# Behaviour techniques to help the needle-shy equine patient overcome its non-compliance

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## INTRODUCTION

When a horse has developed a fear or aversion to needles, it may present in the form of difficult or outright dangerous behaviour. As veterinary professionals, your encounters with equine patients usually occur in a purely medical situation, which can involve unpleasant or painful scenarios for the horse. To compound matters, such encounters may also involve a needle. For these reasons, a needle-shy horse can be a hazardous patient. The following article suggests the use of operant conditioning, with the focus on positive and negative reinforcement alongside clicker training, as methods to resolve the issue and to ensure that the horse and the people working with it are safer and happier.

## AETIOLOGY

An assumption can be made that a fear of needles is something that developed through a horse's life experience via associative learning (Pearson, 2015a). Your patient may have received a needle, in many instances very early in life – think of the large needle for microchipping – and began to associate the needle with pain. This is a stimulus they would rather avoid!

## DIAGNOSIS

To diagnose needle shyness, the horse must present with non-compliance with procedures that involve injections. The reason behind the horse's behaviour is to achieve avoidance. This may present as ducking, swerving the rear end, kicking and/or rearing. When the veterinary professional's body language and/or actions indicate the administration of an injection, for example occluding the jugular vein for venepuncture, the needle-shy horse may object. Diagnosing needle shyness at this point is vital as, in many instances, it precedes the injection itself (McDonnell, 2000).

## WHERE TO BEGIN?

According to McDonnell (2000) you will need:
- Equipment;
- Headcollar;
- Lead rope;
- Personal protective equipment (PPE) such as helmet, boots, chest guard (may give the wearer more confidence in a potentially hazardous situation);
- Clicker;

| | | Positive<br><br>A stimulus is given/added to the training process | Negative<br><br>A stimulus is removed from the training process |
|---|---|---|---|
| Increases likelihood of behaviour | ▲ | Positive reinforcement<br><br>A stimulus, ie. food is given when the desired behaviour is accomplished | Positive reinforcement<br><br>A stimulus, ie. pressure on headcollar, is removed when desired behaviour is accomplished |
| Decreases likelihood of behaviour | ▼ | Positive punishment<br><br>A stimulus, ie. the use of a crop is applied when the unwanted behaviour occours | Negative punishment<br><br>A stimulus, ie. attention/treats removed when the unwanted behaviour occurs |

Figure 1: Positive and negative reinforcement methods.

- Capped needle and syringe;
- Reward, ie. food or reduced pressure on headcollar; and
- Alcohol if it is routinely used when prepping the site

### SUITABLE AREA
Retraining should not take place in a confined stable or stocks. A suitable large enclosure is ideal with solid and secure flooring.

### BEHAVIOURAL ADJUSTMENT STRATEGIES
As the horse has utilised associative learning to develop the fear of needles, this same ability can be used to retrain their thinking and to become compliant. The most successful methods in utilising this ability is by operant behaviour techniques. This allows the horse to learn that their behaviour can influence the outcome of a situation (Pearson, 2015a). In this article, the focus will be on positive and negative reinforcement methods, which will be referred to hereafter as the 'reward' (Figure 2). Whichever reward method the reader chooses is personal choice. However, the horse has a greater affinity for positive reinforcement learning (McDonnell, 2000).

Clicker training is a secondary positive reinforcement

technique. Used alongside the above techniques, this method helps the horse overcome the obstacle of its short-term memory. When used at the optimum correct behaviour moment in the routine, it will help the patient associate the time of the correct behaviour and the reward (eBEVA, 2018).

### OPERANT TECHNIQUES ROUTINE

Shaping is very important in retraining this type of patient. This simply means you must build up towards what you have diagnosed as the moment the patient initiates objection. Start with contact they can cope with and slowly but surely shape the behaviour towards the desired outcome you want at each step (Pearson, 2015a).

For example, on approach to the nervous horse, lay a hand on its neck. If it fidgets, keep your hand in contact until it stands still. The moment it stands still use the clicker followed by the reward as soon as possible. You are creating the link between the correct behaviour and reward.

This can be built upon, by taking a small pinch of skin or laying your hand near the jugular. Again, if the horse begins to tense keep in contact until it relaxes. Click and reward as soon as possible. If the horse reacts excessively at any point as you build up towards the actual point of injection, go back a step and repeat.

Typically, 10 replications of each stage are required before the horse is considered to have learned. The sign the horse has learned is usually indicated by the horse indicating its expectation of the reward when it performs the correct behaviour. A mildly affected individual may need fewer steps and a shorter period while, conversely, a severely affected individual will require more steps and more time (McDonnell, 2000).

A sheathed needle pressed firmly against the skin will suffice as a substitute to injecting a horse for ten replications (Pearson, 2015b).

### RECOMMENDATIONS

It is vital to ensure you build slowly and practise every standard step you would use in your routine injection procedure. This may include alcohol when prepping a site. If you do so, make room for it in your training routine. Never assume not to. The same can be said about just training from one side. Training, not only from the near-side but the off-side, will ensure the horse doesn't associate the correct behaviour with one side only.

Once you grasp this concept of retraining, educate clients. It is a useful tool for them to utilise from the beginning of their ownership of a horse. It is also a concept that can be applied to other areas of equine behaviour (eBEVA, 2018).

In particularly severe cases, when sedation is being considered, please note that sedation delays learning efforts (McDonnell, 2000).

### CONCLUSION

The needle-shy patient will soon learn to associate their actions, ie. body language to the clicker sound and the reward (eBEVA, 2018).

The above learning methods can also be used for other areas of non-compliance with veterinary procedures such as nasogastric tubing, rectal temperature taking etc. (McDonnell, 2000).

### REFERENCES

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# READER QUESTIONS AND ANSWERS

**1.  HOW DOES A HORSE DEVELOP NEEDLE SHYNESS?**
A   Lifelong associative learning
B   Randomly occurs, no cause
C   Natural nervous disposition

**2.  HORSES HAVE THE HIGHEST AFFINITY FOR WHICH OF THE FOLLOWING LEARNING TECHNIQUES?**
A   Negative reinforcement
B   Positive reinforcement
C   Positive punishment

**3. HORSES HAVE POOR _____?**
A   Long-term memory
B   Short-term memory
C    Abstract thought

**4.  HOW MANY REPLICATES PER SHAPING STAGE IS THE AVERAGE FOR 'LEARNING TO HAVE OCCURRED?**
A   12
B   15
C   10

ANSWERS: A, B, B & C, C