

# AGGRESSION IN CATS: OVERVIEW

## BASICS

### OVERVIEW

- Aggression can be an appropriate behavior that allows the cat to protect itself (known as an “adaptive behavior”) and its resources (such as food)
- Behavioral medicine—concerned with recognizing when aggressive behavior is abnormal or inappropriate (known as “maladaptive behavior”)
- Numerous types of aggression have been identified in cats, including the following:
  1. Aggression owing to lack of socialization
    - No human contact before 3 months of age—cat misses sensitive period important for development of normal approach responses to people; if not handled until 14 weeks of age, it usually is fearful and aggressive to people; if handled for only 5 min/day until 7 weeks of age, it interacts with people, approaches inanimate objects, and plays with toys.
    - Lack of social interaction with other cats—may result in lack of normal inquisitive response to other cats
    - These cats are usually not normal, cuddly pets; they may eventually attach to one person or a small group of people; if forced into a situation involving restraint, confinement, or intimate contact, they may become extremely aggressive
  2. Play aggression
    - Weaned early and hand-raised by humans—cat may never learn to temper its play responses; if not taught as a kitten to modulate responses, it may not learn to sheathe claws or inhibit bite; bottle-fed cats may be over represented
  3. Fearful or fear-induced aggression
    - Fearful—cat may hiss, spit, arch the back, and hair may stand up if flight is not possible; combinations of offensive and defensive postures and overt and covert aggressive behaviors are usually involved
    - Flight—virtually always a component of fearful aggression if the cat can escape
    - Pursued—if cornered, cat will stop, draw its head in, crouch, growl, roll on its back when approached (not submissive but overtly defensive), and paw at the approacher; if pursuit is continued, cat will strike, then hold the approacher with its forepaws while kicking with the back feet and biting
    - If threatened, cat will defend itself; any cat can become fearfully aggressive
  4. Pain aggression
    - Pain may cause aggression; with extended painful treatment, cat may exhibit fearful aggression
  5. Cat-to-cat (intercat) aggression
    - Male cat-to-male cat aggression associated with mating or hierarchical status within the social group; mating also may involve social hierarchy issues
    - Maturity—in peaceful multi-cat households, problems may occur, regardless of sexes in the household, when a cat reaches social maturity (2–4 years of age)
  6. Maternal aggression
    - May occur during the period surrounding the birth of kittens (known as the “periparturient period”)
    - Protection—queens may guard nesting areas and kittens by threatening with long approach distances, rather than attack; usually directed toward unfamiliar individuals; may inappropriately be directed toward known individuals; as kittens mature, aggression resolves
    - Unknown if kittens learn aggressive behavior from an aggressive mother
  7. Predatory behavior
    - Occurs under different behavioral circumstances
    - Normal predatory behavior develops at 5–7 weeks of age; kitten may be a proficient hunter by 14 weeks of age; commonly displayed with field voles, house mice, and birds at feeders; may be learned from mother; more common in cats that have to fend for themselves; if well fed, cat may kill prey without feeding on it
    - Aggression—stealth, silence, heightened attentiveness, body posture associated with hunting (slinking, head lowering, tail twitching, and pounce postures), lunging or springing at prey, exhibiting sudden movement after a quiet period
    - In free-ranging groups of cats, when a new male enters, he may kill kittens to encourage queen to come into heat (estrus)
    - Inappropriate context distinctions about prey—potentially dangerous if “prey” is a foot, hand, or infant; cats exhibiting pre-pounce behaviors in these contexts are at risk of displaying inappropriate predatory behavior
  8. Territorial aggression
    - May be exhibited toward other cats, dogs, or people; owing to transitive nature of social hierarchies, a cat aggressive to one housemate may not be to another if its turf is not contested

- Turf may be delineated by patrol, chin rubbing, spraying, or non-spraying marking; threats and/or fights may occur if a perceived offender enters the area; if the struggle involves social hierarchy, the challenger may be sought out and attacked after the territory is invaded
  - May be difficult to treat, particularly if the cat is marking its territory; marking problems suggest a possible underlying aggression
9. Redirected aggression
- Difficult to recognize and may be reported as incidental to another form of aggression
  - Occurs when a aggressive behavior pattern appropriate for a specific motivational state is redirected to an accessible target because the primary target is unavailable (e.g., cat sees a bird outside the window and is demonstrating predatory behavior; person walks behind cat and cat pounces the person, possibly biting the person); cat may remain reactive for some time after being thwarted in an aggressive interaction
  - Often precipitated by another inappropriate behavior or event; important to treat that behavior as well
10. Assertion or status-related aggression
- If unprovoked, most frequently occurs when cat is being petted; a need to control all interactions with humans and when attention starts and ceases; cat may bite and leave or may take hand in teeth but not bite
  - May be accompanied by true territorial aggression where specific areas are patrolled
  - May best be called impulse control/dyscontrol aggression
  - Exact syndrome is not well defined or recognized
11. Idiopathic aggression
- Rare; poorly understood and poorly defined; unprovoked, unpredictable, “toggle-switch” (turned on and off) aggression

