



**JOINT POSITION PAPER ON THE ANIMAL WELFARE IMPLICATIONS  
OF ANIMAL BEHAVIOURAL MODIFICATION, TRAINING METHODS,  
AND ABILITY TO EXPRESS SPECIES-SPECIFIC BEHAVIOURS**

Adopted unanimously by the FVE General Assembly on June 14<sup>th</sup> 2024

## Table of contents

Executive Summary.....	1
Background and scope.....	2
Veterinary responsibilities to animal behaviour and training .....	3
Preventative behavioural medicine.....	4
Animal origins and acquisition.....	4
Recommendation 1.....	4
Socialisation and habituation.....	4
Training .....	5
Recommendation 4.....	7
Recommendation 7.....	7
Recommendation 8.....	7
Opportunities to perform normal behaviour.....	7
Behavioural first aid .....	8
Undesirable ('problem') behaviour.....	8
Clinical behavioural expertise .....	9
Accreditation of animal behaviourists and trainers.....	9
References .....	10

## Executive Summary

This position paper gives examples of the relationships between animal behaviour, animal training and animal welfare, with recommendations for promoting and ensuring good practices. We recognise and promote the importance and relevance of animal behaviour to animal welfare and the veterinary profession. The paper has a particular focus on dogs and cats and horses. It serves as an introductory paper for further species-specific position papers on behaviour-related issues, both for these animal groups and others.

Animal behaviour is important to the veterinary profession, both for assessing animal welfare and in providing for good welfare. In clinical veterinary practice, for example, altered behaviour (e.g., an abnormal gait or posture) can be an important clinical sign of impaired health. Other kinds of behaviour, such as social, comfort, play as well as abnormal repetitive behaviours may be used as part of a composite welfare assessment to evaluate an animal's welfare state.

The ability to perform certain behaviours is important for achieving good animal welfare and is a necessary part of an animal's psychological wellbeing. Preventing highly motivated behaviour can result in feelings of frustration and poor welfare. Conversely, recognising sensitive time periods and supporting normal and natural behaviours such as species-specific bonding and social opportunities, foraging/food-seeking behaviours and play behaviours, can result in positive emotional experiences and good welfare. Animal behaviour offers a means of recognising emotional states in animals, such as their ability to feel positive and negative emotions, to feel pain, and to feel empathy for their conspecifics and for other species. It also offers a means of recognising, and allowing the expression of, animals' cognitive abilities.

With these links between animal behaviour and welfare in mind, and in seeking to drive animal welfare improvements, we make 14 recommendations under the headings of: preventative behavioural medicine; socialisation and habituation; training; opportunities to perform normal behaviour; undesirable ('problem') behaviour; and accreditation of animal behaviourists and trainers. These recommendations include our calls for EU-wide bans on medically unnecessary and painful procedures, such as cosmetic tail docking and ear cropping, and on the sale and use of electric pulse training devices.

## Background and scope

Providing opportunities for species-typical behaviours contribute to a Good Life<sup>26,27</sup> for kept animals, incorporating the Five Domains paradigm<sup>38</sup>. Animal behaviour offers a means of recognising emotional states in animals, such as their ability to feel positive and negative emotions, to feel pain, and to feel empathy<sup>29</sup> for their conspecifics and for other species. It also offers a means of recognising, and allowing the expression of, animals' cognitive abilities.

This position paper has a particular focus on dogs and cats, and horses. It is acknowledged that animal behaviour is intrinsically different for prey species as opposed to predators. Both predators and prey are responsive to stimuli and use a variety of behavioural strategies. This position paper aims to explore animal welfare implications of animal behavioural modification, training methods, and ability to express species-specific behaviours for dogs and cats as predators, and horses as prey, as the most commonly kept domestic animals.

Undesirable animal behaviour that is problematic for animal caretakers, which may indicate an animal's stress or be normal for that individual, can result in a breakdown of the human-animal bond, with negative impacts on animal welfare.

A 'problem behaviour' may be:

- Any behaviour that could indicate reduced animal welfare, such as fear-related behaviour (particularly if sustained), conflict behaviour (stress-induced behaviour arising from conflicting motivations, behaviours arising from an inability to cope with mental or physical discomfort, e.g. repeated attempts by horses to buck, leap or even rear up on their hind legs), pain-related behaviour or separation-related behaviour indicating anxiety or frustration.
- Any behaviour identified by the caretaker as detrimentally affecting the caretaker's lifestyle or the lifestyle of the people or other animals around them.
- Any behaviour that creates implications for the animal's welfare, e.g. avoidable re-homing or a breakdown in the human-animal relationship.

