

**IS BREED SPECIFIC LEGISLATION THE ANSWER
TO PREVENTING DOG ATTACKS?**

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EXECUTIVE SUMMARY

Purpose of the Report

The purpose of the report is to determine whether breed specific bans are an effective means of preventing dog attacks. This report examined statistics and reviewed expert opinion on the causes of canine aggression and bite prevention, and finally, considered the options a community has for implementing dangerous dog laws.

Conclusions

While it was found that dogs of large breeds, particularly those breeds developed for fighting and/or guarding, are disproportionately represented in the fatal attacks chart, it is evident that breed of dog is neither the only factor in dog attacks nor the most significant. Other factors included heredity, sex, early experience, socialization and training, health (medical and behavioural), reproductive status, quality of ownership, supervision and restraint, and, finally, victim behaviour.

Bite statistics inherently contain the potential for significant inaccuracies. It is not possible to reach an accurate bite-per-breed statistic, as the breed of the biting dog may not be accurately reported, mixed breeds are commonly described as purebreds. The actual number of bites in a community is not known, and the number of dogs of a particular or combination of breeds in a community is not known, because it is rare for all dogs in a community to be licensed. (Beaver., B. V., Baker. D.M., Gloster., R.C., Grant, W.A., Harris, J.M., Hart, B.L., Hattaway, D.H., Houston, T., Koschmann, J. R., Lockwood, R., Rieck, D., Sacks, J.J., Strauss, W. S., & Strother, J., 2001, p. 1733).

Breed-specific legislation is based on the premise that certain breeds are inherently dangerous and that public safety can be accomplished by banning or restricting only those dogs. Unfortunately, this does not deal with the underlying problem – irresponsible

ownership. Non-breed specific dangerous dog laws are based on the premise that any dog can bite and that a dog of any breed can be treated in a way that would encourage aggression. Non-breed specific legislation focuses on the quality of ownership, placing the responsibility for the dog's actions squarely on the owner of the dog.

Recommendations

Initiatives that focus on responsible ownership and education on dog safety are most likely to have an impact on the number of bites a community deals with. Communities should promote responsible ownership issues such as licensing, leash laws, spaying and neutering and the proper socialization and training of dogs. Further, as most victims of dog bites are children, education aimed at teaching young children how to behave safely around dogs would further reduce the number of dog bites in a community.

IS BREED SPECIFIC LEGISLATION THE ANSWER TO PREVENTING DOG ATTACKS?

INTRODUCTION

In 2001, the world was shocked by the death of Dianne Whipple, a 31-year-old schoolteacher in San Francisco who was mauled to death by her neighbour's Presa Canario dogs. This case was highly publicized, coverage focused not only on Dianne's untimely death, and the previously obscure rare breed of dog that killed her, but also on the owner's Aryan Brotherhood and criminal ties. In the wake of this media frenzy calls were made to ban the Presa Canario breed. Similarly, previous high profile attacks called for bans on Rottweilers and Pitbulls, and in some cases those bans were implemented.

Dog attacks are considered a growing epidemic. While the number of fatal dog attacks have held fairly steadily over the years, serious non-fatal dog attacks are on the rise. It is estimated that more than 35 percent of North American households include a dog as a family pet, and that in the United States, over 4.7 million people per year, will be injured by a dog (<http://www.hsusorg/ace/11843>). This problem is, composed in part; of a population turning more and more to dogs as either protection or weapons, and a population that has less time than in previous decades to care for and train pets.

This report will consider whether outlawing certain breeds of dogs is an effective measure to reduce dog bites. To accomplish this goal research will focus on whether breed is the determining factor behind attacks and whether or not other factors were as significant. Additionally, this report will consider issues that affect the enforceability of breed-specific legislation. The scope of the research will be limited to statistics and data specific to the United States and Canada.

While researching dog attacks and dangerous dog laws a number of valuable sources were utilized. These including a number of reports that track fatal dog attack statistics from 1979 to 1998, a book that gives detailed information on the 431 documented cases of fatal dog attacks in the United States, further bite statistics were taken from the “Morbidity and Mortality Weekly Report” which chronicled both fatal and non-fatal bites resulting in emergency room visits. Additional information was supplied by a Website that maintains information on the legal aspects of dog bites including legal issues surrounding breed specific bans and a feasibility study regarding the implementation of breed-specific legislation in a community in Ontario.

While some useful statistical data was found, efforts were hampered by the lack of national or regional databases to track bite statistics. In both the United States and Canada limited non-fatal bites statistics, particularly those referencing the breed of dog were found. As a consequence this report relies heavily on non-statistical information including reports and articles by experts in the field of dog aggression and bite prevention.

This report will first give background information on the problem of dog attacks, including the estimated numbers of attacks and the damage to the victims. Secondly, statistics documenting fatal dog attacks for the period 1979 to 1998 will be reported and analyzed. In the third section, research on relevant factors in dog attacks other than breed will be discussed. Following that the pros and cons of breed-specific and non-breed specific dangerous dog laws will be reviewed and analyzed. Finally, the report will document the conclusions reached and will make recommendations for preventing dog attacks at the community level based on the information covered in the report.

