FSA ELA Argumentative Writing

Directions: Read the texts/graphics about animal testing. Consider the positions presented in each text. Write an essay in which you take a position in favor of animal testing or against animal testing. Remember to use textual evidence to support your claim.

Animal experimentation up 73 percent, study says
by Michael Casey, CBS News, February 26, 2015

The use of animals in experiments at leading federally-funded labs has increased nearly 73 percent in the past 15 years, according to a new study conducted by People for the Ethical Treatment of Animals (PETA). The study, in the Journal of Medical Ethics, found the number of animals tested rose from 1,566,994 in 1997 to 2,705,772 in 2012 in testing by the top 25 institutional recipients of National Institute of Health grants. Mice represented the largest increase in research with their numbers going from 1.2 million to nearly 1.9 million in that period. Other animals also saw increases. Nonhuman primates, for example, increased from 7,292 to 11,167, though the change was not statistically significant. Cats and dogs saw their numbers decline slightly.

PETA has long campaigned for a reduction in animals used experiments and there has been a shift away from using them for such things as chemical toxicity testing and medical education. Europe, for example, has banned the sale of cosmetics with ingredients tested on animals. The study estimated that 17 million to 100 million animals are still used in laboratories.

"Despite new research technology, evidence that animal experiments often don't faithfully translate to humans, and the fact that a growing majority of the public opposes experiments on animals, laboratories are abusing more animals than ever before," said PETA Director of Laboratory Investigations Justin Goodman, who was a co-author on the study.

He and the other authors said the sharp increase in mice used in experiments that their study revealed could be driven by federal restrictions on the use of chimpanzees, dogs and cats due to growing public pressure, and the fact that mice and other smaller animals are not included in the Animal Welfare Act. The use of mice "reflects scientists' and laypersons' greater moral concern for animals in laboratories who are typical viewed as companion animals or as being human-like or having higher mental abilities," the authors wrote. "This bias persists despite extensive evidence that - like dogs, cats and primates - animals such as mice, rats and fish experience pain, stress and distress."

A spokesman for the National Institute of Health dismissed the study, saying the methods could not be used to quantify the numbers of animals being used in research.

"It is data from reports gathered every four years regarding an average daily inventory to get a snapshot of the numbers of animals in a facility at a given time," Megan Columbus, the communications director for the NIH Office of Extramural Research, told CBS News. "It is inappropriate to use the data in the way the authors suggest."

Columbus also said the increased numbers of animals could simply be due to the fact that "research grant awards has increased over the time period reported in the paper."

"Thus, while the numbers of some species reported in the Animal Welfare Assurances have risen, this may reflect the overall increase in research and not that a larger proportion of the funded research involves animals," she said.

The study accused the federally-funded labs of breeding mice to carry genes that "predispose them to crippling diseases and other maladies."

"Because 95 percent of mice bred for these cruel experiments don't carry the desired gene, they're typically killed right after birth," PETA said in a statement accompanying the study. "The spread of this inefficient and inhumane practice has caused animal use to skyrocket."

PETA also alleged that individuals on testing oversight committees are often involved in animal research themselves, which creates a potential conflict of interest. In an article accompanying the study, Lisa Hara Levin of the animal welfare

group Animal Care and Control of New York and William Reppy of Duke University said the study illustrated the need to reform policies related to animal research. They called for avoiding the use of animals in experiments when a non-animal alternative is available, increased transparency regarding animal experiments and a greater willingness to negotiate with responsible representatives of the animal rights and welfare community about problems they have concerning animals in institutions.

"Inviting collaboration with people having broad intellectual backgrounds could result in sensible dialogue regarding the use of animals in research," they wrote. "Ideally, this would replace poorly informed debate, minimize invective and balance the world's drive for scientific advance with the need to ensure animal protections."

