

NASAL STRIPS

By Bill Heller

Nasal strips' future in Thoroughbred racing seemed limitless in the fall of 1999. Just two weeks after longshot Burrito won a race at Keeneland wearing one, 29 of the 101 horses competing in the 1999 Breeders' Cup at Gulfstream Park November 6th had the 4-by-6-inch strip affixed 1.5 inches above their nostrils.

More importantly, three of the eight winners wore them, including Cat Thief, who captured the \$4 million Classic at odds of 19-1 under Pat Day, who was sporting a human equivalent, himself.

The image of both Cat Thief and Day posing in the winner's circle with nasal strips was a powerful one. Cat Thief's victory was the second that day for Hall of Fame trainer D. Wayne Lukas, who earlier saddled 32-1 longshot Cash Run to win the \$1 million Breeder's Cup Two-Year-Old Juvenile Fillies. She, too, wore the non-invasive strip designed to reduce an exercising horse's airway resistance and decrease exercise-induced, pulmonary hemorrhaging (EIPH).

The nasal strips received enormous national publicity after the Breeders' Cup. Wouldn't almost everyone in North America emulate Lukas? Stan Bergstein, the executive vice-president of Harness Tracks of America and a columnist for the Daily Racing Form, postulated long ago that if a horse wearing a blue balloon tied to his tail won a race, you'd see dozens of horses with blue balloons tied to their tails in the paddock the next day.

Lukas, however, preached caution regarding the role of nasal strips in Cash Run and Cat Thief's surprise Breeders' Cup victories. Regardless, Lukas and trainer Bob Baffert spoke at a meeting of the California Horse Racing Board Medication Committee meeting, January 12th, 2000, in support of nasal strips. According to a

CHRB press release, CHRB Commissioner Marie Moretti expressed hope that using the strips could lead to the decreased use of bleeder medication for some racehorses.

That never happened, as Lukas proved prophetic. He saddled three horses in the 2000 Kentucky Derby, two with nasal strips, and none of them finished higher than 12th.

According to Equibase, between October 23rd, 1999, and April 24th, 2000, 8,402 Thoroughbreds wore the strip and 1,077 won, nearly 13 percent. Apparently that wasn't high enough. Less and less trainers used them, though Lukas still does.

By the end of 2000, there was a story on the Internet site www.suite101.com entitled "The Demise of Nasal Strips." Published December 12th, 2000, the article began, "The rise and fall of nasal strips was short and sweet." Noting that the Daily Racing Form had originally listed the nasal strip in past performance lines for all tracks and that by mid-June was only listing them at Hollywood Park, the story concluded, "As quick as they appeared in the spotlight, they vanished." The obituary was more than a bit premature.

Miesque's Approval won the 2006 Breeders' Cup Mile at Churchill Downs wearing a nasal strip for trainer Marty Wolfson, who uses them on all of his 30 horses. "I've been using them on all my horses for two years," Wolfson said in mid-March. "I use them on myself. I run and they help me when I run. I breathe easier. The only

time I couldn't use one was when Pomeroy was in the 2006 Forego Handicap at Saratoga." Pomeroy won that stakes.

He was denied the nasal strip at Saratoga because the New York Racing Association mysteriously banned nasal strips, a day after the New York State Racing and Wagering Board approved them for both Thoroughbred and harness racing. Currently, New Jersey is the only other state which doesn't allow them, while Pennsylvania allows them for Thoroughbreds but not for Standardbreds.

According to nasal strip co-inventor and president of Flair Nasal Strips Jim Chiapetta, some 15,000 nasal strips are sold world-wide each year: 9,000 in the United States, 3,500 in Europe, 2,000 in Australia and New Zealand and 500 in Dubai. He said they were used mostly on horses in eventing, then on Thoroughbreds, Standardbreds and Quarter Horses.

Should they be used more often? Are they a realistic alternative to the powerful diuretic Lasix, which is now used by roughly 95 percent of all Thoroughbreds in the U.S., though the rest of the horse racing world bans Lasix and all other race-day medications? Lasix, which is used ostensibly to reduce EIPH, can improve a horse's performance dramatically the first and/or second time it is used, if for no other reason that its diuretic properties.

Horses can lose 10 to 20 pounds through urination after Lasix is injected. That alone improves most horses' performance. Think about it. If there is an apprentice jockey with even a modicum of ability, trainers scramble for his services just to decrease the weight his

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Miesque's Approval, 2006 Breeders' Cup Mile





Dr. Howard Erickson

horse is carrying by five pounds.

The efficacy of nasal strips can be judged in comparison to Lasix or by itself. "Lasix and nasal strips work in very similar ways," said David Marlin, a consultant who worked for the Animal Health Trust in Newmarket, England, and co-authored *Equine Exercise Physiology*. "From scientific studies, they seem to be equally effective in reducing bleeding."