Animal behaviour problems are well recognised as being a significant threat to the good welfare of animals<sup>6</sup>, and in some cases may also pose a threat to human safety and wellbeing<sup>7</sup>. Any change in an animal's behaviour could be caused by pain, or an underlying physical or psychological disease state. Therefore, it is important to work with a veterinarian to establish this as a first step towards understanding and addressing any problem behaviour as well as the underlying cause of the behaviour, which needs, as far as possible, to be identified and resolved.

## Veterinary responsibilities to animal behaviour and training

Veterinary responsibilities to animal behaviour fall broadly into three categories:

1. Preventative behavioural medicine: The prevention of animal behaviour problems by provision of education and advice, e.g., on normal behaviour and species-specific welfare needs; socialisation and habituation of young animals; minimal stress handling; humane, evidence-based training. Pre-purchase consultations, for people thinking of acquiring an animal, provide a good opportunity for giving this advice<sup>35</sup>.
2. Behavioural first aid: First-opinion practitioners are often asked about problem animal behaviour or may suspect problem behaviour from a caretaker's comment or obvious difficulties in handling during a clinical exam, or their answers to routine screening questionnaires or during wellness consultations<sup>34</sup>. While first-opinion veterinarians would not be expected to provide specialist advice on behaviour modification or medication, they should nevertheless recognise the potential risks of problem behaviours (for both animal welfare and public safety), check for possible underlying causes (e.g. pain) and they should be able to offer reliable and practical first aid advice. Referral to a veterinary behaviour specialist or an accredited clinical animal behaviourist may follow; Diplomate of the European College of Animal Welfare and Behavioural Medicine, for example, are qualified veterinarians who have undergone an extensive, well-defined training programme over many years within the fields of animal welfare and behavioural medicine before passing a demanding board examination.
3. Clinical behavioural expertise: The analysing and interpreting of behaviours to identify triggers of problem behaviours and develop strategies for the long-term to modify and manage behaviour problems.

How an animal's behavioural needs are provided for (e.g., through providing a stimulating, species-appropriate living environment), and how desired behaviour is achieved (e.g., through humane, evidence-based behavioural modification) are linked to recognised animal welfare benefits and risks throughout an animal's life.

## Preventative behavioural medicine

### Animal origins and acquisition

An animal's future behaviour is influenced by their genetic make-up, their experiences through life, and especially their early-life experiences. Temperament traits such as confidence and anxiety have been shown to have a level of heritability and may influence later behaviour<sup>19</sup>. Additionally, both the mother's experience while pregnant and the perinatal environment may influence later behaviours. In the case of companion animals, it is important to obtain an animal from a reputable breeder; raising animals bred from temperamentally stable parents in a good environment is important<sup>8</sup>. Similarly, aversive experiences during early life, such as pain, stress, early weaning or a lack of environmental complexity will also affect development and influence later behaviour. Inflicting deliberate harmful experiences such as cosmetic tail docking or ear cropping during this neo-natal period has been shown to influence pain sensitivity throughout life<sup>9,10</sup>. Likewise, for horses and other large prey species, stressful experiences during pregnancy have been shown to influence the behaviour and responses of the offspring to adverse experiences such as pain; i.e. young animals born to stressed mothers are more likely to have increased sensitivity to pain, show anxiety behaviours and be more likely to develop abnormal behaviours<sup>31</sup>.

#### Recommendation 1

FVE, FECAVA, FEEVA and WSAVA call for universal guidance to ensure the welfare of animals in canine, feline and equine breeding establishments, including the provision of complex, species-appropriate environments; opportunities for species-specific behavioural expression; opportunities for appropriate interspecific interactions, including good relationships with humans; and individual limitations on number of permitted pregnancies.

#### Recommendation 2

We call for a harmonised ban on and enforcement of medically unnecessary and painful procedures, such as those performed for cosmetic reasons. As well as being painful, such procedures, may have long-term effects on future health and behaviour, particularly if performed during the neonatal period.

