting with a companion animal may be one way to reduce allostatic load. Allen et al. (2002) found that people had significantly smaller increases in blood pressure and heart rate when a dog was present while they completed arithmetic tasks and that pet owners had significantly lower blood pressure and heart rate levels than non-pet owners to begin with. Hertzstein (1995) found that pet saliency or importance was a significant predictor of physical health in older adults.

Walking is one exercise in which many elderly persons participate. In a study of 394 elderly, dog walkers were more likely to achieve more time walking and at a faster pace than non-dog walkers (Thorpe et al., 2006). Dembicki and Anderson (1996) found that older adult pet owners walked longer and also had lower triglyceride and cholesterol levels than non-pet owners. Also, during dog walking, elderly volunteers were able to increase the high-frequency power values of heart rate variability, a measure of parasympathetic neural activity which potentially has a greater health benefit as a buffer against stress, than walking without a dog and that this benefit was sustained during dog walking (Motooka et al., 2006). But even more important was that this relaxation response was cumulative over additional dog walks.

Recently, dog ownership and dog walking were associated with having and maintaining over a three-year period, faster normal and rapid walking speeds in older adults (Thorpe et al., 2006). Based on these findings, dog walking may have an impact on preventing disability and functionally limiting effects of chronic illnesses.

Commitment to pets—particularly dogs—involves exercising them, and thus may lead to healthier exercise patterns among dog owners, but these patterns may differ across ethnic groups. For example, Johnson and Meadows (2002) found that while Latino elders expressed a very strong bond with their pet dogs, they did not necessarily exercise with them.

Other investigators have found that pets influence older adults' health indirectly by improving morale (Lago et al., 1989). This mind/body connection has been well established in research and can be a factor in maintaining older adults' health and preventing or minimizing disability. There is reason to believe that older adults' interaction with companion animals may activate this connection and be a powerful tool for health care providers, family members and older adults themselves in promoting successful aging by preventing chronic illnesses, or when they do occur, by minimizing their disabling effects. For example, elderly women having a pet to which they were attached were more likely to report higher levels of happiness than those who either did not have a pet or were not attached to their pets (Ory and Goldberg, 1983). This effect of pets, however, was related to the socioeconomic status (SES) of the women with those of higher SES having higher levels of happiness than those of lower SES.

In health care settings, companion animals have been found to be beneficial in many ways. For example, animal-assisted therapy in an oncology day hospital with elderly patients undergoing chemotherapy resulted in decreased depression compared with control subjects who did not have a dog present (Orlandi et al., 2007). In a study of the utility of a pet animal in the treatment of clinical depression in a nursing home, a significant reduction in depression was found in both the pet therapy and conventional therapy groups but not in the control no therapy group (Brickel, 1984). Likewise,

elderly persons hospitalized for short-term rehabilitation experienced less depression when a caged bird was placed in their rooms for 7 days (Jesson et al., 1996).

Among the institutionalized elderly, animals have also been found to be therapeutic. Residents of two long-term care facilities showed significant positive changes in mood for those receiving visits from volunteers with a dog as compared to those without a dog (Lutwack-Bloom et al., 2005). Likewise, residents in long-term care facilities had less loneliness when receiving animal-assisted therapy (AAT) than those not receiving AAT (Banks and Banks, 2002).

The presence of therapy animals has been particularly useful in reducing agitated behaviors (Churchill et al., 1999, Richeson, 2003), in decreasing episodes of verbal aggression and anxiety (Fritz et al., 1995) and in increasing social interaction (Fick, 1993; Kongable et al., 1989) in institutionalized elderly with dementias, including Alzheimer's disease. Even visiting with a robotic dog has been found to be beneficial to well-being among nursing home residents (Banks et al., 2008).

Aquariums have had interesting effects on persons with Alzheimer's disease. Edwards and Beck (2002) demonstrated significant increases in nutritional intake among residents of specialized Alzheimer's units by simply placing aquariums in the dining rooms. The increases in nutrition were accompanied by significant weight gain among the residents.

Using "Living Habitat," in which plants and animals were introduced to a nursing home, a sample of residents had higher cognitive status and became more positively engaged with their environment but with a decreased sense of control after six months. Residents who had greater affinity for pets also became more positively engaged with their environment (Ruckdeschel and Van Haitsma, 2001).