Breathe Right strips were invented in 1987 by Bruce Johnson, who suffered from allergies. By the early 1990's, they were being used for colds, allergies, snoring and athletic performance. They work by reducing the partial collapse of the soft tissues of the nose when it is under pressure because of the vacuum caused by the lungs during exercise. The mechanical, spring device maintains optimum air flow.

Humans have an option for breathing: nose or mouth. Horses do not. They breathe only through their nostrils. Could nasal strips benefit horses?

That's a question Jim Chiapetta and his partner Ed Blach decided to explore. They had become friends at the Littleton Large Animal Clinic in Littleton, Colorado.

Chiapetta, 48, returned to his clinic in Shakopee, Minnesota, to finish law school at William Mitchell College of Law. Blach, a former veterinarian who is now an animal products consultant, called Chiapetta in 1996 to discuss a possible equine version of a nasal strip.

"We talked to a bunch of people and they said it wouldn't work for horses, but I told Ed I think it could," Chiapetta said. "We went ahead and made some prototypes."

Then they consulted Monty Roberts, the horse whisperer. "Ed used to be Monty's resident veterinarian," Chiapetta explained. Roberts was

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interested enough to have them test the strip at a track at Roberts' farm north of Santa Barbara in California. "We didn't have the adhesive done right," Chiapetta said. "The riders were coming back and saying, 'This horse felt better, more relaxed.' So we figured there was something there."

Having breakfast one morning with Roberts, Chiapetta and Bloch came up with a name. "I was thinking about flaring nostrils, then I was thinking about air, and we came up with the name Flair," Chiapetta said.

Next, they consulted with CNS, the Minnesota company which manufactured Breathe Right. "They agreed to license it if it showed it reduces bleeding," Chiapetta said. "They funded a study at Kansas State University."

That study and a majority, but not all, of a handful of subsequent studies - all involving a standard small sample of horses - showed positive results from nasal strips. "The nasal strips seem to help," Dr. Howard Erickson of Kansas State University, a co-author of one of the studies, said last February. "We've done studies here. There have been studies in Kentucky, California and Florida. In most of the studies, it decreases the bleeding by 50 percent and it also decreases the airway resistance."

He believes that most horses would benefit from both, because he believes almost all horses suffer from EIPH. "I think it's nearly 100 percent that have some degree of bleeding for the movement of fluid from the capillaries to the airway. For some, it may be negligible. Quarter Horses will respond the same way. Standardbreds, too. You see it in rodeo horses and barrel horses."

That sentiment is shared by David Marlin, who has worked with researchers at Kansas State. "The bottom line is that all horses will

break blood vessels in a race," he said. "It happens with camels; it happens with humans, it happens with greyhounds."

Marlin also believes that nasal strips may be a more preferable treatment than Lasix. "It's less complicated and you can't build up tolerance," he said. "If you think about a diabetic who uses insulin, he develops tolerance and needs more of it. Do horses develop tolerance of Lasix? Generally, when you use drugs repeatedly, there's a chance of adaptation to it. The nasal strip is different because it's a mechanical device."

Then why aren't trainers around the world, and especially in the United States, using them?

Ironically, Chiapetta believes that the success of Cash Run and Cat Thief in the 1999 Breeders' Cup is a major reason why. "It was the worst possible thing that could have happened," he said. "We were on the front page of the New York Times Sports Section, the Wall Street Journal and Sports Illustrated. I think horsemen said, 'Hey, this will make us win.' So they strapped them on. And when they didn't win, they took them off."

Some, not all.

"They're expensive (\$7.95 per strip)," Wolfson said. "Some people don't want to spend the money, but I think it's worth it."

Day, the retired Hall of Fame jockey, knew they worked on him. "I found them to be quite helpful when I was riding a number of races back to back," he said. "It seemed that I was less fatigued because I believed I was getting much more air into my lungs. I would have thought that would be more helpful to horses than riders. Horses only breathe through their noses. They cannot or will not breathe through their mouths. If you can open up the nasal passages,

open the airways, you would think it would be beneficial to the horses."

At the Havemeyer Foundation Workshop investigating EIPH, March 9th-12th, 2006, in Vancouver, Canada, Dr. Frederick Derksen, of the Department of Large Animal Clinical Sciences at Michigan State University, spoke about the role of airways in EIPH. He said, "A series of studies demonstrated that the use of a nasal strip decreases the number of red cells in bronchoalveolar lavage fluid after exercise. In horses, the majority of inspiratory resistance to airflow is located in the upper airway. The nasal valve region, located just cranial to the nasoincisive notch is a high resistance region, not supported by bone or cartilage. These characteristics make this region particularly susceptible to collapse during inhalation. Application of the nasal strip in this region prevents nasal collapse and decreases upper airway resistance during exercise. This in turn is expected to reduce negative alveolar pressure during inhalation and decrease transmural

capillary pressures."

