

# Myth Busters

*Veterinary Version*



WorldHorseWelfare

## Is your horse in pain? Or being a pain?

*Busting some of  
the myths about  
horse behaviour...*



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# Introduction

As a rider and trainer of horses, and as an observer of horses during training and competition, I have learned to recognise how pain-free horses move and behave. In addition, as part of a veterinary career that has spanned more than 40 years, I have observed thousands of horses in pain. I have watched how these horses behave when being tacked up, mounted, and ridden and have seen how their behaviour may change when the pain is resolved. I have also talked to these horses' owners and riders about their observations and how they interpret the behaviours displayed.

It is my conclusion that many horse owners either fail to observe their horse's behaviour or assume that the behaviours that they do observe are normal – either for that individual horse or for horses in general. In part, this is because a majority of people learn to ride at riding schools where many of the horses have low-grade lameness in several limbs. The chronic pain to which these horses are exposed often leads them to show abnormal behaviours such as repeatedly putting their ears back or being generally grumpy. People whose only experience of horses is of those in pain may assume that these behaviours are normal for horses.

Owners and riders are not alone in misinterpreting the underlying cause of these behaviours. Many coaches, when faced with a training problem in a horse that is not obviously lame, blame the horse or rider. They may then suggest the use of more coercive cues (aids), rather than questioning whether the horse's behaviour is caused by discomfort. Some veterinarians also may conclude that a horse which does not show obvious lameness in hand or on the lunge cannot have musculoskeletal pain. This is far from the truth. There are many horses that appear to move normally in hand or on the lunge but that show signs of discomfort or lameness when ridden. Their discomfort may not be a constant feature and may only occur under specific circumstances, but it can compromise their performance and welfare, nonetheless. Determining the cause of pain may require detailed diagnostic work, including evaluation of a number of factors: ridden exercise involves an interaction between the horse, the rider, and the tack, any of which – alone or in combination – can contribute to pain.

*Continued*



# Introduction

These misconceptions – of owners, riders, coaches, and veterinarians – have led to a series of ‘myths’ that need to be dispelled, for the sake of both our horses’ welfare and equestrianism’s social licence. Some of the behaviours that underlie the myths are included in the Ridden Horse Pain Ethogram (RHpE). This is a list of 24 behaviours, most of which are at least 10 times more likely to occur in a horse with musculoskeletal pain than in one that is not in pain. A RHpE score of 8 or more is likely to reflect the presence of pain, although some lame horses have a RHpE score of less than 8. You can find out more about the RHpE in the ‘Additional information’ section at the end of this document. This section also contains a table which summarises causes of pain during ridden exercise that may not manifest as overt lameness and a list of publications covering both the RHpE and pain-related causes of behavioural change in horses.

It is important to note that if a horse displays any of the behaviours profiled in this list of myths and the presence of pain has been ruled out, other factors that may be causing the unwanted behaviour should be considered. These include suboptimal riding, training, or management (e.g., insufficient forage, turnout, or social interaction with other equids), the use of equipment that – either inherently or through improper use – causes discomfort, and fear. Consulting a qualified coach, behaviourist, nutritionist, or tack fitter may help to identify and resolve these problems.

If you want to look through all 33 myths, read on. However, to make it easier to find the sections that are most relevant for a particular horse, we have grouped the behaviours into categories and numbered the myths.

  
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# Equine behaviours

**Equine behaviours that, if shown repeatedly, may indicate the presence of pain.**

## **General demeanour and behaviour:** pp.5–7

- Spooky: *Myth 1*
- Grumpy: *Myth 2*
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## **Problems when tacking up and mounting:** p.15

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## **Abnormal rein tension:** pp.16–17

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## **Problems with canter:** pp.17–19

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## **Miscellaneous problems:** pp.7, 11, 20–23

- Prone to gastric ulcers: *Myth 5*
- Frequent tripping/stumbling in front: *Myth 11*
- Reluctant/difficult to turn one way: *Myth 28*
- Unable to perform medium trot: *Myth 29*
- Repeatedly breaks into canter when trotting: *Myth 30*
- Goes downhill sideways: *Myth 31*
- Saddle repeatedly slips to one side: *Myth 32*
- Poor or erratic dressage scores: *Myth 33*

## **Additional information:** pp.24–27



## GENERAL DEMEANOUR AND BEHAVIOUR

**Myth 1:** “My horse is always spooking - but that’s because he has a nervous disposition.”

### Spooking

Horses may spook at unfamiliar objects or if they have been frightened by something. However, if the horse is not in pain, it should be possible to overcome their fear using careful and appropriate retraining and positive reinforcement. If a horse repeatedly spooks for no particular reason, this may be a behavioural response to musculoskeletal pain. If the pain is removed, the horse may stop spooking.



