Why do we use animals in medical research? / Understanding Animal Research.

ABOUT US

Understanding Animal Research aims to achieve understanding and acceptance of the need for humane animal research in the UK, by maintaining and building informed public support and a favourable policy climate for animal research.

The information provided by Understanding Animal Research is based on thorough research and understanding of the facts, historical and scientific.

Understanding Animal Research seeks to engage with and inform many sectors to bring about its vision. Key stakeholders include members of the public, the media, policy makers, schools and the scientific research community.

"The use of animals in scientific research continues to play a vital part developing improvements in healthcare and the environment. This Government is committed to working to ensure that the opportunities presented by scientific advances are used to replace or reduce animal use wherever possible, and to refine procedures to minimise suffering." *David Willetts, Science Minister, 2011*

ALSO AVAILABLE IN THIS SERIES:

Animal research benefits us – and animals too
How much animal research is done in the UK?
How is animal research regulated?
Animal welfare and the three Rs: replacement, refinement and reduction

IMAGE CREDITS

1: © myrrha/iStockphoto
2: Coloured scanning electron micrograph (SEM) of HIV particles (yellow) budding from the membrane of the host cell (blue). Photo: © Dr Olivier Schwartz, Institut Pasteur/Science Photo Library

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Understanding ANIMAL RESEARCH

SEPTEMBER 2011

Understanding ANIMAL RESEARCH

WHY DO WE USE ANIMALS IN MEDICAL RESEARCH?

Understanding ANIMAL RESEARCH

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"It is unethical and illegal to expose human patients to new medicines without being confident that they will not be seriously harmed." *The Royal Society, 2011*


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See also our leaflet *Animal welfare and the three Rs: replacement, refinement and reduction*

DO WE NEED TO USE ANIMALS IN RESEARCH?

Yes. For some medical research we can't do without animals.

Without animals, we may not have benefited from advances that have given us the antibiotics, vaccines and anaesthetics that we now take for granted. Blood transfusions might never have been developed. It is difficult to see how we could control diabetes, asthma and high blood pressure, which would cause more suffering and claim more lives. We still need animals in today's research for tomorrow's treatments.

Medical research takes a long time. It can take up to 12 years for a new product to reach your local pharmacy. Only a small proportion of that time is taken up by animal research.

DID YOU KNOW?

- 8 out of 10 children diagnosed with leukaemia now survive free of the disease for at least five years.
- 8 out of 10 women now survive breast cancer for five years or more.
- The death rate from all cancers has dropped by 11% over the last decade.

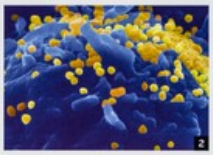
ARE THERE ALTERNATIVES TO ANIMAL RESEARCH?

There are now many 'alternatives' to animal research. These techniques include studies of isolated cells and tissues, new scanning methods, computer models that simulate an animal's response to specific experiments, the use of statistical data already obtained from animal research, and studies of patients and populations.

In fact, the law says that animals cannot be used if medical research or testing can be done by a non-animal method. If it can, then the Home Office will not issue a licence for animal use.

HOW IMPORTANT IS ANIMAL RESEARCH TO MEDICAL PROGRESS?

Although advances in science and technology mean we now use animals in fewer situations, some animal research is still essential for medical progress.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Take, for example, genetic research. Humans share at least 90% of their genes with every other mammal, and we have the same vital organs, including the heart, lungs, liver, kidneys and brain. Research on animals helps scientists understand what genes do and develop new treatments that target them when they go wrong.

All potential medicines must be safety-tested on animals. Such tests identify unexpected side effects and check that the medicine is likely to be safe. Other tests estimate effective doses and find the best way to administer them. Clinical trials can only be conducted in humans after a new medicine has passed animal tests.

These are just some of the medical problems we are fighting with the help of animal research:

- **CYSTIC FIBROSIS** One in every 2,500 babies is born with cystic fibrosis, which clogs the lungs and other organs with mucus. Their life expectancy has improved but is still as low as 31 years. Research on mice is helping scientists to develop better treatments, including gene therapy.
- **SPINAL CORD DAMAGE** Spinal cord damage can paralyse people and rob them of the use of their limbs. Research into nerve-cell regeneration in rats offers hope of medical treatments that can improve sufferers' mobility and quality of life.
- **HIV & AIDS** Research into the effects of antiviral drugs and vaccines on animals may one day allow us to eradicate a syndrome that kills millions of people across the world, particularly in developing countries. The antivirals that have already been developed mean that HIV infection need no longer be a death sentence.

Almost all of us, and animals too, have benefited – and will continue to benefit – from animal research. We now need to tackle the medical problems that will affect future generations.

PUBLIC OPINION

Although opponents of medical research using animals receive significant media coverage, public opinion does not support them. A study conducted by Ipsos MORI in December 2010 found:

- 90% of people accept medical research on animals to some degree
- 60% accept it unconditionally
- Only 17% support an outright ban on all animal research

REGULATION IN THE UK

- Three separate types of licence are required for animal research or testing – for the individual researcher, their project and place of work
- Licences are only granted if potential results are important enough to justify using animals
- The UK is unique in having simultaneous national controls and local ethical controls that govern the use of animals.

See also our leaflet *How is animal research regulated?*

"Animal research has made major contributions to medicine and healthcare by helping scientists to bridge the gap between theories developed in the test tube and the reality of introducing a new treatment to the patient." *Association of The British Pharmaceutical Industry, 2011*