The nasal strips are certainly a hit in New Zealand, especially with harness horses. After reading about the use of nasal strips in the 1999 Breeders' Cup, Brian McMath, a committee member of the New Zealand Standardbred Breeders Association, imported a few samples. After the strips were approved by Harness Racing New Zealand, several trainers began using them and many had success, including Jim and Susan Wakefield's Glacier Bay, who won the \$105,000 PGG Sales Series Final at Alexandria Park in April, 2000, for trainer Cran Daigety. Eventually, Thoroughbred trainers began using the strip, too. By the end of 2004, more than 700 winners in both harness and Thoroughbred racing won wearing the strip.

"I have a technology background in chemistry and engineering, and what convinced me the strips work was basic physics," McMath said. "It's all about windpipe pressures and how a simple mechanical device like the springs in the nasal strip can beneficially alter these pressures."

The reception in Europe, at least for Thoroughbreds, was decidedly cooler. In an April 11th, 2000, letter, Peter Webbon, the Chief Veterinary Adviser to the British Jockey Club, noted that the senior veterinary surgeons from the European Horserace Scientific Liaison Committee (Britain, France, Italy, Germany) considered the question of nasal strips and decided to recommend to their racing authorities that their use should be banned for the following reasons:

- 1 "Other 'gadgets', such as tongue ties, which are allowed, are intended to address a specific clinical entity. Nasal strips are seen by trainers as a non-specific way of improving performances.
- 2 "If they improve performance, they should be banned, in line with performance enhancing medication.
- 3 "If they are ineffective, they should be banned because they give the impression that we condone practices that are intended to improve performance.

Andrew Hay and Moon Fleet



IF YOU SHOE THEM, DO THEY RUN BETTER? IF YOU FEED THEM, DO THEY RUN BETTER? IF YOU TRAIN THEM, DO THEY PERFORM BETTER? WHERE DO YOU DRAW THE LINE?



Frances Whittington with Spin Doctor

4 The manufacturers claim that they reduce the frequency/severity of EIPH. The EHSLC veterinarians felt very strongly, for the sake of the breed, that horses should run on their merits. What would be the effect on the Thoroughbred in the long term if a horse won the Derby, wearing a nasal strip, that without the strip was unable to win a selling race?"

To this day, they are banned throughout Europe for racing but allowed for training.

Two years ago, Chiapetta met with Webbon and his assistant in Newmarket. "He said, 'It reduces fatigue, which improves performance,'" Chiapetta related. "I said, 'If you shoe them, do they run better? If you feed them, do they run better? If you train them, do they perform better? Where do you draw the line?'"

Event horses are allowed to use them throughout the world because they were approved by the International Federation for Equine Sports (FEI). On June 26th, 2006, Horse & Hound wrote that nasal strips "are becoming commonplace on the noses of top event horses," and noted that Andrew Hoy's Moon Fleet won the Badminton, a premier cross-country event in England. "I started using them two years ago," Andrew Hoy said. "I'd seen them being used on horses and humans, and discussed their use with a vet. I had used a human one myself when I had a cold, and it seemed to help. I now use them on my horses at top events to give them every opportunity."

The story said that another eventer, Francis Whittington, uses them on his "advanced" horse

Spin Doctor. "I tried the human version and noted the difference," he said. "I believe it makes it easier for him to breathe so he can last the distance."

That's the whole point. "Some people may think that more oxygen makes them run faster," co-inventor Blach said. "That's not the case. Rather, horses perform at their optimum level for a longer time so they can do what they're made to do over the long haul. Maybe it's too simple. It's based on very simple physics that if you maintain the size of an opening, you're going to maximize what goes through it, in this case air."

Asked if nasal strips help horses, Blach said, "Absolutely." Perhaps the most confounding question about nasal strips is that even the single negative clinical study about them said that they do not reduce EIPH, but offered no tangible downside to their usage. Asked if there is a downside, Marlin said, "I think, as far as anyone knows from a scientific point of view, there is no evidence that there is."

Referring to that study, Chiapetta said it showed that horses using them "certainly weren't less healthier. I don't think there's any downside to it."

Dr. Ted Hill, the New York Racing Association steward for the Jockey Club, said on April 11th, "Our only downside was how to regulate it. If a horse comes to the paddock and it falls off, what do we do? Do we treat it as equipment? We can't put it back on. The significant problem we had originally was it possibly being an aid to bleeders, and relaying that to the public. That came up in an international meeting at a round table in Tokyo last October. It did not receive wide acceptance because it has some efficacy."

So Japan does not allow them. Australia allows them for Standardbreds, but not for thoroughbreds. Yet, nasal strips are allowed for Thoroughbreds in Dubai and Singapore, as well as New Zealand.

"It's probably been embraced more in other countries than here, but in Thoroughbred racing here, furosemide (Lasix) is so embedded," Kansas State's Erickson said. "Furosemide reduces weight. It certainly reduces bleeding. But maybe we have to look for something better."

Maybe something better has been out there for eight years. ■