



Case study on sleep deprivation and irritability Katariina Alongi

(Note from Clare; As part of her training to become an Equine Breathing Trainer, Katarina supervised a 1N case study by Eeva with her mare that has sleep issues. This is Katariina's report on the case study.)

Rollie is a 17-year-old warmblood mare, who, according to her owner, Eeva, has had issues with sleeping for many years, perhaps most of her life. There have been long stretches in Rollie's life when she hasn't lain down to sleep, which is harmful for horses over the long term, since they can only achieve REM sleep while lying down.

Rollie's owner Eeva used a nighttime camera and confirmed that Rollie was physically able to lie down. Lying down itself wasn't the issue as she did so several times each night. However, she rarely stayed down for more than a few minutes and seldom if ever reached a state of deep sleep.

In addition, Rollie was showing aggression toward other horses, particularly at feeding times, when she would chase them away from the food. She was also frequently grumpy when handled by humans, especially during hoof picking. Rollie had been diagnosed with arthritis and displayed noticeable lameness in her right front leg at the start of the study.

Rollie is a very hypervigilant horse by nature and has also trouble relaxing enough during the day to take a nap. She spends her days in an alert state, watching over other horses and monitoring the environment.

1N

Eeva started with 1N. Right from the start 1N was very challenging for Rollie and she could only do it for 5-10 minutes a day during the first two weeks. Most horses find 1N relaxing, as it shifts them more into the parasympathetic nervous system, but for Rollie this was very hard, as it threatened her usual hyper-vigilant state.

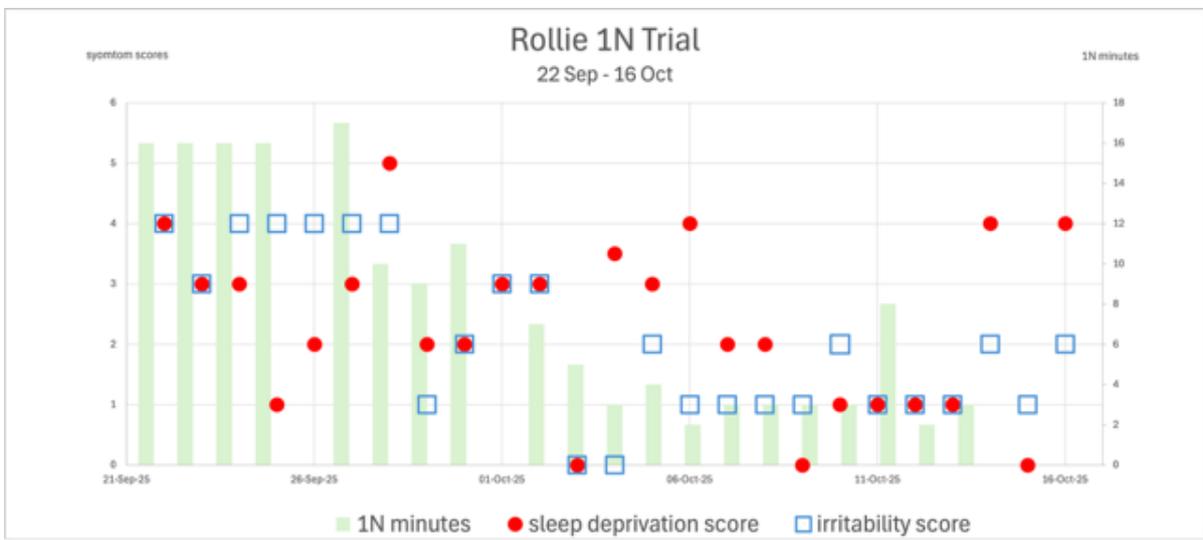
Despite doing 1N for only a few minutes daily, there was immediately a shift in Rollie's nighttime behavior. According to the camera, the mare started to lie down for longer periods of time and even fell into REM-sleep for some minutes every night.

By the third week, Rollie had days when she refused 1N altogether. Eeva was very good at learning to honor the mare's wishes and allowing her to slow the pace of her healing. Despite the minimal minutes of 1N, Rollie's sleep continued to improve.

This chart shows Rollie's progress over the first few weeks of the study when Eeva was using 1N. The green bars show the number of minutes of 1N, while the red dots and the blue squares indicate the symptom scores. High scores mean worse symptoms, low scores mean reduced symptoms ie improvement. Eeva defined the scores before starting so that she could assess progress as objectively as possible through the study. She was able to use camera footage to track Rollie's sleep overnight.

You can find the scores she defined at the end of this article.