Spooking

**Myth 2:** “My horse has always been grumpy – but that’s just how she is – she’s a chestnut mare.”



Happy, relaxed chestnut mare

### Grumpy

Horses that are free from pain are not grumpy. There is also no scientific evidence to support the suggestion that horses of different colours vary in their temperaments. Hormonal changes during the oestrus cycle can result in some alterations in behaviour when a mare is close to ovulation, but these are transient and will fluctuate in association with the cycle. Horses that are frequently grumpy – on the ground or during ridden work – should therefore be investigated for causes of chronic pain.



**Myth 3: “My horse is a real gentleman – but I do have to kick a lot. He is just really lazy.”**

**Lazy**

An appropriately trained, pain-free horse should willingly respond to the rider’s cues (aids) to move forwards. Unwillingness to move forwards may be because conflicting cues are being applied (e.g., use of leg and rein pressure at the same time – like the accelerator being pressed with the hand brake on), or because the horse has never been trained properly to respond to the rider’s cues. Alternatively, repeated lack of willingness may be because the horse is experiencing discomfort. This could be caused by an ill-fitting saddle or bridle, by musculoskeletal pain due to injury, or by carrying a rider who is too big for the horse.



*Horse requiring a strong leg aid (cue) to maintain canter; note that the reins lack tension, and that the horse also shows four of the behaviours of the Ridden Horse Pain Ethogram (front of the head in front of the vertical, ears back, intense stare, tail swishing)*

**Myth 4: “My horse is always ‘buzzy’ because he loves work.”**

**Buzzy**

If shown on a repeated basis, tension, over-enthusiasm for work, rushing, and wanting to go a little too much are often a reflection of discomfort. This could be because of an ill-fitting saddle – perhaps one in which the pommel is too low or the tree points too tight. A change to a better fitting saddle can produce a remarkable change in ridden behaviour. Alternatively, the horse may have low grade pain in both forelimbs or both hindlimbs. In this situation, the horse may not appear obviously lame because the right and left limbs even themselves out. Whatever the cause, removal of pain can transform ridden behaviour and make a buzzy horse appear remarkably calm.

Other potential reasons for ‘buzzy’ behaviour include a rider who gives conflicting cues (aids) with their legs and hands, especially if they are apprehensive, and an imbalance between nutritional energy input and level of exercise (ridden and unrestricted turnout) – i.e., overfeeding.



*Buzzy, effervescent trot (which was unchanged when the check reins were removed); note that the horse also shows two of the behaviours of the Ridden Horse Pain Ethogram (ears back, intense stare)*



**Myth 5:** *“My horse is a stressy individual and therefore seems to be prone to gastric ulceration so I have to manage her diet really carefully.”*

### Stressy

It is not normal for a pain-free horse to experience repeated gastric ulceration if the horse is managed appropriately. It is believed that gastric ulcers are associated with stress in horses. However, if the stressor is removed, there should be no recurrence after successful treatment of the ulcers. The most common cause of repeated gastric ulceration is underlying musculo-skeletal pain. We need to ask why the horse is a ‘stressy individual’. If day-to-day management (e.g., daily turnout in an area large enough for them to exercise, an adequate supply of forage, provision of company) is satisfactory, the stress behaviour probably reflects underlying musculo-skeletal pain. It must be borne in mind that if a horse has low-grade lameness in several limbs, they may not appear obviously lame. Moreover, horses with multi-limb lameness may adapt their way of moving (e.g., stiffening the back to minimise discomfort when ridden) and this may further disguise the pain.



‘Stressy’ horse

## HEAD PROBLEMS

**Myth 6:** *“My trainer tells me that repeated teeth grinding during ridden exercise indicates that the horse is concentrating and focused.”*

### Grinds teeth

Repeated teeth grinding usually reflects stress. The most common source of stress in a ridden horse is the presence of pain.



**Myth 7: “My trainer says that if a horse’s ears are forward, this implies that the horse is not listening to my aids.”**



*Ears forward whilst obeying the rider’s cues (aids) and performing well*



*Ears forward/erect but rotated outwards so that the pinna (the inner part of the ear) can be seen, while the horse is working well*



*Ears forward/erect but rotated outwards, while the horse is working well*

**Ears consistently forward or back**

Most horses that are comfortable during ridden work have their ears forwards, erect, or rotated outwards. The horse is largely directed by cues (aids) from the rider’s seat, legs, and arms, and by their weight distribution – not by their voice. There is therefore no reason that the horse’s ears should be rotated backwards during ridden work. If a horse’s ears are back for a large proportion of the time that the horse is being ridden, this usually reflects discomfort.