### Socialisation and habituation

All young animals go through important periods of development, during which exposure to other animals and people (socialisation) and objects and experiences (habituation and familiarisation) influences how they will react to future similar situations<sup>36, 37,40</sup>. Gradually exposing young companion animals to everyday management and household sights, sounds and scents, and to a variety of people and to other animals (including appropriate handling), will help them to become sociable, outgoing, well-adjusted adults. Raising young animals without these experiences is a risk factor for the development of problem behaviour in later life, which compromises the human-animal bond, harms an animal's psychological wellbeing and can lead to relinquishment, or even to requests for euthanasia<sup>6</sup>. Exposure should be gradual (in number and intensity), so that unfamiliar experiences do not themselves elicit fear responses. As an example, this sensitive period in dogs and cats is marked

by a willingness to approach and investigate, while its end coincides with the appearance of fear-related behaviours in response to novel stimuli. Foals, born neophobic, are fearful and ready to flee from potential threats very shortly after birth. Whereas the socialisation period in foals normally starts at 2-3 months of age when the young foal starts playing with other foals, the end of the socialisation period is not established in a similar way as for cats and dogs. Nonetheless, early socialisation, habituation and familiarisation are equally important. Species-specific time periods should be recognised and acted upon, and individual animals' preferences should be provided for, with competent supervision, so that less confident animals are not overwhelmed.

### Recommendation 3

All those with responsibility for young animals, e.g., breeders, retailers and animal caretakers, should ensure that the animals are gradually exposed to sights, sounds, scents and experiences (including handling) that they are likely to encounter as adults. This exposure should be done with consideration given to the species concerned, individual responses, and ensuring the experience is positive and enjoyable for the young animal. Animals should be relaxed, and not be unnecessarily stressed or fearful<sup>19</sup>. It is recommended to implement gradual exposure in a structured way; for example, by using a socialisation plan. Companion animal veterinary practices should provide education about socialisation and, when possible, offer socialisation classes for vaccinated puppies and familiarisation visits for kittens, as part of their preventive medicine service. Equine practitioners should ask caretakers about their plans for handling and socialisation of foals and young horses.

## Training

Whereas socialisation and habituation relate to animals becoming accustomed to typical living environments through early exposure to key elements, training refers to the active and deliberate process of teaching new behaviours using learning theory. For example, a dog returning when called, a horse performing movements for competition, or a military or assistance animal undertaking a specific task. It is acknowledged that prey and predators react differently based on their natural behaviour patterns.

Training utilises associative learning which is a type of learning that occurs when an animal makes a connection or association between two or more stimuli or events in its environment. It includes classical conditioning where a cue triggers an emotional or physiological response (e.g. Pavlov's bell was paired with food to elicit an automatic food anticipation/salivation response), or operant conditioning where the consequence of a behaviour offered increases (positive consequence for the animal) or decreases (negative consequence for the animal) the likelihood of the behaviour being performed in the future. Operant conditioning theory has four quadrants and is based on reinforcing desired behaviours (Positive Reinforcement and Negative Reinforcement), or stopping unwanted behaviours from recurring (Positive Punishment and Negative Punishment) (Fig. 1). Reinforcement training relies on good timing which is why a marker cue is often used with positive reinforcement to reduce the likelihood of frustration or confusion. Negative reinforcement relies on the immediate release of a non-harming cue.. Punishment based training is generally avoided as it tells the animal what not to do but it does not help them work out what to do instead, positive punishment may result in fear or pain, whilst negative punishment can lead to frustration. However, all training should result in an animal that is confident and happy. When performed without sufficient skill or knowledge any form of training can lead to frustration, anxiety or other negative emotional states.

