



RSPCA AUSTRALIA

Animal welfare science update

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This is the first Animal welfare science update provided by the RSPCA Australia office. The aim of the update is to keep you informed of developments in animal welfare science that relate to the work of the RSPCA. The update provides summaries of recently published scientific papers that have been received by the RSPCA Australia office in the past few months.

Companion animals

1 Prediction of problem behaviour in dogs after adoption from animal shelters

This American study suggests that screening dogs for their behavioural responses in stressful situations may be valuable in determining how well they will behave when adopted out, and this will allow potential problem dogs to be targeted for behavioural training. The authors have developed a 10 minute test to assess the responses of dogs to new or threatening conditions. They then look at the relationship between the dogs' responses in these tests and their behaviour in their adopted homes. While the blood cortisone level detected in the dogs does not show any convincing link with behaviour, this form of behavioural testing does. Those puppies that were assessed as "wary" had the least behavioural problems after 2 weeks in their new home.

Reference: Hennessy, M. B., Voith, V. L., Mazzei, S. J., Buttram, J., Miller, D. D., and Linden, F. (2001). Behaviour and cortisol levels of dogs in a public animal shelter, and an exploration of the ability of these measures to predict problem behaviour after adoption. *Applied Animal Behaviour Science* 73:217-233.

2 Do citronella spray collars reduce barking?

Citronella spray dog collars release a cloud of citronella fragranced spray with a loud hiss in response to barking. This research from the UK shows that citronella spray collars are effective, and are most useful when used intermittently rather than every day. But, it also demonstrates that however they are used, dogs will become habituated to the collars and their barking will resume again.

Reference: Wells, D. L. (2001) The effectiveness of a citronella spray collar in reducing certain forms of barking in dogs. *Applied Animal Behavioural Science* 73:299-309.

3 Aggressive characteristics of dogs and risk factors for dog bites in domestic households

The authors of these three papers believe that fearfulness may be an important motivation behind dog attacks on family members and should be addressed as part of behavioural training. Biting dogs are more likely to be afraid of children, men, and strangers. Many bites can also be attributed to dominant or possessive behaviour, and dogs who bite often show possessive and dominance related aggression prior to any attacks. These three papers report a survey of dog owners from three Canadian provinces (3226 dogs were included in the analysis). The results of the survey related factors such as gender, breed, age, and neuter status to the risk of aggression in dogs. Desexed male dogs were found to be the most likely to bite a family member, followed by desexed female dogs. The highest frequency of biting was reported for dogs less than one year of age. Other risk factors for biting behaviour include: teenage children in the home, some canine skin disorders, aggression over food in the first two months of ownership, sleeping on a family member's bed in the first two months of ownership, young age, and low weight.

References

Guy, N. C., Luescher, U. A., Dohoo, S. E., Spangler, E., Miller, J. B., Dohoo, I. R., and Bate, L. A. (2001) Demographic and aggressive characteristics of dogs in a general veterinary caseload. *Applied Animal Behaviour Science* 74:15-28.

Guy, N. C., Luescher, U. A., Dohoo, S. E., Spangler, E., Miller, J. B., Dohoo, I. R., and Bate, L. A. (2001) Risk factors for dog bites to owners in a general veterinary caseload. *Applied Animal Behaviour Science* 74:29-42.

Guy, N. C., Luescher, U. A., Dohoo, S. E., Spangler, E., Miller, J. B., Dohoo, I. R., and Bate, L. A. (2001) A case series of biting dogs: characteristics of the dogs, their behaviour, and their victims. *Applied Animal Behaviour Science* 74:43-57.

Farm animals

4 Trial of pain relief for newborn lambs before castration and tail docking

Castration and docking of lambs with rubber rings is common practice in Australia. This procedure causes obvious discomfort to the lambs, so an easily administered form of rapid pain relief is desirable. This paper from the UK found that neither suckling of sucrose or subcutaneous injection with the analgesic carprofen reduced discomfort in castrated and/or docked lambs.

Reference: Price, J., and Nolan, A. M. (2001) Analgesia of newborn lambs before castration and tail docking with rubber rings. *Veterinary Record* 149:321-324.

