



Supplementary resources for members of local ethical review processes

Pigeons: 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

The domestic pigeon, *Columba livia*, is probably descended from the rock dove, which nests and roosts on and in rock formations such as cliffs, gorges and caves. Feral pigeons living in towns are escaped domesticated birds, and they use ledges on structures made by humans in the same way that rock doves use natural rock formations. Free-living, feral birds can occur in numbers ranging from pairs up to large, loose flocks that feed and roost together. However, the pigeon is highly territorial and will defend roosting spaces and nesting areas. Pairs are usually monogamous and males 'drive' females away from the rest of the flock during the breeding season.

Domestic pigeons are primarily seed eaters but will take a wide range of grains, fruits, berries and vegetation and invertebrates such as small snails. There are over 200 breeds of pigeon in which different traits have been selected for racing or showing, some of which have traits that could result in welfare problems. It is important to bear this in mind when choosing a breed for laboratory use.

What pigeons need

The following list of requirements is based on animal welfare science that has evaluated birds' references and motivation for resources, and on the ecology and behaviour of wild birds. More information on pigeon welfare, housing and care can be found in the references listed at the end of this document.

- **Social housing**

Both wild *Columba livia* and feral pigeons occur in large, mixed flocks and so pigeons should be group housed in the laboratory. Groups should be carefully observed when first set up to make sure that aggressive birds do not bully or injure others. An 'escape area' for timid birds will help to avoid distress and injury. Breeding can be prevented by not providing nesting places, in which case birds may lay eggs but will not incubate them.

- **Plenty of pen space**

Pigeons should be housed in pens that permit enrichment and a range of behaviours, including flight wherever possible – they have been shown to strongly prefer aviaries that allow them to fly. Long, narrow pens are best because they permit short flights. Cages are not suitable for housing pigeons and should only be used if there is compelling scientific or veterinary justification. If they must be used, it is a good idea to use modified cages, for example rabbit cages with shelving, perches and toys, rather than "standard" pigeon caging. Ideally, pigeons should be housed with outdoor access wherever possible or even in wholly outdoor flights, in which case they will need access to covered shelters at all times.

- **Solid floor**

Grid floors prevent foraging so are not suitable for housing pigeons. Solid flooring with litter material for foraging is preferred. Daily cleaning and the use of minimal litter will help to reduce levels of dust created by the birds.



- **Environmental enrichment**

Pigeons have been found to benefit from items hung from chains, including bird bells, mirrors and toys designed for other animals such as cats. For aviary housed birds, foliage attached to enclosure sides using thick gardening wire can provide extra perching and shelter. Branches hung from the roof and scaffolding will provide a more stimulating environment in very large enclosures.

- **Perches**

Each bird should have access to a perching area and perches should be sited at a range of levels, to encourage birds to establish territories and reduce competition. In larger aviaries, box perches approximately 30 cm square and 15 cm deep located in blocks along one wall simulate a 'natural' environment and help to keep faeces in one area.

- **Water baths**

Pigeons splash considerably when they bathe, so placing water baths inside larger, waterproof trays should reduce soaking. Extra baths can be offered to birds on the day before cleaning so that any substrate and dust will be damped down. Pigeons also enjoy showers, although they must be monitored to ensure that they do not become chilled.

- **A varied diet and opportunities to forage**

Pigeons are omnivorous and should be offered a wide range of grains and green food, supplemented with pelleted diets containing animal protein such as chick starter crumbs. Small seeds such as millet, rape or linseed can be fed on the pen floor to encourage foraging or by hand to help habituate the birds to humans. Turf or trays with other litter can also be used to encourage foraging, taking care to site foraging areas away from areas where birds defaecate. Other favourite treats include pinhead oats, hemp with peanuts, popcorn and mealworms. Note that birds fed *ad lib* all the time will become obese, especially if they are only allowed limited opportunities to exercise.

- **10cm of feeder length per adult bird**

This feeder length will allow all birds to feed simultaneously, which will facilitate natural behaviour and reduce aggression.

- **'Flight rooms' where appropriate**

If it is really not possible for pigeons to be housed in pens that are large enough for them to fly, an alternative is allowing birds part-time access to 'flight rooms' with perches (such as a spare animal room), provided that they are closely monitored to prevent bullying. Birds can be trained to retreat to nesting areas or even to fly to the hand, as an alternative to catching them with nets.

Potential husbandry related welfare problems and how to resolve them

Parasites can be a major cause of suffering for domestic pigeons. Effective ecto- and endo-parasite control is essential. This involves removing faeces regularly, checking birds for parasites regularly, and treating not only the birds but also their housing, as some ectoparasites such as red mites do not live on the host when they are not feeding.

Aggression – subordinate birds may be bullied and denied access to resources such as food, water and perches. Monitoring birds carefully and making sure that there are sufficient resources for all the birds to use them at once will help to prevent birds suffering through being bullied. Ensuring that birds can escape from one another will also help to prevent stress and injury.



Abnormal behaviours such as stereotypies (e.g. route tracing) are frequently caused by an understimulating environment. Experiments designed to study pigeons' cognitive abilities have shown that they are capable of some quite complex thinking – for example, they can categorise objects into groups in a similar way to humans – and they need a suitably stimulating environment.

Pigeon housing and care: ERP aide-memoire

- ❖ **Social housing with the opportunity for timid birds to retreat**
- ❖ **Adequate pen space to permit a range of behaviours including flight**
- ❖ **Outdoor access with covered shelters**
- ❖ **Solid floor with a litter suitable for foraging**
- ❖ **A variety of items for environmental enrichment**
- ❖ **Perches sited at a range of levels for each bird**
- ❖ **Water baths**
- ❖ **A varied diet with opportunities to forage**
- ❖ **Feeder length of at least 10cm so that all birds can feed simultaneously**
- ❖ **Access to 'flight rooms' where caging is unavoidable**

Notes



Recommended references

1. Hawkins P, Morton DB, Cameron D, Cuthill I, Francis R, Freir R, Gosler A, Healy S, Hudson A, Inglis I, Jones A, Kirkwood J, Lawton M, Monaghan P, Sherwin C and Townsend P (2001) Laboratory birds: Refinements in husbandry and procedures. *Laboratory Animals* 35 (Suppl. 1) Download at <http://tinyurl.com/3aljtmtd>
2. McGregor A & Haselgrove M (2010) Doves and pigeons. Chapter 44 in *The UFAW Handbook on the Care and Management of Laboratory Animals*, 8th edn (ed by R Hubrecht and J Kirkwood), pp 686-696. Oxford: Wiley-Blackwell.
3. 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
4. Nepote KH (1999) Pigeon housing: Practical considerations and welfare implications. *Lab Animal* 28 (2): 34-37.



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