

IMPORTANCE OF BEHAVIORAL HEALTH: RECOGNIZING AND REDUCING STRESS IN SHELTER ANIMALS

Sheila Segurson, DVM, DACVB
Koret Shelter Medicine Program
University of California, Davis, CA

Behavioral health refers to the interplay between animal welfare and individual animal behavior. It focuses on maintenance of health and prevention of problems, as opposed to what is more commonly practiced in shelters—treating pre-existing problems and problems that develop while in the shelter.

A pet's behavioral health is a result of their genetic background, their experiences (and learned behavior patterns as a result of those experiences), and their environment. Entering a shelter provides most pets with novel experiences and a novel environment, which can be quite stressful to them. Stress compromises their immune system as well as their welfare. In an effort to treat pets entrusted to our care with benevolence, it is imperative that shelter veterinarians and shelter staff become experts at recognizing and reducing stress of shelter animals.

EVALUATION OF BEHAVIORAL HEALTH

Evaluation of behavioral health involves understanding what comprises normal pet behavior, and how much time a "normal" dog or cat spends sleeping, eating, grooming, walking, playing, and so on. An ethogram is a "catalog" of a species' behavior, and details the behaviors and activities that the species exhibits. An ethogram, coupled with mean amounts of time that a species engages in various behaviors during the day (time budget), would provide us with guidelines for environmental conditions which optimize behavioral health. While this is potentially very valuable data, it is also very likely that individual animals will not match the reported time budget for a species, due to variations in breed, experiences, and environment (eg, living in a small apartment vs. large house vs. outdoors). Because of this challenge, optimizing behavioral health in shelters must be focused upon recognizing and reducing their stress, as stress can be an indicator of poor behavioral health and is a factor which is much better defined and much more easily characterized (as opposed to time budgets).

FACTORS THAT REDUCE BEHAVIORAL HEALTH

Improving the behavioral health of shelter animals begins with understanding which factors are sources of stress for pets in shelters. Important stress inducing factors in a shelter/kennel environment include: environmental change, noise (especially barking dogs), confined living conditions, diet change, exposure to aggressive animals, separation from "family," lack of exercise, boredom, physical trauma, infection, acute/chronic disease, and intense heat/cold. With

exposure to one stressful event/factor, a pet may show no significant outward effect. With exposure to multiple factors, additive effects make the pet much less likely to be able to cope with stress, and much more likely to suffer adverse effects.

CONSEQUENCES OF POOR BEHAVIORAL HEALTH

In addition to being a welfare concern, a stressful environment results in an increased susceptibility to diseases and an increased likelihood of behavior problems. Long-term stress is also directly related to low adoptability ("shows poorly") in shelters. Chronic stress is of major importance from an animal welfare standpoint; however, relieving acute stress is also extremely important for shelter pets. Stress alters a pet's natural behavior patterns. A pet exposed to sudden and severe stress often invokes the "fight or flight" response; thus a stressed dog or cat is more likely to behave aggressively or fearfully when challenged. A pet might "fail" a behavior assessment test and be euthanized in some shelters due to a behavior that is precipitated by stress, and not (necessarily) a behavior that the pet normally exhibits in a home environment. Alternatively, some pets may develop behavior problems during their shelter stay, due to negative experiences that are greatly exacerbated by stressful living conditions. Behavior problems such as barrier aggression, interspecies aggression, and repetitive behaviors (eg, tail chasing) are problems which a pet might learn in the shelter environment, and subsequently result in euthanasia.

RECOGNIZING STRESS

Classic signs of stress include: elevated heart and respiratory rate, dilated pupils, tense body posture, hiding in the back of the cage, inappetence, lack of interest in the environment, panting, and vocalizing. It is important to note that a chronically stressed dog/cat may appear absolutely normal, but less active than is usual for that particular animal (which we will not be able to identify if we do not have a history of interaction with the pet before their shelter stay). Chronically stressed dogs have an increased likelihood of these behavioral manifestations: crouched posture, excessive grooming, social withdrawal paw lifting (dogs), vocalizing, +/- repetitive behavior (eg, pacing, circling, jumping against bars). When challenged, stressed dogs are more likely to show aggression, excitement and uncertainty.

All shelter pets should receive a daily stress assessment. This assessment can and should be done from outside the cage, as this is the environment the pet is living in—thus it is the best environment in which to assess their welfare (note that this is a stress and welfare assessment, and not an assessment for the purpose of adoption/placement decisions. A stress assessment should include standing outside their kennel and noting their location in the kennel and behavior, as well as noting whether the pet shows any signs of interest in social interaction. Finally, it is also valuable to toss a treat in the cage as part of the assessment, as most stressed pets will refuse food.

REDUCING STRESS

When instituting a stress reduction program in a shelter, it is important to treat each animal as an individual. An enrichment device that works for most dogs or cats may not work for all pets, and may INCREASE stress in some animals. It can be helpful to place a card on each pet's cage, to keep track of enrichment device(s) used, as well as objectionable (barking/meowing, jumping, social withdrawal, aggression) and desirable behaviors. Monitoring these cards can help to keep track of what works, what doesn't for the shelter as a whole, and for each individual animal.