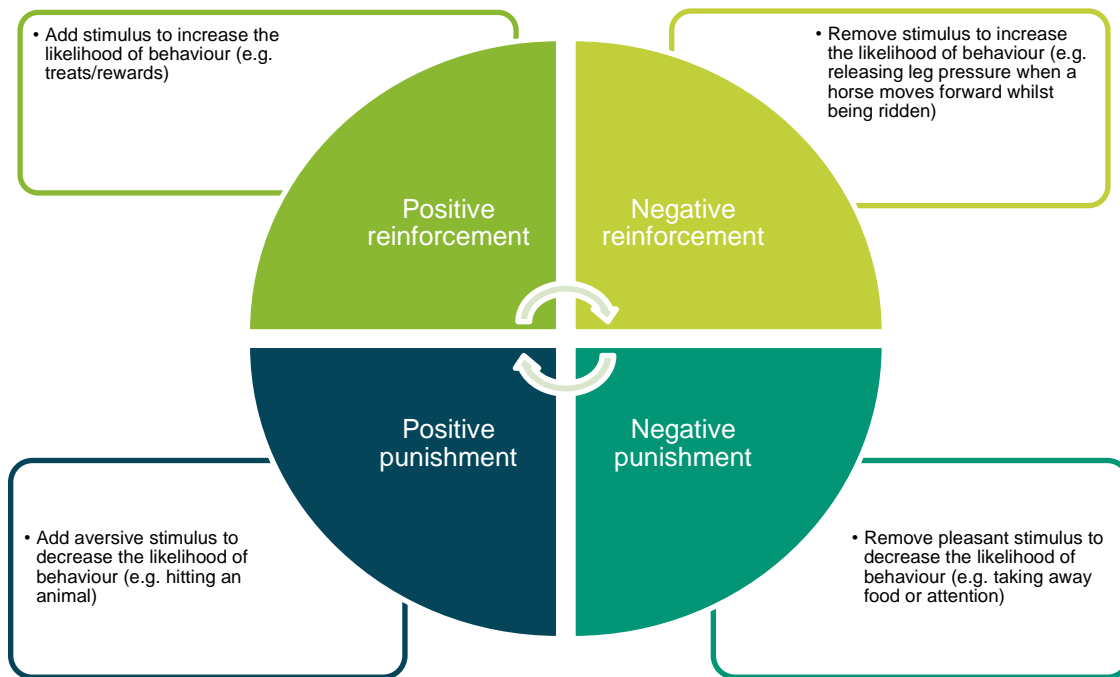


Figure 1. The four quadrants of Operant Conditioning Theory.

Veterinarians should ensure that they have a current and evidence-based understanding of animal behaviour<sup>18</sup>. Training based on humane principles such as pairing desired behaviours with carefully timed rewards can be stimulating, effective and enjoyable, contributing to good welfare. Contemporary training should be ethical and effective, and it should be based on the application of learning theory and should make use of humane methods. In contrast, positive punishment can reduce quality of life and inhibit learning<sup>11,12</sup>. Training methods based on outdated understanding of ethology, which may be both ineffective and inhumane, must be discouraged and not justified as being ‘traditional’. Using dominance as the rationale for applying positive punishment training methods to domesticated animals has been discredited by veterinary behaviourists and other scientists<sup>21, 22, 23, 24, 25, 41</sup>.

While positive punishment training approaches may achieve desired results and may be the traditional approach for some animal trainers or in some disciplines, veterinarians should understand the basic principles of animal learning theory (e.g., reward-based vs. aversive) and advocate for humane, effective training methods as part of their responsibility to promote good animal welfare.

Animal training should lead to improved human safety as well as good animal welfare. For example, the British Equine Veterinary Association (BEVA) has produced a series of short videos providing quick and simple ways of teaching horses to be quiet, relaxed and safe for injections, clipping, worming, examinations and other veterinary procedures ([HERE](#)). Equipment and devices that cause pain or discomfort to modify behaviours, such as electric shock collars for dogs and cats, or reins restricting neck movements and tight nosebands for horses, should not be used<sup>7,17,30</sup> and should be strongly discouraged by veterinarians and other allied professionals. We note and support the position of the European Society for Veterinary Clinical Ethology<sup>30</sup>, calling for an EU-wide ban on the sale, use, distribution and promotion (including internet sale and promotion within Europe) of electric shock collars (‘e-collars’), that is immediately applicable in all Member States.

For training sessions to be most effective, animals should be in an appropriate level of arousal. Learning is impaired when an animal is stressed or over-excited. Complex learning goals such as

training horses for riding should be broken down into progressive small steps. Training must be tailored to an individual animal's abilities, and training programmes should be re-evaluated if stress or frustration occurs.

#### Recommendation 4

Veterinary education should ensure veterinary professionals are competent in a range of welfare-friendly animal handling techniques to minimise stress, fear, anxiety and pain during veterinary procedures; have a solid understanding of learning theory; are able to interpret behaviour, body language and facial expression of a range of species appropriately and are able to advise clients, trainers and animal owners on the pros and cons of different training methods. The developing use of objective assessment of animal behavioural markers, for example in the form of ethograms, is encouraged.

#### Recommendation 5

Training methods used for animals should be evidence-based, behaviourally appropriate for the species and grounded in an understanding of learning theory. Veterinary professionals should apply and advocate the use of humane, effective training methods that support good animal welfare, and ensure these methods are used by trainers they recommend to their clients. We do not support the use of positive punishment training techniques for any animals, or the application of outdated dominance theories.

