

Human Feet Are Not Mice: How to Treat Human-Directed Feline Aggression

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About This Column

Behavior problems are a significant cause of death (euthanasia) in companion animals. While most veterinary practices are necessarily geared toward the medical aspect of care, there are many opportunities to bring behavior awareness into the clinic for the benefit of the pet, the owner, and ourselves. This column acknowledges the importance of behavior as part of veterinary medicine and speaks practically about using it effectively in daily practice.

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Human-directed feline aggression is a common problem. While feline aggression does not have the same potential to cause severe injury that aggression in large dogs does, the bites and scratches inflicted are, at best, painful. They can also create serious problems for people with diabetes or compromised immune systems, such as individuals undergoing chemotherapy or with HIV. Aggression by cats toward humans has many causes, of which two of the most common are play behavior and fear. Petting intolerance and redirected, maternal, sexual, and dominance aggression are far less common but can occur. Distraction and desensitization and, less frequently, punishment or medication may all play roles in treatment.

PLAY AGGRESSION

Play aggression is most common in kittens and healthy, young, adult cats, but it can start at any age. Because kittens' claws are short and soft enough that they cannot cause much harm, some people may encourage kittens to attack their hands or feet, thinking that such play is funny. Unfortunately, this teaches the kitten that human hands and feet are toys to be attacked. When the kitten gets larger and has long, hard claws and longer teeth, these antics are no longer amusing. Regardless of encouragement, cats have a natural drive to play by stalking, chasing, biting, and clawing at objects. Over the years, I have developed an axiom, "If you do not provide a cat with an acceptable way to play, it will find an unacceptable way to play."

Besides being young and healthy, another common characteristic of play aggressors is that their owners do not play with them or do not provide sufficient opportunities for play. However, this is not always the case. I have known middle-aged cats that developed play aggression despite their owners offering them a variety of play options. In some cases, the cat simply discovered what it considered to be a fun game: leap onto the owner's leg, sink teeth and claws into flesh, and watch the owner jump around and scream. It is important to remember that cats that do this may not think that they are causing harm. To them, it is just a game.

Diagnosis

Diagnosis of play aggression is based on the cat's behavior and postures. The cat will follow the owner, stare at the owner, hide behind furniture or doors with its tail twitching, and then run out and attack. Although, in mild cases, the cat may develop a game of simply running past the owner and batting his or her leg with its paw, the most serious cases involve leaping on the owner, biting, and scratching. Despite the fact that the underlying motivation for the play aggressor is *play*, this type of aggression often has the most serious presentation. The owners of these cats may have a remarkable array of scars and scratches from "playful" attacks and may have become genuinely afraid of their pets.

The Three Rules of Punishment

- The punishment must be appropriate to the individual, being just intense enough to disrupt the behavior but not so intense as to cause fear.
- The punishment must happen immediately.
- The punishment needs to be administered every time, not just occasionally.

Treatment

Treatment involves two main components. First, and most important, the cat must be provided with appropriate and acceptable means of playing in a vigorous hunting style. The owner can accomplish this by buying various toys or by making toys from materials already in the house, such as scrap cloth from an old sewing project. It is important that the cat have the opportunity to chase something, so the toys must either move by themselves (e.g., battery-operated mice) or be operated by a person (e.g., dragged around by a string, dangled from a "fishing rod"). Cats, like children, also need diversity in their toys. The cat owner needs to provide multiple toys and rotate their availability.

- The second component of treatment is to provide physical protection for the owner so that attacks can more easily be ignored. A passive response from the owner can make the game of "attack the ankle" uninteresting. Thus, rather than walk around the house barelegged and barefoot, the owner needs to wear protective clothing during the early stages of treatment. For most cats, long, sturdy pants such as denim jeans and solid shoes that cover the entire foot are adequate. In severe cases, shin guards, such as those used in playing soccer, are necessary. Stores that resell sporting goods are an inexpensive source of such protective gear. Another clothing-related measure that may be helpful or necessary is not wearing clothing that is particularly attractive to play-aggressive cats, such as long skirts that swish as the wearer walks.

