

Managing stressed canine patients: practical techniques

Author : Stuart Greenfield

Categories : [RVNs](#)

Date : January 1, 2013

Stuart Greenfield HND Animal Welfare, BSc student in Applied Animal Behaviour, reviews the evidence for using behaviour therapies to reduce stress levels in dogs brought into practices

Summary

WE have all seen stressed, barking, whining dogs in our kennels. Studies on stress behaviour have focused on situations within rescue kennels and how, by reducing stress levels and stress-related behaviours, some problematic behaviours can also be reduced. Here, the author examines various techniques and shows how they may complement each other and be transferred to a veterinary practice environment to reduce stress and anxiety in patients.

Key words

dogs, behaviour, stress

PAUL McCutcheon, an American vet who specialises in holistic methods, said in an interview that stress has a detrimental effect on the canine immune system, which may, in turn, cause further or enhanced complications, such as contracting infections (McCutcheon and Roberts). This view was supported by **Patrick Pageat**, talking at the 32nd WSAVA Congress in Sydney, who stated stress can impair the immune system as well as recovery of physiological equilibrium. This can be highly detrimental to the efficacy of treatment (Pageat, 2007).

As most of us are aware, diarrhoea and vomiting are common manifestations of stress (Bonham,

2009; Welton, 2005; Lindsay 2001) and the presence of these symptoms can be unpleasant for both the animal patient and staff.

These points demonstrate how a stressful state may negatively affect a patient's recovery, or cause further implications and complications. Veterinary staff should also be aware of behavioural implications.

Caroline Hewson, speaking at the 2008 WSAVA Congress in Dublin, remarked animals experiencing stress could manifest this in behaviours that caused risk to both themselves and the staff dealing with them (Hewson, 2008). This was supported by Lane and Cooper, who stated stress could cause defensive aggression towards the staff dealing with the animal (Lane and Cooper, 2003).

This tendency towards an aggressive manifestation of stress is supported in part by Beerda et al (1999), who stated stress caused by spatial restriction could manifest itself in aggression through behaviours such as raised hairs and growling. Although no aggression in the form of snapping or attempting to bite was recorded, other signs of aggression, such as teeth baring, yawning and raised hackles, were. This shows the potential for the behaviour to develop into something more dangerous.

Are kennels stressful?

Dogs entering kennel environments have been seen to show an increased cortisol/creatinine ratio (Hilby et al, 2006).

When dogs in a veterinary waiting room were studied they showed a higher level of stress, which was then increased when the dogs were weighed (Hernander, 2008). This shows that stress levels are increased even before the dogs enter the kennel area.

This was also found by Stephen and Ledger (2006), who reported the cortisol/ creatinine ratio was consistently higher in dogs in a kennel environment compared with samples taken from dogs in a home environment.

These studies suggest a heightened stress level in dogs transferring from a home environment to a kennel environment. This principle may be transferable to a practice environment where clients bring in dogs from home.

Rooney et al's study (2007) found dogs entering a kennel environment in a training establishment showed higher cortisol/creatinine levels than before kennelling. They also suggested dogs without any previous experience of kennelling showed a higher physiological stress response than those with experience.

This is interesting and pertinent as it may indicate that a dog's first visit to a veterinary clinic and kennel environment may cause a more severe stress response. Therefore, a positive experience and stress-reducing techniques may be highly important to both reduce stress and make the dog's next visit much less stressful through positive associations to the environment.

Training

By using a simple "sit" or "down" command, stress levels may be reduced. This may be through both mental stimulation and interaction with humans.

Hennessey et al (1998) state a study into the influence of petting on cortisol and behaviour in a rehoming shelter showed cortisol levels were decreased after a 20-minute session of human interaction, and the dogs exhibited increased relaxed posture.

Further to this, Bergamasco et al (2010) found cortisol levels decreased after four, once-daily, human interaction sessions, along with improved timid behaviours, indicating a positive effect on stress levels through human interaction.

This was further shown by Coppola (2006), who studied human interaction and cortisol, and showed lower exhibited cortisol levels in dogs that had received human interaction, including basic obedience commands. Paige (2007) suggested that to reduce a dog's stress and anxiety, the level of human interaction should be increased.

Mellor goes on to state studies have shown a dog's heart rate is slowed when it is subjected to gentle handling and petting, including speaking to the animal (Mellor et al, 2008).

It has been stated the mental stimulation provided by training can also aid in depleting stress levels. Blake (2007) suggests working with a dog to perform tasks such as sits, downs and targeting (touching nose to hand or object) can provide the dog with mental stimulation and reduce stress. Arthur (2009) attributes a lack of mental stimulation to a dog that cannot be calm and goes on to advocate training as an outlet for stress and an aid for mental stimulation.

O'Rorke-Wieneke produced a report on how training could reduce stress in shelter dogs and stated that research had shown dogs trained to sit in rehoming shelters became calmer. Implementing a policy that stated kennel staff should get a dog to sit before letting it leave the kennel, interacting with it physically or when feeding, showed reduced levels of barking and other manic behaviours. This report also stated dogs from a rehoming shelter brought into a prison inmate training scheme were reported to show a decreased number of stress-related behaviours than dogs that had not received the training (O'Rorke-Wieneke, not dated).

