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Dog Behavior Problems – Aggression Diagnosis and Overview

Though aggression can be a normal canine behavior, aggression is a complex, serious and dangerous behavior problem for dog owners. Expression of aggression may range from inhibited communication such as a warning growl, snarl or a snap and include, of course, severe uninhibited repetitive bites that may be quite injurious. The decision to keep or rehome a dog that has demonstrated aggressive responses is complicated and serious and may have legal consequences. Since there are many different types of aggression, making a diagnosis, determining the prognosis (the chances of safe and effective correction), and developing an appropriate treatment plan are usually best handled with the help of a veterinary or applied animal behaviorist.

To treat the problem effectively, it will first be necessary to determine which type of aggression your dog displays: conflict-related, fear, possessive, protective, territorial, maternal, play, redirected, pain-induced, interdog aggression, aggression toward familiar and unfamiliar people, status-related aggression, pathophysiological (or medical), or learned. In many cases, more than one form of aggression may be exhibited (see Aggression – Introduction). Treatment is addressed separately.

What is fear aggression, and how is it diagnosed?

One of the most common types of aggression seen by veterinary behaviorists is fear related aggression. Fear-related aggression may occur in many situations (home, veterinary hospital, public setting, or on walks) and many different people (familiar, unfamiliar or professionals) or animals (same or different species) may be the target of this aggression.

Fear related aggression may occur when a dog is exposed to people or other animals that the dog is unfamiliar with, or to those that have been previously associated with an unpleasant or fearful experience. Some dogs learn and generalize based on one experience; others need multiple opportunities to develop a pattern of behavior based on previous experiences. Although some dogs may retreat when fearful, those that are on their own territory and those that cannot retreat because they are cornered or restrained are more likely to fight. If aggressive responses alter the outcome – that is, the person or animal retreats, acts overly fearful, or if the pet is harmed or further frightened in any way (e.g., a fight, punishment) – the fear is likely to be further aggravated.



"Fearful body postures in conjunction with aggressive displays are diagnostic of fear aggression."

Fear aggression toward family members might arise out of punishment or some other unpleasant experience associated with the owners. Many cases of fear-related aggression are seen as combinations or complicating factors of other forms of aggression (e.g., conflict, maternal, possessive, learned, pain related, social conflict). Fearful body postures in conjunction with aggressive displays are diagnostic of fear-related aggression; however, in some cases, as dogs learn that aggression changes the outcome of the encounter, their body postures may become more confident even when the underlying

motivation of fear is unaltered. Behavior therapy, perhaps in combination with drug therapy, can be used to treat most cases of fear aggression (see Fears, Phobias, and Anxiety, Canine Communication – Interpreting Dog Language, Fears and Phobias – Animals and People, and Fears and Phobias – Inanimate Noises and Places)

What is conflict-related aggression, and how is it diagnosed?

The term dominance especially to describe human-dog relationships has recently come under intense scrutiny. Recent research suggests that dogs and free ranging wolves do not develop or strive to accomplish a strictly structured pack hierarchy as previously described nor do their social interactions appear to be strictly linear with an alpha dog on top and all other individuals subordinate at all times. Therefore, to use that terminology and the assertion of “pack leadership” and control of resources as the underlying motivation for human directed aggression appears to be inaccurate and simplistic. Reassessing the behavior in line with learning theory suggests in some situations, dogs that are confident and assertive are motivated by a pattern of successful encounters to continue their behavior. In these situations, the problem often surfaces around resources, rather than disobedience to commands, or anxiety conditions such as fears and phobias. Dominance or status related aggression is a poor interpretation of an individual dog’s motivation and the most common misdiagnosis. Few dogs, if any, deserve this diagnosis and most dogs displaying owner directed aggression are more accurately diagnosed as fear, conflict, defensive, territorial, or pain-related aggression. In fact, all of the situations that might even be considered dominance are more readily explained by learning principles (i.e., successful access of a resource, successful outcome for the dog).