While many areas of companion/animal interaction with elderly need further research to substantiate their effectiveness, there are studies to support positive benefits from this intervention. These interventions, however, need to be planned carefully considering not only characteristics of the elderly themselves but also of their environment. We present in Box 15.1 a case study of dog visitation to newly admitted nursing home residents.

Box 15.1 Effects of Dog Visitation on Newly Admitted Older Adult Nursing Home Residents (conducted by R. Johnson)

The purpose of this research was to conduct a case study of one nursing home in which a three-group, delayed treatment, pre-test post-test design was used to test the effectiveness of a dog visit protocol (DVP) on mood, social support, sense of coherence, and stress (measured via salivary cortisol). Fifteen older adults who had relocated to a nursing home in the preceding four weeks for long-term residence and scored 3 or higher on the Short Mini Mental State Exam (SMMSSE) were included in the study. Participants who were moving from another nursing home were not included. Three groups were created: an experimental group who received dog visits ($n = 5$), an experimental group who received friendly person visits ($n = 5$), and a control group who received standard care ($n = 5$).

The first five residents to consent were assigned to the control group and were

to the dog visit group, and the final five were assigned to the human visit group. Experimental group participants received either 18 visits from a trained, certified visitor dog and its handler, or 18 visits from a human visitor, over a six-week period (three visits per week). Each visit consisted of a 20-minute session in the participant's room.

The dog used for the study was certified by the University of Missouri-Columbia College of Veterinary Medicine's Pet Assisted Love and Support (PALS) program. The dog handler was fully oriented to the study protocols. The handler was instructed to discuss only the dog during the visits. At the initial visit, handlers explained that visits could involve combing, petting, and talking to the dog. No lively play (e.g. throwing a ball, wrestling, etc.) was permitted.

After informed consent, all participants completed the Short Mini Mental State Exam (SMSE), a Demographic Questionnaire (DQ), the Profile of Mood States (POMS), the UCLA Loneliness Scale (UCLA), the Social Provisions Scale (SPS), the Daily Hassles and Uplifts Scale (DHUS), and the Orientation to Life Questionnaire, a measure of sense of coherence (OTLQ). Saliva samples were collected at 8 am and 4 pm by having the older adults spit into a prepared collection tube. Post-protocol data collection occurred within one week after the experimental group participants completed their 18th dog visit or human visit. This data collection occurred during the seventh week of residence for the control group. All participants then completed the POMS, UCLA, SPS, DHUS, and OTLQ once again. Saliva samples were again collected from all participants at 8 am and 4 pm using the same method as in the pre-test. Experimental group participants also completed the Exit Questionnaire. Table 15.1 shows demographic characteristics of the sample.

For each group, T-tests were performed to detect significant differences between pre-test and post-test scores. Results (shown in Table 15.2) are reported in terms of difference scores (pre-post) and indicated that the control group had fewer uplifts and less social integration after the six-week study period. The human visit group had less depression and lower cortisol levels after the six-week study period. The dog group had no significant changes in any outcome measures. However, results were in expected directions including less loneliness, tension, depression, anger, and confusion.

Using the Kruskal-Wallis test, group mean cortisol am, pm, and the daily averages were compared for the three groups. At alpha level of 0.05 there were no statistically significant differences in cortisol levels between groups. However, the human visit group had a significantly higher post-pm cortisol level, indicating a greater level of stress after the six weeks.

The Kruskal-Wallis test was used to compare sense of coherence and mood across the three groups. Displayed results (shown in Table 15.3) indicated that at the pre-test, the dog visit group had a significantly higher sense of coherence, and stronger reassurance of worth pre score than the control group. The dog group had significantly less anger than the control group. The human visit group had a stronger sense of coherence and reassurance of worth, and less anger than the control group.

However, on the post-test scores, both the human and the dog visit group had significantly more uplifts than the control group. The dog visit group had more uplifts and less anger. The human visit group had more uplifts and less depression than the control group. There were no significant differences between the dog and human visit groups.