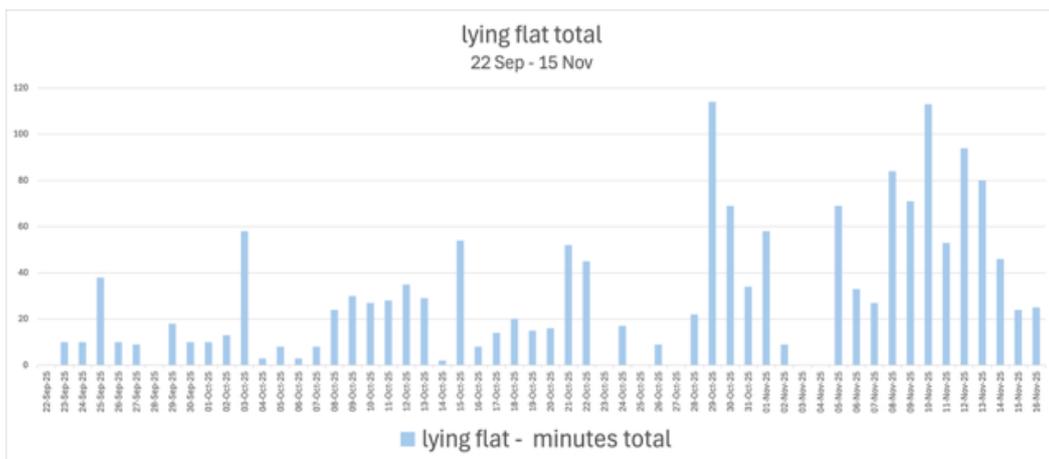
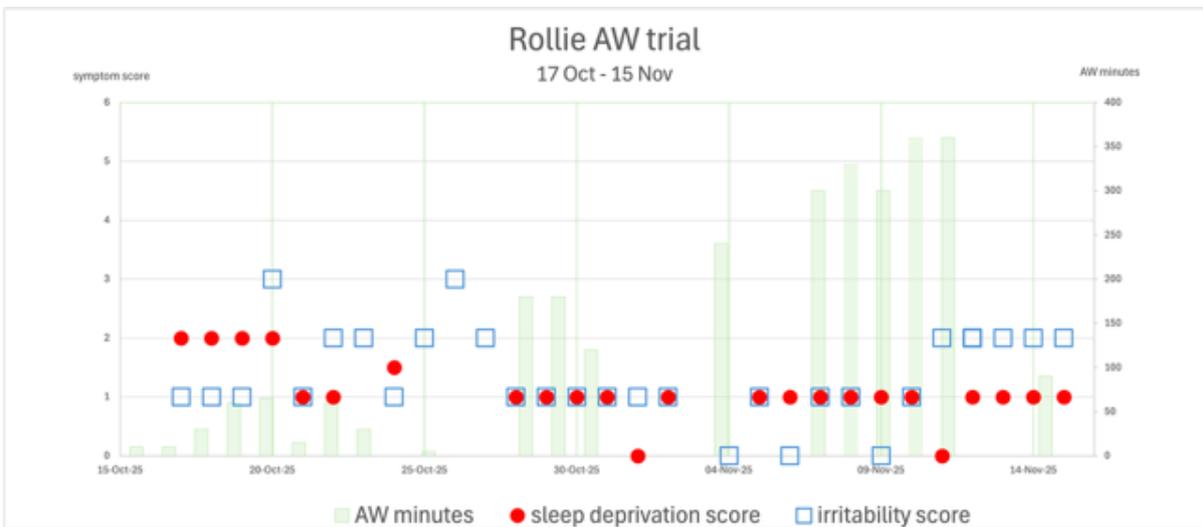


The reduction in symptoms shown in the chart reflect Eeva's observations. She said "From the very beginning, Rollie started lying down more at night, and soon her REM sleep appeared to increase as well. She became noticeably more relaxed and gentler during the day, both with people and with her herd. Her coat looked brighter, new dapples appeared, and even her lameness eventually improved slightly."

All Weather Breather

In the 4th week of this case study, Eeva started using an All Weather Breather. The AW was easier for Rollie than 1N, but there were still days when she clearly showed that she needed a break from the daily breathing exercise.

Her sleep, however, improved vastly at this point and her "lying flat time" doubled and even tripled, averaging around 40 to 60 minutes every night (see chart below)



[Watch Rollie in REM sleep on youtube](#)



[Watch Rollie in REM sleep on youtube](#)

Having more sleep at night had a significant impact on Rollie's behavior; she was no longer aggressive around food, nor was she grumpy towards humans. Also, her lameness improved and even her skin and coat started to look better! After two months of Equine Breathing, Rollie was on her way to becoming a more relaxed and balanced horse.

Insights

This case study gave me a clear, concrete understanding of how 1N and Equine Breathing can support a horse's well-being. **Breathing is a truly fundamental, holistic pathway to healing, and its power should not be underestimated.**

That said, it is essential to remember that each horse is an individual. What stood out to me most in this case study was **the importance of listening to the horse and allowing the horse to set the pace.** Only the horse can determine the rate of healing that feels right for them. Sometimes, less truly is more. It is essential not to force the process or the horse, but instead to let the horse be the guide.

At the same time, gentle persistence and steady perseverance are needed to discover the approaches that truly support that particular horse's healing.

