Catastrophic Scapula Fractures in Thoroughbred and Quarter Horse Racehorses

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1. Introduction
Catastrophic scapula fractures account for 2% of Thoroughbred (TB) and 6% of Quarter Horse (QH) racehorse musculoskeletal fatalities. Pre-existing stress fracture disease and a typical fracture configuration have been reported. Our goal was to investigate breed- and exercise-related risk factors for scapula fracture.

2. Materials and Methods
Necropsy records from all horses with scapula fracture (73 TBs and 28 QHs) submitted to the California Horse Racing Board post-mortem program between 1990 and 2008 were studied. High-speed exercise variables calculated from lifetime exercise histories were compared between affected TB and QH racehorses and between horses with scapula fracture and two age-, sex-, and event-matched control horses for each affected horse, using non-parametric techniques.

3. Results
TBs and QHs incurred a complete, comminuted neck fracture with an articular component.
TBs had a greater number of workouts, events (combined works and races), and average race/work/event distances than QHs.
TB horses with a scapula fracture had fewer events, less total distance, fewer active days in training, and lower frequency of events than their matched controls. Several similar trends were observed for QHs.

4. Discussion
Long distance (TB) and sprint (QH) racehorses incurred similar scapular fractures and have similar exercise histories compared with matched control horses despite differences between breeds in distance exercised at high speed.

Footnote
*Jockey Club Information Systems, Lexington, KY 40503.