Punishment can be useful in some cases, but only if the three rules of punishment can be applied. First, the punishment must be appropriate to the individual, being just intense enough to disrupt the behavior but not so intense as to cause fear. For some cats, a squirt of water from a water pistol is effective (i.e., it disrupts the behavior). Other cats may be afraid of or further aroused by the water, while some cats treat it as another game; for these cats, other potential punishments include hissing at the cat or throwing a wadded washcloth at it. Second, the

punishment must happen immediately—that is, while the cat is first engaging in behaviors indicative of intended attack, such as crouching with its tail twitching and staring intently at a moving ankle. The use of punishment when the cat is already in the midst of a highly aroused play attack is likely to make the situation worse. Third, the punishment needs to be administered every time, not just occasionally. One of my clients reported that water pistols worked very well to interrupt her cat's attacks but that they were often unavailable. This was addressed by getting several water pistols and keeping them around the house and fully "loaded," preferably with one being carried by any person the cat tended to attack.

For many cats, a distraction at the moment they start focusing on moving human targets is far more effective than punishment. For example, old pieces of cloth and small pillows can be kept around the house to be tossed near—not at—the cat when its behavior is suggestive of an oncoming attack. The cat is then likely to redirect its desire to engage in violent play onto the cloth or pillow instead.

Medication is generally not indicated for play aggression, although for cats that easily become excessively aroused, 2 to 4 months of treatment with a selective serotonin reuptake inhibitor (SSRI; Table 1 and see "Selecting Psychoactive Medications for Behavior Problems," August 2006) may be beneficial.

FEAR AGGRESSION

In contrast to the play aggressor, the fear aggressor attempts to avoid interactions with the human(s) of whom it is afraid. However, when interaction is forced or the cat perceives an interaction as frightening, it becomes aggressive. The cat may turn its ears back, lower its tail lateral to the thigh (as opposed to between its legs, as dogs do), and may lower its head or even its whole body. When interaction cannot be avoided, it will hiss and growl. In extreme displays of fear aggression, the cat will arch its back, exhibit piloerection, and stick its tail up in the air: the classic Halloween cat.

Genetics and early experience affect the likelihood that a cat will become a fear aggressor. Early experience is significant in that kittens that experience regular gentle handling by humans, especially at 2 to 7 weeks of age, will be more attracted to humans and less fearful of them at a later age than kittens that are not handled in this manner. If the mother is not afraid of humans, the presence of the mother during handling sessions facilitates this taming process. This is obviously relevant in

the taming of feral kittens to the point where they can make suitable pets. However, while early experience affects response to humans, it does not determine it. A cat that has been raised around humans and has historically been comfortable with and friendly toward humans may become severely fear aggressive through a traumatic incident that it associates with a human via the process of classical conditioning (see "Classical Conditioning: Learning by Association," June 2006). While the person being attacked might be the direct cause of the association (e.g., he or she may deliberately intimidate the cat), he or she may also be an innocent bystander to a frightening incident, such as firecrackers going off.

As with all behavior problems involving fear, desensitization and counter-conditioning are the main modes of treatment. There are a number of practical ways to implement these treatments in the fear-aggressive cat; however, which is the best technique for a given cat will need to be determined. For a cat that is motivated by food, tossing food treats, laying down "treat trails," or sitting quietly near a bowl of highly palatable food can be helpful. If the cat is afraid of only particular people, then someone the cat does not fear can sit with it and give it treats as long as it remains calm while a person it is afraid of slowly approaches. For a cat that prefers play and toys, play that does not involve direct interaction can be offered, such as rolling a ball to the cat or dragging a toy on a very long string near the cat. Multiple treatment sessions are typically required to achieve resolution. In all cases, it is important to allow the cat to determine how close it is going to be to the human(s) it is afraid of and to not pressure it into accepting handling or interaction. As with play aggression, protective clothing may be beneficial at certain phases of treatment; although, in these cases, wearing long-sleeved shirts and leather gloves may be necessary for the psychologic comfort of the person initiating the interaction rather than for that of the cat.

In the worst cases, medication may be necessary. In general, benzodiazepines are not recommended in treating aggressive animals because while they alleviate fear, they can also cause the loss of learned inhibitions. SSRIs and tricyclic antidepressants, given daily throughout treatment, may facilitate treatment by making the cat calmer and less reactive (Table 1).