Dog Attacks: Numbers, Victims and Damage

The Number of Attacks

It is estimated that in 2001, there were over 68 million dogs kept as pets in the United States. No decisive estimates were found for the number of dogs kept as pets in Canada, but it is reasonable to conclude a similar percentage of dogs are kept as pets in Canada adjusted for this country's lower population. Unfortunately, some of the interaction between man and man's best friend has been less than positive. The Humane Society of the United States estimates that two percent of the population is bitten each year, resulting in over 4.5 million dog bites per year (<http://www.hsus.org/ace/11843>). The authors of the report, *Dog bites: How big a problem?*, note that dog bites are among the top twelve causes of non-fatal injury in the United States (Sacks, J.J., Kresnow, M., & Houston, B., 1996 p. 52). Even more seriously, between 1979 and 1998 there have been over three hundred fatal attacks by dogs. On average, between 10 to 20 people, are killed annually in the United States by dogs (Sacks, J. J., Sinclair, L., Gilchrist, J., Golab, C. G., & Lockwood, R., 2000 pp. 836-840). Clearly dog attacks are a serious problem.

The Victims

One of the most disturbing aspects of these statistics is that children are by far the most likely to be bitten by dogs and the most likely to suffer serious or fatal injury (Sacks, J.J., Sinclair, L., et. al, 2000 p. 836). The age group likeliest of all to sustain a serious or fatal bite wound is that between the ages of five and nine years of age (Gilchris, J., Gotsch, K., Annest, J.L., & Ryan, G., 2003 pp. 605-610). Between 1965 and 2001, eighty-one children under the age of one year were killed by dogs in the United States (Delise, K., 2002, p. 18).

There are a number of reasons why children, particularly young children, are the most likely to be attacked and seriously injured. Children's small size makes them less able to fend off an attack and has the added disadvantage of putting a large dog's head on level

with a small child's head and neck. Secondly, young children are less likely to identify risk factors such as touching an object the dog is guarding, moving within the range of chained dog, or playing with a dog in an inappropriate way. Adults and older children are more likely to be able to accurately read a dog's expression and body posture to determine whether the dog is a threat or not. For example, an adult or older child approaching a dog on a chain may see the dog stiffen, raise its hackles, elevate its shoulders by standing up on its toes, and change its facial expression by drawing its lips away from its teeth. They correctly identify the dog's altered posture as threatening and back off. A younger child unable to understand the significance of the dog's change in posture continues forward and is attacked.

In addition to the reasons listed above, children's smaller stature may encourage a dog to show dominance over them. Dogs by nature understand a hierarchical pack structure, where a dog may calmly accept a human it understands to be higher in the pack order than itself, giving it commands, entering its territory or handling its food and toys, may well respond with aggression to what it perceives as a sub-ordinate pack member taking the same liberties. (Sacks, J.J., Kresnow, M., & et. al., 1996, pp. 52-54). Finally, there is a greater likelihood of a dog perceiving a child as prey. Children's quick erratic movements and high pitched noises are more likely to set off a dog's instinct to chase and attack prey.

After the age of twelve the incidence of serious and fatal bite wounds fall steadily likely reflecting an increased ability to recognize dangerous situations involving dogs and the advantage of larger size to both deter attacks and increased physical ability to fight off and survive an attack.

After children under the age of 12, the elderly are also at greater risk of serious injuries by dogs, possibly reflecting their diminished strength, balance and overall health as factors. Elderly women are more than twice as likely as elderly men to suffer fatal injury from a dog attack. According to Karen Delise the two most common scenarios for fatal dog attacks involving the elderly are being attacked and killed by the neighbour's dog(s) and being attacked and killed by a family member's dog(s) (2002, p. 16).

This information tells that the weakest members of our population are at the most risk from dog attacks and that any recommendations for preventing dog bites should take this into consideration.

The Damage of the Attacks

Dog attack victims' physical injuries range from bruises and abrasion to disfigurement and death. Young children are more likely to be bitten in the face and neck area often causing serious disfigurement and disability. Wounds received by adults are more often on the extremities (Gilchrist, et. al, 2003, pp. 605-610).

Direct costs of dog attack related injuries are high. The insurance industry estimates it pays more than \$1 billion dollars (USD) per year in homeowners' liability claims resulting from dog bites. Hospital expenses for dog bite-related emergency room visits are estimated at \$102.4 million (USD) (Beaver., B. V., Baker. D.M., Gloster., R.C., Grant, W.A., Harris, J.M., Hart, B.L., Hattaway, D.H., Houston, T., Koschmann, J. R., Lockwood, R., Rieck, D., Sacks, J.J., Strauss, W. S., & Strother, J., 2001, p. 1733). No matter how serious the injury, the wounds themselves will only be part of the damage to the victim. Emotional, financial, and legal aspects must also be considered part of the equation stemming from dog attacks.