5 Raising laying hens with litter reduces feather pecking

Hens that are caged together will often peck at each other's feathers. This paper from Switzerland shows that if chickens are given unrestricted access to litter in their first two weeks they will spend more time foraging, will peck at each other's feathers less, and will have less damaged tail feathers^[B1].

Reference: Huber-Eicher, B., and Sebo, F. (2001) Reducing feather pecking when raising laying hen chicks in aviary systems. *Applied Animal Behavioural Science* 73:59-68.

6 Benefits of providing wood shavings for layer hens

This paper from the UK demonstrates the benefit of woodshaving-lined cages in reducing the incidence of feather-pecking in layer hens of any age. Any hen that has previously been in a cage with litter (woodshavings) will peck other hens' feathers less than a hen that has always been kept without litter. Hens that are currently in cages with litter will peck the least. Hens given woodshavings at a younger age will also dust-bathe more than other hens, and hens will dust-bathe more on woodshavings than straw.

Reference: Nicol, C. J., Lindberg, A. C., Phillips, S. J., Wilkins, L. J., and Green, L. E. (2001) Influence of prior exposure to wood shavings on feather pecking, dustbathing and foraging in adult laying hens. *Applied Animal Behaviour Science* 73:141-155.

7 Feather pecking in commercial layer hens

This study from Switzerland found that feather pecking in commercial laying hens became more damaging as the birds aged, and that while it did not lead to more deaths, it did reduce egg production. Their results also show that feather pecking is very common. In over 40% of commercial flocks of hens there was more than one feather pecking incident per bird per 30 minutes in the fifth week, and that this rose to 77% of flocks by week 14, before dropping of to a constant level in weeks 20 to 32.

Reference: Huber-Eicher, B., and Sebo, F. (2001) The prevalence of feather pecking and development in commercial flocks of laying hens. *Applied Animal Behaviour Science* 74:223-231.

8 Factors influencing vent pecking in layer hens in alternative systems

From a postal survey in the UK these authors found that some factors increasing the frequency of vent pecking in layer hens were: dim light, frequent changes in diet, the use of hanging bell drinkers, and the onset of lay before 20 weeks of age. The same factors, except for early onset of laying, also increased the risk of feather pecking.

Reference: Potzsch, C. J., Lewis, K., Nicol, C. J., and Green, L. E. (2001) A cross-sectional study of the prevalence of vent pecking in laying hens in alternative systems and its associations with feather pecking, management and disease. *Applied Animal Behavioural Science* 74:259-272.

9 Straw enrichment for broiler chicks

UK 'Freedom Food' standards recommend the provision of straw bales for broiler chicks as a form of environmental enrichment and behavioural stimulus. In this study from the UK the authors show that when growing broiler chicks are given straw bales not only will be more active in the vicinity of the straw bale, but they are also more active in general. Further research needs to be carried out to determine how beneficial this increased activity is to the welfare of the birds.

Reference: Kells, A., Dawkins, M. S., and Cortina Borja, M. (2001) **The effect of a 'freedom food' enrichment on the behaviour of broilers on commercial farms.** *Animal Welfare* 10: 347-356.

10 Welfare implications of deflighting procedures in captive birds

Zoos and public parks often inhibit flight in their display birds by asymmetrically trimming primary wing feathers, binding wings, pinioning, or a range of other techniques. The authors of this paper argue that the potential negatives of deflighting large captive birds include; stress of capture and restraint, pain and discomfort during and after the procedure, risk of infection, risk of complications, and the negative impact on a bird of the loss of the ability to fly. Whereas, positives include less need to closely confine or cage birds to prevent them escaping resulting in an improved quality of life. Temporary and permanent methods of deflighting are discussed, and ways of avoiding welfare problems are addressed.

Reference: Hesterman, H., Gregory, N. G., and Boardman, W. S. J. (2001) **Deflighting procedures and their welfare implications in captive birds.** *Animal Welfare* 10:405-419.

Page: 2

[BJ1] Did they look at them when they were older?