

For many years the following behaviors, e.g. cribbing , weaving and box walking, were referred to as stable vices. However, along with that term was an implication that the horse was somehow behaving badly or had made a decision to annoy its owner. To move away from that bias, the term 'stereotypies' or 'stereotypic behavior' has now become the preferred term. According to Mason (1991), 'stereotypies are defined as repetitive, relatively invariant patterns of behavior with no apparent goal or function'.

Some of the more common equine stereotypic behaviors are:

- Cribbing/Crib-biting – fixing the teeth against almost any object, pulling backwards while tightening the neck muscles, typically accompanied by a grunting sound
- Weaving – swaying its weight back and forth from left to right on the front legs
- Stall-walking/Box-walking – pacing a fixed route around the stall
- Flank biting/Self-mutilation – repetitively biting itself

(There are other stereotypic behaviors that may be observed. In general, most can be categorized either as oral stereotypies or locomotor stereotypies.)

Note: wood-chewing and pawing (in my opinion anyway) should not be considered stereotypic behaviors. Wood-chewing is a very normal (albeit sometimes frustrating) behavior for horses to perform. Even horses out in the wild will often chew bark and branches, especially when other food substrates are lacking. Pawing often accompanies frustration/anticipation right before feeding time. If we sometimes feed more quickly when horses are pawing, we are accidentally reinforcing this behavior; furthermore it is a natural behavior that they engage in during the process of grazing.

Stereotypic behavior (SB) is often linked to a suboptimal environment (e.g. insufficient turnout time, lack of social interaction); however a **big caution** needs to be made here. Just because a horse currently performs an SB such as cribbing, does not mean the horse's

current

environment/welfare status is inadequate – merely that it has likely experienced a suboptimal scenario sometime during its life. SBs, once entrenched, are next to impossible to extinguish. Some researchers have suggested that SBs serve as coping mechanisms to help reduce an animal's stress or increase its ability to cope with confinement or other stressors that it has little to no control over. There has never been a documented case of free-ranging, feral horses engaging in stereotypic behaviors.

Several surveys over the last two decades (in Europe, Canada, Australia and the US) indicate that 2-8% of the horse population crib, approximately 3% weave and about 2% box walk. They have also consistently found associations with the following potential risk factors: limited turn out time, limited social interaction, limited opportunities to graze/forage, above average reliance on concentrate feeds, and stressful weaning. There may also be a genetic relationship. It is likely that some horses can be exposed to nearly all of the above mentioned risk factors, and still not develop an SB; whereas some horses can be exposed to just one of the above risk factors, and quickly develop a stereotypic behavior.

If, as we have now begun to believe, SBs are a coping mechanism of sorts, what, then, is the harm in a horse developing a stereotypic behavior? There are some potential harms that have been noted. Cribbing horses may cause damage to their teeth and gums, and they may cause damage to the surfaces that they crib upon. Weavers and box-walkers tend to be hard on their hooves/shoes, hard on their stalls and may be difficult to keep weight on due to the extra calories burned throughout the day and that they may, in some cases, prefer to perform their stereotypy versus eating. In addition, some boarding facilities ban stereotypic horses from their barns, and stereotypic horses – all other things being equal – often have a reduced market value. Why are they sometimes banned at boarding facilities? There is a commonly held belief that horses learn to crib or weave from other cribbers or weavers. However, this has never been proven via research studies. At MSU, we have occasionally accepted donated horses with stereotypies. Typically these are horses that are turned out with our horsemanship lesson horses. We have never had one of our own horses begin stereotyping after the stereotypic horse was put out with them. Also of interest is that these donated SB horses do eventually reduce the amount of time they spend engaging in their cribbing or weaving behavior, when kept out on pasture with the other horses. But as soon as they are brought back into a stall situation, they immediately go back to their preferred stereotypic behavior.