#### **SIGNALMENT/DESCRIPTION of ANIMAL**

- Any breed of cat
- Some types of aggression appear at onset of social maturity (2–4 years)
- Males—may be more prone to cat-to-cat aggression (known as “intercat” aggression)

#### **SIGNS/OBSERVED CHANGES in the ANIMAL**

- Aggressive behavior
- Physical examination findings are generally secondary to aggression, such as injuries, lacerations, or damage to teeth or claws
- Continuous anxiety—decreased or increased grooming

#### **CAUSES**

- Aggression is part of normal feline behavior; greatly influenced by the early social history and exposure to humans and other animals, sex, social context, handling, and many other variables

#### **RISK FACTORS**

- Abuse—cat may learn aggression as a pre-emptive strategy to protect itself

## **TREATMENT**

#### **HEALTH CARE**

- Desensitization, counterconditioning, flooding, and habituation—if subtleties of social systems and communication are understood

## **MEDICATIONS**

Medications presented in this section are intended to provide general information about possible treatment. The treatment for a particular condition may evolve as medical advances are made; therefore, the medications should not be considered as all-inclusive.

No drugs are approved by the FDA for the treatment of aggression in cats; your veterinarian will discuss the risks and benefits of medical treatment

- Antianxiety medications that increase levels of serotonin in the central nervous system, such as tricyclic antidepressants (TCAs) and selective serotonin reuptake inhibitors (SSRIs)
- Amitriptyline (TCA)
- Imipramine
- **Buspirone**; may make some cats more assertive; thus may work well for the victim in anxiety-associated aggression
- **Clomipramine** (TCA)
- **Fluoxetine** or paroxetine (SSRI)
- Buspirone, clomipramine, paroxetine and fluoxetine—may take 3–5 weeks to be fully effective; early effects in cats are seen within 1 week, best for active, overt aggressions

- Nortriptyline—active intermediate metabolite of amitriptyline
- Anxious and fearful aggression combined with elimination disorders (behavioral problems involving urination and/or defecation)—diazepam or other benzodiazepine; use with caution because benzodiazepines can worsen inhibited aggressions; may facilitate some behavior modification if food treats used

## FOLLOW-UP CARE

### PATIENT MONITORING

- Blood work (complete blood count, serum biochemistry) and urinalysis should be performed before treatment; semiannually in older patients; yearly in younger patients if treatment is continuous; adjust dosages accordingly
- As warranted by clinical signs—vomiting; gastrointestinal distress; rapid heart rate (tachycardia), and rapid breathing (tachypnea)

### PREVENTIONS AND AVOIDANCE

- Ensure appropriate socialization of kittens with humans and other cats
- Avoid provocation of the cat
- Observe signs of aggression (such as tail flicking, ears flat, pupils dilated, head hunched, claws possibly unsheathed, stillness or tenseness, low growl) and safely interrupt the behavior; leave cat alone and refuse to interact until appropriate behavior is displayed; if the cat is in the person's lap, let the cat drop from his or her lap
- Discourage direct physical correction; may intensify aggression
- If possible, safely separate cats; keep the active aggressor in a less favored area to passively reinforce more desirable behavior
- Remember that a cat displaying aggressive or predatory behavior can bite or scratch any person or another animal--always be careful to ensure that you do not get injured; the best approach in some situations is to leave the cat alone in a quiet area until it calms down

### POSSIBLE COMPLICATIONS

- Human injuries; surrender of cat to animal control or animal shelter; euthanasia of cat
- Left untreated, these disorders always progress

### KEY POINTS

- Aggression can be an appropriate behavior that allows the cat to protect itself (known as an “adaptive behavior”) and its resources (such as food)
- Behavioral medicine is concerned with recognizing and identifying abnormal or inappropriate aggressive behavior
- Numerous types of aggression have been identified in cats
- Early treatment using both behavioral modification and pharmacological intervention is crucial
- Left untreated, these disorders always progress