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Table 15.1 Demographic characteristics

	Total (<i>n</i> = 15)	Control group (<i>n</i> = 5)	Dog visit group (<i>n</i> = 5)	Human visit group (<i>n</i> = 5)
Age	78.3 (s.d. = 12.4)	83.8 (s.d. = 10.0)	74.8 (s.d. = 13.7)	76.4 (s.d. = 11.5)
Male	7 (46.7)	1 (20)	4 (80)	2 (40)
White	14 (93)	4 (80)	5 (100)	5 (100)
Marital status				
Married	1 (7)	0	1 (20)	0
Single	1 (7)	0	1 (20)	0
Divorced	4 (28)	1 (20)	1 (20)	3 (60)
Separated/widowed	8 (57.1)	4 (80)	2 (40)	2 (40)
Education no H.S.	3 (20)	1 (20)	1 (20)	1 (20)
Some H.S.	4 (26.7)	1 (20)	2 (40)	1 (20)
H.S. graduate	3 (20)	0	1 (20)	1 (20)
Some college	2 (13.3)	0	1 (20)	2 (40)
Bachelor's	2 (13.3)	2 (40)	1 (20)	1 (20)
Graduate work	1 (6.7)	1 (20)	0	0

Note: Percentages in parentheses.

Table 15.2 Within group mean difference scores

	Control group	Dog visit group	Human visit group
Hassles	3.80	1.60	0.80
Uplifts	4.00*	-1.80	-1.40
POMS			
Tension	-1.80	3.80	1.80
Vigor	-1.80	1.20	0.20
Fatigue	2.80	2.40	0.80
Confusion	0.80	0.20	1.4
Mood	-8.80	7.40	5.00
Depression	3.60	1.60	1.00*
Anger	4.00	0.60	0.20
Social provisions			
Attachment	-0.40	0.20	0.20
Social integration	0.60	0.60	-0.60
Reassurance of worth	-1.00	1.00	-0.20
Reliable alliance	0.40	0.40	0.80
Guidance	0	0	0.40
Opportunity	0.60	0	0.20
UCLA Loneliness Scale	0.20	0.20	0
Orientation to life	-2.60	0	0.40
Difference between a.m. scores (post-pre)	-0.03	0	0
Difference between p.m. scores (post-pre)	0.02	0.01	0.01*
Difference between p.m.-a.m.	-0.01	0.01	0

Table 15.3 Between group differences: pre scores and post scores: means and standard deviations

	Pre		Post	
	Dog Control visit	Human visit	Dog Control visit	Human visit
Hassles	8.60 (6.42)	14.40 (4.50)	13.40 (0.54)	4.80* (3.34)
Uplifts	15.60 (9.28)	18.00 (3.74)	17.80 (3.11)	11.60* (7.43)
POMS Tension	6.00 (4.06)	5.00 (6.36)	4.40 (3.04)	7.80 (6.37)
Vigor	14.20 (11.34)	3.20 (3.34)	1.60 (1.51)	5.60 (7.82)
Fatigue	8.80 (7.29)	0.60* (1.34)	0.40* (0.54)	3.40 (4.44)
Confusion	5.00 (3.80)	22.60 (2.96)	17.40 (5.02)	16.00 (11.93)
Mood	2.20 (30.78)	3.00 (4.52)	1.60 (1.67)	6.00 (8.68)
Depression	9.20 (9.57)	2.80 (0.83)	3.20 (0.83)	4.20 (3.76)
Anger	7.40** (7.43)	-8.00 (16.21)	-6.20 (9.67)	11.00 (3.94)
Social provisions	6.20 (3.56)	7.60 (2.30)	8.20 (1.09)	6.60 (3.78)
Attachment	4.80 (2.77)	6.40 (1.14)	6.00 (0.70)	4.20 (2.48)
Social integration	3.80** (2.38)	7.80* (1.48)	6.40 (0.89)	4.80 (3.03)
Reassurance of worth	5.60** (3.57)	6.40 (0.89)	6.40 (0.89)	5.60 (3.20)
Reliable alliance	4.80 (2.94)	6.40 (0.54)	6.40 (1.14)	4.80 (2.68)
Guidance	5.40 (3.20)	4.00 (1.22)	4.00 (0.70)	4.80 (2.77)
Opportunity	3.40 (2.07)	4.20 (0.44)	4.00 (0.00)	3.20 (2.16)
UCLA Loneliness Scale	5.60* (3.57)	9.40* (1.14)	9.80* (0.83)	8.20 (4.76)
Orientation to life				

*Note: $p < 0.10$.
 $p < 0.05$, Standard deviations in parentheses.

While we must use caution in the interpretation of findings from such a small case study, some results were in predicted directions. Perhaps because of the small sample, our findings are not similar to those of Banks and Banks (2005) who found that a dog visit reduced loneliness in nursing home residents.