#### Recommendation 6

Equipment and techniques used for training purposes should not cause an animal pain, fear, stress or distress, and should not put animals into unnatural body postures.

#### Recommendation 7

We call for a complete ban on the sale and use of electric pulse training devices, such as electric shock collars for dogs or goads used to deliver an electric shock.

#### Recommendation 8

We call for regulations and guidance that safeguard animal welfare and promote humane training techniques and welfare-friendly handling, applicable to all types of sport, showing or competing of animals where training has been required.

### Opportunities to perform normal behaviour

The behavioural repertoires of many domestic animals remain little changed from their wild ancestors, despite selective breeding and domestication. Many evolutionarily important behaviours retain a strong internal motivation, even when an animal has been born and raised in their captive environment and the outcome of the behaviour is not required in the captive environment. For example, many cats are highly motivated to scratch as a form of communication to other cats, even when kept singly indoors. Horses have evolved to be highly social and spend much of their time engaged in selective grazing. Preventing these behaviours – so-called “behavioural needs” – causes stress, frustration and contributes to poor animal welfare.

Frustration of behavioural needs can stimulate behavioural pathology or the development of abnormal behaviours. Some behaviours are valued by animals for contributing to positive wellbeing; for example, play, allogrooming/alopreening and the ability to make choices; for example, to be provided with different options for where they rest, or to have the option of being outdoors or indoors. Providing opportunities for these behaviours contributes to a Good Life<sup>26, 27</sup> for kept animals.

(For application of these principles to farmed animals, see the 2021 FVE position papers: *Moving towards more animal welfare-friendly systems for laying hens* [HERE](#) and *Moving towards more welfare-friendly farrowing systems* [HERE](#)).

### Recommendation 9

Animals under human care should experience a Good Life<sup>26, 27</sup>, with opportunities for positive welfare experiences, such as comfort, pleasure, interest, confidence and the ability to make choices, alongside excellent health outcomes. All living environments that animals are kept in should allow for the performance of highly motivated species-specific behaviours; this includes, for example, in horses regular turn out to pasture, adequate grazing time and species-appropriate social contact, unless a veterinarian has advised against this temporarily on medical grounds. To this end, we support the '3Fs' of equine welfare: Freedom, Friendship and Forage<sup>32</sup>. These behavioural opportunities are necessary for an animal's psychological wellbeing and are necessary provisions for animal-using activities (such as keeping and using animals for companionship or sport) to retain their social licence.

### Recommendation 10

Highly restrictive living environments and practices that preclude most movement during an animal's life (such as long-term tethering of single horses and dogs – i.e., trying to restrict their movement) should be banned. The only exception may be if such an environment is a necessary and temporary part of an individual animal's treatment by a veterinarian.

## Behavioural first aid

### Undesirable ('problem') behaviour

Kept animals may behave in ways that caretakers find unwelcome and do not fit with an owner's expectations or hopes. Such behaviour can be problematic for a caretaker and can lead to an impaired quality of life, both for the animal and caretaker. Undesirable animal behaviour can be normal behaviour, such as a vocalisation (e.g., a barking dog), or a horse's fear towards novel objects or places); or abnormal repetitive behaviour (e.g., a crib-biting horse). Abnormal repetitive behaviours may be due to behavioural frustration, a failure to cope with inappropriate stressors, an underlying medical condition (e.g. pain), or central nervous system pathology<sup>13</sup>. It is essential that the cause of the abnormal behaviour is investigated – by a veterinarian in the first instance, to rule out medical causes - and ameliorated. Problem behaviours should not simply be prevented, e.g., by declawing a scratching cat or using crib collars on a crib biting horse, as preventing the behaviour removes the mechanism that the animal is currently using to cope, thereby increasing stress, and further reducing welfare.

Undesirable animal behaviour can lead to relinquishment and requests for euthanasia. It can be a cause of poor animal welfare, either from the underlying emotional motivation (e.g., stress causing a cat to eliminate indoors) or from a caretaker's attempts to stop it (e.g., using punishment or devices such as cribbing collars). Experiences during the sensitive socialisation and habituation periods (see above) for young animals are important for helping prevent the development of many undesirable behaviours (e.g., gradually accustoming a puppy to being left alone, to reduce the risk of separation-related behaviours in later life).



