

Training: how do horses learn?

Horses don't instinctively know how to live in a human world. It's something we need to teach them through compassionate and consistent training. It's important to remember that horses learn all the time, not just during training sessions. This means that every interaction we have with them matters.

Horses learn through the consequences of their actions, just like us. If something they do leads to a desired outcome – for example, a slice of carrot or the removal of uncomfortable pressure from the bit – they are more likely to do it again. And conversely, if something they do leads to an undesired outcome – for example, pain from a whip or losing access to food – they are less likely to do it again.

Horses don't have the cognitive capacity to draw conclusions about what we expect from them. It is our responsibility to give them clues by arranging the environment in a way that helps them figure out what we want, by breaking down training into easy, logical steps, and by systematically reinforcing the behaviours that we want through consistent application of learning theory.

When deciding on which training method to use, we need to consider not just effectiveness, but the horse's experience, too. Methods that risk causing injury or physical and emotional harm should not be used. Such methods also risk damaging our relationship with our horses, as horses may learn to associate these unpleasant experiences with us.

In addition, methods that cause fear or stress impede learning, making the training less effective. Horses' three basic responses to a potential threat include flight, fight and freeze. Flight is the process of moving away from the threat, fight is to react through aggressive behaviours such as biting and kicking, and freeze is when the horses is assessing the situation based on past experiences and deciding whether fight or flight is the best response. Horses can't learn when they are in a heightened emotional state or in any of the three responses described above.

When training horses, it is important to understand how horses learn; this is called learning theory.

There are various key terms which can be confusing and some sound quite similar, so we have produced a glossary for you to use.

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Key Term	Definition
Non-associative learning	Comprised of habituation, sensitisation and desensitisation, and is the response of the horse to an object, person or situation.
Habituation	The horse's reaction to an object, person or situation decreases through repeated exposure, simply put, the horse gets used to it. (e.g., your horse gets used to seeing a new bench placed next to the arena).
Sensitisation	The horse's reaction to an object, person or situation increases (e.g., your horse starts responding to lighter leg aids).
Desensitisation	The horse's reaction to an object, person or situation, that has previously caused a sensitised reaction is decreased, which is similar to habituation. (e.g., your horse stops reacting to your leg aids if they are overused or mis-timed).
Over-shadowing	Where two actions are applied to the horse with one reducing the response to the other (e.g., scratching the horse's withers from one side, whilst the vet injects the other side of the horse's neck).
Flooding	Exposing a horse to something they don't like until they stop reacting, which can lead to learned helplessness or cause the horse to shut down (e.g. holding on to a horse's foot when they don't want you to, to get them used to having their feet handled).
Associative learning	Comprised of classical and operant conditioning which are training methods based on the association of a cue and the addition or removal of a reinforcement or punishment.
Classical conditioning	Creation of an association between two events, in which one predicts the other (e.g., when you enter the feed room, your horse may display certain behaviours in anticipation of being fed, as they have linked you entering the feed room with getting food).
Operant conditioning	Creation of an association between a behaviour and an outcome. Includes positive and negative reinforcement, and positive and negative punishment.

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Positive reinforcement	Adding something the horse likes when they perform a desired behaviour to make the behaviour more likely to happen in future (e.g., giving your horse a treat for standing still at the mounting block).
Negative reinforcement	Removing something the horse doesn't like when they perform a desired behaviour to make it more likely to happen in future (e.g., applying leg aids and removing the leg aid when the horse responds correctly).
Positive punishment	
Note: this strategy is often unhelpful and always ethically questionable.	Adding something the horse doesn't like when they perform an undesired behaviour to make it less likely to happen in future (e.g., smacking your horse on the nose if they try and bite you. Biting can be a sign of pain or discomfort, if you are concerned about your horse's behaviour consult your vet or a qualified equine behaviour professional).
Negative punishment	Removing something the horse likes when they perform an undesired behaviour to make it less likely to happen in future (e.g., your horse tries to bite you as you enter their stable to put their feed bowl down, so you remove the food. Removing valuable resources such as food can lead to an escalation of aggressive behaviour and should be used under the supervision of a qualified equine behaviour professional).

Positive and negative reinforcement and positive and negative punishment can be tricky concepts to get your head around, particularly as they sound similar. The diagram shows they key differences between them. Where possible, positive reinforcement (R+) should underpin training and positive punishment (P+) should be avoided as it is an ethically questionable practice that is unlikely to get you the results you want. Horses respond to patient and consistent training, and it is important that we build trusting relationships with our equine partners.

For further guidance on common training and behavioural issues, please see the following pages:

- <u>Separation anxiety:</u> training your horse to be on their own
- De-worming
- <u>Clipping</u>
- Introducing a new horse to the herd