This concept is supported in an online report by the WSPA on the mental health of cats and dogs in shelters. This report states the kennel environment can induce stress, and the teaching of basic

commands can provide mental stimulation. This research shows how both human interaction and training can reduce stress levels in dogs.

Dog appeasing pheromone (DAP)

Dog appeasing pheromone (DAP) diffusers are often used in practices to try to reduce anxiety, but how can this aid behaviour therapy?

The glands around a bitch's mammary glands secrete pheromones (apaisine), which are thought to have a calming effect on the newborn puppies. DAP is a synthetic and widely available form of these pheromones produced by a bitch postpartum and has shown to reduce fear and stress in dogs (Case, 2010; Lindsay, 2001).

Taking this into a veterinary environment, Siracusa (2009) looked at 16 dogs post-surgery. When DAP was diffused into the atmosphere, the dogs showed more instances of alertness and exploration post-surgery, along with a significantly decreased prolactin response to stress.

Related to this, Mills (2006) carried out a study involving 15 dogs known to be fearful during visits to a veterinary clinic. They were exposed to a wait in the waiting area, a consult and a standard examination in the consult room. The study showed DAP had a positive effect on stress behaviours, but did not affect aggressive behaviours during examination. It may be the examination elicited a sensitised state too intense for DAP alone to affect; however, it does show DAP can positively affect stress behaviours within a clinical environment.

DAP lowers a dog's emotional stress levels, which lessens the likelihood of over-sensitisation. This has the potential to make the dogs more amenable for training, as well as being a secondary reducer of stress.

In the practice

Veterinary patients are often restricted with regards to exercise to aid recovery. This may be short five-minute "toilet break" walks or strict cage rest for a designated time period, depending on the severity of the operation.

In these circumstances, training regimes can be used to deplete stress levels through providing mental stimulation. As the animals are unable to undertake the required exercise for their breed, stimulation can be used to avoid boredom and undue stress.

Obedience training

A short period of obedience training is a good way of mentally stimulating the dog, along with

providing human interaction and keeping up the patient's general good manners to avoid it learning problem behaviours to be taken home upon discharge.

These sessions should last five to eight minutes to avoid the dog losing focus, and to avoid causing too much strain on the recovering patient. They should not include anything that may be detrimental to the dog's recovery or cause further complications. Food rewards can be used as long as the animal's daily feed allowance is adjusted accordingly, and the food is of an adequate type to support a recuperating patient.

With command training there are complications to consider. If the animal has had orthopaedic surgery, such as stifle surgery or a spinal operation, continuous "sits" and "stands" may cause unnecessary strain on the surgical site and hinder recovery.

This can be avoided by teaching a simple touch command. The dog is rewarded each time its nose touches a target, such as a hand or object. This involves only a slight movement of the head, but the mental stimulation remains effective. The patient still has to work out the behaviour being requested.

Another problem arising from obedience training is owner compliance. If an owner has been conducting his or her own training regime, he or she may not welcome either new behaviours or new commands. This can be avoided by consulting owners about any training they may be undertaking. This means current training methods or commands can be continued rather than changed.

Scent work

For animals that are on restricted exercise during their stay in practice, scent work may be used as a form of training. As with obedience training, this offers mental stimulation to reduce stress, but may cause less pressure on operation or wound sites from repeated movement to fulfil commands.

Scent work can be used in conjunction with the dog's allocated daily exercise allowance to enhance the mental stimulation gained from a walk. Taking part of the dog's daily feed allowance and hiding it in the area where the dog is taken for exercise does not cause extra significant physical exertion ; however, the animal's mental stimulation is heightened by searching for the food.

Scent work can also be extended to use within the practice rather than just out on the walk. By feeding a patient via a Kong or Dog Pyramid or by using food games where the dog has to work out how to find food, the dog gets mental stimulation while being fed.

Wider applications

The use of behavioural therapy has wider applications than improving stress levels and patient welfare within practice. The principles can be explained to owners when their animal is discharged. This gives them the tools to provide their dog with the mental stimulation it needs while it is being crate-rested or on restricted exercise.

This then has the potential to improve owner compliance by reducing the amount of stress behaviours being exhibited. If the owner believes his or her dog is calm and content, then that owner is more likely to comply with the demand for crate rest.

This cooperation may reduce the number of patients returned due to complications arising from an incorrect amount of exercise before the rest period is complete.

The addition of mental stimulation and use of secondary techniques also has the possibility of increasing the positivity of our interaction with patients and reducing the risk of negative incidents. This will also reduce any risks to staff safety when dealing with stressed patients.

Behavioural therapy can be used on puppies within practice. If a puppy is admitted during its optimum training and learning stages the effect on training and developing social skills may be detrimental. By carrying out basic training, or continuing with the owner's training regime, not only will the puppy be getting mental stimulation and human interaction, but it will continue to develop those training and social skills.

