

SLEEP TIGHT

Restorative sleep fuels performance and mental focus, and horses evolved to sleep when it's dark at night. But how does stalling at shows under 24/7 lights affect a horse's rest? Dr. Beau Whitaker, DVM, developed the REM mask to solve that problem.

■ BY KATIE NAVARRA ■



HAVE YOU EVER WONDERED why staring at a computer screen or working on a mobile device feels more draining than a full day of physically demanding activity?

At the end of the day, it's not uncommon to sit down and watch television to unwind, yet many people still have trouble falling and staying asleep. This is because the light on your device may look white, but many of the artificial light wavelengths are considered blue light.

While light is critical to regulating many bodily functions in all mammals, one of which is circadian rhythm and sleep pattern, it is made of different wavelengths that trigger different responses.

Exposure to all colors of light helps control your natural sleep-and-wake cycle or circadian rhythm, *webmd.com* explains. More so than any other color, blue light messes with your body's ability to prepare for sleep because it blocks a hormone called melatonin that makes you sleepy.

Brazos Valley Equine Hospitals veterinarian Dr. Beau Whitaker, DVM, experienced this firsthand. He struggled to fall and remain asleep. He'd heard about blue-light blocking glasses, so he decided to try a pair, and the result was a full night's rest.

"I bought special glasses and wore them before going to bed," Whitaker said. "I fell asleep faster and started reading up on the research behind it."

Then, he had an epiphany at a Waco, Texas, barrel race while working a mid-night emergency case. The fluorescent lights were blazing, and he could hear the other horses being restless, kicking or moving about the stall rather than sleeping.

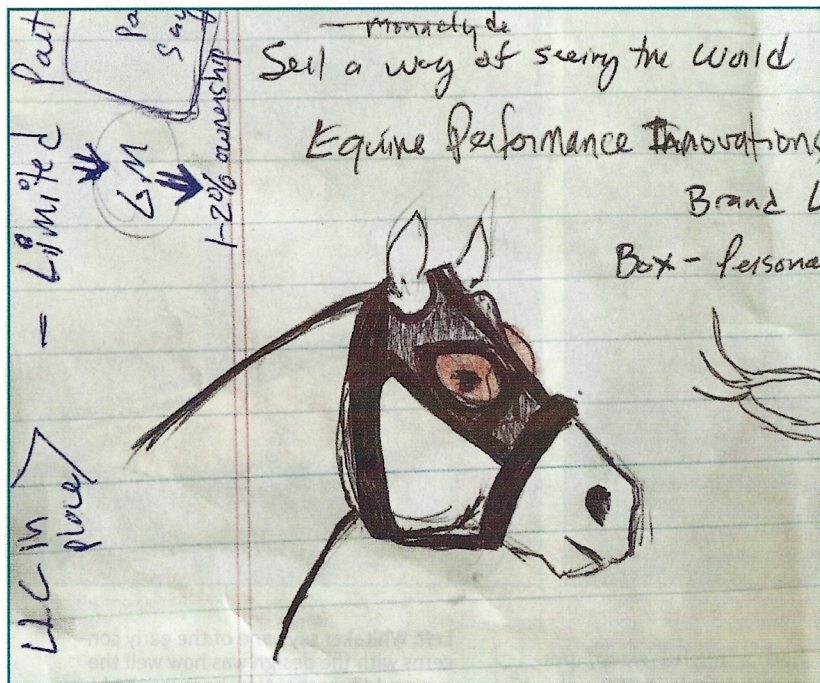
"It occurred to me that horses evolved just like we did. They rely on it being

dark at night and light during the day," Whitaker said. "I wondered if blue light has the same effect on horses and if a blue-light blocking device could have the same benefits."

Whitaker went to work developing something similar to blue-light blocking glasses for horses. The result is the REM mask made by Xpert Equine, which eliminates blue light wavelengths from affecting a horse's sleep.

Futurity trainer Ashley Schafer hadn't initially considered the influence of light on her horses' restlessness at events. When she saw the masks and the science behind them, she said they made sense. The lights at her barn are on a timer, so the horses get eight hours of dark each night, which is in stark contrast to the bright lights blazing around the clock at larger events.

"There are a lot of different things on the market you can try, and I always want to see the results to believe in a product. I was a little skeptical of the mask at first,"



COURTESY REM MASK BY XPERTEQUINE



COURTESY REM MASK BY XPERTEQUINE

Dr. Beau Whitaker, DVM, put pen to paper and sketched the first design for what would become the Equibrand REM mask by XpertEquine, made from materials designed to block blue light waves.

The prototype for what would become the REM mask by XpertEquine.