OTHER TYPES OF AGGRESSION

Petting Intolerance

The cause of petting intolerance is controversial. Within groups of cats, there is a certain etiquette

Table 1. Common Medications in Treating Feline Aggression

Medication	Dose (mg/kg PO q24h)
Clomipramine	0.25-1.3
Fluoxetine	0.5-1.5
Paroxetine	0.5-1.5

involved in grooming each other that humans often ignore. Cats groom each other primarily on the head and neck, although some body rubbing occurs during allorubbing. There are also individual differences between cats regarding the amount of physical contact with which they are comfortable. Because of this, a given owner and cat may be mismatched. The relationship can work well if both human and cat enjoy petting and cuddling. It can also work well if neither wants much interaction. However, if a person who wants to pet and cuddle his or her cat has a cat that is uncomfortable with much interaction, or if the person wants to pet the cat in ways it does not like (e.g., on the belly), serious conflict can develop. Owners of cats that prefer not to be petted very much need to learn to wait for the cat to initiate interactions and to interact with it only briefly. Sometimes the owner will do well to adopt a second cat that has been identified as enjoying petting. While this requires introducing two cats to each other, it may be the easiest solution in the long term.

Redirected Aggression

In redirected aggression, the cat experiences aggressive arousal against something other than a human, but it cannot exhibit aggression toward the intended target, so it redirects its behavior toward the human. For example, if an owner picks up his or her cat when it is growling at another cat or other animal through the window or when it is being harassed by a dog, and the cat is unable or unwilling to attack the desired target, the owner becomes the victim. In these cases, it is necessary to identify what is causing the fear and arousal in the cat and address that. In the two examples above, keeping outside cats or other animals away from the house, using various animal repellent systems such as the Scarecrow detection and repellent sprinkler (Contech Electronics, Victoria, BC, Canada), or training the dog not to chase the cat is necessary.

Maternal Aggression

Maternal aggression is, to a certain degree, normal behavior. If someone unfamiliar to a queen attempts to handle her new kittens, she may simply try to defend her young. To attempt to prevent this problem, it is important to ensure that a queen about to give birth is familiar and comfortable with anyone who is likely to care for her and her kittens postpartum.

Sexual Aggression

Sexual aggression is rare. While females may direct estrus displays toward humans, actual aggression has been reported only in males, both intact and neutered. In this type of aggression, the cat attempts to engage in sexual behavior with a human's arm or leg. While the queen has the protection of fur during the nape grip, the human arm is particularly likely to be injured. For cats that repeatedly engage in this behavior, treatment with an SSRI may be beneficial, and the owner should walk away whenever the cat shows intention movements of mounting. However, these cases may be best referred to a specialist.

Dominance Aggression

Dominance aggression, in which the cat exhibits dominance postures (e.g., turning upright ears to the side, staring at the owner, walking stiffly toward the owner with fully extended limbs; "Understanding Cats," April 2007) combined with aggression toward humans is extremely rare. Treatment with SSRIs may be beneficial, but, as with dogs, attempts to "dominate" the cat are likely to be counterproductive. Referral to a specialist is also probably the best course for cats in which this diagnosis is suspected.

CONCLUSION

Most cases of human-directed aggression in cats are motivated by fear or inappropriately intense play. Prevention of both is best accomplished by early socialization of kittens and regular provision of appropriate toys and types of play.

RECOMMENDED READING

Crowell-Davis SL, Murray T: *Veterinary Psychopharmacology*. Ames, IA, Blackwell Publishing, 2006.

Next month:
Intercat Aggression

The Use of Thrombolytic Agents

(continued from page 482)

7. Production of plasmin is inhibited by

- a. fibrinogen.
- b. plasminogen activator inhibitors 1 and 2.
- c. heparin.
- d. thrombin.
- e. tPA.

8. _____ has the shortest half-life and is fibrin specific in humans.

- a. Anisoylated plasminogen-streptokinase activator complex
- b. rtPA
- c. Streptokinase
- d. Prourokinase
- e. Urokinase

9. Allergic reactions can occur with the use of _____ in small animals.

- a. Streptokinase
- b. urokinase
- "c. tPA
- d. anisoylated plasminogen-streptokinase activator complex
- e. all of the above

10. The optimal treatment for ATE in small animals is

- a. unknown.
- b. systemic anticoagulants.
- c. local thrombolytic infusion.
- d. thromboembolectomy via balloon catheterization or arteriotomy.
- e. limb amputation.

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- Canine Dystocia
- The Evolution of Insulin Therapy
- Granulomatous Meningoencephalomyelitis