*Ears rotated backwards; note that the horse also shows an additional behaviour of the Ridden Horse Pain Ethogram (an intense stare) and that there is inwards lean of the horse’s trunk in this 10 metre diameter circle*





**Myth 8:** *“My 4-year-old gelding has been in ridden work for six months and is constantly moving his head, mostly slightly up and down. My trainer says that this is normal young horse behaviour and should improve with time.”*

#### **Unsteady head carriage/repeatedly moves head up and down**

A correctly trained young horse that is ridden positively forwards without undue interference from cues (aids) applied via the reins to the bit should have a steady head carriage after six months of training. A head carriage that is frequently unsteady is likely to reflect discomfort. There are many potential sources of pain including sharp teeth that have ulcerated the lining of the cheeks, a bit which fits incorrectly, lacerations in the corners of the horse’s mouth, an ill-fitting saddle, and musculoskeletal injury.



*Head repeatedly moved up and down; note that the horse also shows an additional two of the behaviours of the Ridden Horse Pain Ethogram (ears back, intense stare)*

**Myth 9:** *“My horse repeatedly tosses his head up and down when ridden. I’ve been told that he is not a head shaker (he does not have trigeminal neuralgia). His teeth have been checked. I’ve used several bits but nothing seems to change him. My trainer says that I should ride him in draw reins because he is just being evasive.”*

#### **Tosses head**

Head tossing is one way that horses have of indicating that they are experiencing discomfort. Although frequent head tossing is usually caused by pain, it tells you nothing about the source of the pain (i.e., it is a non-specific sign). The use of draw reins is unlikely to eliminate the problem long term, although it may make lameness easier to see.



*Repeated head tossing*



**Myth 10:** “My trainer tells me that my horse has a lazy or weak right hind leg. What does this mean? My trainer implies that this is normal for some horses.”

### Weak/lazy hindlimb

The terms ‘lazy’ or ‘weak’ in one hindlimb are a way of suggesting that a horse is moving asymmetrically behind but that this is not caused by pain. Just like people, horses do not move completely symmetrically. Some horses exhibit subtle asymmetry of movement which is known as ‘laterality’ (the human equivalent of being left- or right-handed). However, although laterality can be assessed using a variety of techniques, it is not usually possible to detect it by eye in a ridden horse. In contrast, if a horse has a consistent, visually detectable, toe drag on one hindlimb, or steps short with one hindlimb, this is likely to reflect underlying discomfort. In addition, if a horse persistently moves asymmetrically, it is likely that this will – over time – result in secondary changes to the gait. The earlier that the original problem is identified and investigated, the more likely it is that the horse can be treated appropriately with subsequent improvement in performance and avoidance of secondary problems.

*Right hindlimb toe drag; note that the saddle has also slipped to the right – this is likely to reflect asymmetrical movement of the horse’s back associated with low-grade hindlimb lameness*



**Myth 11:** *“My horse trips quite a lot but he is a bit of a clumsy individual – he’s a big horse and only 7 years of age so he just needs more time to develop.”*

#### **Frequent tripping/stumbling behind**

Horses are skeletally mature by six years of age. By this time, if they are worked appropriately, are pain-free, have normal neurological control of limb placement, and have their feet regularly trimmed to an appropriate length, repeated tripping should not occur. Repeated tripping may reflect inability to correctly place their limbs because of neurological dysfunction. Alternatively, it may reflect a change in foot placement secondary to pain. If a human or a horse has pain, this can cause changes in neurological pathways. This in turn may lead to changes in the way a limb is placed to the ground, making the horse more prone to tripping or stumbling of the forelimbs or hindlimbs. Occasionally, tripping may be caused by reduced joint flexion secondary to pain.



*Stumbling on the right hindlimb*



*Stumbling on the left forelimb*

**Myth 12:** *“My horse has always been awkward about picking up the hindlimbs, especially the right hindlimb, but seems to be cooperative in all other respects. He is a gentle horse and wants to please, so I assume that is just normal for him.”*

#### **Reluctant to pick up one or both hindlimbs**

With appropriate training, most horses should be willing to pick up both hindlimbs without a struggle and with equal ease. A small proportion of horses may have experienced a traumatic event which makes them genuinely apprehensive about picking up one or both hindlimbs. However, with appropriate retraining using positive reinforcement, these problems can be overcome. More commonly, repeated reluctance to pick up a hindlimb reflects anticipation of discomfort. This occurs in horses with the condition ‘shivers’. Another potential reason is lumbosacroiliac joint region pain – affected horses may be unwilling to pick up one or both hindlimbs because they do not want to stand on the limb which is not being picked up. Standing on one hindlimb usually results in some rotation of the pelvis and it is this that generates discomfort.



