

## Using Animals in Research

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Animals used for experimentation and research are always a hot topic of debates.

The use of animals in research is prevalent because they share at least 200 common illnesses and diseases with humans.

Animals are used in research or experimentation in place of human subjects for various reasons.

Using animals in research affords the scientist to monitor reactions to stimuli and other variables in complex organs and tissue, while allowing the scientist to minimize environmental variables.

Animals are used in scientific research to further science in many arenas. They are used most often in the following cases:

- Disease Treatment
- Prevention
- Treatment of Injuries
- Basic Medical Testing
- Medical Diagnosis

Animals in research have made possible many scientific breakthroughs that humans benefit from each day.

- Vaccinations
- Anesthesia
- Antibiotics
- Numerous medical treatments for various diseases

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## Why Animals?

Animals provide the scientist with unique possibilities especially using animals for medical research.

When experimenting with new drugs for the treatment of disease it would be virtually impossible to isolate a human the way an animal can be isolated. All mammals share the same systems, there are variants but they are far outweighed by the likeness that humans and animals share.

There are just certain testing that can not be accomplished without the use of live organs and tissue. There is no way to duplicate a complex disease in a culture, nor to enable a computer to completely analyze the effects of drugs on a system. Animals play a vital role in medical research.

## Facts About Animal Research

- 85 % of the animals used in research are rodents - rats and mice that have been bred for laboratory use
- Most laboratory tests on animals are simple single type tests - change in diet, drawing a simple blood sample, administering a drug
- Animals are given anesthetics if a procedure is going to be invasive in any way
- Dogs, cats and non-human primates account for only 3 out of 1000 subjects in experimentation
- Humans are still the largest group that is used for research and experimentation and beats out all other lab animals when it comes to testing.

## The Three R's

A criterion which all scientists must follow is known as the three R's. The three R's in research refer to the following:

- Refinement
- Reduction
- Replacement

Refinement of testing must be arranged so that animal distress is minimal. The scientist must reduce the number of animals used in the experimentation whenever possible and if possible, replace animals with other adequate research methods.

There are animal restrictions in place to insure that animals are not used when not necessary. When there are other viable models to conduct research those methods supposed to be used instead of using an animal subject. Only the minimal number of animals is to be used as subjects in an experiment or research project. Unnecessary research and experimentation is considered unethical [1] and use of animals is not supported.

The use of animals in research is heavily regulated. The care is mandated through regulatory guidelines and there are heavy damages and fines assessed when these regulations are not followed. The regulations dictate how the animals will be housed and treated to include veterinary care, pain management and other measures to make sure the animals do not suffer through out the course of the experiment.

The scientist needs to get permission from an ethical committee, which have a full description of the project, before starting any research on animals, to ensure for minimum of suffer among the animals.

## **Good Treatment - Good Experiment**

All scientists will agree that with good treatment of the animals the experiment will be an overall better experience. Working with sick or mistreated animals does not benefit anyone, most scientist take pride in their lab and as part of that lab the animals are treated very well. Animal welfare is extremely important to the scientific community, if not for the love of the animal than for the pride of the work.

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### **Links**

[1] <https://www.explorable.com/ethics-in-research>