



# Equine Sleep Requirements: Understanding the Restful Needs of Horses

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# Sleep, From a Horse's Perspective

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# A Good Night's Sleep

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- A good night's sleep is something we all know that we need, but does a horse need it too?
- After all, they stand up while sleeping so how much do they really need?



# A Good Night's Sleep

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- The veterinary field historically has not taught us much about sleep needs of horses.
- That is changing rapidly.
- We are just beginning to understand better the mental and physiological need for sleep's essential, recuperative benefits.





# Definition of Sleep Deprivation

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- **Insufficient Sleep:**  
Sleep deprivation refers to a condition where an individual consistently fails to obtain an adequate amount of sleep required for optimal functioning.
- **Quantity and Quality:**  
Sleep deprivation can result from a lack of total sleep time or poor sleep quality, including disruptions in sleep continuity and inadequate time spent in **restorative sleep stages**.

# Basics of Equine Sleep

- Duration:  
On average, horses sleep for approximately three-four hours per day, distributed across multiple sleep episodes. This may not seem like a lot, but this short time is essential for every horse.
- Sleep Cycle:  
Similar to humans, horses experience both Rapid Eye Movement (REM) and Non-Rapid Eye Movement (NREM) sleep stages. Horses require adequate REM sleep for mental alertness and physiologic recuperation. This REM sleep is for many horses only possible when sleeping lying down.



- We all have been taught that horses sleep standing up. That is true from an anatomical standpoint. We have learned so much about what sleep really is over the past 25 years. It used to be when the eyes are closed, then that is called sleep.
- Now we know that there are different stages of sleep with different benefits to the mind and body. Horses can get restful sleep standing up, but not the regenerative, recuperative sleep called deep or REM sleep. Horses require both deep and REM sleep to thrive.
- We all know of particular horses that never lie down to sleep. We always thought that it was just their **personality**. We now understand that it is not simply their personality; **it is that they just do not feel safe.**



# Factors Influencing Equine Sleep

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- **Environmental Factors:**
  - Shelter: Access to a comfortable and secure shelter helps horses feel safe and promotes better sleep.
  - Lighting: Natural lighting cues, such as sunrise and sunset, influence equine sleep patterns.
  - Noise Levels: A quiet environment is essential for uninterrupted rest, as loud noises can startle and disturb sleeping horses.
- **Herd Dynamics:**
  - Horses are social animals and tend to sleep in groups, relying on their herd members for protection during sleep.







# Sleep Behavior and Patterns - Standing

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- **Standing Sleep:** Horses are unique in their ability to sleep both standing up and lying down.
- **Staying Alert:** Horses engage in "stay apparatus" where they lock their limbs to remain standing while dozing off.
- **Short Episodes:** Standing sleep episodes usually last for about 15-20 minutes and are more prevalent during the day.

# Sleep Behavior and Patterns - Lying Down



- Lying Down Sleep; REM Sleep: Horses experience REM sleep exclusively while lying down, characterized by rapid eye movement.
- Deep Rest: Lying down sleep enables horses to achieve deeper and more restful sleep, essential for their overall well-being.
- If horses cannot get deep REM sleep, even if the duration is long enough, their cellular healing cannot occur. This results in chronically underperforming or sometimes even in sick or injured horses.

## Consequences of Sleep Deprivation

- Behavioral and Performance (Cognitive) Issues:
  - Mood impacts: Sleep-deprived horses may exhibit heightened irritability, aggression, mood swings, emotional instability, or skittishness. They may be more prone to behavioral disorders (wind sucking (cribbing), weaving, digging, etc).
  - Reduced Concentration: Lack of quality sleep can lead to decreased focus (attention span) and lowered memory (learning ability), significantly impacting training.
  - Suboptimal Performance: A lack of REM or deep sleep causes a reduced ability to recuperate from prior efforts, as well as a reduced problem solving capacity (demonstrated in an impaired reaction time).

## Consequences of Sleep Deprivation

- **Compromised Health:**
  - **Immune System:** Sleep deprivation weakens the immune system, making horses more susceptible to infections and illnesses.
  - **Metabolic Disorders:** Insufficient rest can disrupt hormonal balance and contribute to metabolic disorders like Equine Cushings.
  - **Motor skills:** A reduction in motor skills, coordination, and balance, as well as an increase in errors, accidents, trips and falls can result from sleep deprivation.
  - **Stress:** Inadequate sleep is stressful to both the mind and the body. Constant stress from sleep deprivation can lead to decreased ability to cope with any additional stress.