**Myth 13:** “My 8-year-old dressage horse working at medium level has a mild but continual hindlimb toe drag. My trainer tells me that he needs to be energised – I must do more transitions within paces and between paces – but the toe drag continues. The trainer still says repeatedly ‘create more energy’.”

#### Hindlimb toe drag

There are four main reasons for a continual hindlimb toe drag. Firstly, the hind feet may be too long. Secondly, the horse may lack strength and coordination (although this is unlikely in an 8-year-old unless the horse has an underlying neurological problem). Thirdly, the arena surface may be of poor quality. And finally, there may be subclinical hindlimb lameness or thoracolumbosacral region pain.



Left hindlimb toe drag and reduced flexion of the hock

## PROBLEMS WHEN JUMPING



Bucking and kicking out on landing; note that the horse also shows an additional three of the behaviours of the Ridden Horse Pain Ethogram (ears back, mouth open, intense stare)

**Myth 14:** “My horse often bucks on landing after a jump because he is happy – he loves jumping.”

#### Bucks after jumps

It is not normal behaviour for a horse to repeatedly buck, or to buck and kick out, after landing when jumping, although it occurs not uncommonly in showjumpers. When this happens, it is usually a reflection of lumbosacroiliac joint region pain. Horses often continue to jump despite pain, in part because substances such as adrenaline and endorphins are released which make the horse feel good. Also, a strong rider may be able to make a horse jump because the horse fears the consequences of not jumping.





**Myth 17:** *“My horse has always loved jumping. He never stopped. I have not changed level – I am still competing at BE 90 but now he has started stopping in the showjumping and occasionally in the cross-country phase as well and there seems to be no pattern to it. I have lost confidence, so I assume that it’s me.”*

### **Stops at fences**

Horses may lose confidence if they are stepped up a level and are asked to jump larger fences, close to their athletic limits, especially if the rider does not always find the right take-off spot. However, if a horse starts stopping on a repeated basis, when competing at a level at which they previously performed consistently well, this usually reflects a pain-related problem. It may rock the rider’s confidence so that they ride more defensively or less positively, and this may compound the problem. However, in general, the problem starts because the horse is anticipating pain.



*Stopping at fence*

**Myth 18:** *“My horse always lands on the incorrect lead when jumping on the right rein. So even if I indicate that we are turning tightly to the right after the fence he still lands with the left forelimb leading. I assume that this is habit.”*

### **Lands on the wrong lead**

If you watch most pain-free horses being loose schooled, they will land with similar frequency with each forelimb leading. If a horse repeatedly refuses to land with one forelimb leading, this is usually because of forelimb pain. The forelimb on which the horse prefers to lead on landing will vary depending on the source of pain (in other words, if the left forelimb is the lame leg, the horse may prefer to land on the left lead, or on the right lead, depending on the site of pain within the left forelimb). Ground reaction forces (the forces exerted by the ground on the hoof) are greater in the trailing forelimb which lands more vertically than the leading forelimb. So, a horse with left front foot pain may prefer to land with the left forelimb leading because there are lower vertical forces generated through the left front foot than the foot of the trailing right forelimb. The rider’s position should also be checked to ensure that their weight is symmetrically distributed. Horses may alter their jumping technique to adapt to a rider who sits extremely crookedly, especially over a fence.



*Jumping off the right rein but repeatedly landing with the left forelimb leading*



**Myth 19:** “My horse has always turned to try to bite the girth region during tacking up but he is a grumpy horse – it is just part of his character.”

**Grumpy or aggressive when girthed up**

Biting the girth region during saddling, which is sometimes called ‘girth aversion behaviour’, is not normal. If this behaviour is displayed repeatedly, it could be associated with gastric ulceration. However, more commonly, it is due to an ill-fitting saddle (particularly tight tree points) or to pain during ridden exercise causing lameness or abnormalities of canter (e.g., lack of a suspension phase, a four-beat canter, repeatedly breaking from canter to trot). The behaviour is performed in anticipation of the pain associated with being ridden. Less commonly, this behaviour may be caused by a girth that is creating discomfort.



*Turning the head to the girth when it is being done up*

**Myth 20:** “My horse has never wanted to stand still at the mounting block, but he is a really ‘goey’ horse so this reflects his character.”



**Reluctant to stand to be mounted**

Repeated failure to stand still at a mounting block could reflect inadequate training. On the other hand, it could be caused by an ill-fitting saddle or musculoskeletal pain when ridden. In this situation, the behaviour reflects stress associated with anticipation of discomfort during ridden exercise.

*Moving away from the mounting block when being mounted; note that the horse also shows two of the behaviours of the Ridden Horse Pain Ethogram (ears back, intense stare)*



**Myth 21:** “My horse ‘leans’ on my ‘right hand’ (i.e., rein tension in the right rein is excessive), but I am right-handed so this is my dominant hand and I probably over-use it.”