Fatal Dog Bite Statistics by Breed

Between 1979 and 1998 over 25 breeds of dogs were involved in fatal attacks on humans. As expected, Pitbull type dogs and Rottweilers topped the list, followed by German Shepherds, Husky-type dogs, Malamutes and Wolf-dog Hybrids (Sacks, J.J., Sinclair, L., Gilchrist, J., Golab, G.C., & Lockwood, R., 2000 p. 837).

Unfortunately, there are no national breed statistics for non-fatal bites (National Center for Injury Prevention and Control, <http://www.cdc.gov/ncipc/duip/hospital.htm>). National breed statistics for non-fatal bites in Canada could not be found. This reflects a lack of standardized reporting present in both countries.

The Breeds of Dogs Involved in Fatal Dog Attacks

While the twenty-five breeds listed in fatal dogs attacks do include a few smaller breeds it is heavily weighted towards large, powerful dogs. The top six breeds for fatal attacks include Pitbulls, Rottweilers, German Shepherd Dogs, Husky type dogs, Malamutes and Wolf Dog Hybrids.

Pit bulls are muscular, powerfully built dogs, originally developed for fighting both other dogs and other animals such as bulls and bears. The advocates for the various breeds that make up the Pit Bull type praise their loyalty and courage.

Rottweilers, a large mastiff type breed, were originally developed to drive and herd cattle and were later used as draft animals to pull milk wagons. This breed showed a rapid rise in popularity in North America as they gained a reputation as ferocious guard dogs. The first fatal dog attack involving the Rottweiler breed occurred in 1992 and since then the number of fatal attacks mirrors their growing popularity. At the peak of their popularity Rottweilers were second only to Labradors in the numbers of individual dog registrations for the American Kennel Club. Like the German Shepherd Dog, listed below, the Rottweiler is beginning to drop in popularity. Rottweiler fanciers praise this breed's loyalty, intelligence, and trainability.

The German Shepherd Dog is a relatively recent breed, developed in the last hundred years as a herding, guard, and police dog. The German Shepherd Dog is known for its intelligence, and trainability. In recent decades, this breed's popularity has been superceded by other breeds thought to be more aggressive. Correspondingly, the number of attacks involving this breed has fallen in recent years. This breed's admirers praise its courage, intelligence, and trainability.

Husky-type dogs are strong, independent dogs originally developed as draft animals. Delise notes in her research of fatal attacks that the victims of Siberian Husky attacks are almost always children under the age of 3 months and that there are no cases of a Siberian Husky killing a family member over the age of two months. Husky-type dogs are also

involved in killings that almost always revolve around a specific situation. Most fatal attacks have occurred in dog lots where groups of sled dogs are chained together (2002, pp. 75, 76). Husky fanciers love their dogs' spirits and courage.

Malamute (which is arguably a husky-type breed) similarly is a large, powerful dog bred to pull dog sleds. Malamute fanciers praise this breed's strength and endurance.

Wolf – Hybrids are a cross between dogs and the wolf (*canis lupus*), a wild animal species. By creating these hybrids, breeders are effectively removing many of the characteristics, such as bite inhibition towards humans, which make dogs good pets. Wolf-hybrid fanciers enjoy the idea of having a semi-wild animal as a pet.

Breeds of Dogs involved in human dog-bite related fatalities (DBRF) between 1979 and 1998

(Sacks, J.J., Sinclair, L., Gilchrist, J., Golab, G.C., & Lockwood, R., 2000 pp 836 - 840)

Breed	Purebred	Crossbreed	Total
Pit bull-type	66	11*	76*
Rottweiler	39	6*	44*
German Shepherd Dog	17	11*	27*
Husky-type (includes Siberian)	15	6	21
Malamute	12	3	15
Wolf-dog hybrid	0	14	14
Mixed-Breed (NOS)	0	12	12
Chow Chow	8	3	11
Doberman	9	1	10
Saint Bernard	7	1	8
Great Dane	7*	1*	7*
Labrador Retriever	1	4	5
Akita	4	0	4
Sled-type (NOS)	3	0	3
Bulldog	2	1	3
Mastiff	2	1	3
Boxer	2	1	3
Collie	0	3	3
Bull-Mastiff	1	1	2
Hound type (NOS)	1	1	2
Retriever-type (NOS)	1	1	2
Chesapeake Bay Retriever	1	0	1
West Highland Terrier (NOS)	1	0	1
Terrier - type (NOS)	1	0	1
Japanese Hunting Dog (NOS)	1	0	1
Newfoundland	1	0	1
Coonhound	1	0	1
Sheepdog (NOS)	0	1	1
Australian Shepherd	0	1	1
Rhodesian Ridgeback	1	0	1
Cocker Spaniel	1	0	1

* A purebred dog and a crossbred dog of this breed were involved in a single fatality; therefore, that breed is counted only once in the totals column.