Conclusion

Behavioural therapy has the potential to reduce stress and anxiety for animals within practice by providing mental stimulation and human interaction.

The therapy may then be extended to providing continued training for puppies and reduce claims that unprofessional handling has resulted in aggression problems. Behavioural therapy may also have a positive effect on owner cooperation with exercise restriction and crate rest. This has potential to reduce complications brought about by over-exercise.

Reduced stress levels may also increase the dog's cooperation in practice, and produce a lowered fear response when it next enters a veterinary scenario as the connotations are more positive.

References

- Arthur N K (2009). *Chill Out Fido! How to Calm Your Dog*, Dogwise Publishing, Washington, US: 15.
- Beerda B et al (1999). Chronic stress in dogs subjected to social and spatial restriction (I) behavioural responses, *Physiology and Behaviour* **66**: 233-242.
- Bergamasco L et al (2010). Heart rate variability and saliva cortisol assessment in shelter

- dog: human-animal interaction effects, *Applied Animal Behaviour Science* **125**: 56-68.
- Blake M (2007). *The Dog Trainer's Resource: The APDT Chronicle of the Dog Collection*, Dogwise Publishing, Washington, US: 101.
 - Bonham H (2009). *Introduction to Dog Agility*, Barons Educational Series. New York, US: 32.
 - Case L P (2010). *Canine and Feline Behavior and Training: A Complete Guide to Understanding Our Two Best Friends*, Delmar, New York, US: 258.
 - Coppola L et al (2006). Human interaction and cortisol: can human contact reduce stress for shelter dogs? *Physiology and Behaviour* **87**: 537-541.
 - Hennessey B et al (1998). Influence of male and female petters on plasma cortisol and behaviour: can human interaction reduce the stress of dogs in a public animal shelter? *Applied Animal Behaviour Science* **61**: 63-77.
 - Hernander L (2008). Factors influencing dogs' stress level in the waiting room at a veterinary clinic, *Student Report, Swedish University of Agricultural Sciences*, ex-epsilon.slu.se:8080/archive/.../01/huvudversion_klar_lollo.pdf.
 - Hewson C J (2008). Welfare in practice 3: how to recognise stress in your patients, *Proceedings of WSAVA Congress, Dublin*.
 - Hilby E F et al (2006). Behavioural and physiological responses of dogs entering re-homing kennels, *Physiology and Behaviour* **89**: 385-391.
 - Lane D R and Cooper B (2003). *Veterinary Nursing*, Butterworth-Heinemann, London, UK.
 - Lindsay S R (2001). *Handbook of Applied Dog Behaviour and Training: Etiology and Assessment of Behaviour Problems*, Blackwell Publishing, Iowa, US: 142.
 - McCutcheon P and Roberts K (no date). Canine stress interview. <http://dogs.lovetoknow.com/dog-expert-interviews/canine-stress-interview-paul-mccutcheon>. Accessed 6/03/2012.
 - Mellor D J et al (2008). *The Sciences of Animal Welfare*, Wiley Blackwell, West Sussex, UK: 126.
 - Mills D S et al (2006). A triple blind placebo-controlled investigation into the assessment of the effect of dog appeasing pheromone (DAP) on anxiety related behaviour of problem dogs in the veterinary clinic, *Applied Animal Behaviour Science* **98**: 114-126.
 - O'Rorke-Wieneke D (no date). New trends in shelter welfare research: Can training reduce stress and increase adoption rates in shelter dogs? vip. vetsci.usyd.edu.au/contentUpload/.../DevonO'Rorke-Wieneke.pdf. Accessed 05/03/2012.
 - Pageat P (2007). Stress during hospitalization in dogs and cats: consequences and prevention, *Proceedings of WSAVA, Sydney*.
 - Paige C (2007). *The Good Behaviour Book for Dogs: The Most Annoying Dog Behaviours... Solved*. Quarry Books, Massachusetts, US: 161.
 - Rooney N J et al (2007). Behavioural and glucocorticoid responses of dogs (*Canis familiaris*) to kennelling: investigating mitigation of stress by prior habituation, *Physiology and Behaviour* **92**: 847-854.
 - Siracusa C (2009). Perioperative stress in dogs undergoing elective surgery: evaluation of the dog appeasing pheromone (DAP) for the control of behavioural, neuroendocrine,

- immune and acute phase stress responses, *Universitat Autònoma de Barcelona*.
- Stephen J M and Ledger R A (2006). A longitudinal evaluation of urinary cortisol in kennelled dogs, *Canis familiaris*, *Physiology and Behaviour* **87**: 911-916.
 - Welton R L (2005). *Canine and Feline 101 : A Complete Guide for Selecting, Training and Caring for Dogs and Cats*. iUniverse.com, Lincoln, US: 38.
 - WSPA (no date). Looking after the mental health of dogs and cats in shelters. www.animalwelfareonline.org/Images/resources_Companion%20Animals_false_Shelter-and-enrichment_tcm34-17378.pdf. Accessed 05/03/2012.