The current study shows trends in the predicted direction for many of the variables examined. For example, the control group had higher levels of depression and anger and lower levels of attachment and reassurance of worth.

One other finding of note from the current study is the higher anger score of the control group over both the dog and human visit groups. This finding is not surprising. Previous studies have shown that newly admitted nursing home residents often report a variety of mental health issues due to relocation, including sadness, anxiety, stress, depression, powerlessness, anger, betrayal, social withdrawal, and decreased life satisfaction. The lack of significant differences between the human and dog visit group suggests that further comparison of these visits is warranted.

Participants in the dog visit group expressed that seeing the dog was "fun," "enjoyable," "something to do in a new place," and that the visit "cheered me up." Participants in the human visit group reported that the visitor "helps you feel welcome to a new place," is "fun," and was "a new friend, even if it was just for a study and would only be for a few weeks." Given these comments, it may be useful to conduct a qualitative study to fully describe the nature of both human and dog visits and what each may mean to newly admitted nursing home residents. In particular, the nature of the relationships formed, and how they are formed during the visits may be of interest.

15.3 Facilitating relationships between pets and older adults

15.3.1 "Aging in place"

The notion of "aging in place" is not a new concept. Most investigators and others who work with older adults routinely hear their participants/clients express a desire to remain living "in my own home." Often older adults want to remain in their own homes so that they can keep their pets. Staying in their own homes can present particular challenges given the rapidly expanding demographic group that older adults constitute and their needs for health care services. Approximately one-third of all older adults need some form of supportive care and services to remain living in the community. This care can range from homemaker services to assist with housework and bathing to professional services, such as medication management, regular monitoring of health conditions, and full-scale coordinating of many health care providers. Aging in place aims, as an alternative to relocation to a nursing home, to provide needed care and prevent relocation-associated trauma.

As the aging in place movement has grown, so have the number of options for these types of places in which to live. A wide variety of alternatives exist including subsidized apartments designed for older adults, where care and services are not provided, retirement communities, assisted living facilities where older adults may have their own room or apartment with limited services typically including congregate meals and housekeeping, or a combination of these. These models provide only partial versions of aging in place. The fear of having to move, even to a different part

of the building, can be so intense for older adults that they may attempt to hide their growing needs and thus do not receive care that could facilitate their health and functioning.

A group of faculty at University of Missouri Sinclair School of Nursing whose expertise is in gerontology recognized the need for a new model of aging in place in which the threat and stress of relocation would not impede proper care provision for older adults. This Aging in Place project was formulated with two components: first, a home health agency, Senior Care, was formed to provide care coordination and direct care to older adults. The second component required a corporate partner to build and manage TigerPlace, a 32 apartment residential facility. The partnership was formed with Americare Systems, Inc., of Sikeston, Missouri. Americare is the "landlord" of the facility and provides meal service, housekeeping, and concierge-type activity planning. At TigerPlace, a resident need not relocate when even advanced levels of care are needed. The facility is equipped with sensors to detect and report falls and monitoring devices for those with dementia that are used to insure their safety. Staff of a home health agency monitor the residents' health and care needs and implement treatment plans within the facility.

TigerPlace features efficiency, one- and two-bedroom apartments, a large community room, classroom, congregate and private dining rooms, hair salon, sports bar, exercise room, theatre, and clinic space for resident use with health care providers. Situated on several acres, the facility includes walk trails and outside exercise areas.

TigerPlace has a strong relationship with the University of Missouri, and is host to students from nursing, physical therapy, social work, occupational therapy, medicine, law, journalism, engineering (who were heavily involved in developing the building with state of the art technology), and education. TigerPlace residents are encouraged to participate in the myriad of activities, lectures, concerts and exhibits that the university has ongoing, and transportation is provided.

TigerPlace is a pet-inclusive, pet-encouraging facility. This philosophy is based on research showing that human/pet interaction provides visual, auditory, olfactory and tactile stimulation, and that this interaction may stimulate well-being through chemical processes. For example, Odendaal (2000) found that in response to a quiet petting interaction with a dog, people had significant improvements in serum oxytocin, prolactin, and beta-endorphin, norepinephrine, phenylethylamine, dopamine, and cortisol levels. These neurochemicals are believed to enhance feelings of well-being, mood, and relaxation. Knowing that pets are beneficial for older adults, pets were considered throughout the design and construction of the TigerPlace facility. Each apartment has a screened porch, wide windowsills, an outside entrance, and tile entry to accommodate pet needs. But perhaps the most unique and compelling feature is the veterinary clinic within the building, specially designed to provide care for the pet residents of TigerPlace.