(NOS) = Not otherwise specified

Issues to Consider When Interpreting These Statistics

As you can see from the chart above, many breeds are listed as something-type dog with “not otherwise specified” as the breed. This gives us an inkling of the significant problems with breed statistics. As there are on average less than twenty-five deaths annually in the United States caused by dogs this gives us an idea of the difficulty in getting accurate statistics for non-fatal attacks, which number in the millions. Gathering accurate breed statistics is difficult for a number of reasons. First and most problematical is the problem of accurate breed identification. The authors of the statistics in the chart shown above, note that identification of a dog’s breed is subjective and that even experts may disagree on the breed of a particular dog. The author’s consequently feel that the dog-bite-related-fatality (DBRF) may be differentially ascribed to breeds with a reputation for aggression.

A potentially time consuming and expensive process of pedigree analysis and DNA testing offer the best hope of an objective standard for identifying the breed of a dog. (Sacks, et. al, 2000, pp. 836 - 840). However, for mixed-breed and unregistered dogs there is seldom pedigree information available to analyze, nor are the dogs parents or grandparents necessarily available to provide DNA to compare with. This makes the chances of determining the exact parentage of the dog in question highly unlikely even if authorities were convinced to allot the necessary funds and time.

Pit bulls specifically present a problem, as “Pit bull” is not a recognized breed and is in fact a type of dog like retriever or hound. American Staffordshire Terriers, Staffordshire Bull Terriers, Bull Terriers, and American Pit Bull Terriers, as well as various crossbreeds thereof have been lumped in together as Pitbulls even though these breeds may differ significantly from each other (Delise, K., 2002, p. 83).

Secondly, as there is no centralized repository for bite data, even with fatal bite data there is no standardized way to report attacks. Data for the above listed study was partially garnered from media reports and the authors note that some breeds are more newsworthy than others. Other data from this report was based on the Humane Society of United States

bite statistics, which were developed from a relatively small statistical sample (some 5000 respondents were surveyed).

Finally, the authors specify that to give an accurate idea of the comparative dangers of various breeds the number of DBRFs should be calculated against the number of dogs of the breed. While it is possible to find out the approximate number of registered dogs of a certain breed this does not account for crossbred dogs or unregistered dogs, which may make up a major portion of some breed's populations. (Sacks, et. al, 2000, pp. 836 - 840)

The authors of the above report tell us that breed is only one factor in the attacks, other factors that also affect a dogs propensity to bite include: heredity, sex, early experience, socialization and training, health (medial and behavioural), reproductive status, quality of ownership and supervision and finally victim behaviour. (Sacks, et. al, 2000, p. 839).

Carrie Allen suspects that these statistics may also reflect that some breeds of dogs may have a higher number of owners who are not good caregivers (Allen, C., 2001, http://www.hsus2.org/sheltering/magazine/currentissue/may_jun01/frontline_blamebreed.htm).

These statistics tells us that some breeds have higher incidences of fatal attacks on humans than other breeds. Even when some leeway is given for the potential to accurately recognize dogs of a certain breed and allow for the probability that some attacks are mistakenly attributed to breeds with reputations for aggression, it would still remain that pitbulls and Rottweilers are disproportionately represented in the fatal attacks on humans. While it is clear that breed of dog is a factor in dog attacks it would also seem clear from information also listed in the above studies that breed may not be the only factor in dog attacks nor even the most significant factor. In the next section of the report we will analyze factors other than breed that are significant in dog attacks.

Relevant Factors Other Than Breed in Fatal Dog Attacks

Location and Familiarity

It is interesting to note that while people are increasingly choosing large, powerful dogs as a means of keeping their family safe; most people who are attacked, are attacked by a dog they are familiar with. The authors note that in a one-year period, 1997 – 1998, what was described as the family dog perpetrated seventy-five percent of the fatal attacks. They further note that in attacks involving children under the age of eighteen, thirty percent of victims were bitten by the family dog and a whopping fifty percent of victims by a neighbour's dog (Gilchrist et.al 2003 pp. 605 –610). Delise reports, that seventy-six percent of all fatal attacks occur on the owner's property or on what can be defined as the dogs territory (2002, p 18).

While the above statistics reflect the fact that a person is most likely to be injured by dogs that they interact regularly with because those are the dogs with the most opportunity to injure them. This does imply that the choices owners make when choosing a breed, and later choices they make in socialization, training and restraint of their dog may have significant impact on their dog's propensity to bite.

Sex, Reproductive Status and Maternity

Male dogs were found to be 6.2 times more likely to bite than female dogs. Sexually intact male dogs were found to 2.6 times more likely to bite than their neutered brethren (Sacks et. al, 2000 p. 837). Karen Delise notes that of the 28 dogs involved in single dog attack fatalities in the 2000- 2001 period, 26 were male and only two were female. Of these 26 male dogs, 21 were sexually intact and the reproductive status of the other five could not be determined. She also notes that there are 15 documented fatalities have been perpetrated by an un-neutered male dog, chained, kenneled or kept near a female in estrus. (Delise, K., 2002, p. 14) There are no clear statistics to prove that sexually intact female dogs are more

likely to bite than spayed females but there are numerous documented cases of fatal attacks by female dogs nursing or caring for puppies.