From www.ProCon.org: Against Animal Testing

Animal testing is cruel and inhumane. According to Humane Society International, animals used in experiments are commonly subjected to force feeding, forced inhalation, food and water deprivation, prolonged periods of physical restraint, the infliction of burns and other wounds to study the healing process, the infliction of pain to study its effects and remedies, and "killing by carbon dioxide asphyxiation, neck-breaking, decapitation, or other means." The Draize eye test, used by cosmetics companies to evaluate irritation caused by shampoos and other products, involves rabbits being incapacitated in stocks with their eyelids held open by clips, sometimes for multiple days, so they cannot blink away the products being tested. The commonly used LD50 (lethal dose 50) test involves finding out which dose of a chemical will kill 50% of the animals being used in the experiment. The US Department of Agriculture (USDA) reported in 2010 that 97,123 animals suffered pain during experiments while being given no anesthesia for relief, including 1,395 primates, 5,996 rabbits, 33,652 guinea pigs, and 48,015 hamsters.

Alternative testing methods now exist that can replace the need for animals. In vitro (in glass) testing, such as studying cell cultures in a petri dish, can produce more relevant results than animal testing because human cells can be used. Microdosing, the administering of doses too small to cause adverse reactions, can be used in human volunteers, whose blood is then analyzed. Artificial human skin, such as the commercially available products EpiDerm and ThinCert, is made from sheets of human skin cells grown in test tubes or plastic wells and can produce more useful results than testing chemicals on animal skin. Microfluidic chips ("organs on a chip"), which are lined with human cells and recreate the functions of human organs, are in advanced stages of development. Computer models, such as virtual reconstructions of human molecular structures, can predict the toxicity of substances without invasive experiments on animals.

Animals are very different from human beings and therefore make poor test subjects. The anatomic, metabolic, and cellular differences between animals and people make animals poor models for human beings. Paul Furlong, Professor of Clinical Neuroimaging at Aston University (UK), states that "it's very hard to create an animal model that even equates closely to what we're trying to achieve in the human." Thomas Hartung, Professor of evidence-based toxicology at Johns Hopkins University, argues for alternatives to animal testing because "we are not 70 kg rats."

Drugs that pass animal tests are not necessarily safe. The 1950s sleeping pill thalidomide, which caused 10,000 babies to be born with severe deformities, was tested on animals prior to its commercial release. Later tests on pregnant mice, rats, guinea pigs, cats, and hamsters did not result in birth defects unless the drug was administered at extremely high doses. Animal tests on the arthritis drug Vioxx showed that it had a protective effect on the hearts of mice, yet the drug went on to cause more than 27,000 heart attacks and sudden cardiac deaths before being pulled from the market.

From www.dogingtonpost.com

The Life of a Research Beagle

Research on animals is still extremely common in the United States. It's estimated that thousands of mice, guinea pigs, rats, rabbits, and dogs suffer and die in these tests every year in the U.S. alone.

Beagles are the dog of choice for laboratory research because of their small size and gentle nature. Despite mounting evidence that this testing produces unreliable results, 70,000 Beagles are killed each year in the name of research.

Cancer Research

Dogs are either bred to be predisposed to cancer, exposed to dangerous carcinogens, or implanted with cancerous tumors and then used in research to study and attempt treatments for cancer in humans.

In a study at Harvard Medical School, researchers implanted 13 female retired breeding dogs with cancerous tumors under their skin, in their kidneys, and in their lungs. After the tumors grew and were extracted for testing, the 13 dogs were euthanized.

These are some of the horrific tests Beagles and other animals are forced to endure:

Transplantation

Dogs and other animals are commonly used to act as "human models" for experimnets related to organ transplants.

Many are bred to have specific diseases so that experiments, like bone marrow and cell transplants, can be done to test if they will cure the disease.

Skin Irritation Testing

Testing is done by placing a chemical on a shaved area of the animal. Researchers may even prepare the area by removing layers of skin to cause abrasions.

These tests cause severe pain to the animal and can result in ulcers, bleeding, bloody scabs and discolored skin.

Eye Irritancy Testing

Researchers drop concentrated amounts of a test substance into the eyes and then measure the eye's reactions to determine the level of damage and injury - i.e. swelling, redness, ulcerations, blindness, etc.