The development of undesirable behaviours can also go beyond young age, so care should always be taken to avoid unnecessary stress and gradually accustom animals to new management procedures. Similarly, ensuring that an animal is able to express their normal behavioural repertoire is essential to preventing behavioural frustration which can trigger the development of abnormal behaviours<sup>14</sup>. It is important for owners to observe and understand their animals' normal behaviour, so that changes can be recognised and acted upon if necessary. For example, unresolved stress/pain behaviour has been identified as a priority welfare problem for horses<sup>33</sup>. Behavioural indicators of stress and pain may not be recognised by equine caregivers and can be misinterpreted as a horse being 'naughty'<sup>15,16</sup>; similarly, across various species, these behaviours may be perceived as 'cute' or 'funny'<sup>28</sup>.

### Recommendation 11

Veterinary undergraduate training should foster the recognition of normal and abnormal behaviour (including the widespread use of validated pain assessment tools and behavioural signs of positive and negative emotional states in animals) across a range of species and the provision of behavioural first aid. Additional optional teaching should be available for those streaming in relevant fields on how to counsel and communicate with caretakers on behaviour issues; and when to seek referral, and to whom.

### Recommendation 12

All those with responsibility for animals should receive training (ideally compulsory and prior to acquiring an animal) to understand and provide for species-specific needs (including behavioural needs), recognise normal and abnormal behaviours and know where to seek ethical, evidence-based advice (such as from veterinary professionals) to address it.

### Recommendation 13

Animals of any species showing behavioural indicators of stress and pain or repeatedly displaying any kind of recognised conflict behaviours should not be used for further training, showing or competing until the cause is resolved. The veterinary profession should advocate that the presence of such behaviours should not be accepted as "normal" within an animal-using industry and may be indicators of clinical pathology. Equally, care should be taken to acknowledge and raise awareness that animals can also suffer from stress and pain with subtle recognisable indicators, such as in a proportion of horses with gastric ulcers<sup>20</sup>.

## Clinical behavioural expertise

### Accreditation of animal behaviourists and trainers

Animal behaviour problems can be worsened by unqualified or inexperienced people offering their services as behaviourists or trainers. Such people may use behaviour-modification techniques that are either ineffective and/or inhumane and may not recognise physical or psychological diseases. In some cases, such people have a high-profile media presence and public following, which worsens animal welfare outcomes and makes it harder for ethical training methods to be mainstreamed.

More broadly across Europe the closely regulated EBVS© Veterinary Specialist College of Animal Welfare and Behavioural Medicine (ECAWBM) provides expert referral services, including medical management, of problem behaviours and is ideally positioned to advise on non-veterinarian animal

behaviourists. In addition, animal behaviour modification services are being professionalised in some countries, to protect animal welfare and give confidence to animal owners and referring veterinarians.

### Recommendation 14

We recognise the essential services offered by EBVS Specialists in Animal Behavioural Medicine as well as Behavioural Medicine Specialists recognised by national bodies (for example the Royal College of Veterinary Surgeons (RCVS) Specialist Register). In addition, we recognise the importance of suitably qualified and ethical animal behaviourists and animal trainers, working collaboratively with veterinary professionals to help protect animal welfare and the human-animal bond. We call for regulation of animal behavioural and training services, to ensure those working as animal behaviourists and trainers adhere to minimum standards and are using humane, evidence-based techniques, as is done in the field of veterinary behavioural medicine at specialist level. Accreditation of animal behaviourists and trainers who work in association with or on referral from veterinarians, based on competency assessments, continuing education, registration and supported by a transparent disciplinary system, should be progressed internationally.