## Causes of Sleep Deprivation

- Pain or physical discomfort:
  - Horses may have painful conditions ranging from joint disease or other musculoskeletal diseases, or gastrointestinal ulcers, abdominal adhesions, late-term pregnancy, skin injuries or disorders, teeth or TMJ issues, founder, shoeing, or other hoof issues, or any disease or sensitivity that causes chronic or acute pain or discomfort.
  - The cause of pain or discomfort must always be mitigated before worrying about other issues.



# Causes of Sleep Deprivation

- Environmental insecurity:
  - Horses may not feel able to gain deep restful sleep as the result of environmental issues. The basic needs of a prey animal must be considered even when we, as humans, feel we are doing everything to make them sleep well. Sometimes predators do not see things the same way as prey.
  - Potential environmental causes include stall-size, stall relocation, loss of other horses to which the horse may be attached, the need for other horses close, light issues, blanket issues, bedding/mud/urine problems, window/ventilation issues, noise issues, weather insecurity, and many more seemingly incidental environmental issues that, when addressed, may lead to resolution.

# Promoting Healthy Sleep Practices for Horses

- A. Routine medical care
- B. Management Practices / Consistent Routine
- C. Optimal Housing Conditions
- D. Minimizing Disturbances
- E. Safety
- F. Education and Training

# Promoting Healthy Sleep Practices for Horses

- A. Routine medical care  
Freedom from chronic pain and prevention of injuries and illness is a foundation for caring for any sentient being.
- B. Management Practices / Consistent Routine
- C. Optimal Housing Conditions
- D. Minimizing Disturbances
- E. Safety
- F. Education and Training



# Promoting Healthy Sleep Practices for Horses

- A. Routine medical care
- B. Management Practices / Consistent Routine
  - Maintaining a predictable daily schedule with regular feeding and exercise helps horses establish healthy sleep patterns.
  - Feeding and Exercise: Irregular feeding schedules or excessive exercise can interfere with horses' ability to obtain sufficient sleep.
  - Working Hours: Demanding work schedules or prolonged training sessions without adequate rest periods can lead to sleep deprivation.
- C. Optimal Housing Conditions
- D. Minimizing Disturbances
- E. Safety
- F. Education and Training

# Promoting Healthy Sleep Practices for Horses

- A. Routine medical care
- B. Management Practices / Consistent Routine
- C. Optimal Housing Conditions  
Providing horses with comfortable and secure stabling or pasture environments that promotes relaxation and facilitates lying down sleep. Allowing horses to be in groups or alone, depending on each individual horse's needs.
- D. Minimizing Disturbances
- E. Safety
- F. Education and Training

# Promoting Healthy Sleep Practices for Horses

- A. Routine medical care
- B. Management Practices / Consistent Routine
- C. Optimal Housing Conditions
- D. Minimizing Disturbances  
Creating safe, calm, quiet resting areas and reducing noise and light levels to promote uninterrupted sleep.
- E. Safety
- F. Education and Training

# Promoting Healthy Sleep Practices for Horses

- A. Routine medical care
- B. Management Practices / Consistent Routine
- C. Optimal Housing Conditions
- D. Minimizing Disturbances
- E. Safety
  - Enabling the horse to feel safe in their surroundings, whether it be in a group (safety in numbers) or in a private familiar, safe stall.
  - A feeling of safety is the result of a complex interaction of numerous factors, each of which must be properly handled.
- F. Education and Training

# Promoting Healthy Sleep Practices for Horses

- A. Routine medical care
- B. Management Practices / Consistent Routine
- C. Optimal Housing Conditions
- D. Minimizing Disturbances
- E. Safety
- F. Education and Training  
Promoting awareness among horse owners, trainers, and industry professionals about the importance of sleep and implementing proper sleep management practices.



- Understanding equine sleep requirements is vital for ensuring the well-being and optimal performance of our equine companions.
- By recognizing the factors influencing their sleep patterns, promoting an environment conducive to quality rest, and acknowledging the consequences of sleep deprivation, we can enhance the overall health and happiness of horses in our care.
- Let us strive to meet their sleep needs, just as we do with their medical, hoof care, nutritional, and exercise requirements.