How does a dog learn a new trick?

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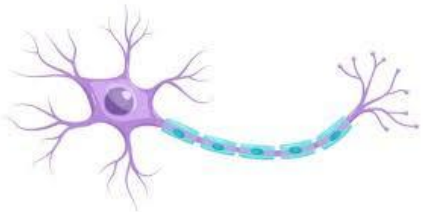
Dogs are considered “a man’s best friend,” and learning new tricks is one way to create a bond with dogs. Knowing how dogs learn new tricks helps with their cognitive abilities and memory.

When a dog is exposed to a new task, such as “sit, roll over/stay,” the dog’s neural connections strengthen, processing the information and being able to perform the command. Dogs have similar memory systems as humans and proceed longer to develop their memory.

Memory is the involuntary procedure of remembering, whether short or long-term. Short-term memory refers to memory stored then later forgotten (phone number/recently learning a new name at a party). Long-term memory refers to memories stored forever and requires little to no effort when performing (dancing, singing, or playing a sport). Dogs when first learning a trick, it is then stored in the short-term memory. As they recall constantly and keep performing the same task, eventually being stored in long-term memory. Also, there are alternative ways to store a procedure in long-term memory. Rewarding can contribute immensely since the dog knows how to act, helping store information faster.

Besides memory, the brain activates when performing a new trick. The brain consists of 4 different lobes: the frontal, parietal, occipital, and temporal lobes. Each lobe has a specific function. The frontal lobe is for managing higher executive tasks, the parietal lobe is for the five senses (sight, smell, touch, taste, & hearing), the occipital lobe is for vision and sensory perception, and the temporal lobe is for hearing. Dogs use all of these lobes while performing a new trick by hearing the task (temporal lobe), reenacting the trick (frontal lobe), seeing how to perform the trick (occipital lobe), and the reward (dog treat (parietal lobe)).



The information travels and processes through pathways called neurons. Neurons are neural pathways that send signals from the body to the brain and perform the action, passing information through neurotransmitters that carry chemical signals from one neuron to the next target cell. As a dog learns new tasks, the neural pathways will strengthen, allowing faster processing and retaining that information as it recalls.

Finally, while learning tricks, dogs may encounter stimuli that initially elicit fear or discomfort. The brain employs mechanisms such as habituation and desensitization to reduce reactivity to these stimuli.

Habituation is the process by which a dog becomes accustomed to a repeated, non-threatening stimulus, leading to a decrease in their response over time. For instance, if a dog initially startles at the sound of a clicker used in training but is exposed to it repeatedly in a positive context, their brain will adjust, and the startle response will diminish.

Desensitization involves exposing the dog gradually and in a controlled manner to a stimulus that triggers fear or anxiety. The brain learns to associate the previously fear-inducing stimulus with positive experiences or rewards, gradually reducing its negative emotional response.

Therefore, learning a new trick is a testament to the incredible cognitive abilities of dogs. With this information, we can best understand how our/somebody's dog acts when learning a new trick. As we continue to explore the depths of canine cognition, we gain deeper insights into the mysteries of the canine mind and strengthen the bonds we share with our loyal companions.

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