Some behaviorists still use the term dominance-related aggression for aggression directed toward familiar people by a socially mature, confident dog resulting in a relationship pattern for the acquisition of desirable resources or privileges OR for avoiding undesirable interactions. The dog usually is confrontational and offensively aggressive; that is, when the dog perceives it is challenged, it may respond with varying degrees of aggression. Social maturity (24 to 36 months) and a pattern of past successes without early fear or defensive displays are generally components of this diagnosis. Dogs that display this type of behavior can be quite frightening to live with. Furthermore, these dogs may not be aggressive to unfamiliar people or professionals such as veterinarians or trainers as they cannot develop a relationship and pattern of interaction with individuals they meet once or intermittently. Instead of labeling these aggressive displays as dominance, they are better described as a learned response by a dog that wishes to maintain a high valued resource, is irritable or does not want to be handled, and has learned that the aggression will successfully achieve the goal. When the owner defers or backs down then the dog has learned that aggression achieves the desired outcome. However, challenging or confronting the dog is likely to increase the dog’s aggression (rather than backing down), potentially cause injury and not only reinforce the success of the aggression but make the dog potentially fearful of further similar encounters. Therefore understanding the dog’s limitations, avoiding circumstances that might be confrontational (or cause fear) and working to improve the situation by getting successful outcomes that can be reinforced would be the goal of treatment.

What is play-related aggression, and how is it diagnosed?

Play-related aggression is seen in young dogs toward people or other pets in the family. Overly rambunctious play, and grabbing, nipping or biting at people or their clothing are some of the common signs of play-related aggression. Although it is a normal behavior, it can lead to injuries and, if handled incorrectly could lead to other control related problems and perhaps other aggressive encounters as your dog matures (see Aggression – Sibling Rivalry – Diagnosis, Aggression – Sibling Rivalry – Treatment, Play Biting, and Play and Exercise).

What is possessive aggression, and how is it diagnosed?

Possessive aggression may be directed toward humans or other pets that approach the dog when it is in possession of something that is highly desirable such as a favorite chew toy, food, or treat or virtually anything the dog wishes to keep. Food-guarding aggression may or may not entail components of possessive aggression or be a separate entity.

"Although protecting possessions may be necessary if an animal is to survive and thrive in the wild, it is unwanted and unacceptable when directed toward people."

What is protective or territorial aggression, and how can it be diagnosed?

Protective aggression may be exhibited toward people or other animals that approach the pet's property (territorial aggression). Generally, people and other animals that are least familiar to the dog or are most unlike the members of the household are the most likely "targets" of territorial aggression. While most forms of territorial aggression are likely to occur on the property, some dogs may protect family members regardless of the location. Territorial aggression can be prevented or minimized with early socialization and good owner control of aggressive signaling (see Socialization and Fear Prevention and Training Basics – Getting Started).

"Territorial aggression can be a learned form of aggression."

In time, most dogs will begin to alert the family by barking when strangers come to the home. However, the dog that has been well socialized and is under good control can be trained to quickly settle down and relax. Territorial aggression can be a learned form of aggression. For example, when a puppy first begins to bark at novel noises and visitors that arrive at the property (alerting, alarm barking), the dog's genetics, socialization and previous experience along with the consequences of the event (outcome) will begin to shape further responses. Owners that are angry, frustrated or that yell at or punish the dog, may lead to a fearful association (pairing/conditioning) with the stimulus (arrival of visitors, knock at the door, doorbell). Similarly, if the stimulus is particularly unusual (e.g., wearing uniforms, carrying mailbags) or threatens the dog in any way (shoving items inside your door, threatening the dog, spraying pepper spray), it may further enhance the dog's fear of visitors. In addition, should the dog bark or growl and the stimulus retreat, the aggressive display behavior is reinforced. Therefore, learning may be a major contributing factor to territorial aggression. For treatment of dogs with territorial aggression, see Aggression – Territorial.

What is predatory behavior, and how can it be diagnosed?