It is clear that sex and reproductive status are an important factor in many dog attacks. That males dogs are more likely to bite than female dogs and that a significant part of the propensity for aggression in male dogs can be fixed by castration gives us options for choosing less aggressive dogs based on their sex and reproductive status. Spaying female dogs would prevent maternal aggression and even if the owners chose to keep their female dog intact for breeding purposes the knowledge that maternal protection can be factor in dog attacks will allow owners to supervise interaction with the dog when she is in heat or nursing puppies.

Chained Dogs

Chained dogs deserved a section all to themselves. Delise notes that a chained dog kills one out of every four victims of a fatal dog attack (2002, p. 92). Sacks et. al, reports that chained dogs are 2.8 times more likely to bite than unchained dogs (2000 p 837). Delise speculates that there are number of reasons why chained dogs have proven so dangerous. Chained dogs are less likely to be socialized and trained than dogs that live with the family and have a correspondingly lesser bond with their owners. Chaining increases certain defensive and aggressive tendencies such as the guarding of food, toys and /or territory. A chained dog's fight or flight options are limited and the dog may feel it has to fight, as it does not have the option to run away. She strongly feels that dogs need mental stimulation and social interaction with either other dogs or with the humans who acquired them and that chained dogs lack of this stimulation leads to frustration and aggression. There are eleven documented cases where a dog straining at the end of a chain broke free and attacked and killed a person nearby. She finally notes, that there are several fatal attacks attributed to entanglement issues with the victim either becoming entangled in the dog's chain and unable to get away and other cases where it is believed that the dog was entangled in the chain and the victim was killed while trying to untangle the dog. She illustrates this concept with the case of the only Chesapeake Bay Retriever involved in a

fatal dog attack. A family that no longer wanted it gave this dog to an elderly man. The dog was chained in the backyard. On its second day at its new home the dog became entangled in its chain. The man's wife tried to untangle the dog, and was bitten severely enough to require medical attention. The couple's son drove his mother to the hospital and when they returned they found his father, near the chained dog, mauled to death, presumably while trying to untangle the dog. (2002, pp.18, 23, 30).

This information would lead us to conclude that chaining a dog can increase its propensity to attack, and that lack of socialization also plays an important part in a dog's aggressive tendencies. In addition to the negative factors chaining has on a dog's mental well being, the physical limitation of the chain is a factor in dog attacks as well. This information tells us that the proper kenneling, socialization, and integration with the dog's human family can significantly reduce the likelihood of the dog showing inappropriate aggression.

Dogs used as Guard Dogs, for Image Enhancement or for Fighting

Our culture is becoming increasingly fearful, and is more and more turning to guard dogs for an added feeling of safety. The threat of crime is leading people to buy larger and more aggressive dogs. Randall Lockwood, considered one of the United States foremost experts on dog attacks, states that many people are buying dogs for the wrong reasons, particularly, as either offensive or defensive weapons (Silver, C., <http://www.workingdogs.com/doc0084.htm>). Delise notes that a noteworthy number of fatal attacks were caused by dogs with some protection, or attack training, and were being utilized in a dual role as a guard dog / family pet (2002, p 18). A recent USA Today poll supports this information showing that 38 percent of households list fear of crime as the reason they purchased a dog. (Silver, C., <http://www.workingdogs.com/doc0084.htm>).

People who want a guard dog, or to own a dog that will make them appear tough, typically value aggression in their dogs. They will choose breeds they believe to have the propensity for violence, and will foster that aggression. Delise substantiates this belief by reporting that after the fatal attack in which Dianne Whipple, a thirty-three year old gym teacher was

killed, there was unprecedented demand for Presa Canarios, the breed involved in that attack. Owners and breeders of this previously obscure breed were barraged with phone calls looking for the “kind of dog that killed the lady in California.” She also finds significance in the number of dogs involved in fatal attacks that are owned by young adult males. (2002, p. 26).

Finally, while it is difficult to determine the number of attacks caused by dogs that had been bred, raised, and trained to fight, primarily because people are not inclined to admit to illegal pursuits, there have been numerous cases in which dog fighting paraphernalia including underground dog-fighting magazines, equipment such as break sticks, antibiotics and treadmills was removed from the dog owner’s home. Other evidence in various fatal attacks includes dogs, specifically Pit Bulls, with large amount of scars implying previous use in the fighting ring (Delise, K., 2002, pp. 26 – 28). In 1987, Michael Patrick Berry of Morgan Hill was found guilty of manslaughter after his Pit Bull Terrier attacked and killed a two-year-old boy who had wandered on to his property. Prosecutors were able to prove that Berry had trained his dog, Willy, to attack and kill other dogs for the dog-fighting ring and successfully argued that this training would make the dog unlikely to distinguish between another dog infringing on its territory and a child. (Moore, C., Murder by Canine, <http://abcnews.go.com/sections/us/DailyNews/dogattack010209.html>).

