

## **RISK FACTORS FOR AND OUTCOMES OF NON-CATASTROPHIC SUSPENSORY APPARATUS INJURY AMONG CALIFORNIA THOROUGHBRED RACEHORSES**

Hill AE<sup>1</sup>, Stover SM<sup>1</sup>, Gardner IA<sup>1</sup>, Kane AJ<sup>2</sup>

<sup>1</sup>Sch. of Vet. Med., Univ. of Calif., Davis; <sup>2</sup>Equine Sci. Prog., Col. State Univ.

This study evaluated the simultaneous effects of toe grabs, exercise intensity, and distance traveled as risk factors for subclinical or mild suspensory apparatus injury (SMSAI), and evaluated the outcomes of horses with SMSAI. Two hundred and nineteen Thoroughbred racehorses at 2 racetracks in southern California were followed for 90 days during Spring 1998. Twenty-five incident cases of SMSAI were compared to controls matched on case injury date within the cohort. Risk factor data were analyzed by conditional logistic regression. Incident cases of SMSAI were marginally more likely than controls to be  $\geq 5$  years old (OR=2.28, 95% CI: 0.96, 5.42), and to have worn toe grabs (OR=2.80, 95% CI: 0.60, 13.06) and exercised a longer distance in the week prior to injury (OR=2.06, 95% CI: 0.66, 6.44), though results were not statistically significant. Forty-one horses that had SMSAI were significantly more likely to thereafter experience a severe musculoskeletal injury (MSI) (P=0.04), particularly suspensory apparatus failure (SAF) (P=0.03), though they were also marginally more likely to experience metacarpal condylar fracture (CDY) (P=0.09). Kaplan-Meier survival analysis found less time to SAF/CDY for horses with SMSAI than those without SMSAI (P=0.01). These data suggest that SMSAI is associated with an increased incidence of CDY, SAF, and other severe MSI, and that suspending or decreasing the intensity of training for horses with SMSAI may decrease the incidence of severe MSI.