

IS MY HORSE EXPERIENCING STRESS OR ANXIETY?

Horses are sensitive and can become fearful and anxious when presented with a new object, loud noises or change in environment.

Please complete the below to evaluate your horse's behaviour.

DO YOU CONSIDER YOUR HORSE TO BE:

- | | | |
|--|---|---|
| <input type="checkbox"/> Aggressive (bites or threatens to bite, kicks, rears or bucks)? | <input type="checkbox"/> Restless or fidgety? | <input type="checkbox"/> Difficult to slow or stop? |
| <input type="checkbox"/> Naughty / disobedient? | <input type="checkbox"/> Depressed or lazy? | <input type="checkbox"/> Naps, failure to move or herd bound? |
| <input type="checkbox"/> Anxious, nervous or fearful? | <input type="checkbox"/> Tense or spooky? | <input type="checkbox"/> Unpredictable? |
| <input type="checkbox"/> Excitable, hot or sweaty? | | |

DOES YOUR HORSE EXHIBIT ANY OF THE FOLLOWING BEHAVIOURS:

- | | |
|--|---|
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Difficult to catch in the paddock? |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Stand-offish in stable (unfriendly, pins ears, bites or threatens to bite, turns head away and swings quarters around)? |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Difficulty in putting the bridle on or taking it off (holds head high, tosses head, clenches teeth)? |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Has difficulty with trailer loading or travelling? |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Exhibits head shyness where you have difficulty handling or clipping around the mouth, ears, and forelock? |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Difficult to mount, as a result of being fidgety or tense, moving away or rearing? |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Bucks, bounds, spins or rears? |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Above / ahead of the bit (poking their nose in the air) or high-headed / 'star-gazing', or behind the bit / 'overbent' where they tuck their chin into their chest? |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Lazy, dull, tires prematurely or lacks 'life'? |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Ear pinning and rarely pricks up ears during exercise? |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Slaps lip (noisy flapping of lower lip) at work? |



Answering YES to any of the questions above can indicate that your horse might be experiencing pain or stress and anxiety...

Please speak to your vet should you be concerned about your horse's behaviour.

Your vet and behaviourist are a formidable team who is well-equipped to help you address any problem behaviours you may be experiencing with your horse.

Developed in association with



WORLDWIDE EXCELLENCE IN ANIMAL BEHAVIOUR EDUCATION

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Nutritional aid for use in anxiety related conditions in horses

CAN BE USED TO ASSIST IN STRESS AND ANXIETY CAUSED BY:



COMPOSITION	POWDER	PASTE
Active Ingredients	Per 1 g Powder	Per 1 ml Paste
Peptazine	54 mg	50 mg
L-Tryptophan	12,5 mg	50 mg
L-Theanine	12,5 mg	-
N-Acetyl Taurinate Magnesium	-	60 mg
Vitamin B ₅ (Pyridoxine HCl)	0,75 mg	1 mg
Vitamin B ₁ (Thiamine)	1,5 mg	-
Vitamin B ₃ (Niacin)	0,75 mg	-

DIRECTIONS FOR USE

WEIGHT	POWDER	PASTE	1.5 kg POWDER	60 g PASTE
Foals / Weanlings / Ponies (<250 kg)	½ Sachet (25 g)	10 ml	60 Days	6 Doses
Horses <500 kg	½ Sachet (25 g)	20 ml	60 Days	3 Doses
Large Horses >500 kg	1 Sachet (50 g)	25 ml	30 Days	2 Doses

LENGTH OF USE

For long-term use, speak to your veterinarian.

Can be mixed into the horse's feed. Administer one to two hours before the stressful event or activity.

Can be repeated if desired effect is not achieved.

If the period of stress is longer than one day, then continue with once daily dosing for the duration of stressful period.



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CalmEze[®]

PLUS EQUINE

Reg. No. V33228 / V33229 Act 36/1947
Namibia: N-FF 5214 / N-FF 5215

FOR ANIMAL USE ONLY

Nutritional aid for use in anxiety related conditions in horses



L-TRYPTOPHAN

A precursor of serotonin, which controls behaviour and mood. It has been observed that low levels of serotonin are directly related to aggression, depression and stress.^{1,4}

PEPTAZINE[®]



L-THEANINE

Increases the levels of GABA, which is essential for the control of central nervous system responses during periods of fear and anxiety. It also helps to increase serotonin and dopamine levels and reduces cortisol and noradrenaline levels.^{11,12}

N-ACETYL TAURINATE MAGNESIUM



Magnesium is a vital macromineral essential for cellular health and function and is essential in the regulation of vascular tone and heart rhythm. It plays an important role in reducing nerve excitability and muscle spasms. Studies found a correlation between nervousness and suboptimal levels of magnesium in the diet.¹⁴



THIAMINE (Vitamin B1)

