

Your Dog's Breed Affects Their Behavior and Health, Study Finds

Dogs have been part of human life for thousands of years, evolving from wild wolves into loyal companions. But how did their evolution, particularly the changes in each breed, affect their behavior and personality?

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STORY AT-A-GLANCE

- Dog breeds were originally bred for survival and work, but by the 19th century, selective breeding prioritized appearance over function, shaping modern purebred dogs
- A study analyzing 40,000 dog owners' responses found that breed history affects personality — herding dogs are highly trainable, while terriers are independent and alert
- While genetics play a role, a dog's environment, training and socialization significantly impact behavior, helping shape temperament and mitigate breed-related tendencies
- Selective breeding has led to breed-specific health issues, such as breathing problems in flat-faced dogs and joint issues in large breeds, requiring informed pet care
- Responsible breeding practices are crucial, but adopting from shelters helps rescue dogs in need, reducing overpopulation while providing a loving home to a deserving pet

In humans, studies have found that genes can influence personality, behavior and psychological characteristics — is it the same for dogs? This article delves into the effects of breeding on canine behavior and what science says about nature versus nurture in these companion animals.

The Evolution of Dog Breeds

Initially, people bred dogs to help with survival tasks like hunting, herding, and pulling sleds. Arctic cultures, for example, carefully selected dogs that could tolerate extreme cold while hauling heavy loads. These early dogs were shaped by their ability to do a job, not by their appearance.

Over time, people began breeding dogs for more specialized tasks. Breeders trained some dogs to retrieve birds for hunters, while they bred others to protect livestock from predators. This focus on function created distinct breeds with specific skills and temperaments. For example, breeders developed terriers to hunt small animals underground, so these dogs naturally stay alert and energetic.

But by the 19th century, this started to change, as people's priorities shifted. Instead of focusing only on performance, dog breeders, particularly those Victorian dog fanciers in England, aimed to breed dogs to alter their appearance. James A. Serpell, an emeritus professor of ethics and animal welfare at the University of Pennsylvania School of Veterinary Medicine, says that instead of creating skilled working dogs, the dog fanciers aimed to produce "the perfect physical specimen."¹

This movement is what created the modern breeds seen today. Eventually, breeders established strict breed standards, which meant they only used dogs with the "right" look for breeding. A New York Times article states:

*"Breed clubs created prescriptive standards that specified exactly how the perfect pointer (or bulldog or foxhound) should look. They identified dogs that fit the bill and registered them as official members of those breeds. Then, they used those dogs — and only those dogs — to breed more just like them. As a result, each breed became a distinct, reproductively isolated population."*²

At the same time, these modifications made each breed unique and led to the development of specific traits — and a recent study offers some interesting insights on this.

Study Highlights How Genetics Influence a Dog's Behavior

Understanding a breed's history helps explain why some dogs love to chase, while others prefer to stay close to their owners. And while researchers have determined that certain behavioral tendencies run within dog breeds, it isn't as simple as you think. Many factors influence your dog's behavior, and their breed and how it evolved is just one of them.

The research above, conducted by researchers at the National Institute of Health (NIH) and published in the journal *Cell*, used survey responses from more than 40,000 dog owners and compared the data. According to an article from the American Kennel Club (AKC):

"They had owners answer the Canine Behavioral Assessment and Research Questionnaire (C-BARQ), which has been used in many dog behavior studies.

*From that data, they calculated 14 behavior scores for each purebred dog: trainability, attachment and attention-seeking, predatory chasing, dog-directed fear, excitability, owner-directed aggression, separation-related problems, non-social fear, familiar dog aggression, touch sensitivity, dog-directed aggression, stranger-directed aggression, and stranger-directed fear."*³

Their findings found interesting correlations between dog breeds and their personality. For example, breeders historically developed Retrievers, herders, and pointer-spaniels to work closely with people, so these breeds tend to be highly trainable. On the other hand, breeders developed terriers to hunt independently, so they may be more stubborn and determined.

*"Since terriers' jobs are to fearlessly find rodents, foxes, and other small mammals, they must be feisty and never back down from a challenge. Terriers and scenthounds were found to have an increased non-social fears, like objects and situations, rather than people, and need to be keenly alert to their surroundings," AKC explains.*⁴

Meanwhile, breeders trained herding dogs to be hyperattentive to environmental cues to make them more efficient at their tasks, so they tend to be more sensitive to environmental changes — for example, they are more prone to thunderstorm phobias.

