

Training the trainers: How to minimize stress when horses are first ridden

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The horse was domesticated many thousands of years ago and has been hugely important in the development of human civilization. It is hard to overstate its role in agriculture, in transport and communications and even in military operations. More recently, equestrian sports have gained markedly in popularity, so even though the horse has largely been superseded in modern farming and military practice its connection to man remains as close as ever.

Nevertheless, the horse retains at least some aspects of its wild origins. It is clear that horses are frequently subjected to situations that would be extremely stressful for genuinely [wild animals](#), such as training of racehorses, performance in equestrian competitions, examinations by vets and transport by road. Indeed, all of these are known to be associated with stress reactions in horses. Even being ridden could represent a source of stress but there have to date been very few studies on this aspect. Recent work by Alice Schmidt in the group of Christine Aurich at the University of Veterinary Medicine, Vienna has for the first time examined the stress suffered by young horses when they are trained to be ridden.

Schmidt measures stress by examining the horses' heartbeats and the levels of the stress hormone cortisol in their saliva. In looking at heartbeats she considers not only their frequency but also the short-term fluctuations in intervals between the beats, which have previously been shown to be a good indicator for stress. Training of sports horses usually starts when the animals are three years old, so for her recent work

Schmidt examined [horses](#) of this age at the start of their initial training regimes.

Perhaps not surprisingly, she found that the start of training was a stressful period. The initial work on the lunge caused only a moderate amount of stress but the [stress level](#) rose markedly when the rider first mounted. This was revealed by an immediate increase in heartbeat and in the fluctuations in intervals between individual beats, as well as by the release of cortisol into the [saliva](#). It seems likely that the horse interprets the first mounting of a rider as a potentially lethal attack by a predator, from which it is unable to escape. In addition, the rider is outside the horse's field of vision, which presumably exacerbates the problem.

Perhaps surprisingly, when the horse and rider walk or trot forwards, the level of stress decreases somewhat. It thus seems as though the horse adapts rapidly to the idea of being ridden and that - as is the case for humans - exercise may help relieve stress. Furthermore, the extent of stress caused by mounting was found to decrease gradually as the horse is trained, providing that this is done correctly. Aurich cautions that a lack of care or an incorrect regime in early training could cause long-term damage to the relationship between a horse and its rider and thus prevent a sports horse from reaching its full potential as well as causing the animal unnecessary anxiety.

Although her results make clear for the first time that the initial training of a sports horse does stress it, Schmidt has some reassuring words for trainers and jockeys. "The stress caused by being ridden for the first time is nowhere near as much as that caused by being transported by road. And if you are gentle and careful when you start to train a young horse, it will soon get used to you."

More information: The paper Changes in cortisol release and heart rate and heart rate variability during the initial training of three-year-old

sport horses by Alice Schmidt, Jörg Aurich, Erich Möstl, Jürgen Müller and Christine Aurich is published in the september issue of the journal *Hormones and Behavior*.

Provided by University of Veterinary Medicine -- Vienna

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