

HORSE SENSE: PRACTICAL INFORMATION FOR EVERY OWNER

Study reveals link between toe grabs and injuries at the racetrack

by Laura Grubb with Albert J. Kane, DVM, MPVM

BONE, TENDON AND LIGAMENT INJURIES ACCOUNT FOR APPROXIMATELY 80% OF THE FATALITIES OCCURRING ON CALIFORNIA THOROUGHBRED RACETRACKS. IN ADDITION TO CAUSING OWNERS ECONOMIC AND EMOTIONAL HARDSHIP, THESE INJURIES THREATEN THE SAFETY OF HORSES AND JOCKEYS ALIKE, AND PRESENT RACING IN A NEGATIVE LIGHT TO BOTH MEMBERS OF THE MEDIA AND THE RACING FAN. ALTHOUGH THEY ARE RARE OCCURRENCES, CATASTROPHIC INJURIES DO THREATEN THE FUTURE OF THE CALIFORNIA RACING INDUSTRY.

Some traction devices, particularly toe grabs, have been implicated as a cause of racehorse injury and lameness for many years. In an effort to understand why catastrophic injuries occur, a three-year study recently concluded by veterinarians at the U. C. Davis Veterinary Orthopedic Research Laboratory found an association between toe grabs and increased risk of fatal injury, particularly suspensory apparatus failure, for California Thoroughbreds.

Methodology of the study

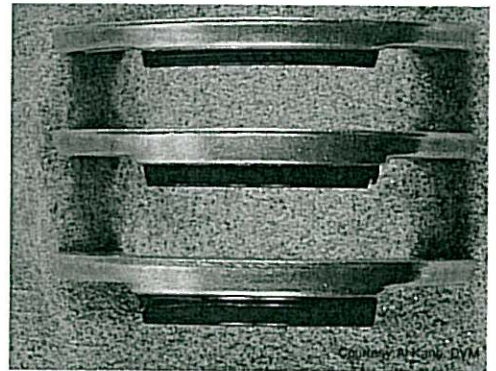
Shod hooves were collected from 201 horses submitted to the California Veterinary Diagnostic Laboratory System (CVDL) through the CHRB Postmortem Program. The presence of toe grabs, rims or flat shoes was recorded for all 4 limbs of each horse in the study. If present, the height of the toe grabs was recorded as low, regular or high; which are 4, 6 or 8mm tall when new. The age and gender of each horse was recorded as well as details of the cause of injury or death. All fatal injuries were

studied as a group as well as the most common type of injury, suspensory apparatus failure.

Horses that died for reasons unrelated to the musculoskeletal system (e.g., colic, pneumonia) were used as controls for comparison to the injured horses. The potential increase or decrease in odds of injury associated with toe grabs or rims was determined by comparing the shoes of injured horses to those of the control horses. In addition, the influence of age and gender on the results was considered in the data analysis.

Results

With low toe grabs, the odds of any injury and suspensory apparatus failure were 2 and 7 times greater, respectively, than those of horses shod without toe grabs. The odds of



Top photo:
Flat, outer and
inner rim shoe.

Bottom photo:
Low, regular and
high toe grabs.

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Toe Grab Injuries

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injury for horses shod with regular toe grabs were 3.5 times greater for any injury and 16 times greater for suspensory apparatus failure. These results clearly show that horses shod with toe grabs are more likely to be injured, and that the risk of injury increases with taller toe grabs. Because very few Thoroughbreds were shod with "high" toe grabs, estimates could not be made for their proportionate increase in odds of injury. However, it is likely that they would be even greater.

The good news is with rim shoes, an alternative to toe grabs which still offer increased traction, the odds of injury were two-thirds lower compared to horses shod without rims.

How do toe grabs lead to these injuries?

"Because toe grabs only elevate the toe of the hoof they lower the functional hoof angle (similar to the long toe, low heel conformation many racehorses develop) which may effect the angles of the joints up the limb while the horse is galloping," says Dr. Kane. "They may also give too much traction, stopping the hoof suddenly on each stride." He goes on to explain, "each time a horse's hoof lands it naturally slides a little bit as it touches the ground. This helps dissipate some of the force of landing. With toe grabs, we think the hoof may stop too quickly and additional forces

may be transferred to the bones, tendons and ligaments causing injury." He is quick to add, "The study we've just completed identified a link between grabs and injury, pointing us in the right direction. Exactly HOW they cause the injuries needs further research to examine these two theories. We would also like to look at more common injuries (e.g., bucked shins, strained suspensories) to see if a similar pattern exists with toe grabs and rims."

The U. C. Davis research team hopes that by spreading the word among owners, trainers, farriers and veterinarians about the risk associated with toe grabs and the safer rim shoe alternative, they can decrease the risk of injury for horses and improve the safety of racing.

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Owner Profile

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Q. How would you describe your best day in racing?

A. My best day so far was when "Calling You" had her first start. She was running against some very well bred and expensive horses, and it looked like she was out-classed. The race was 5 1/2 furlongs and she was positioned on the outside. She broke well and by the far turn was ahead by a neck. Still on the outside I worried that she might not be able to hold on as the other horses closed in. Would she be strong enough? This time span could not have been more than 30 seconds, yet it seemed like it was a lifetime before she would reach the end of that race. I found myself on my feet and shouting loudly as she crossed the finish line. It was a "thrill of a lifetime."

Q. How do you feel about your overall racing experience?

A. So far, everyone I have met has been great, from park-

ing attendants, the backside personnel, racing office employees, as well as the fans. They have all made this a very special experience. I am proud to be a part of the tradition of Thoroughbred racing and hope to continue. In the future I may get more involved with the breeding aspect of the sport.

In closing, Mr. Wiest is a man who not only loves the game but who has a great passion for the horse. As he explained during this interview, he finds himself praying with his family before each race "that whether his horse wins or loses that she will come back sound." 🐾

We would like to thank owner Renee Dupont, a member of TOC's Marketing/Public Relations Committee, for volunteering her time to conducting this Owner Profile.