This test is imprecise because they eyes of test animals differ in both structure and pH from the human eye. It cannot produce reliable results.

Heart and Lung Research

Researchers will induce lethal medical conditions such as heart failure, cardiac arrest, collapsed lungs, and blocked airways in order to study them.

In a study at the Mayo Clinic, dogs were implanted with pacemakers and their heart rates were systematically increased from 70 beats per minute to 220 to study conditions related to human congestive heart failure.

At the end of the study, the dogs were euthanized.

Toxicology Studies

Dogs are often used to measure the harmful effects of a given substance - such as human drugs, food additives, household cleaners, and industrial chemicals.

Dogs are forced to ingest chemicals in order to determine the dose that results in the animal's death.

Dogs are usually killed at the end of the study, if they did not die during the experiment.

Military Research

Military research facilities use animals to study hypothermia, frostbite, oxygen deficiency, respiratory distress and heatstroke.

Many are used in research involving chemical and biological defense, infectious diseases, and testing new weapons. Military research involves the deadliest diseases, like Ebola and Anthrax, typically causing extreme suffering and death.

Others are used in medical training involving gunshot wounds, tissue damage, blood loss, burns and other painful physical damage to their bodies.

Wound lab training sometimes involves shooting animals to re-create battlefield injuries. These studies can produce misleading data.

Embryo Research

A pregnant female is exposed, usually by force-feeding, starting at the initiation of pregnancy (through implantation) and contiuing throughout the pregnancy. She is then killed on the day before she is expected to give birth.

Her pups are extracted and evaluated for signs of developmental abnormalities and birth defects.

Shop for "Cruelty-Free" Products

Shampoo, cologne, lipstick, and hundreds of other cosmetic and household products are all still tested on animals. Thousands of beagles are suffering and dying to test these products, even though producing safe, cruelty-free beauty products is possible. Support those companies that make products that aren't tested on animals.

OPINION: Animal Testing and Its Gifts to Humans: Recent progress treating Ebola and a deadly tumor was made with animals' help.

by Frankie L. Trull, President of the Foundation for Biomedical Research, April 23, 2015.

Patients with aggressive brain tumors finally have reason for hope. Thanks to the work of scientists and physicians at Duke University, an experimental new treatment for glioblastoma multiforme, or GBM—an aggressive tumor that kills about 12,000 people in the U.S. each year—is saving the lives of patients who, just months ago, had little hope of survival.

This extraordinary development wouldn't have been possible without animal research. Yet many in the animal-rights community condemn the use of any and all animals in medical research and continue to push for testing bans. Such efforts ignore the fact that when it comes to medical research, animal models are indispensable. Further proof of this came on Wednesday with news in the journal Nature that a drug to fight Ebola had showed remarkable success when tested in rhesus monkeys. The brain-tumor treatment developed at Duke is a re-engineered polio virus. The new virus designed by researchers helps the body's immune system to recognize and attack cancer cells. As in countless other revolutionary therapies, animal research played an invaluable role in creating this treatment.

Before human trials began, the re-engineered virus was injected into the brains of macaque monkeys, whose systems operate similarly to those of humans. Since the raw polio virus often results in paralysis, such testing of the modified virus made sense—and helped demonstrate that the body's immune system would cripple brain tumors if injected with the re-engineered virus. This wasn't the only instance where animal models proved crucial for the Duke team. While developing their therapy, these researchers relied on years of previous primate research.

One such study was a 1991 paper in which Harvard researchers used a genetically engineered virus to treat a mouse with GBM. In 1996 researchers at the State University of New York at Stony Brook used mice to prove that infecting a cell with a polio virus required a specific receptor on the cell's surface. Then, in 2000, a research team from Duke and Stony Brook showed how a genetically modified polio virus eliminated human tumors bearing that special receptor in mice. This discovery laid the groundwork for the clinical trials that resulted in this breakthrough therapy. Dependence on animal research is hardly unique to Duke researchers. A number of recent medical advances have their roots in animal models. Consider a Phase III clinical trial from 2013, which proved that a next-generation herpes virus could successfully treat melanoma patients. This research was the direct result of a 1995 study by scientists at the University of Pennsylvania and Georgetown University, demonstrating how a modified herpes virus can shrink tumors in mice and nonhuman primates.