It would seem painfully evident that developing, training and otherwise fostering a dog’s aggressive tendencies can have dangerous, even lethal consequences. Owners that choose to foster their dog’s aggressive tendencies should be made responsible for any attacks due to their negligence in control of their dogs.

Failure to Bond

A large number of dog attacks are made by dogs that have not be properly socialized, and are not believed to have developed a bond with their owners. Typically these dogs live apart from the family, either chained or kenneled or kept loose in the yard. Dogs that had little time to acclimate to their new families perpetrated other attacks. Many fatal attacks

attributed to the family dog were in fact were carried out by dogs that had been with the family less than a month, and in many cases only a day or two. Both these scenarios speak to situations in which the owners did not actually know their dogs. There had been limited bonding, socialization, training, and particularly limited understanding. This lack of contact or time to bond means that the owners had limited ability to correctly identify the dog's emotional states, and intentions. A large number of the owners expressed surprise and shock after their dog had attacked someone (Delise, K., 2002, p. 28).

This tells us that some people's perceptions of their dogs are inaccurate or uneducated. It is clear that some dog owners do not perceive their own dogs as potential threats and do not take reasonable precautions in selection, socialization, training, and restraint to minimize that threat.

Attacks Involving Multiple Dogs

There are two main scenarios when dealing with attacks involving multiple dogs, a) the victim is attacked by multiple dogs running in a pack, and b) the victim is attacked when an attack originally directed at the dog or dogs they are with expands to include them.

Pack Mentality - There have been numerous cases of dog attacks involving between 2 and 15 dogs. Most attacks that occur off the owner's property involve multiple dogs. It is suggested by experts that dogs running in a pack have a lower excitement threshold and are more likely to show aggression. It should also be noted that the more dogs involved in an attack the greater potential for damage to the victim (Delise, K., 2002, pp. 36-39).

Inter-canine aggression – In several documented cases a dog owner was killed by his or her own dogs while attempting to break up a fight between some of the dogs. In other cases, the victim was killed by dogs, which had originally targeted the dog the victim was walking. In some cases, the victim is believed to have been fatally injured while attempting to protect their own dog (Delise, K., 2002, p 28).

Most, if not all of these attacks could have been prevented by proper restraint of the dogs involved. By allowing dogs, particularly multiple dogs to run loose, or keeping them penned in a yard they can get out of is clearly asking for trouble.

Previous History of Aggression Towards Humans and Animals

In a large number of fatal dog attacks the dogs in question had previously shown unprovoked aggression to either humans or other animals. In one horrific example, an elderly woman was mauled to death by her neighbour's two Rottweilers. What makes this attack almost incomprehensible, is that these same dogs had attacked this woman one month previously. Why wasn't something done to either remove these dogs, or at least insure their competent restraint? In another example, a young boy was mauled to death by a pack of roaming Bull Terriers. These dogs had a long history of aggression, there had been 10 previous complaints of the dogs biting filed against their owner (2002, p. 34). According to a number of experts, history of aggression, either to humans or other animals is one of the prime indicators of future potential to bite. Delise reports, that failure by owners to understand the significance of previous aggression, and to either take steps to retrain the dog or at least properly restrain it has contributed to many documented fatal attacks.

Any attacks against humans or other animals must be taken seriously as a precursor to more, and potentially, more serious attacks. Steps must be taken to prevent the dog(s) in question to have the opportunity to attack again. Owners of such dogs should take their responsibility to protect other people and animals seriously, and should make sure that dog receives suitable training, competent supervision, and effective restraint. If the owner is not able to control the dog – then the possibilities of either re-homing the dog with someone capable of controlling the dog, or euthanasia should be considered. Willfully, negligent ownership of dogs proven to be aggressive should be penalized in the most severe manner.

Victim Behaviour

This category is the hardest to research as in very few incident reports is it mentioned what the victim is doing. Nor is it likely that a victim teasing or abusing a dog would admit so later. In most fatal attacks the victim was alone during the actual attack. In the Canadian Hospital Injury Reporting and Prevention Program report 28.9 percent of dog bite victims claimed no interaction with the dog at the time of the attack. This may be a perceptual difficulty as the report later notes that some of the victims were bitten while delivering objects or cycling past, which in dog related terms could be seen as entering the dogs territory or exhibiting prey like behaviour.

It remains that a dog attack involves at least two entities – the dog and the victim and while in many cases the victim is considered blameless there are documented cases where the cause and effect of the attack can be clearly related to the action of the victim. For example, Delise relates the case of a three-year-old girl killed by a 15 year old, chained German Shepherd Dog, she had been poking with a stick (2002, p28).

