

## U.S. Dog Bite Fatalities: Breeds of Dogs Involved, Age Groups and Other Factors Over a 13-Year Period (2005 to 2017)

Multi-year report by DogsBite.org, May 2018

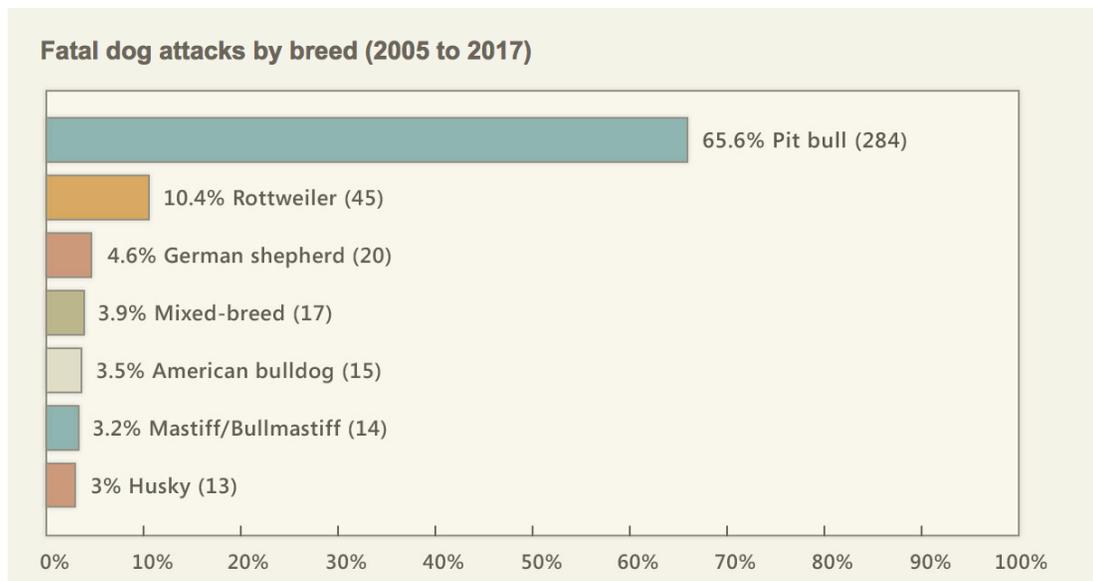


Chart depicts dog breeds that killed  $\geq 13$  people during the 13-year period. 33 dog breeds contributed to  $\leq 9$  deaths and are excluded from this chart. 9.5% of all fatal attacks involved multiple breeds, thus the total number of deaths attributed to each breed will always exceed the actual number of deaths.

**Summary:** In the 13-year period of January 1, 2005 to December 31, 2017, canines killed at least 433 Americans. Pit bulls contributed to 66% of these deaths. Rottweilers, the second leading canine killer, inflicted 10% of attacks that resulted in human death. Combined, two dog breeds accounted for 76% of the total recorded deaths. [\[Table 1\]](#)

This report examines the breeds of dogs involved in fatal attacks on humans, age groups and genders of the victims, the number of dogs involved, family and dog relationships, property statistics, household and time factors, criminal prosecutions following lethal dog attacks and states with the most occurrences. This report also examines the changing metrics in U.S. fatal dog attacks since the CDC last examined this issue (1979 to 1998).

In this report, mastiff/bullmastiff is a combined group due to their rising threat. All other dog breeds recognized by major kennel clubs are tracked in separate categories in this report, including American bulldogs, boxers, pit bulls, presa canarios, cane corsos and over 30 other breeds. Mixed-breeds are tracked according to their predominant breed (a husky-mix predominantly husky is tracked in the husky category). If there is no prevailing breed or if the only information available is "mixed-breed," the dog is tracked in the "mixed-breed" category. [Learn about our Data Collection Method](#) at DogsBite.org.

