



Supplementary resources for members of local ethical review processes

Dogs: Good practice for housing and care





**Before using these guidance notes, please read the introductory sheet that accompanies this series:
*Supplementary resources for lay members: an introduction***

Natural history

Providing for good dog welfare depends on a sound, objective knowledge of species-specific behaviour and how this has developed in the domestic dog. Dogs are hunters by nature, and wild or feral dogs will range and hunt over a large area. They are highly social, intelligent, inquisitive animals, who are strongly motivated to explore and monitor their territory. Although largely carnivorous, dogs are opportunistic feeders and consume a varied diet. They are renowned for possessing a highly developed sense of smell, and can hear sounds that are up to four times quieter than the human ear can detect. Dogs have a wider field of vision than humans; they also have some colour vision and can probably see blue and yellow but not red.

In common with other carnivores, dogs spend much of their time resting. However, they require physical and social stimulation, including play, during their active period in order to develop and behave normally. Social contact with other dogs and humans is extremely important to them. They like to rest in contact with one another, especially when they are young, and they can form strong social bonds with people.

Interestingly, the longstanding theory that dogs are motivated to establish rigid hierarchical relationships with other dogs and humans and have a desire to be dominant is now outdated. Research has shown that the social structure of domestic dogs is not a rigid pyramidal hierarchy with clear “alpha” and “beta” individuals. There is no over-riding structure apparent and the relationships which exist between individuals are based on, and develop through, learning (see reference 1 for more information). This means that, contrary to popular belief, dogs who are showing undesired behaviour such as aggression, are not trying to achieve a higher social status or take control. In fact, almost invariably, aggression is a behaviour used by individuals when they feel they are under threat. If an aggressive response proves successful at avoiding that threat, it will be reinforced and this behaviour will be likely to recur in similar situations.

What dogs need

The following list of requirements for good dog husbandry and care is based on the scientific literature on dog behaviour, needs and preferences. It is summarised from the BVA(AWF)/FRAME/RSPCA/UFAW report on refining dog husbandry and care (reference 2), which covers all of the issues in more detail. Additional information on dog welfare, housing and care can be found in the resources listed at the end of this document.

- **Social housing**

Dogs are social animals, motivated to maintain contact with familiar individuals, and can suffer when kept in social isolation. They should always be housed in pairs or groups unless there is compelling welfare, veterinary or scientific justification for not doing so.

Within a pair or a group of dogs, each individual will, over time, form a distinct relationship with every other animal. This means that each dog will learn to recognise the specific cues that might predict a positive or negative response in another animal and to alter their behaviour accordingly.



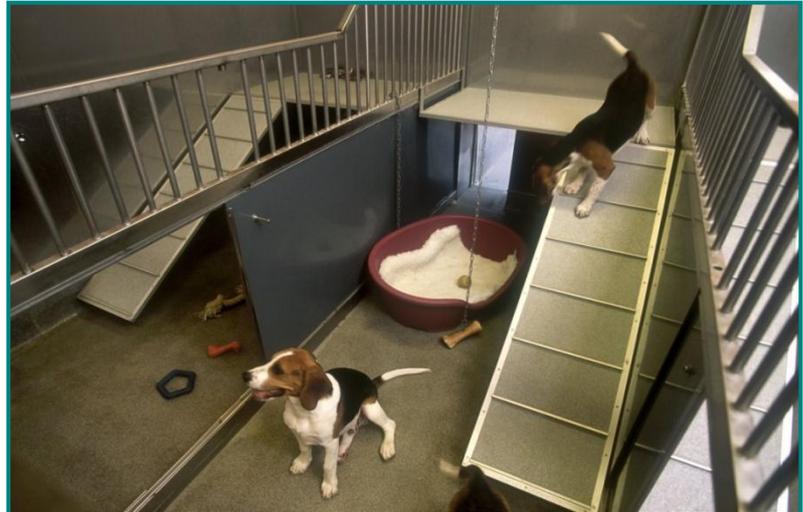
Individuals also learn how each dog is likely to respond in a range of different contexts [1]. Keeping pairs or groups as stable as possible will therefore help avoid problems with aggression, so try to keep compatible pairs or groups together rather than split familiar animals up, even where studies require animals to be 'randomised' to avoid bias [2].

- **Spacious pens**

Pens should be large enough to permit housing in socially compatible groups; to provide separate areas for defecation, activity and resting/sleeping; and to allow essential enrichment so that the dogs can perform a wide range of normal behaviours. Pens should be long enough to allow dogs to retreat to the back if they are feeling anxious or want to avoid other dogs. A flexible design such that pens can be run together, for example for exercise periods, is advantageous.

