

Puppy's AMAZING Sense of Smell

Excerpts from work by Marc Bekoff, PhD, and Alexandra Horowitz, PhD

- In general, **a dog's nose is 100,000 to 1 million times more sensitive than human's**. A Bloodhound's nose is 10 to 100 million times more sensitive than ours. The section of a dog's brain related to processing smells is almost **seven times larger than ours**.
- A dog's fantastic sense of smell can be explained by the fact that **dogs don't exhale when sniffing a faint scent**. This enables the dog to sniff faint odors without disturbing or destroying them. Dogs have a wing-like flap in each nostril that determines the direction of the airstream in and out of the nose. When the dog inhales, an opening above and beside this flap allows air to pass through. When the dog exhales, this opening closes and the air comes out below and beside this flap through another opening, enabling the dog to increase its collection of odors. As a result, the warm air that is exhaled flows backward and away from the odor being sniffed, preventing them from mixing.
- **Dogs also use their nostrils differently according to the nature of the scent**. During behavioral trials, when dogs sniffed at unfamiliar smells that were not dangerous, first they used the right nostril and then switched to the left nostril to sniff at the odors again. Once they had become familiar with the smell, the left side of the brain took over. When they sniffed sweat odors from veterinarians who worked at a kennel, they used only the right nostril. In short, the left and right sides of the brain take in different kinds of information. The right side of the brain is associated with intense feelings, such as aggression, flight behavior, and fear. For most dogs, a veterinarian is a frightening person.
- **The smell of person is so strong that dogs can follow it over time, through water**, after the person is long gone, and even after the thing the person touched has actually blown up. In one [study](#), researchers found trained bloodhounds able to identify who had touched a pipe bomb – after the pipe bomb exploded.
- Early research with one very cooperative fox terrier concluded that she could essentially detect one milligram of butyric acid—think smelly socks—among 100 million cubic meters of air. You'll notice your spouse's smelly socks the moment after they are removed in the bedroom: That's around 40 cubic meters of very socky-smelling air. **The dog knows if someone's removed his socks in a room bigger than the gargantuan vehicle assembly building at NASA's Kennedy Space Center** in Florida, made to put the space shuttles together.
- This is an aroma pleasing to our noses: cinnamon rolls cooking in a home kitchen. The average cinnamon roll has about a gram of cinnamon in it. Sure, the human nose is on it, from the moment we open the door of the house. Now **imagine the**

smell of one trillion cinnamon rolls. That's what the dog coming in with us smells when we enter.

- Dogs also sense fear and anxiety via their noses. When we are stressed or scared, we secrete the fight-or-flight hormone, adrenaline, which dogs detect even though we can not smell it. When we are anxious, we also have increased heart rate and blood flow which carries body chemicals to the skin surface where dogs can pick them up more easily. So, **there is no use trying to mask your true feelings from your canine companion. His sense of smell will not be fooled.**

Now, take puppy on a [sniffari](#)! And when you choose shampoo and other grooming products, opt for unscented...remember those one trillion cinnamon rolls!