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Animal Testing: Needful or Needless?

Do you own a pet, wear make-up, have high blood pressure, or know someone who has Parkinson's disease? Then you may be interested in or have been introduced to the topic of animal testing. Animal testing is a very controversial topic. "Animals have been utilized frequently throughout the records of biomedical investigation. Erasistratus and Aristotle were early Greek physician-scientists who conducted tests on living animals." (Hajar). Some individuals perceive that animal research is inhumane, and animals have rights too, while others believe that it is important and helpful to humanity and the unearthing of new therapies for many illnesses and how safe they are to use. Additionally, Animal rights activists have been at the forefront of advocating for an end to animal experiments due to ethical concerns. Why do people have two strongly different opinions on animal testing? Should we be testing on animals, or should animal testing be abandoned? For those supporting the use of animal experiments, the arguments that have been made include a contribution to life-saving discoveries, a close relationship between animals and humans, used by cosmetic manufacturers to ensure the safety of their product, future medical advances, improvement in veterinary medicine as well, laws put in place to protect animals and advantageous shorter life cycles of animals used for research.

Some opposers such as the international division of The Humane Society of America that promote animal welfare, animal-free testing and research, and protects wildlife, claim that

all animal testing procedures have the potential to cause physical and psychological suffering. The organization also points out that animal testing is mostly a waste of resources and time since those tests do not rightly project real-world human reactions most of the time and leave animals with distress and suffering.

While Humane Society International questions the contribution animal testing provides to human health and believes that it is mostly a waste of time and resources, Understanding Animal Research, a mutual society and a not-for-profit organization that aims to explain the need for animal testing which the American Association for Accreditation of Laboratory Animal Care (AAALAC) supports, emphasizes on how animal research is advantageous to humans as well as animals. "Animal testing has aided us to make life-changing innovations, from new injections and medicines to transplant methods and blood transfusions. Millions of people have been saved as a result" ("Understanding Animal Research" 1). Examples of some major health benefits that humans developed by working and testing on animals incorporate asthma inhalers (BeruBe, 92). The inhalers arose after work on guinea pigs and guinea pigs.

Pandora Pound, a researcher in the Department of Social Medicine, the University of Bristol in England, points out that " the public and Clinicians often think about how animal testing has contributed to curing of human illnesses, yet small-scale evidence is in place to support this view". These people suggest that we need more systematic review and methods to evaluate the clinical importance of basic animal testing since currently, only a few methods exist and until then, the contribution of animal testing remains uncertain. However, Professor Greaves, Fellow of the Royal Society, and a physician believes that animal testing is necessary their contributions is huge in developing a new drug since the goal is to know the safe dose to use and

the range tolerance for that treatment as well as the adverse reactions or events to it and it can only be done through the experiment on animals before human trials.

³ People for the Ethical Treatment of Animals (PETA), a 6.5 million-strong animal rights organization in America, says, “illnesses that are unnaturally induced in animals in a lab, whether they be monkeys or mice, are never similar to those that arise naturally in humans. And because animal genus differs from one another in many notable ways, it becomes improbable for animal experiments to yield outcomes that will be rightly interpreted and registered in the human condition in a purposeful way” (“Experiments on Animals”).

When the advantages of animal testing are evaluated against the disadvantages, it is clear that the method is helpful. As a result, animal testing should not be prohibited. To commence with, animal testing should not be prohibited because it has benefited both people and animals. Significant progress has been made in the fields of human medicine and research as a result of recent technological advancements. The use of animal testing cannot be overlooked in this regard.

First, the animal experiment has aided in the growth of diverse medical advancements that we may not appreciate. Animal testing has been vital in the discovery of organ transplants, antibiotics, anesthetics, and diabetes insulin, to name a few. Many people have been rescued by the polio injection alone. Herceptin was not only developed and tried on mice but is also extracted from mice. This new therapy has the potential to save the lives of breast cancer patients. The Hib injection, for example, was scientifically challenging to produce since a temporary antibody reaction to the major Hib antigen, a candy, especially in young people. In mice and rabbits, combining the vaccine with a protein, a strategy formerly demonstrated to safeguard mice from pneumonia, resulting in a stronger reaction. Because vaccines are intended

to control illnesses that spread throughout the body, tissue culture alone cannot be utilized to generate them. Vaccine research relies heavily on animals. When the UK immunization program commenced, there were several patients of Hib meningitis, predominantly among newborns, with not many deaths and several children surviving with significant disabilities. The initiation of the vaccination encountered a 90% reduction in the number of cases (Peltola, 594). Animal testing has undoubtedly contributed to life-saving discoveries that are being utilized to save or improve the lives of countless millions of people throughout the world.