Regardless of the actions of the victims, dogs should be under the care and control of the owner at all times. It is not reasonable to expect that all people who may interact with the dog are knowledgeable or even responsible in how they may treat the dog. Many attacks, such as that listed above could be prevented by competent supervision.

Dangerous Dog Laws

The Case for Breed Specific Bans

Breed-specific bans are dangerous dog laws aimed at banning or restricting a specific breed or breeds. For example, Pit bulls and Rottweilers are often specified in this type of legislation (Sacks, et. al., 2000, p. 836). These bans are usually enacted after highly publicized dog attacks involving a certain breed. This type of knee-jerk reaction is not uncommon after a highly publicized attack. The average media viewer has limited information about the breed or breeds in question and is easily convinced that such breeds

are inherently vicious. When a Rottweiler receives an award for bravery or a Pit Bull is applauded for its work as a therapy dog, these stories don't make the front page of the newspaper or the six o'clock news. To people who have one-sided views of certain dog breeds, it easily follows that if such breeds are inherently dangerous, that banning them would be a reasonable way of preventing future dog attacks.

This reasoning is similar to stating, that as red sports cars are involved in more accidents due to excessive speed, than white minivans, that banning red sports cars would be a valid way of reducing car accidents. This reasoning does not take into account a number of other variables that will affect the number of accidents besides the colour and type of vehicle. In the case of car accidents one would expect that the driver's care and attention to driving would be of paramount significance, similarly to a dog owner's level of care and responsibility in choosing, caring for, socializing, training and restraining his dog (<http://www.pitbullsontheweb.com/petbull/thought.html>).

The Case Against Breed-Specific Bans

Breed of dog is not the most significant factor in dog attacks - There are a number of reasons why experts believe that dangerous dog laws based solely on breed will be ineffective in preventing dog attacks. The experts believe that all dogs have the potential to bite, and singling out a breed or breeds gives an unrealistic sense of security. Breed is only one variable of many in dog attacks, and issues of responsible ownership such as restraint, socialization, and training would be more productively addressed (Monti, D.J., 2000, <http://www.avma.org/onlnews/javma/nov00/s111500c.asp>).

Breeds or dogs involved in fatal attacks change over time - The first recorded fatality caused by a Rottweiler didn't occur till 1992, prior to that time the dogs that topped the fatal attack list included German Shepherds, Great Danes and Dobermans. Dr. Randall Lockwood, an expert on fatal attacks and canine aggression, believes that the next breed that may have the dubious distinction of topping the fatal dog attack chart will be the Presa Canario. "Quite likely the kind of person who was an irresponsible owner of a Doberman

in the '70s is the same kind of person who is an irresponsible owner of a Rottweiler in the '90s or a Presa Canario in 2002.” (Walton, M., 2002, <http://www.cnn.com/2002/TECH/science/09/25/coolsc.critters.attacks/> ; Schabner, D., 2004, <http://abcnews.go.com/sections/us/DailyNews/dogs010207.html>)

Owners may simply switch to dogs with similar characteristics - It is believed that if a breed, Rottweilers for example, were banned that irresponsible owners who value aggression in their dogs would simply switch to another breed that has similar intimidating size and guarding or protecting tendencies as the breed that was banned.

Accurate Identification of the breed or breeds that make up a dogs parentage is difficult to determine. As was discussed in the section analyzing the fatal attack statistics, accurate identification of the breed or breeds that make up a dog’s parentage is subjective, and even experts disagree. For optimal enforcement of breed-specific bans, there would have to be an objective method for determining the breed of a particular dog. There is currently no practical way to conclusively determine the parentage of mixed breed or non-registered dogs. This means that law enforcement personnel have limited means to determine a dog’s breed and whether or not the owners are in compliance or violation of laws. Some municipalities have attempted to address this issue by including a description of the breed within the ordinances. “Unfortunately, such descriptions are usually vague, rely on subjective visual observation, and result in many more dogs than those of the specified breed being subject to the restrictions of the ordinance” (Sacks, J.J., Sinclair, L., 2000, p. 839). There are over 500 breeds of dogs recognized world wide and even if only referring to the 157 breeds that American Kennel Club recognizes there are many breeds that are vary similar in appearance to each other. A boxer mix could easily be mistaken for a pit bull mix.

Owners may not choose to comply - Communities that have enacted breed-specific bans have found that a significant percentage of the dogs of the breed that was banned simply go underground. The dogs are still present in the community but are now unable to receive socialization, training and veterinary care. Of the 250 notices sent out by the cities of

Kitchener and Waterloo to registered owners of Pitbulls, but excluding dogs that are registerable with the Canadian Kennel Club as either a Staffordshire Bull Terrier or an American Staffordshire Terrier, 20 percent have initiated appeals, only 10 percent are listed as complying with the ban (Baker, J.M., 2003, p. 4). As both Kitchener and Waterloo are fairly large cities, it is likely the 250 notices were sent to people who had paid for dog licenses, already a more law-abiding portion of the dog owning public. It should also be noted, in the case of people who own dogs for dog-fighting purposes, or people who have guard-dogs for protecting drugs, that as the owners are already pursuing criminal activities, that they additionally have a banned breed of dog is not likely to bother them unduly.