### More tension in one rein more than the other

Asymmetrical rein tension can be caused by the rider. However, if this is the cause of the problem, it should not occur with a more skilled rider. Much more commonly – and if shown repeatedly – asymmetrical rein tension is an adaptation of the horse’s movement that results in the bit being pulled through to one side as they try to minimise pain during ridden exercise. Most horses which induce asymmetrical rein tension have hindlimb discomfort. If the pain is removed, rein tension becomes more symmetrical and ‘the contact’ feels more even in the rider’s hands. As is the case with any problem that occurs during ridden work, the mouth should always be checked for injuries of the teeth, lips, bars, or tongue and the fit, suitability, and integrity of the bit should be assessed.



*Bit pulled through to the right with increased tension in the right rein compared with the left; note that the horse also shows an additional three of the behaviours of the Ridden Horse Pain Ethogram (ears back, intense stare, front of the head in front of the vertical); the horse also has abnormal elevation of the forehead in right canter*

**Myth 22:** “When I work my horse on the flat she has a lovely light contact but the judges say that she is behind the bit and sometimes my reins loop a bit (they lack tension). I think it is just her way of going.”



*Head behind the vertical despite lack of rein tension*

### Behind the bit

A horse that is trained correctly and is pain-free should take an even contact via the reins (i.e., there should be some tension in the reins) and the front of the head should either be in a vertical position or just in front of the vertical. Repeated failure to take this ‘correct contact’ may reflect suboptimal training. However, it may also reflect changes in body posture and movement caused by pain. If the pain is removed, such horses usually take a stronger contact. The source of pain could be in the mouth itself or elsewhere in the body.





**Myth 23:** “My horse leans on the bit (rein tension is excessive but similar in both reins). My trainer says that I must go to a gym to work on my core strength so that I can support the horse better.”

#### ‘Leans’ on the bit

Excessive rein tension is usually the result of inadequate hindlimb impulsion and engagement. This may reflect the rider’s inability to remain stable and in balance, and to apply cues (aids) correctly. However, if the problem continues after appropriate work on the rider’s position (or with a more capable rider), it is much more likely that the excessive rein tension reflects the fact that the horse is in pain. In this situation, the horse is generally on the forehand and heavy in the hand because it is uncomfortable for them to engage the hindlimbs better. A strong, skilled rider may improve the quality of a horse’s paces but if behavioural indicators of pain persist, this generally means that there is an underlying pain-related problem.



The horse is ‘heavy’ in the rider’s hands, leaning on the bit in canter, and is on the forehand; note that the horse also shows four of the behaviours of the Ridden Horse Pain Ethogram (tongue protruding, front of the head behind the vertical, intense stare, bit – which is too wide – pulled through to the left)

## PROBLEMS WITH CANTER

**Myth 24:** “I cannot feel any lameness and nor can my trainer, but my horse has never wanted to canter on the right rein. That’s just normal for him.”

#### Reluctant to canter on one rein

A normal mature horse that has been trained appropriately should be able to establish and maintain canter just as easily on both the left and right reins. Some horses can trot symmetrically and are apparently pain-free and happy to work in trot but are uncomfortable in canter. Trot is a two-beat gait in which the load is always shared between two limbs. In contrast, a correct canter is a three-beat gait and, at times, the horse bears weight on a single limb (for example the trailing or outside hindlimb). This may cause discomfort and result in the horse being repeatedly unwilling to canter.



The rider is struggling to establish canter on the right rein; note that the horse also shows two of the behaviours of the Ridden Horse Pain Ethogram (ears back, intense stare)



**Myth 25:** “I’ve had my horse for a year and she has always had difficulty in maintaining canter on the left rein. She repeatedly tries to break to trot. She seems to find canter on the right rein easier. My trainer tells me that this is because I sit better on the right rein than on the left rein.”



*Struggling to maintain left canter; note that the horse also shows four of the behaviours of the Ridden Horse Pain Ethogram (ears back, intense stare, front of head in front of vertical, tail swishing)*

#### Struggles to maintain canter

An appropriately trained, pain-free horse should be able to maintain canter just as easily on the left and right reins. The most common reasons for problems with canter are hindlimb lameness and back pain. If a horse repeatedly struggles to maintain canter on one or both leads, it is therefore most likely that there is an underlying, pain-related problem. It is important to recognise that a horse that is moving abnormally will alter a rider's posture and ability to apply effective cues (aids). If the problem has been present since purchase, this suggests that it may already have been present at that time. However, it should be borne in mind that if a rider always sits crookedly, this in itself will result in asymmetrical force distribution. This can alter a horse's movement patterns and ultimately result in musculoskeletal pain.

