



# OVER HERD

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## The Slippery Slope to Learned Helplessness in Horses

Posted by Christa Lesté-Lasserre, MA | Oct 4, 2020 | in Article, Behavior, Behavior & Handling, Horse Care, Horsemanship Science, Welfare and Industry.

Many training styles and riding mistakes can make a horse less responsive to cues, pressure, and even pain—and that's often the early stages of *learned helplessness*. Learn how to identify and prevent this negative mental state.

### Learn to identify and prevent this negative mental state

#### The Biology Behind the Condition

Logically, it makes sense that people or animals would learn there's no point in trying when every effort always fails to stop the pain, says Natalie Waran, PhD, of the Eastern Institute of Technology, in Hawke's Bay, New Zealand. But it's not just a mental or emotional response. The brain undergoes physiological changes when learned helplessness occurs.

Dopamine is a neurotransmitter in the brain that scientists have linked to feelings of reward and motivation. Dopamine surges in different areas of the brain occur along with relief or pleasure, like the kind that goes along with making the right choice and getting rewarded for it. Stress also causes a dopamine release in certain areas of the brain, motivating the individual to find solutions to relieve that stress, says Waran, citing many studies, most led by Simona Cabib, PhD, of Sapienza University of Rome, in Italy.

When an animal has discovered it cannot predict or control a situation, learned helplessness can occur, stopping the release of stress-induced, problem-solving dopamine, she explains. Whereas dopamine can flood three or four lobe areas in a healthy individual, the brain of one experiencing learned helplessness essentially suffers a dopamine drought.

"Deprived of that dopamine, they lose motivation, and they don't anticipate any sense of reward," Waran says.

Learned helplessness is a passive coping strategy in which (individuals) get into a lowered blood pressure and lower heart rate. (*Cont. on Page 2*)

## Broken Spirit

"Learned helplessness" is a kinder, softer sounding phase than we use for the damaged horses that arrive here at the sanctuary. Their **spirit** is **broken!** Many don't want anything to do with people or other horses.

Meeka didn't trust either of those. She came to us four months after a horse had kicked her in the face so hard it broke her jaw. The owners were told by the veterinarian that the jaw should be stabilized to promote correct healing. It was not done, so when we met Meeka four months later, she was still in a great deal of pain and oh, so skinny. Today Meeka is a happy well-adjusted sweetie that likes attention and is doing great under saddle.

Red Sky came from hell! She was sick with EPM and suffered from terrible treatment. In her last home, anyone was allowed to ride her regardless of whether they know how to ride or not. When Red Sky started bucking people off, the owner started riding her. He was a huge dude and had no business riding a horse this size .

(*Cont. on Page 4*)



Meeka



Red Sky



Chuckles & Chicklet



Honey

## How it Happens in Horses - Dr. Andrew McLean (*Cont. from Page 1*)

Animal behavior scientists consider learned helplessness to be an extreme state of negative welfare. Waran says we should be very concerned if animals in our care have reached this point; if it's occurring in our own barns, it could be happening on a larger scale throughout the industry.

Traditional training techniques, especially as humans have found ways to control animals much bigger and stronger than themselves, have historically put horses at risk of learned helplessness, says Hayley Randle, PhD, of Charles Sturt University's School of Animal and Veterinary Science, in Wagga Wagga, New South Wales, Australia.

Across generations of horse training, humans have used methods that "break" the horse's will, Randle says. These mainly include restraint systems that involve tying horses for long periods in ways they can't escape. While that might seem extreme in most modern equitation programs, many riders continue to use restraint systems and devices that don't allow the horse to find a way out. Or, techniques such as the "yank and crank" method—holding the reins tight while spurring hard into the sides—can be conflicting and confusing. "The horse can't behave in a way that causes the pain to cease," Randle says.

Unskilled riding can also create a state of learned helplessness, she adds. Riding school mounts deal with multiple riders who haven't mastered negative reinforcement—the timely release of pressure acknowledging the horse's response to a cue. And each student has a unique set of skills, along with mistakes they commonly make.

"Combined with a lack of contingency (in this case, the absence of certainty) between response and outcome, such horses may well be predisposed to giving up trying," she says.

"It's certainly an area in which we need a greater understanding of the behavioral indicators we can use reliably to ensure we avoid putting our horses in this state of poor welfare," Waran says. Lazy? Depressed? Pessimistic?

The learned helplessness horse is essentially "turned off," our sources say. He seems to be uninterested in most things, unmotivated, and generally apathetic. Some people describe horses in a state of learned helplessness as lazy or stubborn. To others, they might seem depressed, hanging their heads and ears low and not responding to sights, noises, voices, or approaching people or animals.

