

Background: "Should Animals Be Used for Scientific or Commercial Testing?"



An estimated 26 million animals are used every year in the United States for scientific and commercial testing. Animals are used to develop medical treatments, determine the toxicity of medications, check the safety of products destined for human use, and other biomedical, commercial, and health care uses. Research on living animals has been practiced since at least 500 BC.

Proponents of animal testing say that it has enabled the development of numerous life-saving treatments for both humans and animals, that there is no alternative method for researching a complete living organism, and that strict regulations prevent the mistreatment of animals in

laboratories.

Opponents of animal testing say that it is cruel and inhumane to experiment on animals, that alternative methods available to researchers can replace animal testing, and that animals are so different from human beings that research on animals often yields irrelevant results.

Regulations

Animal testing in the United States is regulated by the federal Animal Welfare Act (AWA), passed in 1966 and amended in 1970, 1976, and 1985. The AWA defines "animal" as "any live or dead dog, cat, monkey (nonhuman primate mammal), guinea pig, hamster, rabbit, or such other warm blooded animal." The AWA excludes birds, rats and mice bred for research, cold-blooded animals, and farm animals used for food and other purposes.

While the AWA regulates the housing and transportation of animals used for research, it does not regulate the experiments themselves. The US Congress Conference Committee stated at the time of the bill's passage that it wanted "to provide protection for the researcher... by exempting from regulations all animals during actual research and experimentation... It is not the intention of the committee to interfere in any way with research or experimentation."

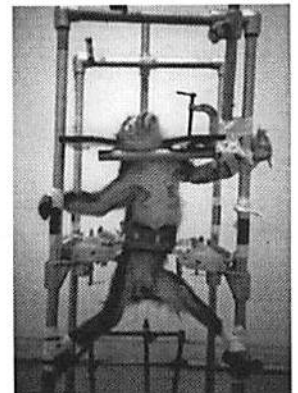
Animal studies funded by US Public Health Service (PHS) agencies, including the National Institutes of Health (NIH), are further regulated by the Public Health Service Policy on Humane Care and Use of Laboratory Animals. All PHS funded institutions must base their animal care standards on the AWA and the *Guide for the Care and Use of Laboratory Animals* (also known as the *Guide*), prepared by the Institute for Laboratory Animal Research at the National Research Council. Unlike the AWA, the Policy on Humane Care and Use of Laboratory Animals and the *Guide* cover all vertebrate animals used for research, including birds, rats and mice. The *Guide* "establishes the minimum ethical, practice, and care standards for researchers and their institutions," including environment and housing standards and required veterinary care. The *Guide* stipulates that "the avoidance or minimization of discomfort, distress, and pain when consistent with sound scientific practices, is imperative."

The US Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) reports the number of animals used for research each year, though it excludes animals not covered by the AWA. For fiscal year 2010 (the latest year for which data are available as of Oct. 11, 2013), 1,134,693 animals were reported. Since the data excludes cold-blooded animals, farm animals used for food, and birds, rats, and mice bred for use in research, the total number of animals used for testing is unknown. Estimates of the number of animals not counted by APHIS range from 85%-96% of the total of all animals used for testing.

Public Opinion

A public outcry over animal testing and the treatment of animals in general broke out in the United States in the mid-1960s, leading to the passage of the AWA. An article in the November 29, 1965 issue of *Sports Illustrated* about Pepper, a farmer's pet Dalmation that was kidnapped and sold into experimentation, is believed to have been the initial catalyst for the rise in anti-testing sentiment. Pepper died after researchers attempted to implant an experimental cardiac pacemaker in her body.

A May 2013 Gallup poll found that 56% of Americans say medical testing on animals is morally acceptable (down from 65% in 2001), with 39% saying it is morally wrong. Younger Americans are less likely to accept animal testing. 47% of people aged 18-34 say that animal testing is morally acceptable, whereas 60% of people aged 35-54 and 61% of people aged 55 and older say it is morally acceptable. 67% of registered voters in the US are opposed to using animals to test cosmetics and personal care products, according to a 2013 nationwide poll conducted by Lake Research Partners. The poll found that women are more likely to object, with 76% of women under 50 and 70% of women over 50 being opposed to animal testing, and 63% of men under and over 50 being opposed. 52% of voters said they feel safer using a product that was tested using non-animal methods, while 18% said they feel safer with products tested on animals.



Early History

Descriptions of the dissection of live animals have been found in ancient Greek writings from as early as circa 500 BC. Physician-scientists such as Aristotle, Herophilus, and Erasistratus performed the experiments to discover the functions of living organisms. Vivisection (dissection of a living organism) was practiced on human criminals in ancient Rome and Alexandria, but prohibitions against mutilation of the human

body in ancient Greece led to a reliance on animal subjects. Aristotle believed that animals lacked intelligence, and so the notions of justice and injustice did not apply to them. Theophrastus, a successor to Aristotle, disagreed, objecting to the vivisection of animals on the grounds that, like humans, they can feel pain, and causing pain to animals was an affront to the gods.