## I. Breeds of dogs involved in the most human fatalities

- In the 13-year period of 2005 to 2017, canines killed 433 Americans. Pit bulls contributed to 66% (284) of these deaths. Within this period, deaths attributed to pit bulls rose from 58% (2005 to 2010) to 71% (2011 to 2017), a 22% rise.<sup>1</sup> [\[Table 2\]](#)
- Today, when averaging the last 3 years (2015 to 2017), pit bulls comprise about 6.5% of the total U.S. dog population. This is a 63% rise since the 3-year period of 2010 to 2012 when the total U.S. pit bull population was estimated to be 4%.<sup>2</sup>
- Rottweilers, the second most lethal dog breed over the 13-year period, inflicted 10% (45) of attacks resulting in death. This is a decrease from an earlier period (2005 to 2010) when rottweilers inflicted 14% of the total recorded deaths. [\[Table 2\]](#)
- A group of dog breeds followed rottweilers, each with fewer than half the number of deaths: German shepherds 20 deaths, mixed-breeds 17 deaths, American bulldogs 15 deaths, mastiff/bullmastiff combination 14 deaths and huskies 13 deaths.
- The 13-year data set shows the combination of pit bulls, rottweilers and "baiting" bull breeds, fighting and guardian breeds -- American bulldogs, mastiffs, bullmastiffs, presa canarios, and cane corsos -- contributed to over 80% of all dog bite fatalities.

**13-Year Dog Bite Fatality Chart by Breed:** [Chart depicts the top 7 killing dog breeds](#), inflicting ≥13 deaths during the period. Also in this report, 6 dog breeds contributed from 9 to 4 deaths, 7 breeds contributed from 3 to 2 deaths, and 20 breeds contributed to 1 death.

## II. Victim age groups and gender

- The 13-year data set shows that 48% (208) of all fatality victims were ≤9 years old and 52% (225) were ≥10 years old, a significant rise from the early CDC study years (1979 to 1988) when victims ≥10 years only comprised 30% of all deaths.<sup>3</sup> [\[Table 3\]](#)

<sup>1</sup> If fatal attacks involving pit bulls were removed from the 13-year data set, 149 deaths would remain -- 11.5 deaths per year. That is a lower annual death rate than the CDC study years, 1979 to 1998, which averaged 16.5 dog bite fatalities per year. The 20-year CDC study period did include pit bulls, but the breed's population was only estimated to be ≤1% to 1.5% of the total dog population, compared to ≤6.5% today. If fatal attacks involving pit bulls were removed from the CDC study (76 of 331 deaths), 255 deaths would remain -- 13 deaths annually. Between the two study periods, one just before the 21st century and one just after, the total population of dogs has risen from 53 to 70+ million (1997 and 2012 AVMA U.S. pet ownership surveys) and the human population has risen from 272.6 to 325.7 million (1997 and 2017 U.S. Census Bureau). Despite the growth in both populations since the CDC study period, the extremely small number of annual deaths after excluding pit bulls from both periods (11.5 vs. 13 deaths per year) is virtually unchanged.

<sup>2</sup> ["Rescued" pit bulls now outnumber pit puppies](#), by Merritt Clifton, *Animals 24-7*, June 14, 2017 ([www.animals24-7.org](http://www.animals24-7.org)). The chart, "Most popular U.S. dog breed categories & others of concern, 1900-1950 & since 2010," shows the last 3-year average of the total pit bull population is 6.5% (6.6% in 2015, 4.9% in 2016 and 8.0% in 2017). The chart also shows the 3-year average from 2010 to 2012 was 4%.

<sup>3</sup> [Dog Bite-Related Fatalities from 1979 through 1988](#), by J. J. Sacks, R. W. Sattin and S. E. Bonzo, *JAMA*, 1989;262:1489-1492.

