

## Dogs in Research FAQ

### Question: Why must dogs be studied?

Studies in dogs and other animals absolutely remain necessary. Frequently, studies in dogs help ensure new medications developed for human and animal use are safe and do not pose serious health risks. We simply must be as certain as possible that the medicines we take or provide to our loved ones will not cause harm.

But research in dogs is far from the first step in this incredibly important process. Typically, these tests are initiated using *in silico* (computer-based modeling) and *in vitro* (cell culture based) systems. Once these non-animal assessments are completed and initial safety indications are met, tests in rodents then take place. Barring any initial findings in these small animal models, an assessment in a larger animal species comes next. When this step is finally reached, dogs are often required because canines provide highly meaningful data that has been clearly shown to translate to safety in humans.

There are a few other select research areas where dog studies remain necessary:

- Certain conditions, some forms of cancer and also heart disease, impact both dogs and humans alike. As a result, data gathered from research in canines helps us combat these health problems in both species.
- Dogs sometimes play a critical role in pharmacokinetics (PK) studies. These studies explain how living systems process medications once ingested. They provide important information about drug absorption, distribution and the eventual elimination of these compounds by the body. Because of their importance, these studies must also take place in species that provide highly meaningful data for human health use.
- Finally, the development of new veterinary treatments for dogs logically requires canine studies. Simply put, you must study dogs in order to develop new medical treatments for our pets.

Because of our nation's collective desire, both in and outside of the health research community, to only study dogs when it is necessary, several controls are in place to ensure all other alternatives are utilized before research in canines is allowed to take place. These alternatives include studies in other species (rats and mice). They also include research using non-animal methods such as computer models, tissue cultures, organoids and organs-on-a-chip. Of course, these alternatives can only be used when they exist, are proven to work and provide all the necessary data.

### **Question: Can't we study rodents instead of dogs?**

Health research occurs in a variety of species because different animals biologically resemble humans in different ways. For example, infectious disease research often takes place in nonhuman primates because monkeys have very similar immune systems to humans. They are also often susceptible to many of the same infectious diseases as we are.

When it comes to psychological studies, certain behaviors such as stress, which is linked to a variety of mental and physical health problems, can be observed and accurately measured across species. This is why some researchers study anxiety in rodents or even birds.

The development of new heart surgery approaches frequently takes place in pigs. This is because the internal anatomy of these animals and the size of their hearts, closely resemble humans.

As for dogs, there are certain [canine cancers that closely align with cancers seen in humans](#). For example, skin cancer, aka melanoma, has been studied in dogs. At times, treatments that shrink tumors in dogs are also shown to assist human patients. Osteosarcoma, otherwise known as bone cancer, can also occur in both species, meaning that new treatments can possibly benefit both dogs and humans.

Another example is Duchenne muscular dystrophy (DMD), the most common form of muscular dystrophy. It's a serious and deadly disease that causes progressive weakness, muscle loss and premature death. It just so happens that a degenerative muscular disease that naturally occurs in dogs greatly resembles the human form of DMD, which is why scientists are looking for treatments across species.

Cardiology is an additional area where dogs are studied. [An independent review](#) of canine research within the U.S. Department of Veterans Affairs revealed the continued need for heart studies in dogs.

In fact, a long list of human diseases also naturally occur in dogs. These include epilepsy, heart disease, diabetes, glaucoma and autoimmune diseases to name just a few.

**Question: How common is research in dogs?**

Dogs are only studied when necessary. As a result, more than 95 percent of biomedical research occurs in rodents (mice and rats.) In comparison, less than .05 percent of all health research occurs in dogs.

**Question: What systems are in place to ensure animals involved in veterinary and human medicine studies are treated with kindness and respect?**

There are several overlapping layers of veterinary and legal oversight to ensure animals involved in research - including dogs - are well cared for.

Canines are protected by regulations under the [Animal Welfare Act \(AWA\)](#), which governs the treatment of animals involved in research, teaching and testing. The act also regulates their exhibition and transportation. The AWA is not a static document. It is regularly updated with revisions/additions occurring in 1970, 1976, 1985, 1990, 2002, 2007, 2008 and 2013.

Federal inspectors employed by the United States Department of Agriculture's Animal and Plant Health Inspection Service conduct unannounced inspections of all research facilities that house animals covered by the Animal Welfare Act. The results of these inspections and any infractions are publicly reported. If a facility breaks the law, they can face fines or even the loss of their license to operate in extreme cases.

In addition to these protections, every research facility is required to employ an attending veterinarian. In fact, many organizations have a team of veterinarians and animal care staff. These highly trained and committed individuals oversee research animals and provide day-to-day care and feeding.

There are also several controls in place to ensure proposed research in animals is thoroughly vetted before it is allowed to take place. When seeking federal dollars, our nation's top source of health research funding, scientists

must explain in detail why certain animal species must be studied and why other alternatives - including non-animal options - are not sufficient. On top of that, the Animal Welfare Act requires research institutions that study animals to host an Institutional Animal Care and Use Committee, which thoroughly reviews all animal-based

studies before they are allowed to commence. IACUCs also conduct lab inspections of their own.

There are other forms of oversight including animal care requirements for all National Institutes of Health-funded research. Many research organizations also obtain professional animal care accreditation, which seeks a standard of care above and beyond federal regulations.

**Question: What would happen if research in dogs ended today?**

An immediate end to all research in dogs would have serious, negative impacts for both humans and animals. Veterinary medical advancements being developed for dogs naturally require the study of dogs to design and test these interventions. Ending these studies would stall ongoing and future advancements for our pets.

There are select disease research areas where our only option is research in canines. As a result, ending these studies would prematurely halt advancement and abandon hope of future breakthroughs for countless patients and their families. In addition, we would lose the ability to fully assess the safety of medications, given the current lack of proven alternatives for these critically important studies.

**Question: Why are dogs bred for research in the first place? If we must study them, can't we instead use animals surrendered to pounds?**

Several years ago, the United States government announced a new policy requiring all National Institutes of Health-funded canine research to take place in purpose-bred animals. This means in most cases, research facilities can only use dogs obtained from Class A dealers which breed animals specifically for research.

Additional information:

[Notice Regarding NIH Plan to Transition from Use of USDA Class B Dogs to Other Legal Sources - December 17, 2013](#)