## Dog Brain and Behavior

By Reyaa

Do any of you have a big - eyed creature running around your house messing thing up and always begging for treats! Guess what, these animals have relatives that are ferocious and could hurt, injure or kill you!! Can you guess the animal?

Surprise surprise! It's a dog. Ancestors of the dogs are wolves, foxes, coyotes and other canines. Many people own dogs as a pet, my research shows that mainly people in America have dogs for pets or for special services.

Research says, that dogs have been pets for thousands of years, since the time of caveman. Dogs are often called "man's best friend", this is because dogs help humans in so many ways. There are many different breeds of dogs. Dogs are mammals, most dogs have strong muscles, large teeth, can run fast, jump and walk on their toes and all love to chase cats! Dogs are omnivores, this means they can eat meat and vegetables. Their ancestors, except for the fox, were carnivores. Dogs have good senses, they are known for their excellent sense of smell.

Dogs' brains are smaller than ours when compared to body size, but have the mental ability of a 2 year old child. There are 3 types of dog intelligence, instinctive, adaptive and obedience & working. Human brains have more folds, meaning more surface area. our prefrontal cortex—where higher level processing and thoughts occur, allows problem solving, is more developed than dogs'. Like humans dogs can be taught to understand and be trained to behave in certain ways. So my question is how are dogs and human connected and how do we train dogs in certain behaviors? last time when dog and humankind shared an ancestor. A long time ago dog and humans voice areas was just like a dogs but when we got more civilized we got more powerful voice areas but dog voice areas did not evolved so they still can only grunt and bark. this is why dogs and human have such strong connections, sorry cat lovers.  $\checkmark$ 

This also explains how the behavioral and neural (brain/thinking) relationship between humans and dogs. They share a social environment, dogs and human both like to make friends and their brains process social information the same way, how someone looks, sounds, whether they could be a friend or not. Researchers noticed that dog and human brains process emotional sounds in the same way. The primary auditory(sound cortex) is at work. For example if a dog hears a crying sound they will come to you just like your parents, they can tell the difference between happy and sad sounds. This teaches us that dogs can be so amazingly good at focusing in on their human owners. Dogs also know their human owners so well because

Dogs can be good pets especially for families with kids. Families need to choose the right fit of dog for their lifestyle. One difference the dog brain has a smaller

understanding of words and signals. Have you heard about Rico? He is a collie that can understand up to 200 words, not all dogs are like him, but many can understand their owners. Dogs can actually talk, woof, whimper or by a wag of a tail.

Have you seen a police dogs at an airport? German Shepherds and Labradors are dogs that are trained to protect and sniff out illegal substances. Dogs like these are working dogs, As a working dog, some breeds can be trained for hunting, police work, rescue work, service and therapy work. Dogs are smart and willing to be trained to work.

For example, Ozzie (my pet) is a therapy dog, he goes to hospitals to cheer up the sick and elderly people. Research shows that dog owners are happier and less stressed. The job of the therapy dog is to be caring, loving and make people happy. To become a therapy dog, the dog has to be trained not to bark, pounce or scratch, and be happy around lots of people and loud sounds. A cat's memory is thought to be at least 200 times better than a dog's. ... Short term memory for a dog is about five minutes; cats remember much longer, up to 16 hours. Long term memory is harder to determine. We know dogs have a long term memory because they can remember hand signals and words for their lifetime.

Research shows all mammals have similar parts in the brain. Dogs have the same brain structures that produce emotions in humans. They have the same hormones and undergo the same chemical changes that humans do during emotional states. Dogs like humans have the hormone oxytocin, which in makes us feel love and affection. Like humans, dogs have voice areas in their brain. Certain sounds trigger emotion in the

Dogs have survived as pets because humans like to have them as their canine friends, because they bring joy to a family. When you are feeling sad and depressed you can count on your dog. When you need your day to get flipped around you can chill with your dog. Dogs have the intelligence to be taught signals, words and behaviors to help people in need. The dog and human brain have many similarities that allows them to understand some basic expressions and emotions. This relationship has allowed dogs and humans to stay happy together

The biggest part of the brain is the cerebrum. The cerebrum makes The biggest part of the

cerebrum (say: suh-REE-brum)

The cerebrum makes up 85% of the brain's weight, and it's easy to see why. The cerebrum is the thinking part of the brain and it controls your voluntary muscles — the ones that move when you want them to. So you can't dance — or kick a soccer ball — without your cerebrum.	
1. cerebellum (say: sair-uh-BELL-um)	It controls balance, movement, and coordination (how your muscles work together). Allows you to stand straight and also do gymnastics.
2. brain stem	It connects the rest of the brain to the spinal cord, which runs down your neck and back. The brain stem is in charge of all the functions your body needs to stay alive, like breathing air, digesting food, and circulating blood.
3. pituitary (say: puh-TOO-uh-ter-ee) gland	The pituitary gland is very small — only about the size of a pea! Its job is to produce and release hormone. It helps you grow into men and womenpuberty!
4. hypothalamus (say: hy-po-THAL-uh-mus)	The hypothalamus is like your brain's inner thermostat The hypothalamus knows a body should be 37°C. If your body is too hot, the hypothalamus tells it to sweat. If you're too cold, the hypothalamus gets you shivering

## Sites Used:

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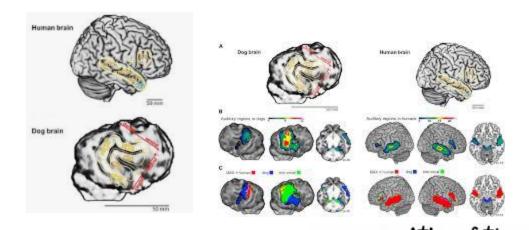
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## **HUMAN BRAIN**

