ELECTRONIC TRAINING DEVICES:

ESVCE POSITION STATEMENT

E-collars, also known as "shock collars" are used in dog training.

There are three types of electronic devices commonly used in dog training [1]:

- Bark activated collars that operate automatically in response to the dog barking
- Electronic boundary fences that are activated at a boundary line to keep the dog inside
- Remote controlled collars that are activated manually via a remote-controlled transmitter

Their use employs learning theory and the principles of conditioning: positive punishment (if used after an undesirable behaviour) and negative reinforcement (if maintained until a desired behaviour is shown).

Their use is controversial and several European countries have decided to either ban or restrict their use, in the interest of dog welfare, which is at risk.

Having researched and compiled current available scientific articles, our working group edited the following lines as a position statement to inform the public and to take a position regarding the possible use of this technique as an educational tool for dogs.

E-collar pros: are they admissible arguments?

- ✓ precisely controllable intensity [1] indisputably proved incorrect by 1) below
- ✓ low cost [1] not a valid argument when in relation to the welfare of dogs
- ✓ aversive enough to suppress an undesired behaviour [1] [2]
 alternative non-aversive techniques can alter undesired behaviour as shown in 8)
 and importantly not just suppress it
- ✓ when used as a negative reinforcer they reinforce alternative behaviour
 as do other non-aversive techniques as shown in 8)
- ✓ e-collars pose a smaller risk to the longterm welfare of dogs than other punishing techniques [3]
 - e-collars pose a higher risk to the welfare of dogs compared to positive training techniques as shown in 8)
- ✓ e-collars can solve behavioural issues that no other technique can no evidence of this could be found in the scientific literature available

Hence, no argument makes a valid point to use an e-collar for dog training.



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E-collar cons: what are the risks of using e-collars?

1) e-collar intensity: not controllable

- ✓ many parameters are likely to modify the shock and consequently the level of pain
 which the animal receives: shock intensity [4] [3], shock duration [4], electrode size
 [3], beep warning [5], degree of humidity and the morphology of the dog itself (hair
 length, moisture level of skin, subcutaneous fat level) [6]
- ✓ it is not possible to determine the appropriate intensity for a particular dog [3] [7] which leads to two possible risks when using the e-collar:
 - too high intensity which may induce intense fear or pain [5], aggression [8], phobias [8], high levels of stress may block or lower an animal's ability to learn [7]
 - not high enough intensity (may induce habituation): the undesired behaviour will remain but the animal will habituate to pain

2) Association with external stimuli: a major risk

in an everyday situation, many uncontrolled and un-associated environmental stimuli can be associated with the shock [8] [7], including the trainer [4]

3) Perfect timing required

e-collar use requires perfect timing between the undesired behaviour and the presentation of the shock [5] [7] [4]. Without this flawless timing, both fearful and aggressive responses have increased likelihood of presenting and of becoming part of the dog's behavioural repertoire [1] [2].

Consequently, unqualified trainers carry a higher risk of negative outcome when using e-collars [9]

4) Risk of abuse

There is a risk of abuse when an owner activates the collar when in a negative emotional state such as when angry [4] [5] [10]

5) Physiological risks

The following physiological risks have been reported when using e-collars: a raise in salivary cortisol [11], a raise in heart rate (both increase with shock unpredictability) [5]), intense burn sensation than can lead to physical burns with skin necrosis [3]

6) Stress related behaviours

These include high risk of: distress, suffering stress-related behaviours (yelping, tongue flicking, lowering of tail position, inhibition) becoming part of the dog's behavioural repertoire outside of the training context [4]

7) Other risks when using any punishing technique

Punishing training methods induce higher risks of aggression [1] [12], fear, anxiety [13] and undesirable behaviours [14], while they decrease the quality of the dogowner relationship [15], dog welfare and dog-human team performance, [16] compared to non-aversive techniques. This is especially the case with positive punishment, where an aversive event (an electric shock, a kick, etc.) follows an undesirable dog behaviour and in the case of negative reinforcement where an aversive event (an electric shock, a sharp pull or a check on a choke or prong collar) ends after a desired dog behaviour.



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8) Efficacy

No study shows a superior efficacy when comparing an e-collar to positive training. Some conclude a superior efficacy of positive training [10] [17], while others show no difference in efficacy but a decrease in welfare when using e-collars [18]. In relation to fence collars, one study even suggests a higher risk of escape when using an efence rather than a normal fence [19].

9) The "easy fix" illusion

E-collars are seen as an "easy fix" (even if as demonstrated above they are not). This neglects a more preferable approach which would seek to understand the mechanisms of canine behaviour on every level which cause undesirable behaviour and then identify a successful and welfare compatible resolution [4].

In conclusion, e-collar training is associated with numerous well documented risks concerning dog health, behaviour and welfare. Any existing behaviour problem is likely to deteriorate or an additional problem is likely to emerge, when such a collar is used. This becomes an even greater risk when this aversive tool is used by an unqualified trainer (as training is largely unregulated throughout the EU, it appears that a large number of trainers are unqualified).

Additionally, the efficacy of these collars has not been proven to be more effective than other alternatives such as positive training. Hence, ESVCE encourages education programmes which employ positive reinforcement methods (while avoiding positive punishment and negative reinforcement) thereby promoting positive dog welfare and a humane, ethical and moral approach to dog training at all times.