15.3.2 TigerPlace Pet Initiative (TIPPI)

TIPPI is a cross-disciplinary, collaborative program between the MU Sinclair School of Nursing and the MU College of Veterinary Medicine. The underlying principle of

TIPPI is the belief in the health benefits of human/animal interaction and the human/animal bond for older adults and pets. This belief is based on research showing that older adults live longer, healthier and happier lives when they own or regularly interact with pets.

TIPPI aims to:

- Foster a pet-inclusive environment at TigerPlace. An admission and periodic screening process is in place for residents' pets, and residents who do not have pets are assisted to adopt pets as they would like. As of this writing, there were four dogs and three cats residing with their owners at TigerPlace. A student "Pet Assistant" is paid to the help dog owners with walking the dogs, cleaning cat litter boxes, delivering pet food, giving medication to the pets and transporting the pets as needed.
- Facilitate excellent veterinary care of TigerPlace residents' pets, while simultaneously providing an invaluable learning experience for veterinary students to work with older adult clients. The facility features a fully equipped veterinary exam room with equipment enabling preventive health care and treatment for non-critical illnesses. Residents need only walk down the hallway with their pets to visit the veterinarian. An MU College of Veterinary Medicine faculty veterinarian makes monthly house calls to all pet owners at TigerPlace. This enables an assessment of the pets in their home environment. He provides education and suggestions for preventive care of the pets. If minor procedures are needed, the animal is taken to the onsite exam room. For more intense treatment, pets are transported (either by the pet owner or TigerPlace staff) to the Veterinary Medical Teaching Hospital, or to a local veterinarian of the owner's choosing.
- Promote human/animal contact for the residents of TigerPlace. This is done through the "PAWSive Visits" program. Weekly the TigerPlace residents have the opportunity to interact with and learn about a particular species during this animal visitation program. An MU student coordinates a variety of animals to be brought by their owners or handlers. During these sessions the "PAWSive Visits" Coordinator and/or the animal's owner provide a brief tutorial which stimulates discussion and reminiscence about animal experiences in the residents' lives. A recent highlight was a visit by "Cookie" and "Tuffy," two miniature horses. A wide variety of animals have visited including an assortment of dogs and cats, pot-belly pigs, alpacas, Missouri mules, birds of prey, ferrets, rabbits, and a coatiundi.
- Promote research into the benefits of human/animal interaction and the human/animal bond. TigerPlace provides an ideal place to study the role of pets in older adults' lives.
- Provide foster care and adoption services for bereaved pets. An endowment is in place so that when a TIPPI pet's owner is deceased or can no longer care for the pet, funds are available to support the pet's care in a foster home with another resident of TigerPlace, or if this is not possible, in a foster home in the community. The funds support food and medical care of the pet until it is placed in a permanent home. Recently, a pet dog was orphaned through the death of its owner. Another TigerPlace resident readily adopted the dog.

Taken in total, TigerPlace offers a remarkable change in the usual model of aging in place. It eliminates mandatory relocation as older adults' care needs increase and thus minimizes the fear associated with this. TigerPlace residents enjoy meals bordering on the gourmet prepared by a formally trained executive chef, regular activities and excursions, and most importantly they can bring their pets and know that these beloved companions will also be cared for.

15.4 Pet selection

15.4.1 Community-dwelling elderly persons

Recommending a pet for an elderly person is a challenging opportunity. Even though a number of studies have demonstrated that pets can be beneficial to the elderly, for example in alleviating depression and in increasing socialization, finding the right pet for a particular person can be difficult. The primary consideration is the health and safety of the person.

Many older adults have mobility difficulties. It is not uncommon for them to walk with canes or walkers and to be somewhat unsteady on their feet. While a young dog can provide much affection and entertainment, it may be too strong for the older adult to walk on a leash or it might be able to cause a fall by jumping against the legs or tripping the person. Older adults may not be able to move quickly enough to get a puppy house broken. Thus, an older dog, particularly one who has been obedience trained, socialized, and housebroken, may be a good alternative. Often dog breeders, especially those who show their dogs, have adult dogs who are still young but are no longer going to be shown and whom they would like to place in loving homes. These purebred dogs usually are excellent examples of the breed and have been bred for good temperament, have been socialized to dog shows where they had to perform in front of hundreds of people and dogs, and thus make excellent pets.

