Animal Experiments THE FACTS





Every 7½ seconds an animal suffers and dies in a British laboratory. Around 4 million animals every year, in unreliable and unethical experiments that belong in the past. Some claim that animal experiments are needed to test the safety of products and medicines; but animal experiments have been shown to be misleading and have resulted in harm to humans. Medical progress does not require harming animals, there are advanced methods already available. Here are some facts about animal research.

Animal experiments: unreliable, unethical, unnecessary.



The fundamental flaw of animal based research is 'species differences'. Each species reacts differently to chemicals, drugs and toxins etc. Animal tests do not accurately predict what will happen in humans, only what will happen in that species of animal. Laboratory animals are kept in conditions which, by their very nature, cause the animal stress. This stress can affect the animal mentally and physically, thereby affecting the outcome of the experiment. Also disease, artificially created in animals in an attempt to mimic the human condition, is not the same as the

naturally occurring conditions in

humans.

Species differences

- Macaque monkeys are frequently used in toxicology testing, but they have specific genes which are vital for drug metabolism (when a drug works through the body). These genes are not found in humans and this is "partly responsible for differences in drug metabolism between monkeys and humans".
- Aspirin causes birth defects in dogs and cats, but not in humans
- Guinea pigs can only breathe through their noses.
- Horses, rats and mice cannot vomit.
- Morphine drugs are a depressant in rats, dogs, hamsters and other species, but produce tremors and convulsions at comparable doses in mice and cats.
- Drug tests: the way that a drug is metabolised (breaks down and works through the body) varies from species to species, and even within the same species; it can be affected by age, sex, disease, hormones and diet
- The breast cancer drug tamoxifen was designed as an oral contraceptive. It is in rats, but in women it has the opposite effect. It is now used in the treatment of breast cancer, despite causing cancer in rats in some studies.

Confusion and disaster

Fialuridine, a Hepatitis B vaccine, killed 5 people and caused serious illness in others although it had been tested on dogs, rats and monkeys. A review found "...unfortunately, there is nothing to indicate that other laboratory animal studies would have been more appropriate or capable of better prediction of the fatal outcome"





TGN1412, an experimental drug, caused volunteers to suffer serious, permanent and life-threatening damage. Prior to human trials, the drug was tested in monkeys at 500 times the human dose; the monkeys did not suffer the side effects experienced by the humans. Several studies regarding TGN1412 have highlighted the crucial differences between the human and monkey immune systems.

The anti-inflammatory drug **Vioxx** had unexpected effects on human patients, after laboratory animal tests. It was reported that between 88-140,000 extra heart attacks may have been caused by Vioxx in the five years since its introduction.

Avandia, the diabetes drug, was suspended across Europe after data showed that the benefits no longer outweighed the risks.

Progress without animals

Although some people contend that animal use in research is essential, the majority of medical and scientific research does not use animals. Advanced, cutting-edge technologies and computer analysis, modelling and data can be used instead of animals. All of these methods avoid the problem of species differences and are directly relevant to humans. These are the latest developments in a long medical history of progress without animals, which includes:

Anaesthetics – introduction of chloroform, ether, nitrous oxide, and cocaine.

Asepsis - understanding of sterile techniques in surgery.

Blood – understanding of the blood groups and Rhesus factor.

Circulation – understanding of how the blood circulates around the body.

Drugs – introduction of beta blockers for blood pressure; digitalis for heart failure; morphine as a pain killer; nitrite drugs for angina; quinine for malaria;

salicylic acid, the active ingredient of aspirin. **Epidemiology** – discovery of the link between cancer and smoking; the causes of heart disease; and the causes of many other

diseases.

Hormones – identification and purification of insulin for diabetes.

Surgical procedures – removal of the appendix; removal of bladder stones; Brock's technique for blue baby surgery and mitral stenosis; repair of cardiac aneurysm; removal of cataracts; removal of gall stones; repair of inguinal hernia; removal of the ovaries for tumours.





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The NAVS

The National Anti-Vivisection Society, founded in 1875, is the world's first society to campaign on this issue, and continues to lead the campaign today, spearheading the adoption of advanced, non-animal methods. We raise awareness with undercover investigations, produce detailed scientific reports, technical briefings for legislators, and educational materials.

In 1973, we founded The Lord Dowding Fund for Humane Research, to award grants to scientists for advanced medical and scientific research that does not use animals. Projects include cancer, kidney research, safety testing, microsurgery, toxicity of dental fillings, Parkinson's, schizophrenia, and computer suites for universities, to replace the use of animals in teaching.

Our international wing, Animal Defenders International was founded in 1990 and campaigns at international level on a wide range of animal and environmental protection issues.

We have made great progress over the years, with bans on certain tests and restrictions on animal use, replacing them with non-animal methods.

With your help and support, we can bring changes that will save animals, and benefit science and people, too.



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