



**Sadly, horses often develop problem behaviours that affect the relationship between horse and handler. A recent study of horses presented in a slaughter house in Europe identified that the most common reason for horse destruction was not due to physical problems but was due to behavioural problems. The following information outlines some common problem behaviours and possible treatment methods. As with all behaviour problems, the advice of a vet and a behaviour specialist should be sought before modification is attempted.**

### What is training?

'Training' is defined as the intentional modification of the frequency and/or intensity of specific behavioural responses. Desirable responses are encouraged and undesirable ones are reduced or eliminated.

Modification of horse behaviour can be achieved through different means: the shaping of a response where the specific behaviour is positively reinforced (where the desired behaviour is rewarded so that its performance is increased) in a step-wise fashion towards a specific end point, or using negative reinforcement, eg when an aversive stimulus is applied until the desirable behaviour increases in occurrence where upon the stimulus will be removed. Or using methods for suppressing undesirable behaviour (using humane punishment techniques such as a sudden sound or a spray of cold water to the body that stops the ongoing performance of a behaviour so that a more appropriate behaviour can be reinforced).

Effective and humane horse training relies on knowledge of normal horse behaviour and behavioural responses as well as an understanding of the way animals learn.

The context in which the training occurs is an important factor in whether training is successful. Thus when problems occur, it is worth looking at the effect that the environment may be having on the horse: the presence of distractive elements, such as other horses, will influence the degree to which the horse attends to the trainer; in addition, the size of the area in which training occurs will influence the trainer's ability to keep the attention of the horse; the similarity of the environment to other situations in which the horse is utilised will also affect the ability of the horse to generalise learnt associations to other contexts.

### What common behavioural problems might I encounter?

The term 'behavioural problem' can be used to describe a range of undesirable behavioural responses performed by the horse. Many of these behaviours are perfectly natural equine behavioural responses that are a problem for the owner/rider. However, there are a number of abnormal responses that are only seen in captive conditions.

The main problem behaviours include:

Aggressive behaviour (kicking, biting, charging and striking) - towards humans and/or horses related to feed, space and a variety of other situations.

Bucking and bolting particularly when under saddle.

Fearfulness/anxiety about being handled.

Rearing, spinning and refusing to move forwards either over jumps, into a transporter or stable or just generally.

### What methods can I use to deal with problem behaviour?

There are various methods used when dealing with problem behaviour in horses and it is often necessary to use a combination of these techniques to deal with the behaviour of an individual. There is no recipe for dealing with specific problem behaviours and it is suggested that the chosen approach will depend very much upon the individual circumstance of each case, which will be gained through taking a thorough behavioural and medical history.

### Methods

The following methods are the main ones used for dealing with the common handling and riding problems that arise with the domestic horse.



### Positive reinforcement

This method is used to increase a particular behavioural response. The use of food or social contact (both extremely desirable to the horse) to reward specific behaviours can increase the chance of the horse offering specific behaviours on application of particular signals or cues.

Since the horse has no fear of getting things wrong and being punished it is thought that this method of training new behaviours is more humane, and leads to the development of a more positive relationship between horse and handler. This in turn is thought to increase the chances of the horse 'offering' behaviour rather than being forced to do something.

Use of primary reinforcers such as food is not always practical in training since many of the desired responses are required in the ridden horse, and rewarding with food is not possible during a ridden training session. During handling, food as a reward can lead to the horse 'mugging' the handler until it is very clear what behaviour is required before food is delivered.

Food is useful for bribing or enticing a horse to perform a specific behaviour and then rewarding it. For example a horse can be lured into a trailer using food as the bait:

1. The horse is given food only when it moves a foot or its body in the right direction (shaping behaviour).
2. Care must be taken that the horse does not acquire too much food so that it becomes less motivated to continue in the training session.
3. Small amounts of food (a few pony nuts, or a section of carrot) should be used as a reward.
4. Training sessions should be kept short so that they end when the handler chooses and on a positive note.
5. Once inside the horse can be rewarded by being given a large (bonus) amount of its favourite food item, eg carrots. This should increase the chance of the horse offering to move forward into the trailer in future.