An essential dietary requirement and is important for energy metabolism within the central nervous system. It has been shown to reduce anxiety and improve general well-being. Deficiencies can cause selective loss of neurons, cholinergic neurotransmitter function impairment and can lead to generalised anxiety disorder.^{5,6}

NIACIN (Vitamin B3)



The key mediator for neuronal development and survival during oxidative stress. Deficiencies can cause dementia, depression and neuro degenerative-like symptoms. Niacin has been indicated as a treatment for ischaemic and traumatic injuries, psychiatric disorders and neurological diseases.⁷



PYRIDOXINE (Vitamin B6)

Pyridoxine is an essential cofactor for the conversion of 5-HTP into serotonin and has been shown to increase the transport of tryptophan into serotonergic neurons, thereby increasing serotonin synthesis. Deficiencies can lead to a reduced number of serotonin-2 receptor sites.⁸



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COMMON STRESSORS IN HORSES INCLUDE: ^{1,2,13}

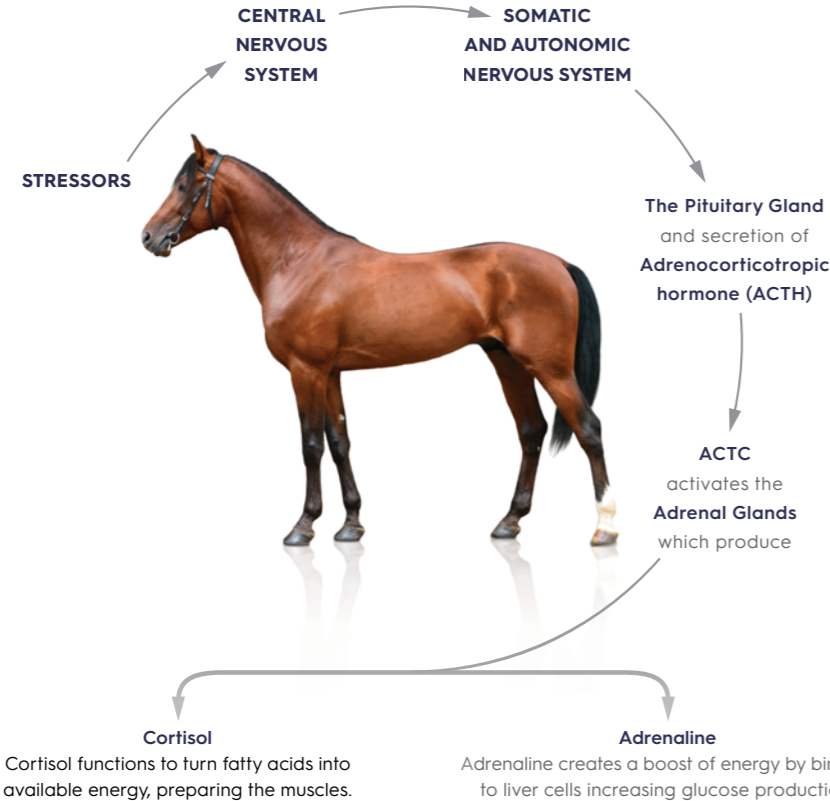


Horses that experience stress or anxiety will adopt one of the "4F" basic behaviours: flight, fight, freeze or fidget. Their first response is usually to flee from the situation and save themselves. If escape is not an option the horse will employ a different basic behaviour like kicking out, refusing to load or pawing the ground.¹³

THE FIGHT OR FLIGHT RESPONSE

During a stressful situation, the sympathetic nervous system throws some parts of the body into overdrive while depriving other parts of blood and oxygen.⁹ This forms part of the fight or flight response governed by the limbic system: the epicentre of emotional and behavioural expression.¹

Figure 1.¹



PHYSICAL AND PHYSIOLOGICAL EFFECTS OF STRESS AND ANXIETY

PHYSICAL EFFECTS ²	PHYSIOLOGICAL EFFECTS ¹
<ul style="list-style-type: none"> • Eye wrinkling, twitching or blinking • Wide or triangulated eyes and ear position • Muscular tension • Elimination • Avoidance • Tail swishing 	<ul style="list-style-type: none"> • High blood pressure • Elevated blood sugars • Suppressed immune system • Accelerated heart rate • Slowed digestion • Paling or flushing

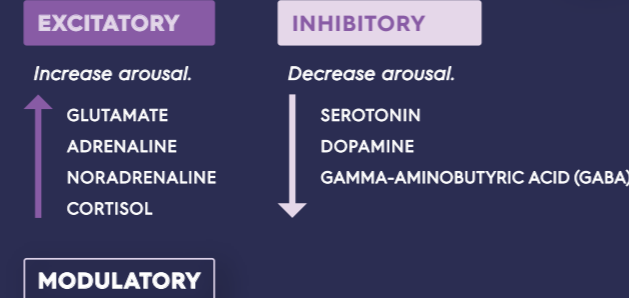
THE ROLE OF THE NEURON AND NEUROTRANSMITTERS

Neurons relay impulses through the continuous release of small quantities of neurotransmitters by synaptic vesicles within the synaptic cleft.^{5,9}

Neurotransmitters are small chemical messengers that act as signalling molecules by binding to specific receptor sites within the synaptic cleft.¹

The quantities of neurotransmitters available within the synaptic cleft are regulated by the body. They are either broken down or reabsorbed by re-uptake sites that take the molecules out of the synaptic cleft and into the presynaptic neuron.⁹

Neuroendocrine molecules can be excitatory, inhibitory or modulatory:³



Act on large numbers of neurons and influence the effects of other neurotransmitters.