"They get this way because learned helplessness is a passive coping strategy in which they get into a lowered blood pressure and lower heart rate," says Andrew McLean, PhD, BSc, Dipl. Ed, of the Australian Equine Behaviour Centre, in Victoria. "It's a depressed state, and you can see that they just don't seek pleasure anymore, and nothing interests them."

Certain animal trainers—including elephant trainers—seek out this state in large animals because it makes them seem safer to work with, McLean says. But it can actually be dangerous because the animal can become untrainable. Above all, when humans purposefully work toward LH in horses, it's unethical and even borders on abuse, he says.

"It's a sad state to be in," says McLean. "We see the same thing in people who've been tortured. And that's what torture is, isn't it? Constant pain and unending pain that has to be endured."

### What Learned Helplessness Is Not

Fortunately, the extreme state of learned helplessness is fairly rare in the modern world of equitation, says Hall. That doesn't mean we don't have horses dealing with bad riding or constant pain; it just means horses haven't reached the extent of being in a true state of learned helplessness.

Sometimes people confuse signals or accidentally desensitize horses to cues like leg pressure by not releasing it, says Hall. "The horse ends up not responding to leg pressure anymore, but that's ... just desensitization, which is another kind of problem but not as extreme (as LH)."

Learned helplessness also gets confused with useful training techniques such as habituation (becoming accustomed to something), Randle says. That's what we do when we train horses to not show a flight response when they see scary objects such as blowing flags, or when we train them to stand still while we spray them with fly spray or a hose.

"The term learned helplessness often gets overused, and it's frustrating," Randle says. "This means that LH becomes a blanket term and gets dumbed down. Without an accurate understanding of what LH is and how severe it is, horse welfare ultimately gets further compromised."

### Alternatives to Learned Helplessness

Although many things aren't learned helplessness, an ongoing mix of improper riding and training methods can eventually lead to it, our sources agree. That's why it's critical we take steps to avoid what researchers call "the slippery slope to LH." By getting informed and becoming better riders and more ethical trainers, we can avoid heading down that path, they say. (*Cont. on Page 3*)

## Alternatives to Learned Helplessness (*Cont. from Page 2*)

"Poor equitation can lead to a negative affective (relating to moods, feelings, and attitudes) state marked by pessimism, meaning the horse isn't really interested in trying new things," says McLean. "A combination of welfare invasions, including bad training, sends horses down that LH slippery slope."

To help prevent this, make sure your horse always feels like he has a choice and that his choices have consequences that allow him to control what happens to him, says Hall. For instance, with the negative reinforcement example given earlier, if you ask the horse to leg yield, he knows he has the choice to continue moving off the leg pressure laterally, with the consequence of you releasing the pressure.

Understand learning theory, she says. Its main learning processes are habituation, sensitization, shaping, operant conditioning (positive and negative reinforcement), and classical conditioning (using predictable signals).

"Train horses according to what we already know about their cognition and learning," Hall adds. "Pay attention to how we give cues, and how we release pressure. Keep training sessions short and interesting, where the horses can see that the choices they make matter."

Groundwork can help prevent learned helplessness, as well, because it reveals our strengths and flaws as trainers better than ridden work, says Hall. "The people working the horse will understand better how the horse works when they're on the same level, literally, as the horse," she says.

Of course, there are ways to improve our riding to reduce the chances of causing LH. One way, is with "simulators!" says Hall. "When you ride a simulator, you can develop better balance, core strength, and familiarization with movement patterns, without causing lasting harm to your horse."

Not an embarrassment, a trick, or a tool reserved for novices, a riding simulator can improve welfare-critical skills for equestrians of all levels, she says. Several types are available commercially.

### Can it be Undone?

While the slope to learned -helplessness is a dangerous one, you might be able to halt its progress by using the learning-theory-based techniques described, our sources say. Once a horse reaches a true state of learned helplessness, however, there's little you can do to bring him back, says Hall.

"I bought a mare once who suffered from LH," she recalls. "She was very happy to be handled from the ground but unresponsive when ridden. I tried everything I could to bring her out of it. I spent many long hours working with her, trying to show her that she could have control over various situations. But it was too late. Under saddle she had lost all hope, all motivation. We had back checks, tack checks, teeth checks, and more. But nothing untoward was ever found. She felt like an unresponsive 'riding school' horse whom we couldn't reverse. By then, the only thing anyone could do for her was offer her a happy pasture for the rest of her life."

### Take-Home Message

Does your horse care what happens to him? Does he actively try to avoid pain, pressure, or negative stimuli? If he does, it's up to you to keep him responding. Many training styles and riding mistakes can make a horse less responsive to cues, pressure, and even pain—and that's often the early stages of learned - helplessness.