### Secondary positive reinforcement

This method establishes a new behavioural response, eg 'Clicker-training' - originally developed for use with performing sea mammals; a commonly used form of conditioned reinforcement.

Using this approach a novel sound, produced from a plastic 'clicker' is classically conditioned to a reinforcer, generally a food reward. The use of a conditioned reinforcer like a clicker has several advantages in training:

1. Once the classical association is made, the sound of the click is 'rewarding' for the horse. This enables the trainer to reward a behaviour rapidly after its performance, thereby increasing the chance of the horse associating the reward with the appropriate desired activity.
2. The association allows the trainer to bridge the gap between the time at which an animal performs a response correctly and the arrival of a primary reinforcer (usually food). This allows training to be carried out from a distance (hence its use by dolphin trainers) and its potential for use by horse riders.
3. It has been suggested that conditioned reinforcement facilitates learning.
4. During the initial stages of training, the clicker sound should always be followed by a positive reinforcer such as a food reward (click followed by treat within 2-5 sec).
5. Simultaneous presentation of a reward and a novel secondary stimulus works less well. Similarly, presentation of the secondary stimulus after the food is given (primary reinforcer) is unhelpful.
6. Once the association has been made, it can be maintained and strengthened via variable or intermittent reinforcement, ie do not give food after every click.
7. Although one advantage of a commercial clicker device is that the sound it makes is distinctive any human sound could be used instead as long as it is not easily confused with words that are commonly used in training.

### Pressure-release technique (negative reinforcement)

This method is used to train a new behavioural response. This is where the negative reinforcement is used

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to increase the likelihood of a behaviour being offered following a particular signal involving pressure.

A stimulus such as contact of the rider's leg with the horse's side, or a pull backwards on the leadrope is applied until the horse performs a specific response (such as moving sideways away from the leg aid, or stopping to pressure applied backwards on the leadrope). At the moment that the horse starts to show the desired response to the pressure applied, the pressure is removed or released.

With repetition the horse begins to understand the association (operant conditioning) between the signal and its behaviour in response to the given signal, at which point the strength of the signal can be reduced, ie the signal becomes more subtle, and the frequency with which the reward (pressure release) is offered is reduced (intermittent reinforcement). This allows the trainer to refine the behavioural response.

The aim of pressure-release training is to time the release of the force the trainer is applying so that the horse understands that performing the behaviour is immediately rewarded. When this technique is used on horses with established problem behaviours, it may be necessary to apply a greater amount of pressure to the horse to get a desired response, since the horse is likely to have dulled responses due to it having been confused during its training. Using this technique it is possible to get the horse to associate one signal with one response.

### Systematic desensitisation

This is where the acquired sensitivity to a particular situation or event is reduced through repeated controlled exposures to successive approximations of the actual problem situation or event.

Common equipment used for desensitising the horse to touch, eg used for training horses to allow their back legs to be picked up, includes the 'big hand' (a broom handle or a rubber pipe with a glove, stuffed with cotton wool, taped to the end of it). Horses that are frightened of traffic can be desensitised to sounds and then finally sight plus sound by initially using taped sounds of the vehicles that can be played at increasing volumes over time whilst the horse is feeding.

For example a protocol for dealing with a horse that is fearful of having a bridle put on would be as follows:

1. In this case the whole bridling experience needs to be deconstructed so that the essential elements of the bridling experience are identified.
2. The horse will require to be desensitised to a number of things, including approach of the handler, sight of the bridle, handling of the ears from both sides of the horse, movement of the handlers arms and hands when reaching over the head to secure the bridle in place, and of course the bridle parts themselves; the bit in the mouth, the noseband pressure, the head piece and so on.
3. If the problem is found to be related most to the handling of the ears, then the horse must be slowly and gently exposed to increasing amounts of handling of the ears over time. Teaching the horse to lower its head and be less responsive to sensations around its poll and ears is achieved through a number of desensitisation sessions.
4. Each training session will be short in duration (say 10 min max) and a cut-off point established, so if the horse becomes agitated the session is immediately ended, and within the session the horse is rewarded for all positive and calm responses.