## References

1. Littlewood KE, Mellor DJ. Changes in the Welfare of an Injured Working Farm Dog Assessed Using the Five Domains Model. *Animals* 2016;6:58.
2. Désiré L, Boissy A, Veissier I. Emotions in farm animals: a new approach to animal welfare in applied ethology. *Behavioural Processes* 2002;60:165-180.
3. Yeates JW, Main DCJ. Assessment of positive welfare: A review. *The Veterinary Journal* 2008;175:293-300.
4. Panksepp J. The basic emotional circuits of mammalian brains: Do animals have affective lives? *Neuroscience & Biobehavioral Reviews* 2011;35:1791-1804.
5. Mellor DJ. Operational Details of the Five Domains Model and Its Key Applications to the Assessment and Management of Animal Welfare. *Animals* 2017;7:60.
6. Boyd C, Jarvis S, McGreevy P, et al. Mortality resulting from undesirable behaviours in dogs aged under three years attending primary-care veterinary practices in England. *Animal Welfare* 2018;27:251-262.
7. Doherty O, McGreevy PD, Pearson G. The importance of learning theory and equitation science to the veterinarian. *Applied Animal Behaviour Science* 2017;190:111-122.
8. Wauthier LM, Scottish Society for the Prevention of Cruelty to A, Williams JM. Using the mini C-BARQ to investigate the effects of puppy farming on dog behaviour. *Applied Animal Behaviour Science* 2018;206:75-86.
9. Mellor DJ. Tail Docking of Canine Puppies: Reassessment of the tail's role in communication, the acute pain caused by docking and interpretation of behavioural responses. *Animals* 2018;8:82.
10. Reyes-Sotelo B, Mota-Rojas D, Martínez-Burnes J, et al. Tail docking in dogs: behavioural, physiological and ethical aspects. *CAB Reviews* 2020:1-13.
11. Guilherme Fernandes J, Olsson IAS, Vieira de Castro AC. Do aversive-based training methods actually compromise dog welfare? A literature review. *Applied Animal Behaviour Science* 2017;196:1-12.
12. Vieira de Castro AC, Fuchs D, Morello GM, et al. Does training method matter? Evidence for the negative impact of aversive-based methods on companion dog welfare. *PLOS ONE* 2020;15:e0225023.

13. Mason GJ. Stereotypic behaviour in captive animals: fundamentals and applications to welfare In: Mason G, Rushen J, eds. *Stereotypies in captive animals*. Wallingford, UK: CAB International, 2006;325–356.
14. Bacon H. Behaviour-based husbandry—a holistic approach to the management of abnormal repetitive behaviors. *Animals* 2018;8:103
15. Hall C, Huws N, White C, Taylor E, Owen H, Mc Greevy P. Assessment of ridden horse behaviour. *Journal of veterinary behaviour*. 2013;8:62-73
16. Dyson S, Berger J, Ellis AD, Mullard J. Development of an ethogram for a pain scoring system in ridden horses and its application to determine the presence of musculoskeletal pain. *Journal of Veterinary Behaviour*. 2018;23:47-57
17. Uldahl M, Clayton C. Lesions associated with the use of bits, nosebands, spurs and whips in Danish competition horses. *Equine Veterinary Journal*. 2019;51(2):154-162
18. McLean A, Christensen JW. The application of learning theory in horse training. *Applied Animal Behaviour Science*. 2017;190:18-27
19. Christensen JW, Ahrendt LP, Gaillard C, Palme R, Malmkvist J. Does Learning Performance in horses relate to fearfulness, baseline stress hormone and social rank? *Applied Animal Behavioural Science*. 2012;140:44-52
20. Malmkvist J, Poulsen JM, Luthersson N, Palme R, Christensen JW, Søndergaard E. Behaviour and stress responses in horses with gastric ulceration. *Applied Animal Behaviour Science*. 2012;142:160-167
21. Bradshaw JWS, Emily J, Blackwell EJ, Casey RA. Dominance in domestic dogs—useful construct or bad habit? *Journal of Veterinary Behavior*. 2009; 4(3): 135-144.
22. Wynne CDL. The indispensable dog. *Frontiers in Psychology*. 2021;12:2730
23. Serpell J. The domestic dog. 2016. 2nd edition. *Cambridge University Press*. ISBN 9781139161800. DOI: <https://doi.org/10.1017/9781139161800>
24. Haverbeke, A. Efficiency of working dogs undergoing a new human familiarisation and training program. *Journal of Veterinary Behavior*. 2010; 5:112-119
25. Hartmann E, Christensen JW, McGreevy PD. Dominance and leadership: Useful concepts in human–horse interactions? *Journal of Equine Veterinary Science*. 2017;52:19
26. Mellor DJ. Updating animal welfare thinking: Moving beyond the “Five Freedoms” towards “A Life Worth Living”. *Animals*. 2016;6(3):21
27. Webster J. Animal Welfare: Freedoms, dominions and “A Life Worth Living”. *Animals*. 2016;6(6):35
28. Coren S.. The Data Says “Don’t Hug the Dog!” *Psychology Today*. 2016. [www.psychologytoday.com/intl/blog/canine-corner/201604/the-data-says-dont-hug-the-dog](http://www.psychologytoday.com/intl/blog/canine-corner/201604/the-data-says-dont-hug-the-dog)
29. Edgar JL, Lowe JC, Paul ES et al. Avian maternal response to chick distress. *Proceedings of the Royal Society B: Biological Sciences*. 2011;278:3129–34
30. Masson, S., de la Vega, S., Gazzano, A., Mariti, C., Da Graça Pereira, G., Halsberghe, C., Muser-Leyvraz, A., McPeake, K., Schoening, B. (2018) Electronic training devices: Discussion on the pros and cons of their use in dogs as a basis for the position statement of the European Society of Veterinary Clinical Ethology, *Journal of Veterinary Behavior*, 25, 71-75
31. Gräbner M, Kanitz E, Otten W. Pränataler Stress bei Nutztieren: Eine Uebersicht [Prenatal stress in farm animals: a survey]. *Berl Munch Tierarztl Wochenschr*. 2009 Mar-Apr;122(3-4):73-81. German. PMID: 19350805.