**Myth 26:** “My horse often bucks going into canter and I’m told that this reflects joie de vivre.”

#### Bucks when going into canter

Bucking going into canter on a repeated basis is usually a sign of pain. Although this behaviour tells you nothing about the site of the discomfort (i.e., it is non-specific), pain in the lumbosacroiliac joint region is the most common cause. However, other sources of pain have also been associated with this behaviour. In particular, the fit of the saddle to both horse and rider should always be assessed in these cases.



*Bucking going into canter; note that the horse also shows an additional two of the behaviours of the Ridden Horse Pain Ethogram (ears back, intense stare)*





*Becoming disunited in right canter*

**Myth 27:** *“My 7-year-old event horse competes at BE 100 level but repeatedly becomes disunited in canter on either rein, especially going into corners. My trainer tells me that it is because I am not sitting up enough, but it happens when my friend rides the horse as well and she is a better rider than me.”*

#### **Goes disunited**

Unlike trot, canter is an asymmetrical gait in which the outside (trailing) hindlimb bears weight alone at the initiation of the stride. Therefore, a horse may appear non-lame in trot but be uncomfortable in canter. A young immature horse which lacks musculoskeletal strength and coordination may easily become disunited, especially going into corners, but a 7-year-old should not. If a horse repeatedly becomes disunited, this most frequently reflects hindlimb discomfort.



**Myth 28** “My horse has always been more difficult to turn to the right than to the left. I’ve had his teeth checked and they are okay. My coach says that the bit fits alright and that the horse is just being awkward.”

**Reluctant/difficult to turn one way**

Repeated difficulty in turning in one direction is almost always related to discomfort.

There are many potential causes: mouth pain, neck pain, back pain, or forelimb or hindlimb lameness. If horses are trained correctly and are pain free, they are not awkward – there is usually a pain-related cause. In the photograph, the inside hindlimb is crossing under the trunk towards the outside forelimb. Horses often do this to minimise hindlimb pain.



*Difficulty turning to the right in right canter; note the way in which the right hindlimb is crossed under the trunk towards the left forelimb*

**Myth 29** “My horse has always been ‘one paced’; she seems comfortable in working paces, but I have never been able to achieve medium trot. I assume that she is just not an athletic horse.”



*One-paced trot; note that the horse also shows three of the behaviours of the Ridden Horse Pain Ethogram (ears back, intense stare, front of the head behind the vertical)*

**Unable to perform medium trot**

There is no doubt that individual horses vary in the quality of their paces and a Thoroughbred is unlikely to have the same step length and elevation as a Warmblood horse that was bred for dressage. However, with appropriate training, any horse should be able to produce a medium trot. For some horses, this is better achieved out hacking, trotting alongside a bigger stepping horse, than alone in an arena. Trotting down the tram lines of a wheat field (with the farmer’s permission!) can work wonders. The use of

appropriately spaced trot poles can help with training. In addition, the rider must always be sure that they are not giving conflicting cues (aids). However, medium trot requires greater hindlimb impulsion and engagement than working trot and inability to achieve this pace may be because of underlying musculoskeletal pain. Alternatively, a saddle with tight tree points may be restricting forelimb movement.



**Myth 30:** *“When I ride my horse in trot, sometimes she seems to want to break into canter for a few steps. It is really variable in the frequency of occurrence and can happen on either the left or right reins. She has always done this, so I assume that it is normal for her.”*

**Repeatedly breaks into a canter when trotting**

A horse that repeatedly shows this behaviour – which sometimes feels as though the horse is hopping – may have an ill-fitting saddle. Repeated ‘hopping’ into canter can also be caused by episodic nerve pain at the base of the neck (cervicothoracic junction) or by other pain-related conditions that have not yet been defined. Occasionally, this behaviour is seen on the lunge, but it occurs much more commonly in ridden horses.



*‘Hopping’ into canter; note that, as the left forelimb has been brought forward, the head and neck have been raised and that the horse also shows two of the behaviours of the Ridden Horse Pain Ethogram (ears back, intense stare)*

**Myth 31:** *“Ever since I bought her two years ago, my horse has never wanted to walk straight going downhill. She seems to want to go sideways like a crab.”*

**Goes downhill sideways**

Normal horses should be able to balance themselves and their riders so that they can walk downhill straight. However, if the horse has musculoskeletal pain or an ill-fitting saddle, the discomfort that they feel may be exacerbated by going down a slope. For example, when walking down hill, more forces are placed on the forelimbs. In addition, depending on the steepness of the incline, the hindlimbs may need to be placed further under the trunk of the horse, altering the stresses placed on tendons, ligaments, and joints. The pressure under the front of the saddle may also increase. If shown repeatedly, moving sideways down a hill is usually an adaptation to minimise discomfort because of an underlying pain-related problem. The weight distribution of the rider should also be considered – if the rider sits asymmetrically, this may cause the horse to change the way that they move.