More recently, animal research has helped pave the way toward restoring vision. Last September, a Japanese woman became the first person to undergo an experimental stem-cell treatment for blindness. The procedure was deemed safe for humans after several studies involving monkeys and mice.

The greatest medical contributions from animal research may still lie in the future. In a study published last year in the journal Stem Cell Reports, scientists in France and Germany were able to regenerate damaged brain areas in mice for the first time. The discovery could lead to treatments for human brain damage caused by everything from strokes to bullet wounds. Despite these successes, critics continue to attack animal-research methods as needlessly cruel. Activists have succeeded in pressuring all but one major airline to stop carrying animal models to research labs. That's a problem for scientists in the U.S. Most monkeys come from Asia and Mauritius, where they're humanely raised on farms.

Consequently, researchers have had to turn to charter carriers. As a result, costs per animal have tripled. Those extra costs sap medical progress. Another common argument by critics is that animal models rarely lead to discoveries that are relevant to humans. It's undeniable that human physiology differs from that of mice or monkeys. But humans and animals still have much in common. Primates share fundamental similarities—from their use of hormones to their reactions to infection—that, for centuries, have helped deepen our understanding of the human body.

With the Duke trials, the project director initially called the idea of using polio as a therapy "nuts" because of the risk of paralysis. Animal models are what enabled his team to move forward with their work. Activists calling for the elimination of animal studies grossly underestimate the human value of animal studies. Those who doubt this value need only look at the faces of patients in the Duke trial whose lives have been saved by these essential research techniques.

From www.ProCon.org – For Animal Testing

Animal testing has contributed to many life-saving cures and treatments. The California Biomedical Research Association states that nearly every medical breakthrough in the last 100 years has resulted directly from research using animals. Experiments in which dogs had their pancreases removed led directly to the discovery of insulin, critical to saving the lives of diabetics. The polio vaccine, tested on animals, reduced the global occurrence of the disease from 350,000 cases in 1988 to 223 cases in 2012. Animal research has also contributed to major advances in understanding and treating conditions such as breast cancer, brain injury, childhood leukemia, cystic fibrosis, malaria, multiple sclerosis, tuberculosis, and many others, and was instrumental in the development of pacemakers, cardiac valve substitutes, and anesthetics. Chris Abee, Director of the University of Texas M.D. Anderson Cancer Center's animal research facility, states that "we wouldn't have a vaccine for hepatitis B without chimpanzees," and says that the use of chimps is "our best hope" for finding a vaccine for Hepatitis C, a disease that kills 15,000 people every year in the United States.

Animals are appropriate research subjects because they are similar to human beings in many ways. Chimpanzees share 99% of their DNA with humans, and mice are 98% genetically similar to humans. All mammals, including humans, are descended from common ancestors, and all have the same set of organs (heart, kidneys, lungs, etc.) that function in essentially the same way with the help of a bloodstream and central nervous system. Because animals and humans are so biologically similar, they are susceptible to many of the same conditions and illnesses, including heart disease, cancer, and diabetes.

Animal research is highly regulated, with laws in place to protect animals from mistreatment. In addition to local and state laws and guidelines, animal research has been regulated by the federal Animal Welfare Act (AWA) since 1966. As well as stipulating minimum housing standards for research animals (enclosure size, temperature, access to clean food and water, and others), the AWA also requires regular inspections by veterinarians. All proposals to use animals for research must be approved by an Institutional Animal Care and Use Committee (IACUC) set up by each research facility. Humane treatment is enforced by each facility's IACUC, and most major research institutions' programs are voluntarily reviewed for humane practices by the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC). All institutions receiving funding from the US Public Health Service (PHS) must comply with the PHS Policy on Humane Care and Use of Laboratory Animals.