L-TRYPTOPHAN, L-THEANINE & PEPTAZINE

Under normal conditions, small quantities of serotonin and dopamine are released within the synaptic cleft on a continuous basis. L-tryptophan and 5-hydroxytryptophan (5-HTP) are precursors of serotonin. Oral L-tryptophan supplementation increases the amount of serotonin that is produced and released within the synaptic cleft.^{1,9}

Similarly, supplementation of L-theanine and peptazine increases the effects of GABA, which competes with ACTH, thereby reducing the secretion of adrenaline and cortisol by the adrenal glands. They also stimulate the release of dopamine which increases the sense of well-being and relaxation and reduces anxiety.^{10,11,12}

This combination has been shown to be safe, fast-acting and effective in both acute and chronic cases of anxiety, with no known side effects.⁴ Combined treatment with other supplements and medications should however be avoided as far as possible. More is not necessarily better.

Fear and stress is listed as one of the major concerns facing domestic horses.²

Studies show that most owners mistakenly interpret anxiety as being naughty, cheeky, excitable, in pain, disobedient, or just not wanting to do something.²

Many guardians are unable to recognise subtle signs of anxiety and mild to minor signs of anxiety are often ignored as they do not cause inconveniences. Intervention is often only considered with severe and exaggerated signs of stress and anxiety.²

SIGNS OF ANXIETY

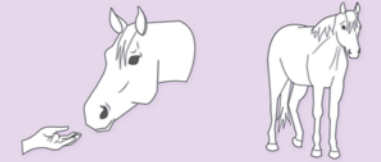


Figure^{2,3}

EQUINE FEAR, ANXIETY AND STRESS SCALE

RELAXED

- Head, neck and ears in natural position.
- Muscles relaxed, standing at rest, often with most of the weight shifted to one leg.
- Eyes soft or sleepy.
- May show curiosity, and may willingly approach and interact with people or other horses.
- Will groom (themselves or herd mates) and graze if food is available.



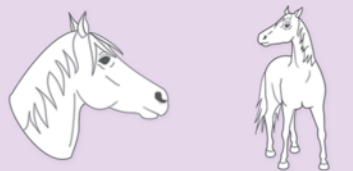
ALERTNESS OR AROUSAL

- Increased ear rotation.
- Head slightly raised, with increased head movement towards or away from person, but not moving the body away.
- Small hoof movement, with self-grooming that is done out of context of normal grooming.
- Might accept treats or touch and interact with person or other horses or appear curious about them.



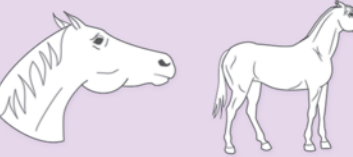
MODERATE ANXIETY

- Frequent ear rotation.
- Raised head and neck.
- Restless, tail movements and muscle tension.
- Reduced interest in interaction, treats or touch, whilst not actively trying to escape.
- With moderate anxiety there will be attempts to increase distance between horse and fear inducing stimulus - even if that is just stepping back or lifting head high or pulling back on halter/swinging away.
- Hoof movement may also include stamping the hooves in agitation.



FEAR OR STRESSED

- Raised head and neck, with frequent ear rotation.
- Whites of eyes showing.
- Restless, with snapping tail movement, stomping/pawing, head shaking.
- Full-body muscle tension, with reduced movement or freezing.
- Disinterested in interaction, refuses treats or grabs them roughly.
- Actively trying to escape, showing avoidance behaviours and possibly rearing.
- When fear circuitry in the brain is engaged the horse is unlikely to eat (sympathetic nervous system activation that suppresses appetite at this level of dis-inhibition).



BEHAVIOURAL PROBLEMS²

The inability of some horse guardians to recognise anxiety in their horses, can lead to long-term stress and anxiety, giving way to behavioural problems and an increase in dangerous situations for both guardians and their horses. Not addressing causes of stress can also lead to emotional challenges like depression.

Compulsive behaviours associated with long-term stress and anxiety:^{2,13}

- Wind sucking.
- Weaving or pawing.
- Nodding or head shaking.
- 'Shut down' demeanour.
- Evading tightening of the nose band, raising the head, grinding teeth during saddling and girthing.