Schafer said. "But when I tried them, I noticed a different demeanor in my horses. They were either laying down or had their head hung in the corner."

The Science of Sleep

There are a lot of factors that influence a human's or horse's performance, from nutrition to fitness and talent. So, it can seem magical or mystical that something as simple as a mask could influence a horse's performance. But sleep and rest are like the icing on the cake—restorative sleep fuels physical performance and mental focus.

The adrenal gland is triggered to produce melatonin after the lights go out. Whitaker explained that while all light colors emit specific wavelengths, blue light suppresses melatonin most. He drew from extensive human research and the limited studies on light and sleep in horses.

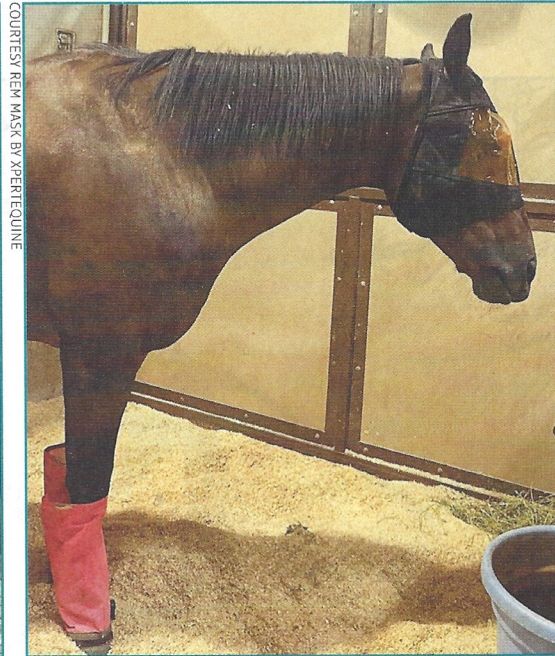
"There had been work done in Europe that found show horses were more sensitive to light than people. It also made



ROSS HECOX

There are many factors that influence a horse's performance, but sleep isn't always the first observation—restorative sleep fuels physical performance and mental focus. While all light colors emit specific wavelengths, blue light suppresses melatonin, which encourages restorative sleep. Dr. Beau Whitaker, DVM, developed the REM mask by XpertEquine, which eliminates blue light wavelengths from affecting a horse's sleep.

COURTESY REM MASK BY XPETEQUINE



sense based on putting mares under lights to encourage cycling,” Whitaker said. “So, it made sense that blue light could be having a negative effect.”

When stimulated by blue light, it is harder to go into REM sleep, the restorative sleep that you dream in. Horses need REM as well. They don’t need as much as humans, but they need to lay down to have REM sleep, so when they’re awake all night, they aren’t getting the restorative sleep they need to perform their best.

Whitaker put pen to paper and sketched his design. What emerged with the help of Equibrand was the REM mask by XpertEquine, made from materials designed to block blue light waves. He also conducted a preliminary study that included 28 horses. Half wore masks overnight; the others did not. Blood samples measured melatonin levels. Those wearing masks had a rise in melatonin levels compared to those without one.

Then, a client offered the opportunity for a real-world test. She owned a showjumper that stressed while at shows and had colicked more than once. The owner consulted with Whitaker to avoid colic. He sent her along to a show with a prototype.

“She called me a day or two later and was blown away by how different the

horse was. He had a restful sleep, performed well, and didn’t colic,” Whitaker said. “It gave me the confidence to know this would work in the real world.”

Leave the Lights On

At the big barrel races, facilities leave lights on to prevent theft and ensure safety. It’s likely this will never change, according to Jeye Johnson, director of marketing at Equibrand Products Group. The company helped Whitaker’s mask move through product development, testing and manufacturing.

“The mask is a way to block those lights and allow horses to rest and relax,” Johnson said. “Preventing sleep deprivation at a major event can help lessen a wide range of issues. In horses, we have learned that sleep deprivation could make them go off their grain, trigger an ulcer or even encourage pacing.”

Barrel racer Tara Lee Woodall was at her wit’s end when she learned about the REM mask at the 2021 Better Barrel Races World Finals. Her gelding Sixes Eyesa consistently ran in the 1D and 2D at major barrel races and was the 2019 American Quarter Horse Association Ranching Heritage Challenge Open Champion and 2021 Ranching Heritage Challenge Open Reserve Champion.

Left: Whitaker says one of the early concerns with the design was how well the eye could breathe. Also, because the blue-light blocking portion is made of vinyl, he worried it would fog up. But as long as the mask is the correct size, no problems have been reported.

