

Human-directed canine aggression

Author : JENNIFER DOBSON

Categories : [Vets](#)

Date : November 12, 2012

JENNIFER DOBSON looks at assessing the risk and prognosis of aggressive behaviour in dogs towards people

Summary

Aggression is a normal canine behaviour, but human-directed aggression can be potentially life-threatening for the owners, other people and the pet. Poor breeding, poor upbringing, mistrust, lack of bonding, inconsistency and miscommunication can all foster aggression. Virtually all aggression is about seeking to control a situation. It can be motivated by various behavioural modes and emotional states and then exacerbated by learning experience. Although larger dogs are often considered a potentially greater risk, with smaller dogs often being discounted as relatively innocuous, in practice, risk depends on the propensity for aggression and reactivity of each dog, its physical capability to inflict injury, together with victim vulnerability.

To the very young, unsteady, elderly, immobile or medically compromised victims even small dogs can be highly dangerous. Predictability of aggression triggers, plus duration and unambiguity of preceding warnings, influence risk. Infrequent specific triggers may be controllable and avoidable, unlike widespread triggers involving everyday events. Multi-dog attacks can involve pack influences – adversely affecting arousal levels. Most cases of aggression can be greatly improved with appropriate behaviour modification therapy, but in more extreme cases, where prognosis is very poor and risk very high, euthanasia may need to be considered as the “least worse” option.

Key words

aggression, risk, prognosis, victim, triggers

AGGRESSION can be defined as feelings of anger or antipathy resulting in hostile or violent behaviour, readiness to attack or confront, the action of attacking without provocation, forcefulness (*Oxford Dictionary of English*).

It is normal behaviour in a species that is a predatory, carnivorous, social, group-bonding and sometimes competitive hunter/scavenger. However, in a domestic pet, human-directed aggression can become potentially life-threatening for the pet, and present very real risks to owners and others.

What are the causes of aggression?

Mutual trust, respect, affection, clear boundaries and good training tend to reduce aggression. Conversely, poor breeding, poor upbringing, mistrust, lack of bonding, inconsistency and miscommunication can do the opposite.

Aggression can be learned via social interactions and environmental influences. Additionally, in some cases, genetic predisposition can be triggered by environmental cues, with aggression spontaneously appearing with increased maturity and/ or confidence despite careful, and, up to that point, apparently successful, socialising and habituation, as the dog's value system may change over time and it becomes more aware of its physical and psychological capability to influence situations.

Virtually all aggression is about a deliberate effort – successful or otherwise – to control someone else, or their actions, unless it is idiopathic or related to medical conditions affecting awareness, such as seizures or brain tumours. Pain and medical conditions can influence aggression, so these should be ruled out before treating aggression as a behavioural problem.

Disorientated animals recovering from anaesthetic can exhibit uncharacteristic aggression. Hunger-increasing treatments can raise the risk of food guarding, which can quickly become a learned behaviour.

Although fear or anxiety can produce aggression – particularly if the dog feels trapped – fear and anxiety about a negative consequence can also inhibit aggressive expression, so use of anxiolytic medication (also some hormonal/steroidal preparations) can disinhibit aggression, as can increasing confidence through learning.

At this point, such dogs can become more dangerous, as they become more proactive about dealing with perceived threats, while becoming less concerned about maintaining their safe distance from it. Hence, a previously noncontacting dog may become more likely to approach within range of a connecting bite.

Aggression can often be multifactorial, with motivational overlaps ranging over, for example, predatory behaviour, inappropriate play and competition over various resources (including territory). Agenda conflicts can arise over control issues, such as compliance or handling. Sometimes aggression is motivated by dislike or anxiety, neither of which is necessarily the same as fear.

People can also be accidentally injured in the “crossfire” during aggression incidents targeted elsewhere – for example, territorial or intraspecific aggression. Injuries incidental to the direct aggression can result if, for example, someone is pulled into traffic, knocked over, badly jolted or otherwise hurt while physically trying to control and restrain an aggressive dog.