Members of ESVCE position strongly against the use of e-collars in dog training, using the above argument as a basis for our position and urge all European countries to take an interest and position in this welfare matter.

ESCVCE proposal: as stated above, ESVCE members argue that there is no strong evidence to justify e-collar use on dogs. On the contrary, there are many reasons to never use these and better training options exist.

This said, the aim of ESVCE is to improve dog welfare and consequently ESVCE has been working on possible solutions to manage situations where e-collars have been a choice. The following alternative suggestions respect the precautionary principle:

- ban e-collar sale, use, distribution, promotion (including internet sale and promotion within Europe), under European legislation immediately applicable in all member states.
- ensure that the law is enforced and adhered to: employing the animal welfare acts or equivalent in each member state, significant fines might be introduced for a first or minor offence, that is an offence where unintentional harm is caused to the dog. In the case of successive offences or where a collar has been used to intentionally



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abuse a dog, a custodial sentence in line with that applicable to similar offences might be introduced. Additionally, significant fines need to be implemented for persons identified selling, distributing or promoting e-collars.

- suggest an alternative: spray collars could be used under veterinary or qualified behavioural supervision, instead of bark activated collars and remote controlled collars. This would allow the cause of the behaviour problem to be addressed and not just the symptom.
- Electronic boundary fences could be replaced with actual fences (even actual
 electrified fences) which would prevent the electronic fences being used incorrectly
 and the dog not being given opportunity to learn; for example if the owner does not
 use the flags which should be supplied to condition the dog to where the fence "is"

BIBLIOGRAPHY

- 1. POLSKY R.H. Electronic shock collars: are they worth the risks? Journal of the American Hospital Association, 1994, Vol. 30
- 2. CHRISTIANSEN F.O. et al. Behavioural changes and aversive conditioning in hunting dogs by the second year confrontation with domestic sheep, Applied Animal Behaviour Science, 2001, 72: 161-143
- 3. LINDSAY S. Biobehavioral monitoring and electronic control of behavior, Handbook of Applied Dog Behaviour and Training: Procedures and Protocols, Vol 3. Ames, Iowa: Blackwell et al. publishing, 2005, 557-627
- 4. SCHILDER M.B.H., VAN DER BORG J.A.M. Training dogs with the help of the shock collar: short and long term behavioural effects, Applied Animal Behaviour Science, 2004, 85: 319-334
- 5. SCHALKE E. et al. Clinical signs caused by the use of electric training collars on dogs in everyday life situation. Applied Animal Behaviour Science, 2007, 105 : 369-380
- 6. JACQUES J., MYERS S. Electronic training devices : a review of current litterature, Animal behaviour consulting : Theory and Practice, 2007
- 7. BLACKWELL ET AL. E, CASEY R. The use of shock collars and their impact on the welfare of dogs, University of Bristol, 2006
- 8. POLSKY R.H. Can aggression in dogs be elicited through the use of electronic pet containment systems?, Journal of Applied Animal Welfare Science, 2000, 3:345-357
- SALGERLI Y., SCHALKE E., BOEHM I., HACKBARTH H. Comparison of learning effects and stress between 3 different training methods (electronic training collar, pinch collar and quitting signal) in Belgian Malinois Police Dogs, Revue Méd. Vét., 2012, 163, 11, 530-535
- 10. BLACKWELL ET AL. E, CASEY R. The use of electronic collars for training domestic dogs: estimated prevalence, reasons and risk factors for use, and owner perceived success as compared to other training methods. BCM Veterinary Research, 2012; 8:93



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- 11. BEERDA et al. Behavioural, saliva cortisol and heart rate responses to different types of stimuli in dogs, Applied Animal Behaviour Science, 1998, 58 : 365-381
- 12. HERRON M.E et al. Survey of the use and outcome of confrontational and non-confrontational training methods in client-owned dogs showing undesired behaviors, Applied Animal Behaviour Science, 2009, 117: 47-54
- 13. ARHANT C. et al. Behaviour of smaller and larger dogs: effects of training methods, inconsistency of owner behaviour and level of engagement in activities with the dog, Applied Animal Behaviour Science, 2010, 123: 161-142
- 14. BLACKWELL ET AL. E, CASEY R. The relationship between training methods and the occurrence of behavior problems, as reported by owners, in a population of domestic dogs, Journal of Veterinary Behavior, 2008, 3: 207-217
- 15. DELDALLE S., GAUNET F. Effects of 2 training methods on stress-related behaviors of the dog (*Canis familiaris*) and on the dog-owner relationship, Journal of Veterinary Behavior, 2014, 9:58-65
- 16. HAVERBEKE A. et al. Training methods of military dogs handlers and their effects on the team's performance, Applied Animal Behaviour Science, 2008
- 17. HIBY E.F., ROONEY N.J., BRADSHAW J.W.S. Dog training method: their use, effectiveness and interaction with behaviour and welfare, Animal Welfare, 2004, 13: 63-69
- 18. COOPER J.J., MILLS D. The Welfare consequences and efficacity of training pet dogs with Remote Electronic Training Collars in comparison to reward based training, Plos one, 2014, Volume 9, Issue 9, e102722
- 19. STARINSKY N.S, LORD K.L., HERRON M.E. Escape rates and biting histories of dogs confined to their owner's property through the use of various containment methods, Journal of American Veterinary Medical Association, 2017, Vol 250 N°3.