- Pit bulls are a contributing factor to the rise of adult fatality victims since the last CDC study (1979 to 1998). From 2005 to 2017, pit bulls killed 72% (163 of 225) of all victims ≥10 years old vs. all other dog breeds combined, which killed 28%. [\[Table 4\]](#)
- A breakdown of adults fatally attacked by pit bulls follows: Pit bulls inflicted 91% (21) of all dog bite deaths in the 10-29 age group; 72% (36) in the 30-49 age group; 74% (56) in the 50-69 age group; and 66% (50) in the ≥70 age group. [\[Table 4\]](#)
- Of all age groups, [children ages 0-2 had the most victims](#), 27% (115). The highest age-specific fatality rate is infants <1, which comprised 48% (55) of this group. The 50-69 and ≥70 age groups followed, each accounting for 18% (76) of all deaths.
- Over the 13-year period, male victims (223) outnumbered female victims (210). Among children ≤9 years old, male victims dominated 63% (132 of 208) to 37% and among adults ≥50 years old, female victims dominated 61% (93 of 152) to 39%.

**Breed-specific trait:** Of the 13 fatal attacks inflicted by huskies, 62% (8 of 13) were infants ≤11 months old and 92% (12) were ages ≤5 years old. The single adult death, a 22-year old female victim, was a multi-breed attack involving a female husky and a male pit bull.<sup>4</sup>

### III. Dogs and property statistics

- In the 13-year data set, 47% (202) of deaths involved 2 or more dogs, up from an earlier period (2005 to 2010) when 2 or more dogs inflicted 44% of deaths. In the first CDC study (1979-1988), only 30% of deaths involved 2 or more dogs.<sup>5</sup> [\[Table 5\]](#)
- 53% (231) of attacks resulting in death involved 1 dog; 24% (105) involved 2 dogs; 8% (34) involved 3 dogs and 15% (63) involved a pack of 4 or more dogs. Of the 97 fatal attacks involving 3 or more dogs, 69% (67) included 2 or more pit bulls.
- In the 13-year data set, 25% (107) of fatal attacks occurred off the dog owner's property, close to the CDC study period of 24%.<sup>6</sup> Pit bulls contributed to 68% (73) of these attacks and 76% (81) of all off-property attacks involved 2 or more dogs.
- Only 25% (110) of fatalities had reproduction status information. 75% (82) involved unaltered dogs, 20% (22) involved sterilized dogs, and 5% (6) included both statuses. Pit bulls inflicted 73% (16) of deaths involving only sterilized dogs.<sup>7</sup>

<sup>4</sup> In comparison with the other top-six killing dog breeds, only 15% (3 of 20) of German shepherd victims were infants ≤11 months old, 13% (6 of 45) of rottweiler victims, 10% (28 of 284) of pit bull victims, 7% (1 of 15) of American bulldog victims, 0% of mixed-breed victims, and 0% of mastiff/bullmastiff victims were infants.

<sup>5</sup> [Dog Bite-Related Fatalities from 1979 through 1988](#), by J. J. Sacks, R. W. Sattin and S. E. Bonzo, JAMA, 1989;262:1489-1492.

<sup>6</sup> [Breeds of Dogs Involved in Fatal Human Attacks in the United States Between 1979 and 1998](#), by Sacks, Sinclair, Gilchrist, Golab and Lockwood, JAVMA, September 15, 2000, Vol. 217, No. 6, Pages 836-840.

<sup>7</sup> Other sterilized dogs that fatally attacked a person included the following breeds: American bulldog, doberman pinscher, mastiff, German shepherd-mix, and rottweiler (female and male in separate attacks).

- Of the 82 fatal attacks involving unaltered dogs, male dogs carried out 52% (43), female dogs carried out 7% (6), and 40% (33) of these lethal attacks included both sexes. Pit bulls inflicted 72% (31 of 43) of deaths involving only unaltered male dogs.

