

# UNDERSTANDING AND PREVENTION OF CANINE AGGRESSION TO CHILDREN

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Aggression continues to be the most frequent canine behavior problem motivating clients to pick up the phone and seek help. Perhaps because it is not easily resolved by drug therapy or simple behavior modification, aggressive behavior is best treated with a full consultation, including extensive counseling about safety issues and realistic expectations for improvement. This is particularly true when children are the victims of biting.

More than 1 million dog bites are reported annually to public health authorities in the United States[1], but these probably comprise only 25-50% of actual bites [2]. Children are the primary targets of all reported dog bites [3]. Because reported injuries require a visit to a hospital emergency room, reported bites represent only a small percentage of the total number that occur annually in the U.S.. Toddlers and school-age children are at high risk because of their small size and quick movements. Compounding these risks, children are more likely than adults to be bitten in the face and head.

## **Characteristics of Dogs That Bite Children**

### ***Breed***

Reported dog bites are generally by young dogs of many breeds, including mixed breeds. Breed generalizations are easily misinterpreted -- this is further compounded by the fact that breeds are often misidentified, and therefore records are inaccurate.

The greatest number of bites are committed by mixed breed dogs, in relative proportion to the mixed breed pet population. This is not true, however, when pure breeds are considered. Aggression toward family members or other familiar people, for example, is statistically more likely in purebred dogs than in mixed breeds[4]. In at least one urban study, bites by working (including herding) and sporting breeds predominate, and in numbers disproportionate to registrations[5, 6]. In various published reports, German Shepherd Dogs, Collies, Poodles (size unspecified) and Cocker Spaniels are frequently cited. When serious bites are separately examined, the culprits tend to be Pit Bull Terriers, German Shepherd Dogs, and Chow Chows. The breeds cited in the subset of serious attacks resulting in deaths include Rottweilers, Pit Bull Terriers and their mixes (considered by some to inflict the bites most likely to cause severe injury), German Shepherd Dogs and their mixes, and Husky breeds[7].

Breed-specific information changes quickly, and the dangerous breeds of 2 decades ago are not necessarily the dangerous breeds of today. Most important to keep in mind, however, is that individuals of any breed have the potential to bite.

## *Sex*

Aggression in general is seen more in males than in females (particularly true for reported bites as a whole, and for clinical categories of owner-directed and territorial aggression). Several studies have shown that sexually intact males and spayed females are more aggressive than their castrated or intact counterparts. In a small study of severe bites in South Carolina, all dogs involved were sexually intact. In another study, 8 of 10 fatal dog attacks were committed by males.

## *Owned or stray?*

The overwhelming majority of dog bites are inflicted by dogs that are owned [8], contradicting the stereotype of the aggressive feral dog. Truly unowned dogs are more rare now than in the past. However, the majority of bites (from pet dogs) in one study were directed at people other than owners themselves[9]. Such statistics are inconsistent because of the lack of standardization (e.g. definition of owned vs stray or familiar vs unfamiliar strangers).

In a survey of over 3000 school children in Pennsylvania, 45% stated they had been bitten at least once their lifetimes [9]. Of these, 30% were bitten by their own dogs. Other surveys of emergency room visits for dog bite reveal similar findings[3]. In a Denver study of 960 children (this time through a pediatric practice), 20% had been bitten at least once, with the majority of bites occurring before the age of 5 years[10].

## **Characteristics of Children**

Children are more likely than adults to be victims of dog bites, and consequently are over-represented in dog bite reports (e.g. over half the victims were children in several dog bite surveys). Among children, the age range with the highest frequency of bites is 5 to 9 years of age. More disturbing is that children are especially vulnerable to severe injuries. Victims of fatal attacks tend to be either young or old (but primarily young); the bite-related fatality rate for newborn infants is many times higher than that for middle-aged human adults.

Boys are bitten at approximately twice the rate of girls. In fact, the victims of severe or fatal dog attacks tend to be boys (especially young boys). One might hypothesize, then, that at least some aspect of victim behavior contributes to the bite incident, even if that aspect is related only to a willingness to approach the dog.

## **Diagnostic Categories of Aggression to Children**

### *Fear-related aggression*

Many dogs seem unnerved by crawling infants or toddling toddlers -- perhaps because of a lack of familiarity with their voice pitch, jerking movements, running and social interactions, children elicit increased vigilance and avoidance behavior in some dogs. Fear may increase irritability and defensive behavior so that, if accidentally

cornered by a child, such dogs are likely to snap or bite. It is difficult (and unnecessary) to distinguish at times between fear-related and conflict-related aggression.

### ***Conflict-related (owner-directed) aggression***

Where conflict-aggression plays a role, provocations by small children are particularly intense because of the increased likelihood of face-to-face contacts and other socially potent situations. Some dogs appear more tolerant of children than of adults, perhaps because they view them as juvenile social group members. Unfortunately, however, it is dangerous to assume that a dog with a history of aggression to family adults but not children would continue to be safe with children. Conversely, there are those dogs that exhibit growling, snapping and other threats only to children. Again, fear and conflict-related behavior often work in concert.

