clinical studies do require more skill, time and patience to avoid unnecessary risks to participants. And with human tissue studies, some effort is needed to form working contacts with hospital staff to secure adequate supplies of material. But the overwhelming advantage of human-based research is its relevance. Compared to this, the continued use of animals must be regarded as bad science. By sacrificing accuracy for the greater convenience of animal experiments, researchers do medicine a disservice.

It is not only research *methods* which need to be scrutinized, but the kind of projects supported. The realization that it is mainly through preventive measures that our health will be improved should influence the allocation of research funds. As an editorial in the *British Medical Journal* explained,[5]

***"today's main killer diseases are due to the way we live … logically the main thrust of medical research should be directed at the prevention of these common, lethal and disabling conditions."***

Unfortunately, there is far more profit and prestige in treating people once they have become ill. The profit-oriented pharmaceutical industry is unlikely to be interested in prevention unless it can be made to pay. It is inevitably more interested in controlling the symptoms of disease. After all, without widespread sickness, the industry cannot thrive. Likewise, surgical extravaganzas with artificial hearts may bring sensational headlines but infinitely more could be achieved, and without suffering to the patient, by preventive measures.

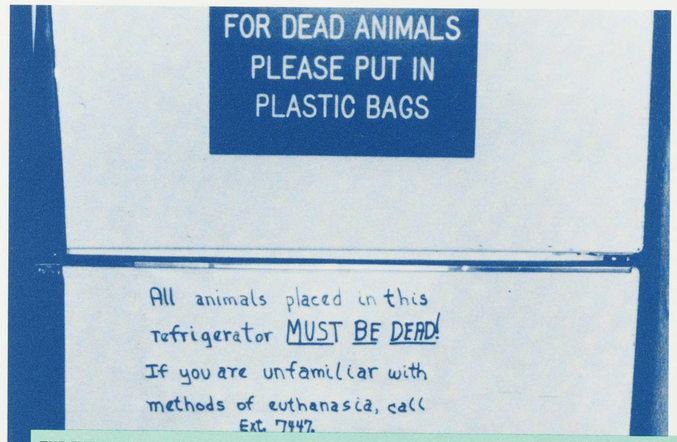
Again, should researchers be experimenting with brain grafts to control neurological illnesses such as Parkinson's Disease? At best, these procedures could only treat some of the symptoms for a small number of people and, as Raymond Bartens of the New York University Medical Center points out, since the underlying cause may still be present, a relapse is the more likely possibility.[6] Surely resources would be better allocated to clinical and epidemiological studies to identify the causes so that preventive action could be taken. Then the incidence of neurological illness would actually *fall*.

The evidence suggests that animal research wastes billions of dollars and often yields misleading results. Far more could be achieved by concentrating resources on methods of direct relevance to people. In the urgent interests of both humans and animals, we therefore propose the following 7-point program for health and humane research. It is our hope that researchers will not react defensively but recognize the merit of a more humane and beneficial approach to medical research and healthcare.

## CHARTER FOR HEALTH & HUMANE RESEARCH

1. Emphasis to be directed towards the prevention of ill health
2. An essential drugs policy restricting new medicines to therapeutic areas of real need, thus avoiding the production of duplicate 'me-too' drugs for which there is no medical justification
3. Medical research to rely on methods of direct relevance to people
4. Medical training to concentrate on the study of human beings
5. A switch to non-animal test systems to improve the safety of medicines
6. Vaccines to be produced from human rather than animal cells
7. Governments to ensure the rapid development, validation and utilization of alternative systems

*The Charter is originally an initiative of The International Association Against Painful Experiments on Animals. The full text is available from the AAVS.*

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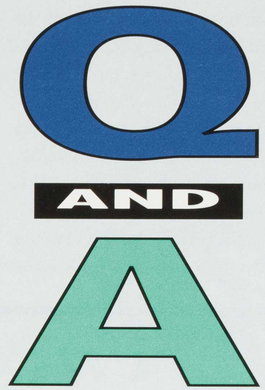
**THE FUTURE FOR MILLIONS OF LABORATORY ANIMALS?**

***We cannot change the past, but we can shape the future. Join us in campaigning for Health & Humane Research and make a better world for both people and animals.***



# QUESTIONS AND ANSWERS




**Q**

Wouldn't research grind to a halt without animal experiments?

**A**

On the contrary, directing resources away from animal research towards the study of people would bring more relevant results. Even tests that have come to rely on animals would not be stopped because scientists quickly devise new techniques to achieve their objectives. For instance, the use of animals to test the potency of vaccines is traditional, but such an approach is of no value in assessing pneumonia vaccines because the causal organisms are not virulent for laboratory animals. The lack of an animal model provided the necessary incentive to devise a successful alternative based on chemical analysis and studies with volunteers.

**Q**

Without animal research, wouldn't diabetes still be a death sentence?

**A**

The key advances in treating diabetes came from human studies and the techniques of chemical purification. Post-mortem analysis of human patients first of all established the link between diabetes and a damaged pancreas. This finding encouraged researchers to give pancreatic extracts to both laboratory animals and diabetic patients, but the extracts were so crude they caused severe toxicity. Even Banting and Best's first human trial had to be stopped, with Banting admitting that results were not as encouraging as those achieved 13 years earlier by Zuelzer. Only when the biochemist J.B. Collip used chemical techniques to purify the extracts did a more effective and less toxic preparation become available.

**Q**

Can scientists carry out AIDS research without using animals?

**A**

It is not only possible but preferable to investigate AIDS without using animals. The fact that no "normal" animal has developed AIDS after inoculation with HIV suggests important species differences, and a Presidential Commission concluded in 1988 that "the lack of appropriate animal models for HIV research makes the application of animal research to humans uncertain." So far, key insights into the understanding, prevention and treatment of AIDS have come from epidemiology and *in vitro* research. And although a large part of the AIDS budget is devoted to animal experiments, future advances are most likely to come from more relevant human-based clinical research.

**Q**

Doesn't the Animal Welfare Act protect animals from pain and suffering?

**A**

The Act mainly regulates the way animals are kept rather than actual experiments, and while encouraging the use of anesthetics, this is left to the researcher's discretion. Furthermore the Act does not cover mice, rats, birds and other species which together make up about 90% of all animals used in experiments. The Department of Agriculture, charged with enforcing the Act, has even failed to provide adequate inspections: in 1983, 51.7% of institutions in California and 48.7% in New York were not inspected at all. Nevertheless, in 1983, inspectors found "serious and chronic deficiencies" in 27% of facilities. The only certain way to protect animals from painful research is to stop the experiments and redirect funding into humane technologies.

**Q**

Would you rather your child die than experiment on animals?

**A**

With the constant risk of misleading predictions, the real choice is not between dogs and babies but between good and bad science. Vivisection is bad science because it only tells us about animals whereas in medicine we need to know about *human* disease.

**Q**

Are you saying that animal research has produced nothing of value?

**A**

Whatever has been learned, and many scientists and clinicians now contend that the value of animal research has been grossly overstated, the fundamental issue is that vivisection is a logically flawed technique because of physiological, anatomical and biochemical differences between humans and animals. Far more could be expected by concentrating resources on methods of more direct relevance to people.