



Stall causes more injuries than loose-housing system

This is what Per Michanek, veterinary and researcher, claimed at his lecture at the "The Happy and Fresh Horse" in Nykøping, Sweden in September.

- For an injury occurred when the horse is in the field, it is much easier to find the direct cause of it. But the injuries, which indirectly are caused because horses are kept in stalls are in my opinion many more, Per Michanek continues.

The horse is designed to live in the open fields without forests. Here it has good use of its speed to escape predators. Horses have adapted to this environment with not much to eat, so they move over large areas in order to find enough feed. Both movement and time are important components in the search for feed. It also affects the amount of time that the horses need to rest. Horses are classified as around-the-clock-active and spend only around 30 min. a day lying down.

- Any change in how the environment is in the wild, gives large demands to the animal's adaptability, and it can create problems, says Per. Today, horses have the exact same need as horses did thousands of years ago. We can change the quantity of their instincts, but we cannot make them go away.

Affects performance

Today, we normally keep horses for our own amusement. No matter if we go for strolls in the forest or compete on a high level, we all wish for the horse to perform its best. The most important factors that decide if the horse is robust and is doing well is, according to Per: Good genes, good health, good exercise, fresh air and good nutrition.

- Everything, except the first factor, are things that we are responsible for, he says.

A horse that spends part of its days in a stall is prevented from living according to its needs.

- First of all, the horse is standing still. It is designed to move around for 18 to 20 hours a day, says Per and continues: - There is also very bad air in a stall. Inside a stable there is so much dust from straw and feed that it cannot all be ventilated out, which means that you will never be able to get the same climate as outside. A stall is an unnatural environment for a horse as it prevents it from socializing. Besides, it implies many injuries, and it is a very expensive form of housing.

Horse that are kept in loose-housing systems have better hoof quality and have no chronic respiratory problems, Per tells us. They move around more and thereby extend their lifetime. Half of the horses that are put down are so because of movement problems and 1/3 due to chronic respiratory problems.

- More than 80% of these horses could have avoided this terrible faith if we had housed them differently! Another advantage of loose-housing systems, is that they cannot be caught in a fire, Per adds, as he mentions that he believes stall fires are one of the worst things to happen.

General stall injuries

Some of the injuries that horses in stalls get are leg fractures, back leg fractures as well as eyelid and nostril injuries. Horses risk rolling against the walls and to kick through grids and get stuck. All these injuries cannot happen outside.



- Horse, that are prevented from moving around because they are kept in stalls also risk to develop stereotypical behavior; something that would not develop if the horse had its needs for feed searching, movement and socializing fulfilled. Which stereotypes they develop can often give a clue to which needs are not being fulfilled.

Horses with a big need for moving around often develops stereotypes such as stall walking and weaving, while a horse that has a large need for feed searching often develops crib biting. When a stereotypical behavior has developed, it can be very difficult to prevent the horse from performing it, even if the needs, which were prevented from the horse before, are now met. Therefore it is very important that they never develop. And for the good of the horse, give it the best conditions as soon as signs arises.

Portions do not fit

Colic is very unusual for loose-housed horse, but unfortunately very normal for stalled horses. – This is due to the portions of feed that they get, says Per, but also because we prevent them from moving around. Their digestion system needs help by the horse moving around.

Research has shown that an increased amount of hours in a stall (fx. 2 weeks) increases the risk of indigestion when the horse is let out with up to 5,5 times. Per continues: - Wild horses move more than 15 km a day. That is the same as 3 hours on a treadmill, which is not recommendable as a replacement...

Any physical activity that the horse does is training. It means cardio training and extending its lifetime when it has a large field, where it can search for feed and socialize with other horses. The body's cells will adapt to the stress that the horse is exposed to.

- What kind of top athlete sits on his bum for 23 hours a day? What is the logic in wanting the horses to perform their very best, but doing nothing to give them the opportunity to do so? Asks Per.

Longer lifetime through movement

In a cardio research study with foals, a group of foals was kept in stalls all day, a group was stalled but was exercised twice a day, and the third group was loose-housed. The stalled group developed weak tendons and cartilage, whereas the loose-housed group developed the strongest tendons and cartilage of them all. The exercised group had the highest number of injuries to tendons and cartilage.

- It is difficult to know what kind of exercise is the "right" one, as in being able to copy what is natural, Per explains.

In another research, groups of riding school horses' cardio condition were compared. During the summer, one group was loose-housed on a 50 acres field, one group was kept in a stall during the day and let out at night on 0,5 acres, and the third group was stalled all day but got movement through daily riding. The only group to improve cardio condition during the 14-week research was the loose-housed group.

- Every single hour that the horse is outside in a pen will change something, says Per. Muscular system, respiratory system, blood circulation, metabolism, temperature control and the nervous system (coordination) all benefit from exercise. Cartilage has no blood in them and therefore depend on movement for the nutrition in the joints to work properly. Standing still is like turning of the heart of the joints. Joint cartilage performance is vital for the horse to perform its best!

- Blood circulation in the legs also depend on movement. It is difficult for the heart to pump blood from the hooves to the heart. Hoof mechanism, where elastic pillows are pushed out when the hoof is put down,



helps blood get pumped around. Working the muscles also helps blood circulation in the entire body, Per adds.

Stalls develops respiratory problems

In a stall that humans believe has “fresh air”, there are around 200-4.000 times more bacteria pr. liter air than outside. The larger particles that we can actually see, get stuck in nose and throat, whereas the smaller particles, more like invisible gasses, get stuck in the cilia. But these cilia are adapted to the amount of particles we find outside, so this large amount of particles in a stall will pass down the throat to the lungs and cause severe damage.

The problem is further worsened if the horse is not allowed to eat from ground level as the transportation of mucus to carry the particles out from the lungs are based on the horse lowering its head and biting.
- 80% of horses in Germany have decreased lung capacity due to bad stall air, Per says.

When it comes to respiratory problems, you have to distinguish between fresh and bad air. Per explains:

- The horse will have decreased performance long before any other symptoms are noticed, such as coughing. When these symptoms are noticed, the horse might have been sick for a long time.

The horse's respiratory frequency is connected to its gait: fx it can only breathe once pr. stride in canter. It is not possible to breathe in more oxygen than that. It is therefore vital that each breath provides as much oxygen as possible for the horse to perform well.

- At a maximum performance the horse needs 30 times more oxygen as when resting. The amount of oxygen a horse can “produce” is only 20 times as much as when resting. So at maximum performance it constantly has an “oxygen-deficiency” and therefore cannot afford to have bad lungs, explains Per.

Expensive and work demanding

Per concludes the lecture with a wonder:

- Why do we build expensive and work demanding stalls for a species that does not need a stall, it doesn't thrive in a stall and furthermore, it becomes ill from being in a stall? It is time to realize that the housing type that we choose for our horses affects their lifetime. Many of the injuries that we see today are indirectly caused by the fact that the horse lives in a single stall and is fed in portions, even though we choose to ignore these facts. We have to accept that it is very little we can do better than nature.

Per has his own racehorses, which have been loose-housed for many years.

- From 2007 -2011 my horses won 25% of all their races and earned on average 14.000 SEK pr. race. That is better than most racehorses, and I guess it shows that horses can perform their best even though they are outside all year round. That the horses get tired from being outside too much, is a myth! On the contrary, they get used to it and get more energy!

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