**Breed-specific trait:** Sex of dog was known in 291 of 433 deaths. 5% (15) were inflicted by 1 female. Of the 23 wolf hybrid deaths (1980 to 2010), sex was known in 15 cases. 33% were inflicted by 1 female, over 6 times higher than all breeds combined in the 13-year data set.<sup>8</sup>

#### IV. Household and time factors

- From 2005 to 2017, family dogs inflicted 54% (232) of all fatal attacks. 64% (149) were perpetrated by pit bulls, up from an earlier period of 56% (2005 to 2010). Of the 284 fatal pit bull attacks, 52% (149) involved killing a family or household member.
- 19% (82) of attacks resulting in death involved a dog or person new to a household (0-2 month period). Children <2 years old accounted for 55% (45) of these deaths. Family dogs carried out 87% (39) of the deadly attacks in the <2 years old subset.
- 16% (68) of all dog bite fatalities involved a babysitter, grandparent or relative watching a child, or the dog being "watched" by a person other than its owner when the canine inflicted a deadly attack. Pit bulls carried out 74% (50) of these attacks.
- 27% (116) of all dog bite fatality victims were either visiting or living temporarily with the dog's owner when the fatal attack occurred. Pit bulls inflicted 73% (85) of these deaths. Children ≤9 years old comprised 66% (76) of these fatality victims.
- In the 13-year data set, 9% (38) of fatalities involved chained dogs, down from an earlier 6-year period (2005 to 2010) of 14%, and down from the CDC study period (1979 to 1998) when "restrained dogs" killed 17% of all dog bite fatality victims.<sup>9</sup>

**Breed-specific trait:** 54 cases involved a dog killing its primary owner. Pit bulls inflicted 63% (34) of these deaths, over 8 times more than any other breed. Pit bulls killed their owners in all adult age groups vs. attacks without pit bulls, where 90% of owners were ≥50 years old.<sup>10</sup>

<sup>8</sup> DogsBite.org maintains an archival record of [fatal wolf hybrid attacks](#) (1980 to present). Similar to how we maintain an archival record for [fatal pit bull attacks](#) and [fatal rottweiler attacks](#).

<sup>9</sup> [Breeds of Dogs Involved in Fatal Human Attacks in the United States Between 1979 and 1998](#), by Sacks, Sinclair, Gilchrist, Golab and Lockwood, *JAVMA*, September 15, 2000, Vol. 217, No. 6, Pages 836-840.

<sup>10</sup> Owners killed by their pet pit bull(s) by age group: 0-9 age group, 1 death; 10-29 age group, 5 deaths; 30-49 age group, 13 deaths; 50-69 age group, 12 deaths and ≥70 age group, 3 deaths. The majority of fatal attacks inflicted upon a primary owner involved a single dog 63% (34) and 37% (20) involved 2-9 dogs in a multi-dog household. 4 deaths in the multi-dog subset involved 1 or more rescue or rehomed dogs killing its owner; all 4 cases involved rescue or rehomed pit bulls. Overall, rescue and rehomed dogs accounted for 17% (9 of 54) of all cases where 1 or more family dogs attacked and killed its primary caretaker.

## V. Criminal charges and states

- In the 13-year data set, only 21% (89) of all fatal dog maulings resulted in criminal charges. Pit bulls were implicated in 75% (67) of these criminal cases vs. attacks not involving pit bulls 25% (22) and at a rate 2.5 times higher than rottweilers.
- Over half of all deaths (47) resulting in criminal charges occurred off the owner's property. Of this subset, 87% (41) involved 2 or more dogs attacking; 66% (31) involved 2 or more pit bulls attacking; and 36% (17) involved  $\geq 4$  dogs attacking.
- From 2005 to 2017, 54% (232) of all dog bite fatalities occurred in the Southern United States. Texas led all states with 54 deaths, of which 70% were carried out by pit bulls. California followed with 45 deaths, of which 84% involved pit bulls. [\[Table 6\]](#)
- Seven states followed with  $\leq 29$  deaths: Florida (29), Georgia (23), North Carolina, (21) Michigan (19), Ohio (19), South Carolina (16), Illinois (16). No fatal dog attacks were recorded in: Idaho, Nebraska, New Hampshire, North Dakota, Utah, and Vermont.
- Of the nine states with the most deaths, Michigan and South Carolina pursued the most criminal charges, 31.5% and 31% respectively. Texas and Florida filed charges lower than the national average of 21% and Illinois filed no charges, 0%. [\[Table 6\]](#)