Other sources of well-trained dogs are the agencies who train dogs as service dogs, for example seeing eye, hearing, and assistance dogs for people with handicaps. At present, there is a 75% dropout rate for these dogs, that is, three-quarters of the dogs who have been specially reared do not succeed in their formal training program. Generally, they make excellent pets because they have had systematic socialization and obedience training since they were young puppies. There are, however, long lists of people waiting to adopt these dogs, and the puppy raisers generally have the first option to adopt the dog if it is rejected during the formal training program.

Many humane societies have adopt-a-pet programs, some designed specifically for the elderly. While there are many animals at Humane Society shelters who can become excellent pets, careful consideration needs to be given to the elderly person's abilities and the pet's needs. If the animal was brought to the shelter for behavior problems, an elderly person may not be able to provide the appropriate behavior modifications. On the other hand, sometimes wonderful pet animals are available for adoption.

Older adults seeking to acquire a dog will have individual needs and likes and dislikes. Sometimes, as individuals age, their self-concept does not change as their bodies become more limited, and they may be unrealistic in assessing what they can and cannot do. Their memories of a loved dog may not include the difficulties encountered during puppyhood, and they may only remember the docile, well-behaved older dog in the last years of its life. Thus, seeking advice on the type of dog to be acquired from an experienced dog owner or trainer and health care provider may be very useful in matching the individual with the right dog.

Most major cities have one or more kennel clubs and dog training clubs. Often these clubs provide public service through maintaining a telephone to assist persons with dog-related questions. Some purebred dog clubs participate in rescue programs where they take unwanted dogs of their breed, rehabilitate them if necessary, and place them in good homes. Some of these rescued dogs may make excellent pets for older adults. Also, veterinarians can provide advice about the care requirements of various breeds. Another avenue of information on purebred dogs is the American Kennel Club, which has an excellent website (<http://www.akc.org>) and can refer inquiries to the national breed clubs. In addition, there are numerous home pages on various breeds of dogs and other dog-related activities that can be accessed through one of the search engines on the Internet. Most libraries have sections on dogs.

It is a good idea for anyone, particularly older adults, not to be impulse driven in the acquisition of a pet. Besides the monetary investment, there may be a 10- to 15-year commitment involved. A few weeks of investigation and planning can be a good investment in making sure that the acquisition of the pet is a positive experience. Sometimes, it is useful if an adult child partners with the older adult in the process of pet adoption. The adult child then hopefully will have some commitment to assisting their parent throughout the process. Older adults need to recognize their current and potential limitations that could occur during the life of the pet. If there is a strong potential that the person will not be able to care for the pet throughout its entire life, an arrangement might be made with a family member or other responsible person to take the pet if the older adult becomes unable to provide care either temporarily or permanently. In Houston and other cities, there are groups of volunteers who will care for pets of low income hospitalized or incapacitated older adults (<http://www.pawshouston.org/>).

A few retirement homes allow older adult residents to bring their pets with them, but the pet owner must be able to care for the pet, and there may be restrictions on the size and species of the pets allowed. Few of these facilities have support systems in place to the extent that TigerPlace does. Hopefully, the number of facilities allowing personal pets will increase in the future. Most nursing homes do not have facilities for personal pets. One of the greatest sources of distress for the institutional elderly can be the loss of their beloved pets. Many nursing homes do have pet visitation programs and allow individuals' pets to visit on a regular basis. Family members or friends can keep the pet and bring it to see its owner. A particularly sad occurrence is for the pet to be taken to the local Humane Society and then euthanized or placed with strangers when its owner is institutionalized so that the elderly person experiences not only the loss of personal independence but also the loss of their beloved pet significant other. Sometimes, the choice of a pet other than a dog is ideal for an older adult. Cats, for example, require less personal care than dogs. Nonetheless, the older adult needs to be mobile enough to change the litter box and responsible enough to feed and care for the cat. Eyesight needs to be good enough to avoid tripping over any pet that has access to the floor.