**Myth 32:** *“My saddle constantly slips to the right. My saddle-fitter has checked the saddle and assures me that it fits the horse appropriately. I previously fractured my left tibia in a riding accident and I assume that I must ride asymmetrically causing the saddle to slip to the right.”*

### **Saddle repeatedly slips to one side**

There are several potential causes of a saddle consistently slipping to one side. These include the horse (hindlimb lameness, asymmetry of the shoulder region or back musculature), the rider (crookedness), and the saddle (asymmetrical flocking). If the saddle slips when the horse is trotted in hand, or in trot and canter on the lunge without a rider, it is likely that the saddle slip is horse-induced. Similarly, if the saddle slips with a rider who sits straight on other horses, it is likely that the horse, rather than the rider, is causing the problem.

Although rider crookedness and asymmetrical saddle flocking do occur, the most common cause of saddle slip is hindlimb lameness. Paradoxically, a well-fitting saddle is more likely to slip than a saddle which bridges (a saddle that bridges makes contact with the horse’s back at the front and back of the panels, but not in the centre). Saddle slip is also more likely to occur in horses that have a rounded back shape than in those that are lean. However, in all horses, including those with a rounded back shape, saddle slip is usually caused by pain-related changes in the horse’s movement. When trying to determine why a saddle slips to one side, it is important to note that some of the causative factors may be inter-related. For example, if a saddle slips repeatedly, the flocking will become compressed asymmetrically. In addition, although rider crookedness can cause saddle slip, saddle slip can itself make a rider sit crookedly. Finally, asymmetry of the back muscles – which is a potential cause of saddle slip – may be caused by an ill-fitting saddle. Therefore, all potential reasons for saddle slip should be explored in order to determine the underlying cause of the problem.



*Saddle slip to the right*



**Myth 33: “My horse jumps well so she must be okay – although her dressage scores are a bit erratic and are generally no better than 60%.”**

**Poor or erratic dressage scores**

Many horses enjoy jumping, particularly if they are jumping well within their athletic capabilities. Moreover, the release of adrenaline and endorphins during jumping adds to their feeling of well-being. In contrast, flat work is repetitive and is often performed within the confines of an arena. Some horses appear to find this less interesting than jumping. In addition, the repetitive change in loading of the limbs on turns that is necessary during dressage may induce pain from problems that are otherwise subclinical. This may result in poor or erratic levels of performance in dressage tests and may explain the difference in some horses’ level of performance when jumping vs doing flatwork.



*Jumps well but poor dressage performance; note that, when working on the flat, the horse shows three of the behaviours of the Ridden Horse Pain Ethogram (ears back, intense stare, front of the head in front of the vertical)*



## ADDITIONAL INFORMATION

### Causes of pain during ridden exercise that may not manifest as overt lameness.

Cause of pain	Comments
Ulceration of the buccal mucosa caused by sharp tooth edges	Horses vary hugely in their sensitivity/reactivity to oral lesions
Injury to the commissure of the lips	Deep cuts, bruising
Injury to the bars of the mouth	Bruising, chronic mucosal thickening
Incorrect bridle fit	Most common causes are: pressure from the headpiece, browband, or noseband; buckles close to the temporomandibular joint; incorrect bit size or type relative to the horse's mouth size and shape
Low grade unilateral forelimb or hindlimb lameness	May only be evident under specific circumstances (e.g., 10 m diameter circles in rising trot or movements requiring collection)
Bilateral forelimb lameness	May only be evident as a short-stepping gait or lack of animation
Bilateral hindlimb lameness	May only be evident as poor hindlimb impulsion and engagement in trot and/or canter; may result in alterations of canter (e.g., becoming disunited, lack of a suspension phase, canter on forehand, four-beat canter, difficulties with flying changes)
Cervical pain	Neck 'stiffness' may be primary but may also be secondary to lameness
Thoracolumbar pain	Reduced range of motion of the thoracolumbosacral region may be an adaptation to forelimb or hindlimb lameness
Lumbosacroiliac joint region pain	May cause more problems in canter than trot
Recurrent exertional myopathy	May not present as classical 'tying up' but as reduced quality of performance
Incorrect saddle or girth fit for the horse	Horses vary hugely in the manner and magnitude of their reaction to poorly fitting tack
Incorrect saddle fit for the rider	Influences rider position, weight distribution, and balance
Rider size and proportions (e.g., trunk vs leg length) relative to the size and proportions of the horse	Influences rider position, weight distribution, and balance
Rider crookedness	Influences weight distribution