**State legislation:** From January 2005 to March 2018, at least 7 state legislative acts and 2 county-level laws were enacted into law in the wake of a deadly dog mauling. 89% (8) of this legislation specifically stemmed from a fatal attack inflicted by 1 or more pit bulls.<sup>11</sup>

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<sup>11</sup> 2005 - Tyler's Law, a Fresno County law named in honor of 6-year old Tyler Babcock, who was mauled to death by two pit bulls in Clovis, California.

2005 - Senate Bill 861, a state law enacted after the pit bull mauling death of 12-year old Nicholas Faibish. The law partially repealed California's preemption law that prohibited cities from enacting breed-specific laws, allowing San Francisco to adopt the first mandatory pit bull spay/neuter ordinance in the country.

2006 - Dorothy Sullivan Memorial Bill, a state law named in honor of Dorothy Sullivan, who was mauled to death by three pit bulls in Spotsylvania County, Virginia.

2007 - Dianna Acklen Act, a state law named in honor of Dianna Acklen, who was mauled to death by three loose dogs in Decherd, Tennessee. The act abolished the state's "one bite" rule and established strict liability under certain circumstances.

2008 - Lillian's Law, a state law named in honor of Lillian Styles, who was mauled to death by a pack of pit bull-rottweiler mixes in Thorndale, Texas.

2009 - Luna McDaniel Act, a state law named in honor of Luna McDaniel, who was mauled to death by three pit bulls in Ville Platte. The law was joined in the memory of 4-year old Michael Landry who was killed by three boxers in Morganza, Louisiana.

2010 - Hinds County enacted a pit bull ordinance ("Wild Animal Variance") after the mauling death of 5-year old Anastasia Bingham in Terry, Mississippi.

2018 - Senate Bill 571, a state law enacted after a rehomed pit bull with a bite history killed Margaret Colvin just hours after being adopted out in Virginia Beach, Virginia.

2018 - Emily's Law, a state law named in honor of 24-year old Emily Colvin, who was killed by her neighbor's five pit bulls in December 2017 in Section, Alabama.

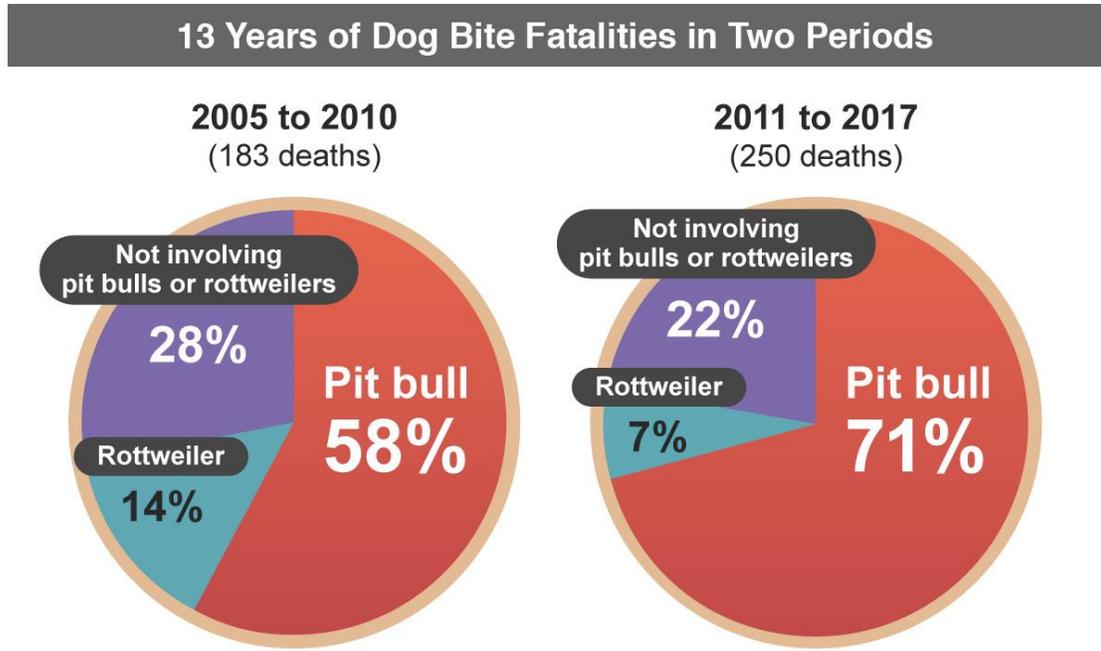
**Table 1** – Breeds of Dogs Involved in Fatal Attacks on Humans