If you already own a horse with a stereotypic behavior, there are a few options to help manage them. (This assumes for the moment you would like them to reduce the amount of time they spend engaging in cribbing, weaving, etc. An increasing number of owners are deciding that if the horse isn't damaging its own well-being, they are going to just let it stereotype.) For cribbers, the cribbing collars are often quite effective for many horses. One person I know with a cribber puts the collar on when her horse is in its box stall, but he doesn't need to wear it when he is out in the paddock and has access to grazing and being around other horses. (*Be very careful when turning horses out to pasture while wearing cribbing collars. I know of two horses who managed to hang themselves while wearing their cribbing collars during turnout.) You can try to minimize the surfaces they have available to crib upon. For example, run a hot wire on the top and to the inside of your paddock fencing. And don't forget to manage these stereotypic horses based on reducing the risk factors mentioned earlier. Horses who have more social interaction, more turn out time, and more access to foraging probably won't quit cribbing, but will usually reduce the amount of time they spend cribbing. The two main locomotor stereotypies (weaving and box walking) have recently been found to occur at the highest levels when there is a lot of activity in the barn. Sometimes, then, it is beneficial to tie horses who are box walkers during the active barn periods of the day and then untie them for the remainder of the day. If they are not overweight, consider tying them next to a full hay net to keep them engaged in an activity. There has been some success with weavers in placing a stainless steel mirror (not glass) in the horse's stall. Does the horse then think it has company? We're still not really sure. Also, the anti-weaving bars popular at some stables do seem to reduce the amount of time horses weave. Recently a number of new style trickle feeders, slow feeders, special hay nets etc. have come onto the market. Many of these work very well to help ensure the horse eats his hay over a longer period of time. If you keep your stalls quite clean, some of the stall toys that horses can push around and receive small bits of food can work out well. These latter two items can be especially helpful if you find you have to keep a horse on stall rest for a period of time.

Conclusion

The bottom line, in my opinion, is that preventing stereotypic behaviors is far easier and more effective than trying to manage SBs. Make sure horses get at least some daily turn out time; if at all possible, ensure that they have social interaction with other equines, even if it is only across the fenceline; feed based on forage needs first. Many horses won't even require any concentrate feed if they are receiving sufficient amounts of forage.

If you happen to acquire a stereotypic horse, this should not be seen as the end of the world. Many stereotypic horses have lovely dispositions and compete very successfully in many disciplines.

Resources

Albright, Mohammed, Heleski, Wickens, Houpt (2009) Crib-biting in US horses: breed predispositions and owner perceptions of aetiology. *Equine Veterinary Journal*

Bachmann, Audige, Stauffacher (2003) Risk factors associated with behavioural disorders of crib-biting, weaving and box-walking in Swiss horses. *Equine Veterinary Journal*

Clegg, Buckley, Friend, McGreevy (2008) The ethological and physiological characteristics of cribbing and weaving horses. *Applied Animal Behaviour Science*

Cooper, Mason (1998) The identification of abnormal behavior and behavioural problems in stabled horses and their relationship to horse welfare: a comparative review. *Equine Veterinary Journal*

Cooper, Albentosa (2005) Behavioural adaptation in the domestic horse: potential role of apparently abnormal responses including stereotypic behavior. *Livestock Production Science*

Haupt, McDonnell (1993) Equine stereotypies. Compendium of Continuing Education

Lebelt, Zanella, Unshelm (1998) Physiological correlates associated with cribbing behavior in horses: changes in thermal threshold, heart rate, plasma beta-endorphin and serotonin. Equine Veterinary Journal

Mason (1991) Stereotypies: a critical review. Animal Behavior

McBride, Cuddeford (2001) The putative welfare-reducing effects of preventing equine stereotypic behavior. Animal Welfare

McGreevy, Nicol (1998) Prevention of crib-biting: a review. Equine Veterinary Journal

McGreevy, Nicol, Cripps, Green, French (1995) Management factors associated with stereotypic and redirected behavior in the Thoroughbred horse. Equine Veterinary Journal

Nicol (1999) Understanding equine stereotypies. Equine Veterinary Journal

Nicol, Davidson, Harris, Waters, Wilson (2002) Study of crib-biting and gastric inflammation and ulceration in young horses. *Veterinary Record*

Parker, Goodwin, Redhead (2008) Survey of breeders' management of horses in Europe, North America and Australia: comparison of factors associated with the development of abnormal behavior. *Applied Animal Behaviour Science*

Viser, Ellis, Van Reenen (2008) The effect of two different housing conditions on the welfare of young horses stabled for the first time. *Applied Animal Behaviour Science*

Waters, Nicol, French (2002) Factors influencing the development of stereotypic and redirected behaviours in young horses: findings of a four year prospective epidemiological study. *Equine Veterinary Journal*

Winskill, Waran, Channing, Young (1995) Stereotypies in the stabled horse: causes, treatments and prevention. *Current Science*

Wickens, Heleski (2010) Crib-biting behavior in horses: A review. *Applied Animal Behaviour Science*