About dog use...

In the UK, ~85% of dogs used in scientific research are used to safety test human and veterinary medicines.

The number of dogs used each year has been decreasing over the last decade.

The total number of dogs used in Great Britain and Northern Ireland 2014 was 2,815.

In the UK, dogs must be obtained from a designated supplier and are usually purpose-bred beagles.

Around 100,000 dogs are used globally every year, with the USA being one of the biggest users (~65,000 dogs).

Standards in the UK are amongst the highest in the world, yet much dog use occurs outwith the UK.

Less is known about the welfare of dogs in other countries. Some countries do not even report the number of animals used in scientific research.

A dog is pictured being trained to sit without restraint using food treats as positive reinforcement

Refining Dog Care

Dogs are used in scientific research for a variety of reasons, the most common being to safety test new human and veterinary medicines. While alternatives to using live animals in research are being developed all the time, some dog use will continue until alternatives are developed. While dog use continues, there is an ethical and scientific imperative to promote good welfare. The welfare of laboratory-housed dogs in the UK is amongst the highest in the world and research is underway to continually improve welfare.

Measuring welfare

Welfare is defined as the ability of an individual to cope with its environment. As such, it is possible for individuals with differing past experiences to have different welfare in the same circumstances. In order to measure and improve welfare, it is necessary to have an evidence-based scoring system which is practical to use. Behaviour can be used to identify dogs which differ in terms of response to events, have different affective (emotional) states and responses to physical pressure.

Good practice guidelines

There is some evidence available to support good-practice for the most common aspects of the dogs' lives.

> "There is an ethical and scientific imperative to maximise good welfare of dogs in scientific research for as long as their use continues"

Housing and husbandry

The design of housing may be one of the most crucial factors for promoting good dog welfare. Dogs are likely to spend the majority of their lives in the home pen and so it has the potential to significantly influence welfare.

Dogs are highly social, meaning that they should be housed in pairs, trios or small groups. Ensuring compatibility is necessary for group housing dogs, and compatibility should be taken into account when assigning dogs to groups.

The modern style of dog unit and home pen design which is being adopted across industry has been shown to benefit dog welfare. Features of modern home pens include large pens, increased visibility, sound proofing materials and a variety of ledges or locations in the pen which allow the dogs choice. Many features of the modern dog unit can contribute to efficient husbandry practices as well as dog welfare.

Access to indoor and outdoor exercise areas also promotes positive welfare, particularly where a range of toys and opportunities for positive staff contact can be incorporated.

Environmental enrichment

Providing a variety of items for environmental enrichment can add to the welfare benefit of home pen design. Toys which can be chewed, manipulated or contain a portion of daily diet are particularly effective. Environmental enrichment should be evaluated to make sure it is effective. ∎

Training for husbandry and regulated procedures

Training is another fundamental Refinement which has the potential to have a significant impact on welfare.

Using positive reinforcement training for compliance with husbandry practices (e.g. moving pen, health checks) and regulated procedures (e.g. restraint, dosing) benefits dogs, staff and data output. Training can be easily incorporated into pre-study preparation and result in dogs which willingly cooperate, making husbandry activities easier and more efficient.

Training for regulated procedures using desensitisation reduces the negative welfare impact of the procedures, which can also reduce the impact of stress on data outputs. This means better quality of data outputs from the dogs' use. Training for cooperation can also reduce the time necessary for many activities and reduce staff stress from handling difficult animals. ∎

About
Refining Dog Care

Refining Dog Care is a project which has been set up as a collaboration between academia and industry to develop and promote evidence-based good practice guidelines for laboratory-housed dogs. The aim of the project is to improve the welfare and concomitant data output of laboratory-housed dogs.

In a project running from 2015-2017, we are conducting and disseminating research with our partners and collaborators in industry and beyond to improve the welfare of laboratory-housed dogs.

Resources for those working with dogs

We are providing resources to those working with dogs directly (e.g. care staff and technicians) and those who design studies using dogs (e.g. study directors) to support implementation of good practice. We are visiting dog facilities to discuss needs with all groups of staff and to develop staff learning resources which benefit both staff and dogs.

To provide on-going support, we have also developed a website containing extensive resources including publications, multimedia guides to welfare assessment and training, which will develop with assistance from our collaborators.

Evidence-based Refinements

Refinements are not consistently implemented because of a lack of evidence that they work, or concerns about negative impacts on data output. We are working with our partners and collaborators to develop evidence of good practice and disseminate it to those working with dogs. More information can be found on our website. ∎

www.RefiningDogCare.com