Second, Animal research is heavily controlled, with rules in point to certify that animals are handled humanely. For instance, the federal Animal Welfare Act (AWA) has been governing animal experiments in addition to domestic and state regulations and guidance. The federal Animal Welfare Act specifies minimum housing basis for experimentation on animals, together with additional size, accessibility to good food and water, and temperature, among other things (National Research Council). It also commands veterinarian surveys on a steady basis. Each research facility must initiate an Institutional Animal Care and Utilize Committee to review all proposals to utilize creatures in the investigation. There are also associations that reviews programs of the major institutes of research for humane standards voluntarily. Researchers are highly concerned about the welfare of the animals they study for both humane and scientific reasons. According to Dr. Michael DeBakey, a legendary physician and former chancellor emeritus of Baylor College of Medicine, all those medical practitioners who undertake investigations in labs with animals are more anxious about the welfare of the animals. In reality, it was their regard for life's dignity and compassion for the sick and crippled that drove them to look for ways to alleviate disease-related pain and suffering. As a result, laws protect animals,

and medical practitioners must obtain a license before doing any research on animals, and they must not abuse them.

Third, Animals produce excellent investigation subjects since they resemble humans in various ways. The Stanford School of Medicine, a pioneer in the biomedical revolution and the fourth greatest research medical school in the United States, cites several grounds to justify the utilization of animals during the biomedical investigation, including a reality that animals are biologically similar to humans. For example, Chimpanzees, mice, and humans have almost equal DNA (Sturgeon, 261). Every single mammal, together with humans, has similar predecessors and has the same set of body parts such as kidneys, heart, and lungs, that work in much the same manner with the support of blood vessels and central nervous complex. Because animals and humans share so many biological similarities, they are both prone to many similar illnesses and ailments, such as cancer, heart disease, and diabetes. Animals can also be employed to master more about living creatures and diseases that impact humans and other animals. It is possible to discover information that cannot be mastered by any other approach by studying animals. When a drug or surgical procedure is uncovered, the public considers it wrong to try out it first in humans due to the danger of harm rather than gain. Alternatively, animals are utilized to test the drug or method to ascertain that it is both safe and effective. As a result, animals provide experimental models that are impossible to recreate employing human subjects.

Fourth, because of their transient life cycles, animals are recommended experimental subjects than humans. Because lab mice live not more than three years, investigators can investigate the impact of curing or genetic usage throughout a lifetime or multiple age groups, which would be difficult to do with human beings. Due to their limited lifetime, rats and mice are particularly fit for long-term cancer investigation. Researchers can investigate the effects of

medicines throughout their entire lives, which is impossible to do with people (Hajar, 42). Furthermore, utilizing animals with short lifespans allows scientists to study them through multiple generations, which would be impossible to do with human subjects. To boost, scientists may readily manage the environment in which the animals live for a shorter period. Likewise, animals with short life cycles reproduce rapidly, making them inexpensive and easily available in huge quantities. Animals are preferred by research groups in most circumstances because of their short lifespan, which allows them to examine genetic alteration throughout an animal's lifetime.

Fifth, Animal research is also beneficial to animals. Much extraordinary survival and life-extending treatments for farm animals, dogs, wildlife, cats, and jeopardized species have arisen as a result of it. Researchers are continually reminded that humans and animals share many biological and physiological traits, thanks to current genome sequencing, in-depth studies into animal physiology, and surgical breakthroughs. Almost all biomedical research involving laboratory animals promotes veterinary and human medicine, allowing pets and wild animals to live happier, longer, and healthier lives. Several illnesses negatively impact people and animals, stretching from epilepsy to cancer. Injections that are used to cure humans are also advantageous to animals. Antibiotics are successful in curing a variety of different illnesses among people and animals. Researchers can develop medicines and remedies for both humans and animals through animal research. Biomedical research positively impacts animals and humans. According to Edward, Infections with leukemia virus are the leading origin of death in cats. It is believed that 2–3% of all cats in the United States are infected with one or both of these diseases (Ewald, 48). Although vaccination is available to prevent these diseases, much more effort is needed to describe the disorders and how they are treated. Therefore, animal testing also has an impact on how animals are treated.

It's not uncommon for studies to yield surprising results. In 1978, a virus spread rapidly over the world, causing vomiting, dehydration, diarrhea, and, in some cases, death in dogs. This disease, known as canine parvovirus, was quickly discovered to be related to the feline panleukopenia virus. Because a vaccination for feline panleukopenia virus was already available, an injection of parvovirus was designed, tested, and made accessibly and was distributed in one year (Nandi, 31). The parvovirus injection, now widely regarded among the most remarkable victorious stories in contemporary veterinary exploration, nearly instantly stopped the increase of the illness among dogs in America. Puppies between the ages of 6 and 16 weeks are still at a high risk of contracting the virus, and more study is needed to protect pets of all ages.

Sixth, Animal testing protocols are used to ensure that cosmetic items sold correspond to a specific level of safety and allergenicity (Abbott, 145). According to Abbott, Cosmetic industries use about 14 million animals on average around the world to test various types of cosmetics during product development and before export to various nations. Cats, guinea pigs, dogs, numerous species of hamsters, and even small primates make up about a million of the 14 million creatures (Abbott, 145). For instance, ⁴The Food and Drug Administration of the United States is responsible for ensuring the safety of cosmetic items to protect public health. Animal testing in the cosmetics business frequently involves the use of rabbits, rats, mice, and other types of animals to ensure that specific types of cosmetics can be put to the skin's surface or near the eye without producing severe allergic reactions. As a result of the uncertainties surrounding the employment of other options, most cosmetic firms favor animal testing since the service of the skin or around the eyes of such animals is intended to mimic that of the average person. Animal testing aids in the detection of irritation or chemical poisoning, as well as the safety of

goods provided to female consumers who desire to conform to society's current definition of beauty.