Sometimes, a caged animal, such as a bird, might be a better choice if the elderly person has difficulty with mobilization. Birds can be excellent companions. Most domestic birds can be hand trained thus providing physical contact but also can be

kept in cages. The elderly person needs to be able to provide food and water and clean the cage regularly.

Many other small animals could provide touch and affection for elderly persons. Gerbils, guinea pigs, mice, rats, rabbits, hamsters, turtles, and snakes are but a few of the potential small animals that could be wonderful pets. Sometimes it is not possible to predict to which animals strong bonds can develop. Physical contact with the animal is extremely important in the choice of a pet for some people but is not a strong consideration for others. For example, some older adults may find that watching fish in a tank can provide many hours of intense enjoyment.

A major consideration in the acquisition of pets by older adults is access to veterinary medical care. Frequently, elderly persons are no longer able to drive. Finding someone to take the pet to the veterinarian's office may be problematic. Even though there are many ways for the elderly to get transportation for their own health care appointments, there are no similar services for animal health care. In addition, many older adults live on fixed incomes and may not be able to afford the additional costs of health care for pets. A few cities provide low-cost clinics for animal health care, some particularly for animals belonging to older adults, but the pet owner has to find transportation to the clinics. Some veterinarians practice in mobile vans. The availability of such a veterinarian for older adults' pets would be of great assistance in allowing the elderly persons to maintain pets in their homes. Provision for the animal's health care needs to be a critical part of the planning that takes place prior to the acquisition of a pet. Sometimes, if it is not feasible for older adults to have personal pets, wild animals, such as birds and squirrels, can fill the gap. Older adults may get many hours of enjoyment from watching birds and squirrels at feeders.

15.4.2 *Pets in long-term care facilities*

A variety of animals can be used in institutions either as residents or as regular visitors. The most common are dogs, cats, rabbits, small rodents, birds, and fish. Dogs, cats, and rabbits generally visit on a regular basis, although some institutions have acquired them as residents.

The success of a resident animal in a long-term care facility depends on a number of factors. Probably the most important is careful planning prior to the acquisition of the animal. The first step is to review the regulations of review boards and accrediting organizations about resident or visiting animals. If there is no contradiction to the acquisition of an animal, the next step is to decide which animal is best for that facility.

Staff members need to consider who will be responsible for the animal. It is generally overly optimistic to assume that the elderly will care for resident animals. Responsibility needs to be assigned to staff members. If some aspects of care can occasionally be done by elderly residents, this care needs to be accomplished under the supervision of staff members. Thus, staff members need to be willing to assume additional duties in relation to a resident animal. The nature of the animal to be acquired, therefore, has implications for staff workload. A dog, for example, needs food, toileting, and exercise on a regular schedule 24 hours a day seven days a week.

Thus, staff working during all shifts every day will need to make provision for its care. It is possible for the day shift staff to be excited about the acquisition of a resident animal and the night shift staff to resent the added responsibilities. In such a facility, a caged bird which requires less care that can be given on only one shift might be a good choice.

Part of the planning for the acquisition of a resident pet is to consider potential allergies among residents and staff. It may be necessary to specially treat the animal to reduce the disbursement of allergens, for example dander, that can trigger allergic reactions. Also, toenails need to be kept well trimmed and blunt to prevent injury to frail skin. Likewise, a plan needs to be in place for flea and other parasite prevention.

The potential for zoonotic infections, that is, infections that can be transmitted between species, needs careful consideration. Any animal brought into a long-term care facility should be given a complete examination by a licensed veterinarian prior to introduction. There should be a plan for regular examinations to ensure that it remains free of parasites and infections, that immunizations are current, and that preventive medications, such as heart worm pills, are administered appropriately.

There may be some older adult residents who should not interact with the pet such as those who are immunocompromised or allergic to the animal. The plan for the resident animal needs to include provisions for protecting these residents. However, as Johnson et al. (2002) report, there is little if any research evidence reporting zoonotic infections in such situations. The risks to older adult residents are minimal and potentially outweighed by the benefits if facilities adhere to published guidelines (Centers for Disease Control and Prevention Healthcare Infection Control Practices Advisory Committee, 2001).