Redirected or displaced aggression to a less daunting, or more accessible substitute human target can also occur in various situations.

What maintains and motivates aggression?

Aggression can be maintained by various self-reward factors, including a positive feedback loop whereby the more aroused and reactive the dog becomes, the more adrenaline is released, leading to more arousal and reactivity. This can also lead to increasing tunnel vision – the dog becomes less aware of peripheral stimuli, while becoming increasingly focused on the eliciting stimulus.

Frustration and tension release are often significant self-rewards, along with the postadrenaline, post-endorphin feel-good factor, relief from anxiety after removing threats and psychological satisfaction of winning challenges and agenda conflicts.

With several types of aggression, such as predatory sequences, there is the innate reward of performing an instinctive behaviour. Some debate exists as to whether predation involves aggression. However, it clearly fits the dictionary definition provided. All these various physical and psychological rewards contribute to the learned element of aggression.

Identifying the dog’s motivation can indicate the most appropriate way to address the problem, and can help to identify potential targets and high-risk situations. For example, predatory aggression may be triggered by a sudden or fast movement, or a high-pitched noise, and may sometimes involve silent ambush or abrupt behaviour change.

Play aggression can result in very serious injuries and can be triggered by raised arousal levels, particularly in a dog that has not been taught appropriate boundaries. Play aggression is a starting point for developing controlled aggression in security dogs. However, in the hands of inexperienced owners, uncontrolled escalation may be inadvertently encouraged, without the essential safety valve of the well-programmed “off” switch established within professional, structured, aggression training.

Dogs motivated by protective aggression can misread situations. A dog gallantly and bravely defending its owner from a mugger's attack will be lauded as selfless and brave. The same dog attacking police trying to arrest a resisting criminal owner – a near-identical situation in the dog's perception – is likely to lead to additional charges and possibly the dog's destruction.

Caveats

Helping a client who is committed to resolving his or her dog's aggression, when feasible, is not unreasonable, but caution should be observed if you are considering dissuading a client from requesting euthanasia because of aggression problems due to the risk of liability for consequential injuries.

Signed informed consent forms should be obtained that acknowledge the owner has been warned about the legal and physical risks these cases unavoidably involve. A written behavioural report, including a detailed history and the warnings and caveats given, also help protect the practitioner.

In court actions for civil injuries, prior knowledge of aggressive behaviour is pivotal to the outcome. Third party insurance may require known aggression to be declared as a significant material risk.

Factors influencing risk

The degree of risk involved can depend on the type and intensity of the dog's underlying emotion and the qualities of the specific releasing stimuli, which, in many cases, will be various aspects relating to potential victims.

Accordingly, the physical qualities and behavioural characteristics of the dog must be assessed, but also the pertinent qualities of, and accessibility to, potential victims. This includes predictability and controllability of victim behaviour, confidence or fear, physical coordination and strength, ability to read the dog's signals, understanding of situations and how things can escalate in the immediate or longer-term future.

A full past history of the aggressor is very helpful, so recently adopted strays with no known history may represent a greater risk. Every dog that bites does so for the first time, at some point. It can never be safely assumed a dog will not bite, merely because it has not done so previously.

Some dogs will produce unambiguous, dramatic warnings, only biting as a last resort; others only provide brief, subtle warnings, such as a momentary sideways look, a brief stillness or muscle tension, and some will bite without any warning at all, which raises the risk.

Does size matter?

It can be tempting to think only large, powerful dogs represent a high risk of significant injury, as such a dog is likely to cause greater injury than an equally aggressive smaller dog.

However, risk actually depends on the animal's propensity for aggression, reactivity of each individual dog, its physical capability to inflict injury, coupled with the vulnerability of the victim. Even a small dog can be a very real risk, as it could easily access someone very young, frail, unsteady, immobile, already lying prone, those who are immune-compromised, anyone with clotting problems if severe or fatal bleeding occurs or as a consequence of necrotising fasciitis.