The primary method to reduce stress for confined animals is via provision of basic care and environmental enrichment. When deciding on implementation of an enrichment program it is important to consider: human time needed for provision of enrichment, cost of enrichment, whether the enrichment device is effective at reducing stress, and potential spread of infectious diseases. Examples of forms of enrichment that can be utilized include housing, human interaction, conspecific interaction, toys, music, and exercise.

First and foremost, basic housing needs and care must be provided. While reducing stress can strengthen the immune system, there is a reciprocal relationship between disease and stress. Reducing disease transmission and treating medical problems can reduce pain and discomfort and thereby reduce stress. All shelter animals should receive:

- Proper nutrition (including ensuring that they are eating the food provided to them)
- Fresh water (an daily assessment for dehydration, especially in cats which are new to the shelter)
- A physical examination (to identify any medical problems)
- A soft place to sleep/rest
- A hiding place (to have a safe area to retreat to, which allows them to better cope with a stressful environment)
- A place to urinate/defecate which is distant from the eating and resting areas (and ideally in a joined, but separate compartment or outdoors (for dogs))
- Vaccination upon intake to the shelter
- Enough space to stand up, stretch out fully, and walk AT LEAST two to three steps without running into a litter box or food/water bowls

While many people work in old facilities with substandard housing conditions, much can be done to improve quality of life. Some shelters are refurbishing standard cat cages, so that two cages are modified into one living space for a cat, with a closeable hole connecting the two areas. In shelters where there is not the option for improving or buying new cages/enclosures, the other items on the above list can and should be achieved.

In addition to the aforementioned "basics," other improvements can be made shelter pet's environment in

an effort to improve their welfare. Some examples are listed below.

- For inappetent pets that are new to the shelter, in addition to a medical evaluation, staff should decrease stress as much as possible to encourage eating. Sometimes offering a cat a place to hide will entice it to eat, when other methods such as warming the food or adding fish flakes/shavings (olfactory stimulation!) have failed.
- Adding boxes, perches, kennels or raised areas to the existing cage floor will increase vertical space, and provide a place for the pet to hide.
- Provide nonskid surfaces (eg, plastic carpet runner) for weak/geriatric patients.
- Place shy/timid animals in cages in low traffic areas, and away from noisy/barking dogs.
- Position barking dogs in low-traffic areas (but far away from scared/shy animals) in order to avoid stimulating more barking. Most dogs that bark in the shelter are barking in an effort to gain attention. Barking can be reduced by making certain that the dog is never rewarded for barking (don't give it attention or walk closer to it when it is barking) and by drastically increasing its physical and mental stimulation. Because any movement toward a barking dog "rewards" it for unwanted behavior, it is a good idea to place opaque coverings on the window of the enclosure so that the dog is unable to see people approaching. While useful during the training phase, it is important to NOT leave the coverings on long-term, as preventing visual access of anything except walls for extended periods of time is inhumane.
- Enclosures with transparent walls on all (or the majority of) sides may also be less than ideal. Pets should have a place where they can feel safe and avoid the public and other animals- it is very difficult to achieve this with four transparent walls.
- Community housing should be considered on a case by case basis and is extremely important for many pets in long-term housing. Community or group housing should NEVER be chosen solely as a method to increase the number of pets in the shelter, as this quite frequently leads to substandard conditions and serious welfare concerns. For puppies/kittens, group housing with littermates is critical for learning proper social skills; however, infectious disease risks must be considered on a shelter by shelter and case by case basis. It is important to remember that not all adult cats/dogs enjoy being around other animals. When at all possible, it is also a good idea to expose puppies to a healthy and well mannered adult, who can gently teach the puppies to understand how another dog tells them they do NOT want to play. With regard to cats, the majority of cats that come from a household without other cats prefer NOT to live with other cats in a shelter setting. If animals are being housed for short periods of time, the stress of introduction and

risk of infectious diseases may be more harmful than the benefit of living with a conspecific.

- Human interaction is labor intensive, but is probably the most effective method of enrichment for shelter animals. One research study demonstrated that twenty minutes of human interaction per day helps animals to cope with stressful situations. All shelters should have a “real life” room, where volunteers can take pets for some quiet time away from the kennels. This room should contain all the ‘comforts’ of a home living room. This room should not be used for shelter animals that have not undergone a fourteen day quarantine period and a physical examination, to ensure that they will not transmit infectious diseases.
- While increasing *positive* human interaction, it is important to minimize negative interactions and stressful handling procedures. Staff members must be trained regarding how to evaluate canine and feline body language, and the safest and least stressful handling techniques for fearful and aggressive pets. In most shelters, cleaning of cat cages via spot cleaning (www.animalsheltering.org/resource_library/magazine_articles/may_jun_2005/spot_cleaning_a_cat_cage) unless they are heavily soiled, will reduce disruption of their environment, and thereby stress.
- Take dogs on three brief outings (for the purposes of elimination) to maintain their housetraining AND reduce their stress.