- **Solid floors**

Dogs should be housed on a solid floor with a smooth, non-slip finish. They should not be kept on grid or slatted flooring unless there is compelling scientific justification, and then they should always be provided with a comfortable, solid surface for resting and sleeping. Bitches who are about to give birth should never be housed on grid or slatted floors.



- **A warm, dry, draught-free resting area and/or bed with bedding material**

All dogs should be provided with a warm, dry, draught-free area for resting and sleeping. Beds should always be provided for comfort and enrichment. They are especially important for old, young, sick or post-operative dogs, peri-parturient bitches and animals prone to pressure sores. Different bedding materials (e.g. fleecy bedding) should be trialled to see whether dogs will benefit, although some dogs do not seem to have a preference for (or will destroy) bedding.

- **A raised platform for visibility, privacy and additional space**

Pens should be designed to allow good visibility of the room outside, but should also provide for a semi-enclosed area as a 'private retreat' and to help the dog control interactions with other animals, either within the pen or in adjacent pens. Provision of a raised platform helps to meet this goal, and also provides increased complexity, additional choice (of location, height and social contact) and opportunity for exercise. Some dogs prefer their beds to be placed on top of the platform. In whelping pens, however, platforms allow post-parturient bitches to get up and away from their puppies.

- **A varied diet presented in an interesting way**

Standard laboratory dog food is bland and boring, so other foods (with different odours, flavours, textures, shapes and sizes) should be provided wherever possible. Presenting the food in different ways, e.g. by using feeding devices such as Kongs™, can also help alleviate boredom. However, it is important to be predictable in the provision of such feeding devices as changing the routine may cause additional stress, so once started it should be continued on a daily basis.

Chewing is an important behaviour for dogs and appropriate hard items should be provided to meet this need and to prevent gingivitis and periodontal disease. Chews that taste or smell of food (such as certain synthetic bones), are often preferred by the animals.



- **Toys**

The addition of toys (such as balls, ropes, pulls, tug toys, chains) to a pen increases the opportunities for the expression of postures, activities and behaviour that are typical for the species. A wide range of such products is commercially available and these will help to alleviate boredom and fill the dogs' days.

The way the toys are presented is important in terms of matching individuals' preferences, maintaining interest and activity, and allowing the dogs to hold and play with them in a species-typical fashion. These issues can be addressed by preference testing, rotating the presentation of toys, engaging humans in play sessions and suspending toys or chews about 10 to 15 cm from the floor by chains. These should be hung from springs or elastic cord so that the dogs have to hold the items down to chew or play with them. Aggression can be minimised by providing a sufficient number of toys for all animals.



- **Out of pen activity**

Providing an exercise period in an area outside of the pen stimulates the dogs both physically and mentally. Separate exercise areas should be designed to provide an interesting and different environment, for example with platforms, ramps, tunnels and toys. Ideally, dogs should have access to outdoor runs since these provide further opportunities for enrichment, and help meet fundamental behavioural needs (e.g. relating to smell, foraging, investigating and play).

Some establishments have developed excellent exercise facilities, for example by constructing an outdoor run within the confines of a closed site or an open exercise court within a secure building. Outdoor runs should include shelter from adverse weather conditions.



With all out of pen activity, sufficient staff must be present to allow for positive interaction with the animals, to encourage them to use all of the resources provided, and to supervise the dogs effectively to deal with any aggression if necessary.

- **A structured socialisation, habituation and training programme**

Dogs need to have positive interactions with other dogs and humans, and to be able to cope with scientific and veterinary procedures as well as any changes in the environment that might occur throughout their lives. All of this can be facilitated by implementing a formal and structured socialisation, habituation and training programme, with specialist advice from dog behaviour experts. All training should be reward-based and appropriate to the age of the animal.

- **A predictable daily routine**

Like other animals, dogs cope much better in environments which are predictable. Providing a routine in which care and rewarding experiences, e.g. feeding, exercise and provision of toys are guaranteed, will help ensure good welfare.



- **Rehoming**

A number of establishments have set up successful rehoming programmes for ex-breeding or experimental laboratory beagles. These have been found to benefit staff morale as well as the animals themselves, so rehoming should always be considered as an option for dogs. However, there are many factors to consider to ensure that this is in the best interests of the animals - guidance on the practical and legal points are given in reference 3.

Potential husbandry related welfare problems and how to resolve them

Excessive noise due to prolonged, noisy barking can be a serious welfare problem. It is best to address the fundamental cause of the barking by ensuring that housing and care caters for the behavioural needs of the dogs, as set out in the rest of this sheet (see especially raised platforms). In particular, thoughtful husbandry routines will ensure that dogs are used to interacting with humans and are less inclined to bark. The design of the facility can also help to reduce noise, for example by incorporating noise absorbent ceilings, upper walls and/or baffles.