Obviously, a sustained attack is likely to cause more damage than a single shallow bite. Some dogs repeatedly bite and release – others, including some small terriers, don't release, but will shake and worry at the bite, increasing damage to tissue, nerves and blood vessels ([Figure 1](#)).

Prognosis considerations

The early age of onset, high frequency, high severity/intensity (has there been actual injury and, if so, how severe?) and prolonged existence of the aggression problem are all indicative of high risk and a poor prognosis – as is unpredictability and lack of warning of the impending aggression, as this makes it harder to anticipate and take appropriate precautions.

There is generally a greatly increased risk to children, compared to able-bodied adults, because dogs can perceive children differently and children lack the agility, coordination and comprehension to avoid problems, to immediately withdraw if threatened or bitten and to remember to always be aware and careful in certain situations.

This can also be true of adults that are mentally, emotionally or physically compromised in some way, or who are unaware of the dog's likely behaviour. Anyone likely to be taken by surprise, cornered, nervous, agitated or over-confident may also be at greater risk.

Not moving away can result in the dog perceiving this proximity as a continuing threat or challenge, and respond with repeated biting when it may otherwise have stopped at a warning or single bite if the victim withdrew. Some dogs use minimal aggression sufficient for their purpose, while others appear willing to inflict as much damage as possible to gain and keep the advantage, or because they panic.

Some individuals have a greater predisposition to aggression, and some breeds have a higher proportion of these individuals. Very early onset (from a few weeks of age) of non-playful, hard biting with serious intent, sometimes accompanied by seriously meant aggressive vocalisation, may indicate some degree of genetic predisposition.

Assessing risk

When assessing the degree of risk and the likely outcome with canine aggression cases (my most commonly presenting problem), I need to consider many factors.

- Does the owner understand the risks?
- Does good anticipation and prevention or avoidance of high-risk events exist?
- What is the standard of obedience compliance and ability for physical restraint or maintaining critical distances?
- Can essential safety and training equipment to resolve and prevent problem situations arising and to enable safe control when needed be effectively and safely used and reliably fitted?

In some cases, despite positive association training protocols being used, aggressive dogs will jump stair gates, refuse to enter or leave crates, will gather up or guard house lines, refuse to have leads, harnesses, head collars, muzzles or collars put on, or will remove muzzles, bite through the front of tube muzzles or use cage muzzles as damaging battering rams. Dogs can also do considerable damage by charging, wrestling and using claws and head butts – not just teeth.

Attacks involving more than one dog are more difficult to evade or escape. Additionally, each dog can further excite, arouse and influence/encourage the other to attack initially, and to then sustain the attack. Some dogs that can be dangerous in these circumstances may be well-behaved alone, although, over time, increasing confidence and expertise can make solo attacks increasingly likely ([Figure 2](#)).

On the basis of learned behaviour, the longer a behaviour has been established, the more committed, practised and reliant the dog is likely to be with that strategy and, therefore, often the poorer the prognosis.

If a dog only exhibits aggression in response to a few specific triggers, it may not be a high-risk dog, even if highly aggressive when these are encountered, as control against these triggers may be predictably and easily achieved in the short term, while being safely desensitised longer term. In some cases, rehoming to a more suitable environment, or to more appropriate ownership, may be successful if the new owners are aware of the problem behaviour and better placed to handle it.

Regrettably, in extreme cases with long-standing severe aggression and widespread, unavoidable, benign triggers (such as in normal, frequent, everyday events), it may be that the high degree of lifelong safety risks, the risk of legal proceedings, the difficulty and stress of permanently, consistently maintaining essential precautions, the alteration of human and canine social interactions, and the reduction in human and canine quality of life, together with a very poor prognosis for significant improvement, all lead to serious consideration of euthanasia as the difficult, but honest, responsible and realistic least worst outcome.

To resolve aggression cases I identify and address the triggers and their learned responses via a combination of physical management, safety precautions and behavioural modification techniques, involving improving anticipation and communication, restructuring relationships, gradual desensitisation and changing negative emotional associations. However, aggression resolution sometimes means successful control as a “cure” can only be declared retrospectively, in the known absence of relapses.