Legal Issues – In the United States there are two main constitutional difficulties faced by breed bans. Firstly, as all dogs are capable of biting, ordinances that address only a breed or a few breeds are argued to be under inclusive and therefore violate the owners equal protection rights. Secondly, as identification of a dog's breed with the certainty necessary to impose sanctions on the dog's owner is prohibitively difficult, such ordinances have been successfully argued as unconstitutionally vague and therefore, violate due process (Sacks, J.J., Sinclair, L., et. al, 2000, p. 839)

In 2001, the American Veterinary Medical Association (AVMA), the Centers for Disease Control and Prevention (CDC) and the American Society of Plastic Surgeons came together to create the Task Force on Canine Aggression and Human–Canine Interaction. The findings of this task force were published in “A Community Approach to Dog Bite Prevention.” The members of the task force had this to say about the effectiveness of breed-specific bans. “Concerns about “dangerous” dogs have caused many local governments to consider supplementing existing animal control laws with ordinances directed toward control of specific breeds or types of dogs. Members of the Task Force believe such ordinances are inappropriate and ineffective.” (Beaver., B. V., et. al, 2001, p. 1736)

The Benefit of Non-Breed Specific Dangerous Dog Laws

Non-breed specific dangerous dog laws place the primary responsibility on the owner. This focus encourages the owner to be responsible for his dog(s) proper socialization, training, and restraint. Non-breed specific legislation recognizes that any dog can be treated in a way as to foster aggression, and deals with the underlying problem, responsible ownership (Sacks. J.J., Sinclair, L., et. al, 2000, p.839)

Generic dangerous dog laws establish enforcement of licensing, and restraint issues such as leash laws, fencing ordinances, and the prosecution of people who are involved in the sport of dog fighting. A dog is deemed dangerous, because of its behaviour not its breed, and its owner is held accountable.

Ownership of a dog is a serious responsibility, particularly ownership of the large, powerful, guarding breeds. Owners of such dogs must be held responsible for the actions of their pet / guard dogs. As Randal Lockwood has been quoted as saying “This is not a dog problem, this is a people problem. The major cause of dog bites is irresponsible owners.” (Silver, C., <http://www.workingdogs.com/doc0084.htm>)

FINDINGS

1. Most victims are children, with younger children being the most susceptible to serious or fatal attacks.
2. Most victims are bitten by the family dog, or a dog owned by friends and / or neighbours.
3. Most dog attacks occur on or close to the owner's property.
4. Large powerful dogs are more likely to cause fatal attacks than smaller dogs.
5. Male dogs are almost 7 times more likely to attack than female dogs.
6. Unaltered male dogs are significantly more likely to attack than neutered male dogs.
7. Dogs that are habitually chained are more than twice as likely to attack as dogs not normally kept chained.
8. A significant number of fatal attacks involve dogs that have been trained for protection or fighting.
9. Multiple dogs attacks, in which either a group of dogs is running together as a pack or numbers of dogs chained or kenneled together account for a significant portion of fatal attacks.
10. A dog's previous history of aggression towards humans or other animals is one of the prime indications of propensity to attack.
11. Breed-Specific legislation is based on the premise that specific breed or breeds of dogs are inherently dangerous and that only those breeds need to be restricted or controlled.

12. Non-breed specific legislation is based on the premise that all dogs can bite and that the owner should be held responsible for the actions of his dog.

CONCLUSIONS

1. Dog bites are a serious problem. They are among the top twelve causes of non-fatal injuries in the United States, and in the past twenty years, dogs have killed over 400 people.
2. Dogs of large, powerful and popular breeds top the fatal attack chart.
3. It is not possible to accurately calculate a bite rate per breed of dog.
4. Breed is only one of many factors in a dog attack including heredity, sex, early experience, socialization and training, health (medical and behavioural), reproductive status, quality of ownership, supervision and restraint, and finally victim behaviour.
5. Breed- specific legislation does not deal with the underlying problem behind most dog attacks – irresponsible ownership. Breed specific legislation is difficult to enforce and has not been proven effective at its mandate of making communities safer.
6. Non-breed specific legislation places the responsibility for the dog's actions squarely on the owner's shoulders by enforcing generic laws dealing with licensing, leash and fencing ordinances, and dog fighting.

RECOMMENDATIONS

1. Petition communities to develop programs to promote responsible dog ownership, including the benefits of spaying and neutering pets, and socialization and training.
2. Petition communities to develop programs to educate the population, particularly children, on dog safety.
3. Petition communities to enforce generic dog laws including licensing, leash laws, fencing, and kenneling ordinances and prosecute individuals involved in dog-fighting. Irresponsible dog owners should face significantly heavy fines particularly for repeat offences.
4. Petition the federal government to develop a standardized way of reporting dog attacks and a centralized database to store and collate the information.

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