Another consideration in acquiring a resident animal is the location of the facility. Residents coming primarily from rural settings often have very different views of animals than those who have been city dwellers all of their lives. Even animals traditionally regarded as companions, such as dogs and cats, may be considered as appropriately living outside and performing some instrumental function. Retired farmers may prefer interactions with farm animals, such as sheep and chickens, than with dogs and cats. They can get a great deal of satisfaction watching these animals through the window as opposed to petting or cuddling companion animals.

The age of the animal also is a significant factor to be considered in planning. Puppies, although cute and appealing, need housebreaking and training. Older animals have the potential to have training completed before placement. One important consideration is that the animal needs to be temperament tested to ensure that it is suitable for interaction with older adults. Most cities have animal trainers who can perform this function.

Another consideration is that the animal needs time away from constant interaction with humans. While staff are not expected to work 24 hours a day, neither should such "work" be expected from the resident animal. In some instances, resident animals have actually developed stress-related illnesses in response to overstimulation. Planning for a place where the animal can be away from people for part of each day and get its proper rest is essential. Such planning requires an understanding of the behavior of the species. Dogs, for example, generally are most active in the morning

and evening and sleep a great deal in between. Planning for a resident dog might include an enclosure with a shelter on the grounds where the dog can be placed in the middle of the day as well as for the night. An alternative might be for the dog to have a resting place designated within the building, which is kept free from other activities and purposes.

Some institutions have found that a more satisfactory arrangement for having a therapy animal, particularly animals such as dogs and cats, is to have the animal reside with one of the staff. Then, the animal comes to "work" with the staff member and goes home at the end of the shift to a more normal living arrangement where it can get its own needs met. Such an arrangement also negates the need for staff to provide 24-hour, seven-days-a-week care for the animal.

The need for careful planning prior to the acquisition of an animal for a long-term care facility cannot be overemphasized. It would be well to have a committee of stakeholders formed to consider aspects of acquisition of the animal and to generate a written set of guidelines that would become part of the facility's policies and a budget for care of the animal. Such careful planning should result in a happy and therapeutic relationship between the animal, staff, and residents.

15.5 Guidelines for animal-assisted therapy with older adults

Many institutions for older adults have resident pets, and many have regular pet visitation programs. While many studies have demonstrated the beneficial effects of contact with pets for a variety of persons, including the elderly, the long-term effects of resident pets and pet visitation programs have not been examined. Nonetheless, the idea of bringing pets into contact with institutionalized elderly people has become quite popular in the United States and elsewhere.

There is no doubt that the presence of pets in a setting such as a nursing home where one ordinarily does not expect to see them provides a source of distraction and novelty. All one has to do is witness the attention a dog gets as it walks into a facility. Residents, staff, and visitors descend on the dog almost like it is a magnet. Yet, the question of what the long-term effects of contact with a companion animal for the institutionalized elderly are has yet to be answered.

Distraction from one's ordinary daily life in a nursing home is not without merit. Also, pets provide a source of affectionate physical contact that often is lacking in an institutional setting. Perhaps these effects are enough to justify the cost of maintaining these programs. There are important areas to consider in instituting an animal-assisted therapy program

1. Choice of animal. Most pet visitation programs utilize companion animals such as dogs, cats, rabbits and Vietnamese pot-bellied pigs. These animals can be transported easily to the institution and walked or carried to interested residents. One criterion for animals being included as regular visitors is that they be tested for their suitability to interact with strangers. Many pet therapy groups have established their own testing programs. National organizations such as the Delta Society (<http://www.deltasociety.org/>) have standardized

testing that can be done by a local person who is certified. Once the animal has passed the test, it receives a certificate that it can be an institutional visitor. Often it is eligible to wear some sort of symbol of this certification so that persons who see it in the institution know that it has been tested.

2. Orientation of pet handlers. The persons bringing the animals to the institution need to have an orientation to that institution. They need to know in which sections of the building, generally eating areas, animals are not allowed. Also, they should be informed about the characteristics of persons they will encounter and how to deal with problems if they should arise. The safety both of the residents and of the persons and animal visiting is of utmost importance. It is possible for cognitively impaired older adults to behave in surprising ways and to attempt to injure animals and their handlers. Animals visiting an institution should be under the direct physical control of the handler at all times

Many persons who participate in animal visitation programs continue to do so for many years because it is so personally rewarding for them to be a part of the human/animal team. One has only to see the delight and interest on so many otherwise sad or blank elderly faces when allowed to interact with a companion animal to be "hooked" forever and convinced that animals truly are good for the elderly!

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