

Why So Serious? The Importance of Aggression in Dogs and Cats

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Definitions and Function of Aggression

General definition of aggression: Threats of or actual harmful behavior directed toward another individual or group of individuals. Ethologically, aggression is an adaptive response to threats to self, offspring, resources, or territory. It is expensive in behavioral economy due to risk of injury or death. Threatening behavior or ritualized aggression is intended to avoid conflict while being cost effective and reducing risk. To learn more, it is recommended to read Kim Brophey's book *Meet Your Dog* or attend her lectures on the L.E.G.S. Model.

The function of aggression is to create distance from potential threats or individuals and keep oneself safe. It may also be used to obtain a resource, such as food or a mate, and to protect offspring. While it is frequently viewed as behavior to increase tension, it is often used to diffuse tension and avoid conflict.

How Does Aggression Present?

Body postures

A dog displaying aggression may exhibit a stiff posture with low body carriage. Other signs associated with aggression may include piloerection, tail elevated or low, stiff tail wag, front paw raise, and lack of avoidance. A cat displaying aggression may also exhibit a stiff posture with low body carriage. A common body posture associated with fear, anxiety, and aggression in cats is a kyphotic one, commonly known as a "Halloween cat" posture. Cats displaying aggression may also exhibit piloerection, a flicking tail, and lack of avoidance.

Facial expressions

Dogs may exhibit a tight, closed mouth or bare their teeth when exhibiting aggression. Often, the dog stares and pupil dilation is present. Sometimes, dogs avert their gaze or exhibit "whale eye." Ears may be pinned or perked, depending on the motivation of the aggression. Cats often open their mouths to snarl and hiss or can exhibit a tight mouth with whiskers pointed caudally. Staring and pupil dilation are common. Similar to dogs, ears may be forward or pinned.

Vocalizations

Dogs displaying aggression may grumble, growl, and bark. Cats may growl, caterwaul or mowl, howl, moan, and/or hiss.

Differential Diagnoses of Aggression in Dogs and Cats

*Disclaimer: There is no standardization of behavioral diagnoses in veterinary medicine. Therefore, the definitions given here are those used by Dr. Hauser but may vary amongst Veterinary Behaviorists.

It is important for a professional to determine the potential motivation of aggression in the specific individual. To help define this, inquire about the target (e.g., conspecifics, familiar people, unfamiliar people, etc.) and the appearance of the behavior (body postures, facial expressions, vocalizations).

Aggression in companion animals can be affective (emotional) or non-affective (unemotional or innate). The most common emotion to cause affective aggression is fear. Conflict-related aggression refers to fear of interactions with familiar people, previously referred to as dominance aggression. It is known that the aggression between dogs and their guardians is not a result of dominance so this term is no longer used in Veterinary Behavior. Similarly, aggression motivated by fear between two housemates was previously referred to as status-related aggression. However, due to concern for guardians misunderstanding this as a dominance issue, it is more generally referred to as intraspecific aggression, interdog/intercat aggression, or by a more specific diagnosis relating to the trigger (e.g., resource guarding, redirected aggression, etc.). Resource guarding can be a normal behavior, especially if there are only warning signs without escalation, however when it escalates into a pathologic behavior, such as guarding stolen objects from guardians, there is often an anxiety or fear component to the behavior. Similarly, territorial behavior is normal and expected in some dog breeds, however, it may escalate past expected behavior due to anxiety or fear. In cats, territorial aggression is defined as offensive aggression where the cat approaches other cats to create distance and keep them out of specific areas. Territorial behavior is normal in free roaming cats but with indoor pet cats, this may escalate to blocking the other cat in the home from using necessary shared resources.

Non-affective aggression includes diagnoses that are innate such as play, predatory, and maternal. In some cases, these behaviors are exaggerated and pathologic. In addition, they may be misdirected such as predatory aggression by a dog towards a small child or bicycle.

Some cases of aggression may start as non-affective but develop an emotional component through associations and repeated exposure. For example, a dog may chase after a rabbit with its housemate in the yard due to predatory aggression but if the housemate interferes or they cannot access the rabbit and the dog becomes frustrated, it may result in redirected aggression towards the housemate.