### ***Predatory aggression***

Dog bites can be so severe that they kill the victim. One motivation may be hunger, particularly in cases when flesh is consumed; however, predatory aggression directed to people is relatively rare. Small infants, in particular, are at high risk of fatal attacks, even by the family pet or other familiar dog. Dogs particularly predisposed to predatory attacks include terriers, northern breeds (e.g. Siberian Huskies, Alaskan Malamutes), and any dog with a history of killing small prey such as woodchucks. Predatory aggression is probably facilitated when more than one dog is involved. Such “packs” are responsible for some reported fatal attacks in which children have been chased while on a bicycle, for example.

Not all fatal attacks are based on predatory behavior. However, it may be that, once a dog is aroused by biting (and the victim’s reactions), predatory behavior may then be triggered.

### ***Territorial aggression***

Chained dogs are particularly dangerous to children. Dogs chained outdoors for long periods have limited stimulation and may show intensified territorial reactions to trucks, passersby, and other “intruders”. Problems occur when children unknowingly wander into the path of a chained dog, or if vigorous jerking breaks the chain when a child is near. More than a few fatal attacks have involved chained dogs. Equally worrisome are inadequate barrier fences when dogs are left outdoors for long periods. Underground electric fencing is particularly dangerous to children, who, again, may wander onto the dog’s property or whose presence may impel a dog to run through the shock.

## **Management of Aggression to Children**

Because small children cannot be relied upon to follow rules or to be consistent, treatment must highlight prevention and avoidance of high-risk situations (as distinct from reliance upon behavior modification, or learning, to teach the dog to react

differently). Regardless of motivation for aggression, biting dogs should be leashed (attached to the owner) or actively supervised, muzzled, gated or crated in the presence of small children. Even active supervision is insufficient in preventing some bites.

Predatory aggression cannot be "trained out" of dogs predisposed to such behavior, and even well-behaved dogs are potential predators. A history of fatal or otherwise severe attacks on small animals should be taken seriously, and such dogs treated cautiously. The safest approach for prevention of biting is to assume that *any* dog might see an infant as prey. Dogs and infants, whether awake or asleep, should not be left alone together for even brief periods.

Desensitization and counter-conditioning or response substitution -- training the dog to relax and eat in the presence of the child, or to perform a behavior (such as lying down or expecting food) incompatible with the aggression -- can be useful in cases of fear-related aggression, particularly when aggression has been mild (there has been growling and avoidance, but no attempts to bite). However, certain behaviors cannot reliably be changed. Behaviors unlikely to respond to behavior modification are those that were not learned to begin with, but were "innate" -- such as conflict-related aggression, possessive aggression (resource guarding) and biting when woken from a deep sleep (probably a fear reaction).

The use of behavioral drugs can be helpful in the management of aggression. However, there are no drugs currently approved for use in canine aggression. This and the fact that effects of any psychotropic drug may be unpredictable must temper the use of drugs and limit it to cases in which clients have been fully counseled about safety and risks. Drugs, if used, should be part of a complete treatment plan including other types of intervention.

### ***Education of children***

Children can, to some degree, be educated about dogs so that, within realistic limits, the risk of biting is reduced. In general, they should be taught that unknown dogs (including cute, fluffy, leashed dogs) should not be touched or even approached without the consent of an adult. In the home, dogs should not be touched, bothered or approached while eating, resting or sleeping, or chewing on/playing with a toy or bone. Dogs should never be "cornered" under furniture, against the wall, or in other places of retreat or rest. Of all postures to possibly avoid, children should learn that direct face-to-face interactions (even staring) can be provocative.

Children should also be taught that, if confronted by a growling dog, they should quietly turn their gaze sideways, away from the dog, and call for help. Retreat should be slow. If attacked, children should be taught to fall on the floor into a ball, covering the face, and lie still until help arrives.

For interested older children, participating in obedience training, exercising, grooming and feeding (under adult supervision). Can be helpful in forming appropriate relationships with dogs.

## *Education of dog owners*

Dog owners, particularly those without children of their own, should take it upon themselves to expose their dogs, especially in puppyhood, to children of all shapes, sizes, and decibel levels. It is the owner's responsibility to know his or her dog's "buttons" -- if there is any risk, children should firmly be instructed not to approach. It is not appropriate to "desensitize" a dog at the expense of a child. On the other hand, such approaches could be helpful in a controlled environment, with a dog on leash, and the permission of the parent.

In addition to early and frequent exposure to children, owners should take advantage of genetic influences to minimize the risk of aggression in their own pet. Selection of even, non-aggressive temperaments is ideal, regardless of dog breed.

Finally, dogs should not be left outdoors for long periods, whether tied or fenced. Underground fencing should never be relied upon in neighborhoods with children.

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