Predation is the instinctive desire to chase and hunt prey. The sequence of watching, stalking, chasing, attacking, and ingestion is a manifestation of hunting skills. Dogs are scavengers and hunters by nature and while their skills do not compare to their wild ancestors some dogs have a strong genetic, natural drive to perform predatory behaviors. Often predatory behavior is associated with vigilance, watchfulness and focus. Predatory pursuits are often silent and without aroused warnings or displays. Some dogs that have never shown chase or predation on their own, may display predatory behavior when running together with a group of dogs. Predation of wild animals, birds or rodents is normal and may not be related to aggression to people or pets. Some dogs demonstrate predatory behavior to other dogs, other pets or even people or children. This is a very dangerous, persistent form of predation, which must be managed since as an innate, natural behavior it is unlikely to be cured (see Getting Started, Desensitization and Counter-Conditioning, Learning, Training, and Modifying Behavior, (Teaching Loose Leash Walks, Backing Up, and Turning Away, Training Products – Head Halter Training, and Chase Behaviors).

What is pain-induced or irritable aggression, and how can it be diagnosed?

Maternal aggression is directed toward people or other animals that approach the bitch with her puppies. Bitches that experience a pseudopregnancy (false pregnancy) may also become aggressive and begin to protect nesting areas or stuffed toys at the approximate time when the puppies would have been born. Once the litter of puppies are weaned and the dog is spayed the problem is unlikely to recur.

"Medical conditions can contribute to aggression."

In the interim, the owners can use a leash or leash and head collar, along with the "come" command and rewards to teach the dog to leave the litter, at which time the puppies can then be handled. With desensitization, counter-conditioning, good control and highly motivating rewards, it may be possible to train your dog to accept approach and handling of the puppies despite the normal inclination for a mother dog to defend and protect her puppies.

What is redirected aggression, and how can it be diagnosed?

Although learned aggression can refer to dogs that are intentionally trained to act aggressively on command (or in particular situations); more commonly incidental and unintentional learning and conditioning are also important components of many forms of aggression. Dogs are always learning; some dogs learn faster than others do. A dog will use aggression if they determine it is an appropriate behavioral response to change the outcome of the situation. When a dog learns that aggression is successful at removing the stimulus or changing the outcome of a situation, the behavior is further reinforced and more likely to occur at least in a similar circumstance in the future.

"Learning and conditioning are also important components of many forms of aggression."

Therefore, learning contributes to all forms of aggression. Owners who pet or use verbal reassurance in an attempt to calm the pet and reduce aggressive displays may inadvertently encourage and reward the behavior because petting and calm vocal intonation are similar to praise. Pets that are threatened or punished for aggressive displays may become even more aggressive in future similar situations as they learn to associate the punishment with the presence of the stimulus and NOT with their actions. In addition, if the response of the owner or the stimulus (person or other pet) is one that evokes anxiety or fear, the aggression is likely to escalate (see Desensitization and Counter-Conditioning).

What are some of the other causes of aggression?

Aggression associated with medical disorders may arise at any age, may have a relatively sudden onset and may not fit any canine species-typical behavior. Some medical conditions can, on their own, cause aggression, but in many cases a combination of behavioral factors and medical problems cause the pet to pass a certain threshold after which aggression is displayed. Infectious agents such as rabies, hormonal imbalances such as hypothyroidism, psychomotor epilepsy, hyperkinesis, neoplasia, and a variety of genetic and metabolic disorders can cause or predispose a dog to aggression. Painful conditions such as dental disease or arthritis, and medical conditions causing fever, fatigue or sensory loss might increase the pet's irritability (see Diagnosing a Behavior Problem – Is It Medical or Behavioral? and Senior Pet Behavior Problems).

In rare circumstances, aggression has no identifiable etiology and no particular stimuli that initiate the aggressive displays. There may be a genetic propensity to aggression in some lines of some breeds, but the diagnosis of many of the cases previously labeled as "idiopathic", "rage" or "mental lapse aggression" has been disputed, and some cases have been

subsequently reclassified. Only when there is no identifiable stimulus or cause for the behavior, or when an abnormal EEG (electroencephalogram) is documented, should the diagnosis of idiopathic aggression be considered. Alterations in neurotransmitters or receptor sites in the brain may be the cause of these types of aggression and drug therapy might be one aspect of treatment.

*This client information sheet is based on material written by: Debra Horwitz, DVM, DACVB & Gary Landsberg, DVM, DACVB, DECAWBM
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