Certain breeds are also better at specific tasks. Herding dogs focus intensely and respond well to commands, while scenthounds like beagles follow their noses and often ignore training when they catch an interesting scent.

Nurture Still Plays a Pivotal Role in Your Dog's Personality

Although genetics play a significant role, you still have a great deal of influence over your dog's behavior. According to the AKC, "[T]he socialization of any dog, regardless of breed, is key to bringing out the best expression of a dog and their personality."⁵

Exposing a puppy to different people, places, and situations helps it grow into a well-adjusted adult. A dog introduced to new experiences early is less likely to develop fears and anxieties later in life. Meanwhile, training is a key factor in shaping a dog's behavior. Teaching basic obedience, such as sit, stay, and recall, helps build trust between you and your dog.

Indeed, socialization and proper training can help bring out the best in any breed. While you cannot completely change a dog's instincts, you can guide them in a positive direction with patience and consistency. For example, although some breeds are highly energetic and easily aroused, you can take advantage of these traits by teaching them impulse control and focus.

Simply put, you're not changing the personality a dog is born with, but instead helping bring out their best expression. You cannot completely change a dog's instincts, but you can teach how to manage them. "Like a naturally shy person can use tools to build confidence in public speaking, you can give a timid dog the tools to be more confident and self-assured," the AKC article said.⁶

In addition, you should also think about whether your dog's breed matches your daily routine. Many people choose a dog based on appearance, but this can lead to frustration if the breed's energy level or temperament does not match their lifestyle. Remember that some breeds need a lot of space and exercise, while others are happy to lounge on the couch. Doing research before choosing a breed can help prevent these problems.

The Negative Effects of Breeding on Your Dog's Health

Your dog's breed not only affects its personality but also its overall health. Many purebred dogs are prone to specific health problems because of inbreeding. When a dog breed is created by repeatedly breeding the same genetic lines, certain weaknesses become more common.

For example, **flat-faced Brachycephalic dog breeds** are predisposed to breathing and respiratory issues. German Shepherds, which have been bred for a sloped back, are more likely to develop hip issues as they age. This is a widespread concern that veterinarians can now almost predict a dog's diseases by knowing its breed. Dr. Danika Bannasch, a veterinary geneticist at the University of California, Davis, explains:

*"When you go to a doctor, they ask you for a family history. We don't have to do that. As the dog walks in, and it's a Labrador retriever, we already know what diseases its relatives are likely to have had."*⁷

Labrador Retrievers, for example, are more likely to suffer from joint problems and degenerative eye disease. Cavalier King Charles Spaniels often develop heart conditions. Because these health problems are well-documented, regular vet checkups and early screening can help manage them before they become serious.⁸

Conversely, mixed-breed dogs tend to have fewer inherited diseases because they come from a larger genetic pool. This means they are less likely to inherit the same weaknesses that run through a single breed.

However, not all mixed-breed dogs are healthier — especially if they come from breeds that share common health problems. Large dogs, whether mixed or purebred, often face joint and bone issues simply because of their size.

If you are thinking about getting a dog, it is important to research breed-related health risks. This can help you prepare for potential medical issues and choose a breed that fits your lifestyle. Remember that some breeds require more medical care, while others may have longer lifespans with fewer health concerns. Understanding these risks can help you provide the best care for your dog throughout its life.

A Final Reminder — Adopt, Don't Shop

If you genuinely have your heart set on purchasing a purebred pup, buy from a local, reputable breeder. Check their background and references and review the sales contract closely.

A reputable breeder will want to meet and interview anyone interested in buying a puppy and be proud to show you the parents, their living environment, and their medical records. That's why you won't find responsible breeders selling to pet stores.

But if you have no particular breed of choice, how about adopting one from a local shelter or a rescue organization instead? Millions of excellent, deserving pets are waiting for homes in the U.S. You'll feel good about your decision and may save a life. Plus, knowing you saved your furry friend from an unpleasant fate makes the bond you share much more meaningful.

Sources and References

^{1,2,7,8} [New York Times, February 9, 2025](#)

^{3,4,5,6} [American Kennel Club, February 2, 2024](#)