32. Calls to rethink turnout measures for horses to benefit their welfare. *Horse and Hound*, 3 August 2020. [www.horseandhound.co.uk/plus/news-plus/turnout-key-for-horse-welfare-721054](http://www.horseandhound.co.uk/plus/news-plus/turnout-key-for-horse-welfare-721054)
33. University of Bristol and World Horse Welfare. *Horses in our Hands*. 2016. [https://storage.googleapis.com/worldhorsetwelfare-cloud/2019/09/14b98a4b-horses-in-our-hands\\_august-2016.pdf](https://storage.googleapis.com/worldhorsetwelfare-cloud/2019/09/14b98a4b-horses-in-our-hands_august-2016.pdf)
34. Wensley S, Betton V, Martin N, and Tipton E. Advancing animal welfare and ethics in veterinary practice through a Pet Wellbeing Task Force, practice-based Champions and clinical audit. *Vet Record*. 2020. doi:10.1136/vr.105484 Accessed 29.09.2023
35. Belshaw Z, Wensley S. Discussing Brachycephalic Health with Current and Prospective Dog Owners: Pre-purchase consultations. In: *Health and Welfare of Brachycephalic (Flat-faced) Companion Animals: A Complete Guide for Veterinary and Animal Professionals*. Packer R, O'Neill D (eds). 2021:59
36. EU Platform on Animal Welfare. Supplementary guidance for dog breeders on the socialisation of puppies. 2022 [https://food.ec.europa.eu/system/files/2022-07/aw\\_platform\\_platform\\_guide\\_socialisation\\_puppy.pdf](https://food.ec.europa.eu/system/files/2022-07/aw_platform_platform_guide_socialisation_puppy.pdf) Accessed 29.09.2023
37. EU Platform on Animal Welfare. Supplementary guidance for cat breeders on the socialisation of kittens. 2022 [https://food.ec.europa.eu/system/files/2022-07/aw\\_platform\\_platform\\_guide\\_socialisation\\_kitten.pdf](https://food.ec.europa.eu/system/files/2022-07/aw_platform_platform_guide_socialisation_kitten.pdf) Accessed 29.09.2023
38. Mellor DJ. Moving beyond the "Five Freedoms" by Updating the "Five Provisions" and Introducing Aligned "Animal Welfare Aims". *Animals (Basel)*. 2016 Sep 23;6(10):59. doi: 10.3390/ani6100059. PMID: 27669313; PMCID: PMC5082305.
39. International Society for Equitation Sciences. ISES Position Statement on Restrictive Nosebands. Released in November 2019: <https://www.equitationsscience.com/posstat-noseband> Accessed 06.02.2023.
40. MSD Veterinary Manual. Social Behavior of Horses Gary M. Landsberg , Sagi Denenberg, 2022 <https://www.msddvetmanual.com/behavior/normal-social-behavior-and-behavioral-problems-of-domestic-animals/social-behavior-of-horses#:~:text=Horses%20are%20social%20animals%20that,the%20stallion%20leaves%20or%20dies> Accessed 07.09.2023
41. American Veterinary Society of Animal Behavior (AVSAB). Position Statement on Humane Dog Training. 2021. <https://avsab.org/wp-content/uploads/2021/08/AVSAB-Humane-Dog-Training-Position-Statement-2021.pdf> Accessed 29.09.2023