This principle applies to the owner of the horse as well. **It's important to offer owners the support they need**—even if that simply means reassuring them that it is not only acceptable, but essential, to listen to their horse. Listening to the horse can sometimes be very hard, as we humans are very accustomed to “pushing our own agenda” with horses.

Also, this case study was – yet again – **a great reminder of how sensitive horses are**, and how important it is to be able to read their subtle communication. **Learning to stay present and keep a neutral but curious attitude is crucial.** Doing Equine Breathing with your horse is not only an opportunity to heal your horse, but also an opportunity for you to connect, with yourself and with your horse.

Interview with Eeva, Rollie's owner

What made you decide to take part in the 1N Case Study?

I was looking for help because my mare Rollie rarely slept lying down, which meant that she was barely getting any REM sleep. I was interested in trying Equine Breathing as a solution to this issue.

What kind of changes did you notice in your horse during the case study?

From the very beginning, Rollie started lying down more at night, and soon her REM sleep appeared to increase as well. She became noticeably more relaxed and gentler during the day, both with people and with her herd. Her coat looked brighter, new dapples appeared, and even her lameness eventually improved slightly.

What were the biggest lessons you gained from the case study?

This project was truly educational and eye-opening. I had no idea that breathing could have such a significant impact on the body. I was amazed by how much 1N and later the All Weather breather affected Rollie — and also my other horses, who I began practicing with as well.

This case study really highlighted how sensitive horses can be; even a few minutes of altered breathing made a noticeable difference in my horse. Once I saw how much the practice improved her sleep — and because the study period was limited — we didn't take many breaks from the exercises or the AW, even though in hindsight perhaps Rollie would have benefited from them. 1N was challenging for Rollie from the beginning and she never really learned to enjoy the exercises; she likely would have preferred an even slower pace than what I initially started with. I know each horse is different and this project reminded me of how incredibly sensitive Rollie is and how important it is to listen to her and respect her healing pace.

In addition, as I learned more about Equine Breathing, I also became interested in human breathing, since everything I experienced with Rollie, and later my other horses, convinced me of the benefits of breathing. I grew genuinely curious about the topic and began studying it more deeply. It was quite shocking to realize how poorly I had been breathing when I had never paid attention to it. I even started paying attention to my children's breathing.

I started practicing nose breathing and added breathing exercises to my daily routine. Before long I noticed positive changes in myself as my own breathing improved. Changing my own breath and doing the breathing exercises — by myself but also with Rollie — was very challenging at first. Now, however, I've found the practices I enjoy and that truly help me breathe better. My struggles in the beginning, however, made me relate to how my mare Rollie was feeling and helped me understand her better. When you have been overbreathing for a long time, it takes a while to change.

Where are Rollie and you now?

After the case study ended, Rollie and I took a break from the exercises, but we have now slowly begun practicing Equine Breathing again. I hope to integrate the All Weather breather more consistently in Rollie's daily life. I believe Rollie and I still have plenty of work and learning ahead of us in restoring her body's balance and calming her mind through Equine Breathing. From here on, we'll continue even more carefully at her sensitive pace — slowly but steadily moving toward better sleep and health one breath at a time!

Below are the scores that Eeva defined in order to monitor Rollie's progress as objectively as possible

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- **Lies down at night, but doesn't lie flat**
- **Falls into REM-sleep only a few second at a time, but immediately wakes up when this happens.**
- Irritable during the day, pinning her ears back at people and threatening to bite, particularly when groomed.
- Aggressive towards other horses, especially at feeding times, chasing them away from food.
- May occasionally involuntarily lose balance while standing at rest.
- Hypervigilant when awake, watching over other horses constantly, listening to sounds, difficulties relaxing

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- **Lies down at night and allows herself to lie down flat.**
- **Falls into REM-sleep for up to 2 minutes at a time.**
- Pins ears at people, but no threats of biting during grooming.
- Aggression towards other horses is limited to feeding time, still chases other horses away from food.
- Still hypervigilant most of the day, but able to doze off during the day at least once. Maintains good balance.

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- **Lies down flat at night and falls into REM-sleep for 2-5 minutes 3 times a night**
- Pins ears back when hooves are picked, but not during brushing.
- Aggressive at feeding time towards other horses, but aggression lasts only a few seconds.
- Still quite alert, but able relax and doze off several times during the day.

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- **Goes into deep REM-sleep 2-3 times a night for at least 5 min at a time.**
- Pins ears back at morning feeding, but doesn't chase other horses away. Other feedings still chasing horses.
- Able to relax during the day, taking several standing naps.

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- **Spends at least 20 min in REM-sleep/24 h**
- Isn't aggressive when getting morning feed and aggression is minimal during other feedings.
- Doesn't pin ears back at people, even when picking up hooves
- Able to relax during the day, take naps and hang out without reacting to the smallest sound or watching over the movements of other horses.

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Spends at least 30 min in REM-sleep/24 h