### What other problems can be dealt with in this way?

Problems with saddling and girthing can be dealt with through gradual desensitisation.

### Counter-conditioning

This is used when a horse has already acquired a learned response to a particular situation, but that response is undesirable to the owner. Here the horse is taught a more appropriate response through substituting the behavioural response for another. To do this the horse is taught the association between a new behaviour and a reward in a neutral situation, ie one that has nothing to do with the old problem situation.

Standing still for a food reward or a release of pressure (positive or negative reinforcers) is taught in a relaxed training session. This is then used in a counter-conditioning programme.

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For example a horse that usually behaves aggressively over food may be treated in the following way:

The aim is that the horse will learn that standing still in a relaxed situation is rewarding. This is then extended to whilst being groomed and the horse may be given a food reward. The situation where training takes place is out of the horse's stable if this is where the aggression over food takes place, perhaps standing tied up in the corridor. The horse learns that:

1. Standing still is not compatible with moving towards a handler and threatening to bite.
2. Eventually the horse is placed into a stable either tied up or held, and food rewards are given in a bucket (perhaps by another handler) until the horse learns that standing still is required before food is given.

### What other problem behaviours can be treated using counter-conditioning?

This technique has been used successfully with horses that nap, spin and/or rear. If observed closely it is often possible to determine the direction the horse always spins or turns when it naps (refuses to go forwards) or attempts to rear. So, if the horse always spins away to the right, then counter-conditioning can ensure that this behaviour is replaced by a more appropriate response in future situations.

The objective of the training sessions is to counter-condition the horse, so that the old behavioural response is no longer effective and is not the first (or strongest) response. Here, the horse is taught a new behavioural response to a leg and voice signal ('OVER'- away from the direction it usually turns or spins).

When pressure is applied to the horse's side it moves forwards and sideways, at which point the pressure is removed and the horse is also positively rewarded using the voice or food rewards. Using ground and ridden work in a controlled situation away from the place and events that usually provoke the problem behaviour it is possible to change the horse's behaviour over time. Gradually the horse's motivation is greater to move forwards and sideways when asked ('OVER') than it is to go back, spin or up (rear) when it is being problematic.

### Distractors

This method is used to stop or reduce the ongoing behaviour. It is often necessary to halt an ongoing behaviour using a device that startles or mildly distracts the horse so that it can then be signalled to offer a more appropriate behaviour. Distractors (sometimes called 'punishers') can be anything that the horse finds mildly aversive. This will vary from horse to horse.

Cold water sprayed at the horse's body using a spray bottle/child's water gun is often effective for breaking off a behaviour such as biting or refusing to go forward. Another possibility is the use of a sharp sound such as a rattle tin made out of dried macaroni in a metal canister or hard plastic container. Care must be taken that the chosen device does not elicit a strong aversive response since this will not achieve the desired results. Provoking a flight response caused by an extreme fear response will only serve to increase the horse's anxiety about the situation you are attempting to deal with. In addition it is important to ensure that both humans and other animals are kept safe, so care must be taken to use the device safely and properly.

For example aggression towards humans can be broken off using a waterspray, and then the horse can be taught more appropriate behaviour using counter-conditioning techniques (see below). At times when training is not taking place, care must be taken to stop the horse from biting. This can be done using a muzzle.

**More information regarding behavioural problems and how to deal with them can be gained by asking your veterinarian to refer you to a specialist behaviour consultant.**

**If you want any other information on health issues concerning your horse please contact Dalehead Veterinary Group on (01729) 823538 and we will be happy to advise you.**