

These Dogs Make the Best Service Pups

Not every dog is cut out to be a service dog, which comes with the responsibility to help people with disabilities, such as seizure disorders or visual impairments, and navigating daily life.

Analysis by Dr. Karen Shaw Becker

STORY AT-A-GLANCE

- Even with the best training, up to 70% of dogs from service dog programs end up being unsuitable for service
- Emory University scientists turned to fMRI to see if it could predict whether a dog would be a successful service dog
- After undergoing brain scans, certain dogs had higher activity in the amygdala, which is linked to excitability — and these pups were more likely to fail the service dog training
- Dogs with stronger activity in the caudate brain region were more likely to be successful service dogs
- Overall, fMRI helped improve the ability to identify dogs that would not make good service dogs — from about 47% without a brain scan to 67% after fMRI

Not every dog is cut out to be a service dog, which comes with the responsibility to help people with disabilities, such as seizure disorders or visual impairments, navigate daily life. While service dogs must like being around people, they must not be easily distracted. And while they need to be alert and attentive, they also must learn to sit quietly next to their handler, even in loud or chaotic environments.

“Most dogs are not suited to be service dogs,” Emory University researchers put it bluntly in *Scientific Reports*.¹ Even under the best circumstances, many dogs that start service training don’t make it through the program.

The team has turned to brain scans to help, as it’s possible the use of functional magnetic resonance imaging (fMRI) may reveal which dogs are meant to be service dogs and which would be best serving as loyal pets.

Up to 70% of Dogs in Service Programs Fail

It’s becoming apparent that, like humans’, dogs’ brain responses vary by the individual. German shepherds may be known for having dependable, fearless temperaments, while golden retrievers are widely considered intelligent, friendly and eager to please,² but no two dogs are alike, even within the same breed.

As such, there’s no way to determine if a dog is suitable for becoming a service dog right off the bat. You can’t judge a book by its cover or even its breed. Still, service dog programs are set up to do just that. According to the Emory team:³

"Although there is no industry standard, a well-managed service-dog program considers heredity in breeding, optimal nutrition during gestation and nursing, neonatal care of pups and nutrition after weaning, maintenance of hygienic environments, and provision of socialization opportunities with other dogs, animals, and people."

Yet, even with the best intentions, up to 70% of dogs from service dog programs end up being unsuitable for service work — a considerable waste of time and resources. "By many estimates, the cost of training a service dog is \$20,000 to \$50,000. If dogs that are predisposed to fail training could be identified earlier, the average cost would decline," the researchers noted.⁴

Behavioral tests have been suggested to identify dogs that have high potential as working dogs, but even this isn't foolproof. Instead, the Emory University scientists turned to fMRI to see if it could predict whether a dog would be a successful service dog.⁵

Brain Scans May Weed Out Successful Service Dogs From Those That Fail Training

The study involved 43 dogs who underwent service training at 17 to 21 months of age. Prior to being selected for training, they engaged in behavioral tests to show they had a calm temperament. The brain scans revealed information that the behavioral tests could not, however.

After undergoing brain scans, certain dogs had higher activity in the amygdala, which is linked to excitability — and these pups were more likely to fail the service dog training requirements. Study author and neuroscientist Gregory Berns said:⁶

"What the brain imaging tells us is not just which dogs are more likely to fail, but why ... The brain scans may be like taking a dog's mental temperature ... You could think of it as a medical test with a normal range for a service dog. And the heightened neural activity that we see in the amygdala of some dogs may be outside of that range, indicating an abnormal value for a successful service dog."

Overall, fMRI helped improve the ability to identify dogs that would not make good service dogs — from about 47% without a brain scan to 67% after fMRI. "This type of approach is not going to be feasible for individual trainers and their dogs because of the expense of fMRI," Berns said. "It would only be practical for organizations that train large numbers of dogs every year."⁷

In addition to the amygdala, the caudate brain region, which is involved with rewards processing, also gave clues as to which dogs would do best. Those with stronger activity in the caudate were more likely to be successful service dogs. According to Berns:⁸

"The ideal service dog is one that is highly motivated, but also doesn't get excessively excited or nervous. The two neural regions that we focused on — the caudate and the amygdala — seem to distinguish those two traits. Our findings suggest that we may be able to pick up variations in these internal mental states before they get to the level of overt behaviors."

What to Do if You See a Service Dog

While most service dogs come from reputable trainers or organizations that specialize in training service dogs, according to the Americans with Disabilities Act (ADA), “People with disabilities have the right to train the dog themselves and are not required to use a professional service dog training program.”⁹

That being said, many service dogs undergo about two years of training before they’re ready and will continue to learn and adapt to their owner’s changing needs over time.¹⁰ While you may be tempted to greet every dog you see when you’re out and about, resist the urge to pet a service dog — especially without asking.

Touching a service dog could distract him from his job. And depending on the owner’s disability, the distraction could end up being life-threatening. If a service dog approaches you, it’s OK to let the handler know, as this may be a behavior that needs to be corrected.

But remember, Guide Dogs of America says, “Even though the dog is demanding your attention, ignore him/her and talk directly to the owner instead.”¹¹ This ensures the dog is able to keep doing what he does best — looking out for the needs of his owner.

Sources and References

^{1,3,4,5} [Scientific Reports volume 7, Article number: 43704 \(2017\)](#).

² [APDT Chron Dog, 2015 summer; 2015\(summer\): 71–77](#)

^{6,7,8} [Science Daily March 7, 2017](#)

⁹ [ADA.gov, Frequently Asked Questions About Service Animals and the ADA](#)

¹⁰ [The Bark August 2019 \(Archived\)](#).

¹¹ [Guide Dogs of America, Best Practices When Around a Service Dog](#).
