



BRIEFING: THE USE OF ANIMALS IN WARFARE EXPERIMENTS

Campaign aim: A ban on the use of animals in warfare experiments

SUMMARY

The Guidance on the Operation of the Animals (Scientific Procedures) Act 1986, the law which regulates animal experiments, states that *'Project licences will not be granted for programmes of work involving the following...developing or testing offensive weapons (but we may consider licences for developing and testing ways of protecting or treating service men and women, or the population as a whole)'* (1)

Animal Aid is calling for a ban on any experiment where animals are exposed to chemical weapons, biological weapons or live ammunition. This should apply to all procedures for any means.

What might 'warfare experiments' involve?

Nerve agents – These are highly toxic substances that work by binding to an enzyme in the body which stops it working. This enzyme, called AChE, is vital to how nerves work, so when AChE cannot work, the nerves become overstimulated. This can cause mental impairment, breathing problems, seizures (fits), coma and death.

Biological weapons – They spread disease-causing organisms or toxins in order to harm or kill humans, animals or plants. Almost any disease-causing organism (such as bacteria, viruses or fungi) or toxin (poisons derived from animals, plants or microorganisms) can be used in biological weapons. (2)

Blasts – Blasts can be simulated to try to mimic the injuries caused to a body by a blast. Blast injury occurs because of the huge change in pressure. Blasts can cause life-threatening injuries which are very complicated and therefore difficult to treat.

How animals suffer in warfare experiments

Animals used in warfare experiments are typically exposed to compounds or procedures which are known, or even specifically designed, to cause severe suffering, harm and possibly death, to humans. The following example, conducted at Porton Down, illustrates the suffering that animals experience:

Guinea pigs had VX, a highly toxic nerve agent, applied to their backs. (3) They were observed and 'scored' for the display of certain symptoms including *'writhing'*, *'no meaningful voluntary movement'* and *'gasping'* (guinea pigs will only breathe through their mouths when they are in extreme distress).

The science

In order to help humans, animal experiments need to be reliably predictive of what would happen in humans. This is not the case for a number of reasons:

- The differences between humans and other animals in organ structure, metabolism, chemical absorption and genetics.
- Animals living in controlled experimental settings cannot predict the response of human patients living in the 'natural world'.
- Diseases that are artificially created in laboratories, do not reflect naturally occurring human disease.
- Common adverse reactions, such as headache, dizziness, double vision etc, are not outwardly visible. Even if they were present, they would not be detected in animals.

A 2007 paper casts doubt specifically on the reliability of the data gathered from harming guinea pigs with nerve agents in order to test a class of drugs called oximes to help humans. The authors state that the '*guinea pig may not be a suitable animal model for the evaluation of nerve agent antidotes*'. (4) They go on to state that '*some potential oximes that are suitable for humans may be dismissed based upon their poor efficacy in guinea pigs*'. This is an issue that Animal Aid has long pointed out is true; animal experiments can lead to promising treatments for people being discarded due to misleading results in animals.

The scale of animal use

The figures for 2018, reveal that 1,941 animals were used in that year at Porton Down. The number of animals used at Porton Down from 2010 to 2018 is a staggering 50,595. The species involved include primates, pigs, rabbits, mice, rats and guinea pigs. There may be more animals used in warfare experiments at other establishments.

What does Porton Down do?

According to its website, Porton Down has '*been active in developing effective countermeasures to the constantly evolving threat posed by chemical and biological weapons. To help develop effective medical countermeasures and to test systems, we produce very small quantities of chemical and biological agents.*' (5)

Unfortunately, the '*countermeasures*' and '*systems*' described can involve the infliction of terrible suffering upon, and deaths of, thousands of animals. Typically, toxic agents are manufactured, and animals are exposed to these poisonous substances, then attempts are made to 'protect' the animals from the effects of the poison. Obviously, this can, and does, involve terrible, prolonged suffering and death.

Conclusion

All animal experiments are cruel and unreliable, but warfare experiments are particularly heinous. This is because they involve intentionally exposing animals to compounds, weapons or blast injuries which are known to cause terrible suffering and death in humans. A ban on warfare experiments on animals should be implemented immediately.

References

- 1) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/662364/Guidance_on_the_Operation_of_ASPA.pdf - accessed 24/9/19
- 2) [https://www.unog.ch/80256EE600585943/\(httpPages\)/29B727532FECBE96C12571860035A6DB?OpenDocument](https://www.unog.ch/80256EE600585943/(httpPages)/29B727532FECBE96C12571860035A6DB?OpenDocument) – accessed 22/3/19
- 3) Mann, T.M. et al (2017) 'Bioscavenger is effective as a delayed therapeutic intervention following percutaneous VX poisoning in the guinea-pig', *Toxicology Letters*, doi.org/10.1016/j.toxlet.2017.11.029
- 4) Luo, C et al (2007) 'An *in vitro* comparative study on the reactivation of nerve agent-inhibited guinea pig and human acetylcholinesterases by oximes', *Biochemistry*, vol.46, pp.11771 – 11779.
- 5) <https://www.gov.uk/government/news/the-truth-about-porton-down> - accessed 18/11/18