You might need to work with a professional to make sure you're training your horse in a way that teaches him he has a choice (and that not responding to something frightening, or moving away from leg pressure, for example, is the best choice). When horses end up not responding to stimuli because they think nothing they do will make the pain or fear go away, they've hit rock bottom. Avoid this irreversible state through sound, science-based training principles and effective riding skills.

*(I removed parts of this article that were not appropriate for children to read. I know this article has been long, but it applies to not only horses but, all animals, children, people, and folks you work with. ~ J.B)*

## ***Broken Spirit (Cont. from Page 1)***

It took several chiropractic adjustments and treatment for EPM for Red Sky to start to feel better and to trust folks again. She is now back under saddle and doing great.

Chuckles and Chiclet came from total neglect and starvation. They had never been handled or fed. Chuckles trusted everyone right from the first day. There was a large stallion charging in the field intent on doing major damage to poor little four-month-old Chuckles. I jumped the fence and got in between the stallion and Chuckles and chased off that monster scary horse. Chuckles was hiding behind me and leaning into my legs. I reached around to scratch him and know he would now trust people and he did.

Chiclet was a different story and it took several years and one of our young people to slowly bring him around. He has been started under saddle and is doing wonderfully.

Honey was just 2.5 years old when she arrived and disliked all people. Like some of the horses with damaged spirit, she was dangerous. Patience turned her around, and she may be one of the first babies to greet visitors.

The above horses are just a few of the lovely babies that have come to us damaged physically and mentally by their past owners.

So far, we have never had a horse with a broken spirit that we have not been able to turn around to be a good citizen. Each horse is given the time it needs with no pressure, just patience, and more patience to take as long as needed to begin to heal.

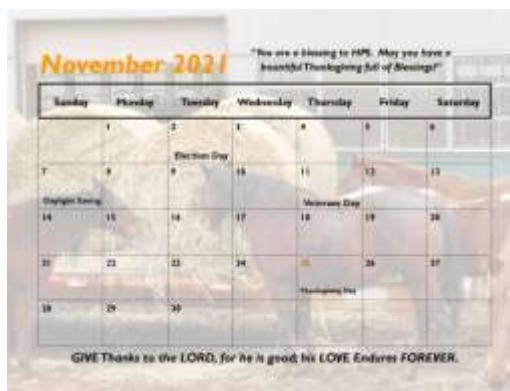
It is a joy when horses come with a healthy mental state like Dusty and Scooter.

These are domestic animals that don't understand when no one takes care of them. If turned out in the wild, these horses will die. These are prey animals that need to be treated gently and understood. Come to the sanctuary and the horses will greet you and come for attention. Visitors are always amazed at how trusting the horses are.

***Thank you for making it possible for each horse to have the time needed to remain at the sanctuary.***



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## *Romance is in the Air*

The girls are all atwitter over the new boy in town. Heavenly has been his main squeeze with Sparrow swishing her pretty tail in his face. We have seen this amorous behavior before with Flame and as he has aged it has lessened some. Putting Vick's Vaporub under the boy's nose often helps, but not with Dusty. He may never have been with so many mares at one time.

If Dusty gets too carried away with his stallion behavior, he gets closed in a stall for a little bit. I think he has put the moves on every mare here. We thought that the stalling was helping until we saw Dusty leading Sparrow around to the side of the barn out of our sight. It is like teenaged kids!

### **Happy Birthday to Heidi Simmons & Benson from the Tucson Tribe**

*Black Bart and Charming Charlie, (aka Mustang Charlie), gone a long time now, but forever remembered with love and thanksgiving. By Lois G. Nixson*

### **In memory of Mr. Eno. By Jessie Morvan**

In memory of Marlene Lane who shared her love of horses with me and exemplified kindness and mercy to all creatures. By Kim Lane

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*Thank you!*

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## News from the Herd

**Scooter** came to the sanctuary with shoes on her front hooves. A copy of her first radiographs was sent to HPS by her past veterinarian. The soles were too thin and there was a crack up the front of one hoof. We had radiographs done and the soles were much improved. Our farrier opened up the crack and shoes were replaced. The farm call and the radiographs cost \$460.00 plus the farrier fee of about \$100.00.

**Freedom's** back was hurting and he needed a chiropractic visit at a cost of the farm call and adjustment for \$182.00.

**Nova** had a recheck and needed medication for a cost of \$392.50.

**New TWH** needed a blood panel since she wasn't gaining weight as she should have for \$150.00. There were additional medications needed and the total of the veterinarian bill was \$2,123.10. The vet cost for the month was higher than normal.

The **Kubota tractor** finally got repaired and returned. It has been too wet to mow the fields which desperately need it. It has been out of commission for most of the summer. It is running better than ever. We have not gotten the bill for the repair yet.