### Ridden Horse Pain Ethogram

The score sheet on the next page lists the 24 behaviours of the Ridden Horse Pain Ethogram (RHpE). Most of these behaviours are at least 10 times more likely to occur in a horse with musculoskeletal pain than in one that is not in pain. Horses that are not in pain may exhibit individual behaviours on the list, for a variety of reasons. However, a RHpE score of 8 or more (i.e., at least 8 'ticks' on the score sheet below) is likely to reflect the presence of pain. The list is therefore designed to be used in its entirety to determine the total number of behaviours shown by a horse. It should be noted that some horses that are in pain have a RHpE score of less than 8. Studies have shown that horses with high RHpE scores tend to perform less well than horses with lower scores.





Behaviour	Tick if present	Comments
1. Repeated changes of head position (up/down) not in rhythm with the trot		
2. Head tilted or tilting repeatedly		
3. Head in front of vertical (>30°) for ≥10s		
4. Head behind vertical (>10°) for ≥10s		
5. Head position changes regularly, tossed or twisted from side to side, corrected constantly		
6. Ears rotated back behind vertical or flat (both or one only) for ≥5s; repeatedly lay flat		
7. Eye lids closed or half closed for 2–5s; repeated rapid blinking		
8. Sclera exposed repeatedly		
9. Intense stare (glazed expression, 'zoned out') for ≥5s		
10. Mouth opening ± shutting repeatedly with separation of teeth, for ≥10s		
11. Tongue exposed, protruding or hanging out, and/or moving in and out > once		
12. Bit pulled through the mouth on one side (left or right) repeatedly		
13. Tail clamped tightly to middle or held to one side		
14. Tail swishing large movements: repeatedly up and down/side to side/circular; during transitions		
15. A rushed gait (frequency of trot steps > 40/15s); irregular rhythm in trot or canter; repeated changes of speed in trot or canter		
16. Gait too slow (frequency of trot steps < 35/15s); passage-like trot		
17. Hindlimbs do not follow tracks of forelimbs but deviated to left or right; on 3 tracks in trot or canter		
18. Canter repeated leg changes: repeated strike off wrong leg; change of leg in front and/or behind (disunited)		
19. Spontaneous changes of gait (e.g., breaks from canter to trot or trot to canter) > once		
20. Stumbles or trips repeatedly; repeated bilateral hindlimb toe drag		
21. Sudden change of direction, against rider direction; spooking		
22. Reluctant to move forward (has to be kicked ± verbal encouragement), stops spontaneously		
23. Rearing (both forelimbs off the ground)		
24. Bucking or kicking backwards (one or both hindlimbs)		





### Online training course: The Ridden Horse Pain Ethogram

A 12-part course with interactive quizzes titled 'How to recognise the 24 behaviours indicating pain in the ridden horse' is available at:

[www.equitopiacenter.com](http://www.equitopiacenter.com)

### Documentary: The 24 behaviours of the ridden horse in pain: Shifting the paradigm of how we see lameness. Go to: <https://www.24horsebehaviors.org/>

This 35-minute video features the story of a showjumper who had started stopping uncharacteristically and was becoming less willing to work on the flat. The video illustrates how use of the Ridden Horse Pain Ethogram can improve recognition of pain-related problems and, through appropriate investigations to identify the causes, improve a horse's welfare. It also addresses the emotional toll that unidentified pain can have on the horse's rider and how important it is to reach an accurate diagnosis and prognosis.

### Relevant publications

Publications marked with an asterisk (\*) are Open Access and can be downloaded free of charge. The others are available on request by sending an e-mail to [sue.dyson@aol.com](mailto:sue.dyson@aol.com).

*Berger, J., Bondi, A., Dyson, S. Ellis, A., Lindegaard, A., Martin, C., Pollard, D., Routh, J., Thomson, K. (2022) Commentary on Ladewig et al.: The uses, values, and limitations of the Ridden Horse Pain Ethogram J. Vet. Behav. 57, 31-34. doi:org/10.1016/j.jveb.2022.09.002*

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*Dyson, S. (2020) Unexplained forelimb lameness possibly associated with radiculopathy. Equine Vet. Educ. 32(S10), 92-103.*

*Dyson, S. (2022) The Ridden Horse Pain Ethogram and the performance of sports horses: a review Proc. Amer. Assoc. Equine Pract. 68, 316-325.*

*Dyson, S., Berger, J., Ellis, A., Mullard, J. (2017) Can the presence of musculoskeletal pain be determined from the facial expressions of ridden horses (FEReq)? J. Vet. Behav.: Clin. Appl. Res. 19,78-89.*

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