



## Animal Ethics and Well-Being with Dr. Frank McMillan

*Frank McMillan DVM*

# Our duty to man's best friend

Dogs are among the most social of all animals on earth. They desire, need and obtain great enjoyment from social companionship. The same can be said about horses, chimpanzees and elephants (and, of course, humans). But there's something distinctly different about the social nature of dogs.

Anyone who has entered an animal shelter has seen this. When you walk through the dog area, you see that most dogs run to the front of their enclosures and bark, howl, jump up and bounce against the front gate of their runs — doing absolutely anything and everything they can to get you to come over and give them some attention. Every social animal species has their social needs met with companions of their own kind, except the domestic dog.

Scientific studies on the social nature of dogs have confirmed what seems obvious: Dogs require dog companions to maintain their mental health, well-being and optimal quality of life. One of the most stressful things for a dog to experience is social isolation from other dogs. Such socially deprived dogs show increased levels of stress hormones in their blood and display behaviors, such as repetitive circling, excessive barking and howling, more often than dogs who live with canine companions.

But dogs aren't socially fulfilled with just doggie pals. They want human companionship, too. The dog's predisposition to form strong social bonds with humans is one of the most widely accepted consequences of thousands of years of domestication. Over a span of between 10,000 and 20,000 years, dogs who showed friendliness and affection toward humans were bred to produce puppies who were even friendlier, and the most affectionate of these were then bred to produce even friendlier dogs, and so on for tens of thousands of generations of new puppies.

Evidence from numerous studies shows that human contact is very rewarding for dogs, so dogs compete for human attention. The beneficial effects of humans on dogs are not limited to just the psychological; studies have shown that a dog's physiology can be affected by the presence of humans. For example, when dogs experience pain or emotional stress (e.g., being taken into an animal shelter), normally they develop a rapid increase

in heart rate. But if they are petted during the stress, the heart rate increase is dramatically reduced. In some cases, the petting actually causes a slowing of the heart rate, which indicates profound relaxation.

Later studies show even broader effects on a dog's blood pressure and cardiac circulation. The dramatic changes in coronary blood flow even surprised the researchers, who commented that in some dogs, the effect of the human touch was as powerful as when the dog was vigorously exercised.

Researchers now know that through domestication and selective breeding, dogs have developed the brain connections for forming strong social relationships with both fellow dogs and with humans. The domestic dog is the only known animal with social needs for two different species.

But these two social needs do not appear to be equal. Recent evidence suggests that a dog's need for human companionship has evolved not just to the same level as the need for canine companionship, but beyond. There is evidence now that dogs may value — and need — social connections with humans much more than connections with other dogs. A dog's need for human companionship is not fulfilled by having other dog companions around.

Researchers at Ohio State University studied dogs during different social interactions and found that they preferred contact from a human caregiver over that of their long-time kennel mate. Physiologically, high stress hormone levels were found when the dogs had only their kennel mates nearby, but these high levels did not occur in the presence of the human caregiver, indicating much lower stress levels.

Play behavior further illustrates the differences in canine social needs. Play between people and dogs differs from the play between dogs, and while dogs enjoy play both with other dogs and with humans, one is not a substitute for the other. A dog's desire to play with humans is not reduced by playing with other dogs.

Researchers in the Netherlands compared dogs housed in pairs and without human contact with dogs housed alone who were given an hour and a half walk by a person every day. The dogs getting the human companionship had lower levels of stress

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## Ask the Vet with Dr. Michael Dix, Best Friends Medical Director

**Q:** What are your recommendations for vaccinations for dogs and cats? I recently took my four-month-old chow chow to the vet for his shots and found out that he had been given a Lyme disease vaccination. I also took one of my cats to the vet for her yearly exam and came out feeling like she was getting too many shots. I am mostly concerned about the effects these vaccinations could have on my cat later in life. – Leslie Lau

**A:** It's very hard to give a one-size-fits-all recommendation for vaccines. Which vaccines are right for your pets depends on their lifestyle (e.g., do they go to dog parks or boarding kennels, are your cats allowed outside), your lifestyle (e.g., do you bring home strays or foster animals from the local rescue group), your pets' overall health and the geographic region in which you live. Some vaccines, namely rabies, are also required by law for public health reasons, so it is important to know your local ordinances related to pet vaccines.

Certainly, there's a lot of anecdotal evidence suggesting that over-vaccination can lead to health conditions, but it's very hard to prove some of these claims scientifically. That being said, some studies indicate that many vaccines don't need to be given every year. I believe that after an animal has had his initial series, and then has booster shots in a year, most vaccines can be given every three years (of course, local laws or kennel regulations may override this).

Your specific question about the Lyme disease vaccine brings up the relevance of where you live. If you are in an area where Lyme disease isn't seen, there is no need for the vaccine. Discuss your concerns about vaccines with your vet, and if the answer doesn't sit well with you, get a second opinion.



**Got a question for Dr. Mike? E-mail [editor@bestfriends.org](mailto:editor@bestfriends.org) and put "Ask the Vet" in the subject line. For timely medical advice, please consult your veterinarian.**

**Q:** I have a 10-year-old female cockapoo. My vet tells me that I should have her teeth cleaned. I have heard that putting a dog under anesthesia can be dangerous, especially for a dog of this age. I have also heard that having them under anesthesia for such a long time can be very bad for their kidneys. What do you think? – Ardythe Jones

**A:** There is always a risk with anesthesia. Even the simplest procedures can have complications. And yes, it is true that the longer an animal is under anesthesia, the more likely harm can be done to internal organs (most commonly, the kidneys). However, most veterinarians take precautions to minimize negative side effects.

I have anesthetized 15-year-old animals for major procedures, and they have done fine. I have also anesthetized one-year-old animals who have had problems. It's important to know the true benefit of the procedure being performed. Do the risks of anesthesia — which are minimal with the modern drugs and monitoring devices we have in veterinary medicine — outweigh the risks of not doing the procedure? Most of the time, it is better to go ahead with the procedure. 🐾

than the dogs who had canine but not human companionship. The key finding of the study was that the stress the dogs experience when deprived of human contact is not alleviated by having a constant dog companion. This helps explain why dogs suffering from separation anxiety when their humans leave the house very often fare no better emotionally when other dog companions are right there with them.

All of this leads us to conclude that dogs need human companionship, that this need can't be fulfilled by the presence of other dogs, and that being deprived of human companionship is for

many dogs a greater source of distress than the absence of fellow dogs. Dogs differ in their levels of need for human companionship, but at every level, one thing is certain: The dog who is unable to fulfill his or her social need for people will be in emotional distress until a person literally steps in to be his/her friend. Since humans have created this strong emotional need in dogs, it is now fully our responsibility to make sure that this need is fulfilled. 🐾

*Dr. Frank McMillan is the director of well-being studies at Best Friends and is currently studying psychological trauma in animals.*