Roman physician and philosopher Galen (130-200 AD), whose theories of medicine were influential throughout Europe for fifteen centuries, engaged in the public dissection of animals (including an elephant), which was a popular form of entertainment at the time. Galen also engaged in animal vivisection in order to develop theories on human anatomy, physiology, pathology, and pharmacology. In one of his experiments, he demonstrated that arteries, which were believed by earlier physicians to contain air, actually contained blood. Galen believed that animal physiology was very similar to that of human beings, but despite this similarity he had little sympathy for the animals on which he experimented. Galen recommended that his students vivisect animals "without pity or compassion" and warned that the "unpleasing expression of the ape when it is being vivisected" was to be expected.

French philosopher René Descartes (1596-1650), who occasionally experimented on live animals, including at least one rabbit, as well as eels and fish, believed that animals were "automata" who could not experience pain or suffer the way that humans do. Descartes recognized that animals could feel, but because they could not think, he argued, they were unable to consciously experience those feelings.

English Physician William Harvey (1578-1657) discovered that the heart, and not the lungs, circulated blood throughout the body as a result of his experiments on living animals.

The Modern Debate

The 1975 publication of *Animal Liberation* by Australian philosopher Peter Singer galvanized the animal rights and anti-testing movements by popularizing the notion of "speciesism" as being analogous to racism, sexism, and other forms of prejudice. Addressing animal testing specifically, Singer predicted that "one day... our children's children, reading about what was done in laboratories in the twentieth century, will feel the same sense of horror and incredulity... that we now feel when we read about the atrocities of the Roman gladiatorial arenas or the eighteenth-century slave trade."

In 1981, an early victory by then-fledgling animal rights group People for the Ethical Treatment of Animals (PETA) served to revitalize the anti-testing movement once again. A PETA activist working undercover at the Institute for Biological Research in Silver Spring, MD took photographs of monkeys in the facility that had engaged in self-mutilation due to stress. The laboratory's director, Edward Taub, was charged with more than a dozen animal cruelty offences, and an especially notorious photo of a monkey in a harness with all four limbs restrained became a symbolic image for the animal rights movement.

In 2001, controversy erupted over animal experiments undertaken by a veterinarian at Ohio State University. Dr. Michael Podell infected cats with the feline AIDS virus in order to study why methamphetamine users deteriorate more quickly from the symptoms of AIDS. After receiving several death threats, Dr. Podell abandoned his academic career. Over 60% of biomedical scientists polled by *Nature* magazine say "animal-rights activists present a real threat to essential biomedical research."

A 2007 report by the National Research Council of the National Academy of Sciences called for a reduction in the use of animal testing, recommending instead the increased use of *in vitro* methods using human cells. Though the report touted new technologies that could eventually eliminate the need for animal testing altogether, the authors acknowledged that "For the foreseeable future... targeted tests in animals would need to be used to complement the *in vitro* tests, because current methods cannot yet adequately mirror the metabolism of a whole animal."

In Mar. 2013, the European Union banned the import and sale of cosmetic products that use ingredients tested on animals. Some proponents of animal testing objected, arguing that some animal tests had no non-animal equivalents. A spokesman for the trade association Cosmetics Europe stated it is likely "that consumers in Europe won't have access to new products because we can't ensure that some ingredients will be safe without access to suitable and adequate testing." India and Israel have also banned animal testing for cosmetic products, while the United States has no such ban in place. China is the only major market where testing all cosmetics on animals is required by law, and foreign companies distributing their products to China must also have them tested on animals. China has announced that its animal testing requirement will be waived for shampoo, perfume, and other so-called "non-special use cosmetics" manufactured by Chinese companies after June 2014. "Special use cosmetics," including hair regrowth, hair removal, dye and permanent wave products, antiperspirant, and sunscreen, will continue to warrant mandatory animal testing.

After ceasing to breed chimpanzees for research in May 2007, the US National Institutes of Health announced in June 2013 that it will retire most of its chimpanzees (310 in total) over the next several years. While the decision was welcomed by animal rights groups, proponents said the decision would have a negative impact on the development of critical vaccines and treatments. The Texas Biomedical Research Institute released a statement claiming that the number of chimps to be retained (up to 50) was "not sufficient to enable the rapid development of better preventions and cures for hepatitis B and C, which kill a million people every year." The United States and Gabon are the only two countries in the world that still experiment on chimpanzees.

