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Web Exclusive: Ethics of Animal Testing

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While clinical testing on humans is still an ethically grey area, all drugs tested on humans are first rigorously tested on animals. The ethics of animal testing are fiercely debated; proponents say animal testing saves human lives and opponents cry animal cruelty

Science thus far has depended on animal research. Chimpanzees helped NASA launch us into the space race and psychology wouldn't be the same without Ivan Pavlov's dogs. After the horrific birth defects caused by thalidomide (then marketed as treatment for morning sickness and now offered in limited uses as treatment for some cancers and leprosy) were discovered in 1961, pharmaceutical animal testing became a requirement; animals are used to test drug toxicity, screen for side effects, and test effectiveness, long before a drug is tested on humans. Animal experimentation helped develop organ transplants, artificial limbs, and vaccines for rabies and tetanus. All cancer treatments are first tested on animals.

Animal rights proponents, such as the Humane Society of the United States, disagree with animal testing because of the confined conditions the animals are kept in, because some experiments involve unmedicated pain, and because animal testing can have mixed results. They point to alternatives to animal testing, such as computer models or testing tissue samples rather than a whole animal, as better options.

In the United States, the Department of Agriculture monitors research facilities to ensure they meet the minimum standards. The Animal Welfare Act of 1966 governs the minimum care for research animals and demands that the animals receive "adequate veterinary care" and "humane handling, care, or treatment of animals," including exercise for dogs and an environment that will "promote the psychological well-being of primates."

Most scientists say that animal testing has helped more than it harms and that, while these alternatives can work alongside animal testing, they aren't yet developed enough to stand alone. The Food and Drug Administration website says "compounds made based on a computer simulation still have to be put into a biological system to see whether they work." At this time, that means animal

testing is necessary. In complex whole-body diseases, such as cancer and HIV, animal testing is currently the only viable option.

Scientists and activists agree that animal research is currently an imperfect science, essentially because animals aren't human. While in mice, the most common research animal, the DNA is identical to 80 percent of human DNA, the remaining differences can change the way a disease acts. According to the science journal *Nature*, scientists have made strides in patching up these problems by creating "transgenic" mice that have some human DNA and more accurately represent human physiology.

There is a middle ground. The FDA and the Humane Society, while on the opposite ends of the animal testing debate, both advocate that all animal research derive the most scientific information using the fewest animals possible in the most humane way. It is generally accepted that animal testing is currently unavoidable, but the debate over how testing can be done in a way that protects both humans and animals continues.

ONLINE RESOURCES INCLUDE:

National Cancer Institute's Center for Cancer Research

The Humane Society

USDA Animal and Plant Health Inspection Service