

EquiSUMMIT™ EQUINE STRESS 101

What Is Stress and What Causes It?

Stress can be defined as a biological or psychological response to new or threatening circumstances. The result can be changes in metabolism, health, and physical performance. Stress can be acute (short term) or chronic (long term). Acute stress can sometimes be beneficial – such as the effect of exercise; however chronic stress or the compounding effect of multiple stressors can have an undesirable impact on your horse.

Some common stressors are identified in the “stress wheel” below and include extreme temperatures, diet changes, exposure to disease, travel and more. While it’s not always possible to avoid stressors, it is important to manage them.



Stress wheel provided by Kemin Equine. Learn more at kemin.com/equine.

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How Do You Know When Your Horse is Stressed?

Just like people, each horse will react differently to stress. Your horse may exhibit a variety of physical, behavioral, or biological changes that signal they are experiencing stress. Most importantly, it's critical to know what is normal or abnormal behavior for your horse.

Physical or behavior changes

- Pawing
- Dilated nostrils
- Cribbing
- Pinned back ears
- More reactive behaviors when handled
- Head tossing or shaking
- Increased or more aggressive tail swishing
- Increased amounts of defecation

Biological changes

When stressed, your horse's heart rate can increase significantly and stress hormones such as cortisol and adrenaline are released. Ultimately, these biological changes may impact metabolism, gut function, electrolyte balance and inflammation.

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The Impact of Stress

Stress reactions redirect nutrients to be used as part of the fight or flight response. In short-term stress situations (e.g. exercise), this can be beneficial. However, when exposed to chronic, repeated, or compounded stressors, elevated cortisol and adrenaline levels have a detrimental impact on your horse. The resulting redirection of energy can inhibit the immune system, reduce physical performance, and negatively impact the horse in a number of other ways.

This inhibitory impact on the immune system is why we and our horses often get sick after stressful periods – such as travel. The horse's immune system is simply not as efficient as it normally would be in fighting off infections or helping to repair injuries.

Long-term changes in metabolism can result in negative impacts to physical and reproductive performance as well.

Additionally, there is a connection referred to as the gut-brain axis in which there is two-way communication between the brain (central nervous system) and the gut. Heightened levels of stress may lead to consistently elevated levels of cortisol which may reduce blood flow to the GI tract. This reduced blood flow results in the breakdown of intestinal tissues and negatively impacts nutrient absorption. High levels of cortisol have also been shown to reduce the production of prostaglandin, a substance that helps protect the mucosal lining of the GI tract from stomach acids.

Tips to Manage Stress

Horses are natural grazing animals attuned to living in herds built with the physical ability to run away from danger. Feeding them fewer and larger meals, spending time in stalls, reduced levels of activity and changes in routine can all cause your horse to stress. Completely eliminating stress is not an option, so the focus needs to be on reducing and managing it. A stress management approach may include:

- Regular turnouts – get your horse the exercise they need.
- Use of haynets to extend the duration of a meal and to keep your horse busy.
- Match the level of sensory input to your horse's personality or temperament. (Is your horse an introvert or an extrovert?)
- Steadily acclimate your horse to new situations. This includes new horses/social situations, changing temperatures and travel and trailering, among others.
- Try to keep to a routine. Horses like consistency, so try to keep meal times, exercise and other interactions consistent.
- Ensure your horse has access to clean and consistent feed and water – pathogens and other contaminants pose a health stress to your horse.
- Keep yourself calm and help your horse to relax in any given situation.

References

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