Breed	Deaths	% of Total
Pit bull	284	65.6%
Rottweiler	45	10.4%
German shepherd	20	4.6%
Mixed-breed	17	3.9%
American bulldog	15	3.5%
Mastiff/Bullmastiff <sup>12</sup>	14	3.2%
Husky	13	3.0%
Unknown/unreleased	11	2.5%
Labrador retriever	9	2.1%
Boxer	7	1.6%
Doberman pinscher	6	1.4%
Alaskan Malamute	4	0.9%
Golden retriever	4	0.9%
Heeler/Australian cattle dog	4	0.9%
Cane corso	3	0.7%
Chow chow	3	0.7%
Wolf hybrid	3	0.7%
Presa canario	2	0.5%
Japanese Akita	2	0.5%
Australian shepherd	2	0.5%
Belgian malinois	2	0.5%
Border collie	1	0.2%
Boston terrier	1	0.2%
Bulldog (unspecified)	1	0.2%
Chihuahua	1	0.2%
Collie (unspecified)	1	0.2%
Catahoula leopard dog	1	0.2%
Dachshund	1	0.2%
Giant schnauzer	1	0.2%
Great dane	1	0.2%
Great pyrenees	1	0.2%
Hound (unspecified)	1	0.2%
Jack Russell terrier	1	0.2%
Keeshond	1	0.2%
Old English sheepdog	1	0.2%
Rhodesian ridgeback	1	0.2%
Schnauzer	1	0.2%
Shiba inu	1	0.2%
Weimaraner	1	0.2%
Welsh corgi	1	0.2%
Shar pei	1	0.2%

<sup>12</sup> Bullmastiff 6, English mastiff 2, Italian mastiff 1, mastiff (unspecified) 4, Neapolitan mastiff 1.

**Table 2**

A chart that breaks down the 13-year data set into two periods (6- and 7-years respectively) shows the rise of pit bull fatalities between the two periods and the fall of rottweiler-inflicted deaths.



Source: DogsBite.org

\*In each period, 2 deaths involved both pit bulls and rottweilers.

**Table 3**

Illustrates the percentage of dog bite fatality victims ages ≥10 years old has increased by 87% since the 1980s, and the percentage of fatality victims ages 0-9 years old has significantly fallen.<sup>13</sup>

Adults Killed in Fatal Dog Attacks - Various Studies (1979-2017)

Years	0-9	≥10	Total	Entity/Study
1979-1988	70%	30%	157	<a href="#">CDC/Sacks, 1989</a>
1989-1994	57%	43%	108	<a href="#">CDC/Sacks, 1996</a>
1979-2005	56%	44%	504	<a href="#">Langley, 2009</a> (no breed data) <sup>12</sup>
2005-2010	53%	47%	183	DogsBite.org, 2017
2011-2017	44%	56%	250	DogsBite.org, 2018

<sup>13</sup> The Langley report only contains CDC Wonder database data: state, age group, race, gender, population, year and underlying cause of death). [Human Fatalities Resulting From Dog Attacks in the United States, 1979–2005](#), by Ricky L. Langley, *Wilderness & Environmental Medicine*, April, 2009, ;20(1):19-25.