Above: At many barrel races the facilities leave lights on to prevent theft and ensure safety. However, this often reduces the ease in which horses are able to sleep and rest. The adrenal gland is triggered to produce melatonin after the lights go out. Whitaker explained that while all light colors emit specific wavelengths, blue light suppresses melatonin most. He drew from extensive human research and the limited studies on light and sleep in horses.

But he fell apart when it came to races that required stall stays, specifically the BBR World Finals. Woodall described the gelding as a silent stressor—she could tell by the look in his eye he was unhappy.

“He never slept well in a stall,” she said. “It didn’t matter that I’d feed him at the trailer or the amount of ulcer medication he got.”

She took him to see Johnson for a saddle fitting and shared her frustrations. She knew he was restless, as she kept cameras on around the clock. “Wormy Dog” would not lay down to rest. Johnson suggested the REM mask.

Special Health and Nutrition Section

"The first night with the mask, he was lying down with his head flat out the entire night," Woodall said. "Jeye asked to video him around midnight. He never moved when she opened the stall door."

In the morning, Woodall could see in his eye that he was more relaxed, and he recorded his best performance at the BBR World Finals. Despite not making the short go, Woodall was thrilled with

his improvement over the 3D and 4D times posted the prior year. Woodall sold Wormy Dog last year, and his new owner Brandi Scott continues to use the mask. He carried her to the 2021 Forth Worth Stock Show Amateur Ranching title.

Woodall describes herself as a skeptic—she must see results, and the product must make sense before buying. This made sense to her.

COURTESY REM MASK BY APERTÉQUINE



The next step Whitaker would like to take is a sleep study by putting a mask on and measuring the depth and quality of sleep under light and those with the mask.

"When COVID came around, taking melatonin to improve sleep was one of the protocols talked a lot about. So, after getting COVID, I started taking melatonin and noticed it made a difference for me," Woodall said. "I am a graphic designer and video producer and have always had trouble sleeping after working on the computer all day. It made sense that it would be similar in horses."

More Than Meets the Eye

While initially designed to help horses rest more peacefully at shows, there are additional benefits. World champion Sherry Cervi's horses don't often stay overnight in lighted barns, but she believes anything you can do outside the arena to keep a horse healthy and comfortable pays dividends in the long run.

She first tried the REM mask during an overnight stay where the lights canceled the darkness. Then she started using them to haul down the road.

"I have a couple horses that move

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“Anything you can do outside the arena to help your horse stay comfortable benefits them in the long run.” — SHERRY CERVI

around in the trailer, so I put the mask on, which helped. I’ve noticed less motion in the trailer as I’m driving. I can also tell by how the shavings haven’t been disturbed as much as before,” Cervi said.

Scientific studies under controlled circumstances that can be replicated are the foundation for testing and evaluating theories. Whitaker has plans for additional studies in the future based on the preliminary 28-horse study conducted and anecdotal information from clients who have observed changes in their horses after wearing the mask.

“One client in Arizona had a horse that had not shed his hair coat in two years. Tests for Cushing’s and other metabolic issues were negative, so they asked about the mask,” Whitaker said. “The horse wore it for two weeks, started shedding

and completely shed out. The only thing I could figure was the horse’s circadian rhythm messed up, and the mask reset it. This is not common but certainly had a profound effect on that horse.”

He observed another interesting change in a horse imported from Europe. The horse was constantly moving his jaw back and forth. The diagnostics revealed nothing unusual. Whitaker suspects it is a rare form of headshaking. After trying several options, he had the client put the mask on the horse.

“It made a huge difference for that horse. It doesn’t work in every case, but it has had success with reducing headshaking, and the only thing I can think is because the mask blocks the light,” Whitaker said. “I’m even working on one with a darker tint for headshaking horses.

I’m not sure if I’ll be developing it commercially but have experimented with it.”

Whitaker says one of the early concerns with the design was how well the eye could breathe. Also, because the blue-light blocking portion is made of vinyl, he worried it would fog up. As long as the mask is the correct size, no problems have been reported.

“Brazos Valley Equine Hospital and Dr. Whitaker came to Equibrand to help with fit, design and bringing the product to market,” Johnson said. “It was many years in the making, starting with his research and then three years of product development.”

The next step Whitaker would like to take is a sleep study to measure the depth and quality of sleep under light for those with the mask. He is confident he’ll see positive results with further research.

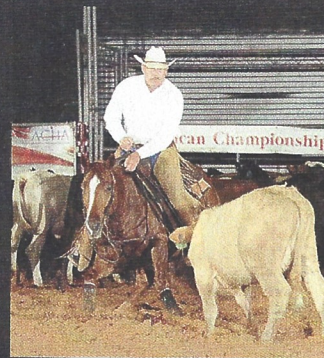
“I’m confident we’ll see a pretty significant difference,” he said. **BHN**

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