When determining if the aggression is “expected” or “typical” of an individual, it’s important to consider a few factors, such as breed and age. Certain breeds were designed to display aggression and when a guardian adopts one, they should be prepared for these behaviors to be present. For example, guardian dogs, such as Great Pyrenees, do not typically exhibit warning signs prior to aggression and are not expected to be social with individuals approaching the property. Terriers are excellent working dogs but they often present to Veterinary Behaviorists for hyperarousal with secondary aggression due to traits that they were initially bred to perform. In addition, herding dogs will often present for affective aggression because they are active, working dogs but when placed in the wrong home, their needs are difficult to meet which results in anxiety. By acknowledging each breed and educating oneself on their traits, it can be helpful in managing guardian expectations and determining if the behavior is pathologic.

Another important factor is the age of the dog or cat. It is most common to see a dog or cat present for aggression once they experience social maturity, starting around 1-2 years of age in dogs and 3-4 years of age in cats. The most common cause of aggression in young companion animals is fear. This may be due to genetics, epigenetics, or the early sensitive (socialization) period. If aggression is starting in a geriatric patient, pain-related aggression must be ruled out.

The Veterinary Team’s Role

Prevalence of Aggression

It is important for the veterinary team to understand aggression since it is highly prevalent in the pet population. In a study by Anderson et al. 2022, 72% of dogs presenting to a veterinary behavior clinic were presented for aggression. In a study by Dinwoodie et al. 2019, a survey of dog guardians was performed, and they reported that about 1 in 3 dogs displayed aggression.

Screening and Identifying

In behavioral medicine, diagnoses are based on history provided by the guardian(s) so as a result, it is subjective. In addition, the guardians may not be perceiving triggers and body language that professionals can detect so asking the right questions is key. Avoid triggering the behaviors to observe them and instead, if guardians have video they have already collected, view it for additional information.

It is rare that aggression is unprovoked. When this is stated by a guardian, ask for more information about potential patterns. As with any behavior concern, medical conditions (e.g., seizures, hepatic encephalopathy, etc.) should also be ruled out to explain aggression without any identifiable triggers.

Avoid using general, lay descriptions of behavior such as “Fluffy gets angry” or “Fluffy is going crazy” as these do not provide sufficient information to provide a treatment plan and they cause judgement which worsens compliance and outcome. Instead, ask for details about body postures, facial expressions, and vocalizations. When a guardian states, “Fluffy is mean,” ask “what does that look like for Fluffy”? If they cannot provide more information, ask about specific body language: “Does Fluffy growl, bare his teeth, or lunge?”

Collect information about the context of the aggression. Consider general questions such as who, what, where, when, and help determine the why. These elements are key for providing a complete treatment plan. Another way to approach a behavior treatment plan is via applied behavior analysis with antecedent, behavior, and consequence.

All behavior conditions, including aggression, are diagnoses of exclusion once a complete medical work up is performed. Depending on the presentation of the case, this may include a thorough physical exam (including orthopedic and neurologic exams), baseline bloodwork (CBC, chemistry, T4/FT4, urinalysis), other labwork (GI panel, fecal PCR), radiographs, abdominal ultrasound, or referral to a specialist.

Treating Aggression

The three “pillars” of a behavioral treatment plan include environmental management, behavior modification, and medications, supplements or pheromones. Environmental management is key in every case of aggression to set up the environment for success and to provide safety measures. Behavior modification involves changing the animal’s emotional response to their triggers. Medications, supplements, and pheromones are utilized to facilitate the first two pillars and are not necessary in every case.

Liability

When seeing a case of aggression, it is important to provide safety recommendations every time. This may include barriers, muzzle training, and avoiding triggers. Every recommendation should be documented in case a guardian does not comply or remember what was discussed. If a guardian cannot or chooses not to stop exposure to the trigger, discuss the risks. When aggression is present, it is also reasonable to refer to a Board-certified Veterinary Behaviorist and other qualified professionals, such as Animal Behaviorists or certified force free, fear free trainers.

Empathizing

Guardians who live with animals displaying aggression are often feeling a variety of emotions including embarrassment, guilt, anger, and frustration. It is important not to be judgmental of them and avoid using terminology that may trigger their anxiety such as “dangerous,” “bad,” or “mean.” Explain to them *why* the patient is behaving in this manner and ways that you can help them. Let the guardian guide the discussion on next steps, including rehoming and behavioral euthanasia, and support them through the process.

Collaboration

An aggression case always requires collaboration between multiple professionals such as the primary care veterinarian, potentially a Board-certified Veterinary Behaviorist or other specialist, veterinary technicians, certified Animal Behaviorists, and certified force free, fear free trainers. Each individual brings different perspectives and treatments to the table. By collaborating with other professionals, the guardian and pet will have the best outcome possible.

References

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