**Table 4**

Illustrates that pit bulls are a contributing factor to the rise of adult deaths, inflicting 72% of the attacks that killed a person ≥10 years old vs. all other dog breeds combined, which killed 28%.

Fatality Victim Ages - Pit Bulls vs. All Other Dog Breeds Combined (2005 to 2017)

Category	0-2	3-4	5-9	10-29	30-49	50-69	70+	Total
Total Deaths	115	42	51	23	50	76	76	433
				52% ages 10 and older				225
Pit Bulls	65	23	33	21	36	56	50	284
				72% ages 10 and older				163
All Other Breeds Combined	50	19	18	2	14	20	26	149
				28% ages 10 and older				62

**Table 5**

Illustrates that deaths inflicted by a single dog have substantially decreased since the first CDC study and attacks inflicted by 2 or more dogs (multi-dog household) have increased by 60%.

Single Dog Involved in Fatal Dog Attacks - Various Studies (1979-2017)

% Single Dog	Years	Single Dog of Total Studied	Entity/Study
70%	1979-1988	(76 of 108)	<a href="#">CDC/Sacks, 1989</a> 
73%	1989-1994	(62 of 85)	<a href="#">CDC/Sacks, 1996</a> 
67%	1979-1998	(160 of 238)	<a href="#">CDC/AVMA, 2000</a> 
56%	2005-2010	(102 of 183)	DogsBite.org, 2017
52%	2011-2017	(129 of 250)	DogsBite.org, 2018

**Table 6**

Illustrates the top 9 states in total fatal dog attacks, the percentage of pit bull-inflicted deaths per state and the number of criminal charges filed, most commonly felony, after a fatal dog mauling.

Top 9 States in Fatal Dog Attacks and Criminal Charges Filed (2005-2017)

State	Total Deaths	Pit Bull Deaths	% Pit Bull Deaths	Criminal Charges	% Charges
Texas	54	38	70%	10	18.5% †
California	45	38	84%	10	22%
Florida	29	16	55%	5	17% †
Georgia	23	15	65%	5	22%
North Carolina	21	16	76%	5	24%
Michigan	19	10	53%	6	31.5%
Ohio	19	10	53%	4	21%
South Carolina	16	10	63%	5	31%
Illinois	16	13	81%	0	0 ‡

† Indicates below the national average of 21%. | ‡ Indicates unacceptably poor state laws in this area.

**About Us**

DogsBite.org is a national dog bite victims' group dedicated to reducing serious dog attacks. Through our work, we hope to protect both people and pets from future attacks. Our website, [www.dogsbite.org](http://www.dogsbite.org), was launched in October 2007 and contains a wide collection of data to help policymakers and citizens learn about dangerous dogs. Our research focuses on pit bull type dogs. Due to selective breeding practices that emphasize aggression and tenacity, this class of dogs negatively impacts communities the most. Our website hosts important dog bite studies, U.S. dog bite fatalities and other key bibliographies. In the Legislating Dogs portion of our site, we offer examples of breed-specific laws (state-by-state) and documentation of the constitutionality of these laws. The Victim Realities section provides a glance into the unforgettable stories victims leave behind and much more. DogsBite.org operates out of Austin, Texas.



**DogsBite.org**  
P.O. Box 12443  
Austin, TX 78711  
**[www.dogsbite.org](http://www.dogsbite.org)**  
[info@dogsbite.org](mailto:info@dogsbite.org)