Abnormal behaviour including **stereotypies** such as pacing or circling, may arise if housing or husbandry does not meet the dogs' physical and/or social needs. The behaviour of the animals should always be monitored closely, and if abnormal behaviour or stereotypies develop, housing and husbandry practices should be immediately reviewed to address all of the topics in this checklist.

Aggression is a normal part of the way in which dogs behave and includes grumbling, growling, snarling, teeth baring, snapping at the air and biting. However, it can have serious consequences for health and welfare if it is excessive or prolonged.

When a dog uses aggression it is almost invariably because the animal thinks s/he is under some form of threat, such as a threat to the animal's personal safety or the threat of removal of a highly valued resource. An aggressive response can also be caused by preventing the dog from doing something s/he really wants to do which causes frustration. All aggressive incidents should therefore be recorded to see whether they are 'triggered' by events that could be avoided or carried out differently such as:

- husbandry activities e.g. feeding or cleaning, which can frustrate or frighten animals;
- contact with unfamiliar individuals from other pens or staff during husbandry activities;
- lack of visibility, especially where dogs can hear activity but not see what is happening;
- lack of space or resources and/or competition for these;
- splitting established pairs or groups and regrouping with other animals.

Careful monitoring of individuals will help identify possible triggers of aggressive behaviour many of which are likely to be resolved by reviewing and making changes to husbandry. In some cases, incompatible animals may need to be removed and re-introduced to a new group. However, dealing with aggression effectively requires a good, up to date understanding of dog behaviour.

Consulting a specialist in dog behaviour can be very helpful, if not essential, when dealing with aggression and other behavioural problems and in designing socialisation and training programmes that aim to avoid them in the first place.



Dog housing and care: ERP aide-memoire

- ❖ Social housing in stable pairs or groups
- ❖ Spacious pens to provide separate areas for defecation, activity, resting and sleeping and retreat
- ❖ Solid, smooth, non-slip flooring
- ❖ Comfortable warm, dry, draught-free resting area with bedding
- ❖ Raised platform for visibility, privacy and additional complexity
- ❖ Varied diet (different odours, flavours, textures) presented in an interesting way
- ❖ Items for chewing
- ❖ Toys presented in such a way as to maintain interest and activity
- ❖ Out of pen activity
- ❖ A structured socialisation, habituation and training program
- ❖ A predictable daily routine
- ❖ Rehoming where possible with a structured rehoming programme

Notes



Recommended references

1. Bradshaw, J.W.S., Blackwell, E.J. and Casey, R.A. (2009) Dominance in domestic dogs - useful construct or bad habit? *Journal of Veterinary Behaviour, Clinical Applications and Research*, 4, (Issue 3), p109-144.
2. Prescott, M.J., Morton, D.B., Anderson, D., Buckwell, T., Heath, S., Hubrecht, R., Jennings, M., Robb, D., Ruane, B., Swallow, J. & Thompson, P. (2004) Refining dog husbandry and care: Eighth report of the BVA(AWF)/FRAME/RSPCA/UFAW Joint Working Group on Refinement. *Laboratory Animals* 38 (Supplement 1): p1-94. www.rspca.org.uk/sciencegroup/researchanimals/implementing3rs/refinement
3. LASA (2004) *LASA Guidance on the Rehoming of Laboratory Dogs: A Report Based on a LASA Working Party and LASA Meeting on Rehoming Laboratory Animals*. (M Jennings & B Howard eds): Download at www.lasa.co.uk
4. Hubrecht, R. (2002) Comfortable quarters for dogs in research institutions. In: *Comfortable quarters for Laboratory Animals*, 9th edn (V & A Reinhardt eds), p56-64. Washington, D.C., USA: Animal Welfare Institute, www.awionline.org
NOTE: the 10th edition of *Comfortable Quarters* is under production at the time of writing.
5. FELASA (2007) *Euroguide on the Accommodation and Care of Animals Used for Experimental and Other Scientific Purposes: Based on the Revised Appendix A of the European Convention ETS123*. London: FELASA. Available for purchase at www.rsmppress.co.uk/bkfelasa.htm
6. Animal Welfare Information Center (2008) *Information Resources on the Care and Welfare of Dogs*. www.nal.usda.gov/awic/pubs/Dogs/dogs.shtml
7. NC3Rs (2008) Dogs. www.nc3rs.org.uk/informationportal ; click on "Dogs".



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