Seventh, due to the lack of rights among animals, it is permissible to experiment on them. Because animals lack the intellectual power and moral acumen that humans hold, they have been handled differently by nearly every community throughout the set down history (Haidt, 814). Every single man would have become a vegetarian if animals were granted rights, and hunting would be forbidden. In addition, Scientists support a hindrance to the utilization of animals through fact-finding since no accountable scientist demands to employ animals or bring them worthless misery where it is easy to keep away from. Similarly, the bioscience section concurs with the experiments that morally use animals.

Eighth, Animal researchers treat animals with compassion, both for the welfare of the animals and to achieve accurate test findings. To secure their comfort and more accurate outcomes, research animals are cared for by husbandry professionals, veterinarians, and animal health technicians. According to Rachael Rubino, head of the animal amenity at Cold Springs Harbor Laboratory, the majority of individuals who have jobs in researching animals adore them. In addition, researchers aim to provide the animals under research the greatest possible lives and treat them decently. As a result, the finest study outcomes come from treating research animals with care.

Another rationale for supporting animal testing is that it enhances consumer safety. Manufacturers and manufacturers are responsible for conducting research and testing on their products before releasing them to the market to guarantee that they are safe. It's critical to remember that all new items in the food industry, and especially medical ones, must be tested. Food supplements, for example, include significant concentrations of chemical compounds that

can be harmful to human health (Costa, 1113). Animal testing is used to detect potential hazards that a new product may cause, thereby safeguarding the general public from the risk of consuming untested products.

Other research methods have been proven to be insufficient to replace or meet the testing criteria set by animal testing. Animals are the most similar to humans and thus the only viable options for testing various vaccinations and medications for treating human ailments. Another viable option is to test vaccinations or medications in the early stages of human disease. However, because the negative effects of lately produced pharmaceuticals are unaccounted or undetermined for in the early phases of testing, such experiments could give rise to a major health danger to people (Gonçalves, 651). If one does not like experimenting with models, animal research is the best means to conduct these medical experiments discoveries.

Animal experimentation has also helped in the development of novel vaccines to prevent diseases that afflict humans. For a state to protect a large population of people from infectious disease, it can be obtained through vaccination, and the nation will be adequately prepared to fight a variety of illnesses. To discover these injections, rigorous and comprehensive study must be conducted in order to build immunity against all types of germs. Several testing and trials must be completed before the vaccinations can be licensed for medical use in people. These studies are carried out on animals in the early phases of development to ensure that people are not harmed. According to Seyhan, Animal tests eliminate the need for early-stage human testing, hence shielding humans from serious problems. For instance, the Royal Society of the United Kingdom has issued a statement on animal research, emphasizing that nearly every medical breakthrough in the twentieth century depended on the utilization of animals in some form throughout the maturing process (Seyhan, 10). The idea is that animal testing will continue to be

required since computer duplicates cannot totally replace it. Therefore, the many vaccines that have emerged have all been tested in animals to assure better results when human beings are vaccinated.

Another key advantage of live testing is that it allows investigators to better acknowledge particular bacteria and viruses by seeing their consequences on animals. Many bacteria and viruses are still not investigated, and there is very insufficient information at hand. Furthermore, certain viruses mutate gradually and, as a consequence, their properties may vary (Bitely, 135). Gaining a better comprehension of these viruses, investigators must experiment them on animals that are the most related to humans. This is the last opportunity to prepare for pandemics to some extent.

lastly, Animal research will be required for future medical advancements. It is critical to study the 'whole body' to comprehend the entire body and how different organs such as the heart, nervous system, and lungs interact. Artificial animals are currently impossible to produce. By law, all possible medicines and novel chemicals must be tested on animals to ensure that they do not have any adverse effects on the heart, liver, or other essential organs (Woodcock, 12). Other tests determine the most effective doses and the optimum route of administration, whether by mouth, injection, or other means. Only after a new treatment has passed animal safety studies can clinical trials be done in people to assess its efficacy and uncover negative effects.

Collectively, animals have been used in research for many years in medical fields. The effectiveness of a new drug is first tested on animals before being introduced to the market. However, substituting human tryouts for other alternatives does not imply placing human cases in danger. It also does not suggest to cease medical expansion. Substituting animals utilized in testing with other alternatives will improve the standard and humanity of our investigation. Other

study alternatives can yield a lot of helpful data, but they cannot fully substitute the data obtained by way of animal experiments. The impact of disease therapy, damage, or preventive action on complex animals can only be displayed in animals. Contribution to life-saving discoveries, close relationships between animals and humans, used by cosmetic manufacturers to ensure the safety of their product, future medical advances, improvements in veterinary medicine, laws enacted to protect animals, and advantageous shorter life cycles of animals are among the benefits that have been made for those who support the use of animal experiments.

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