

Risk factors for hind limb and pelvis fractures in Thoroughbred horses undertaking jump racing in the UK

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There have been multiple studies examining risk factors for the more common fracture types affecting the forelimbs of Thoroughbred horses. There have been fewer studies focussing on fractures affecting the hind limbs or the pelvis. The aim of this study was to identify risk factors associated with sustaining a hind limb fracture (HLF) or a pelvic fracture (PF) and to evaluate differences in these risk factors. A retrospective analysis of records from horses running in all National Hunt (NH) races in the U.K. between 2001 and 2009 identified cases diagnosed with a HLF or PF whilst still at the racecourse. Because a significant difference in risk of HLF was identified between hurdle and steeplechase racing, these were considered separately. Univariable and multivariable logistic regression were used to identify risk factors at any one start. There were 99 HLF case starts and 169,569 control starts in hurdle; 90 HLF case starts and 102,804 control starts in steeplechase; and 86 PF case starts and 298,209 control starts in NH. In the final multivariable models several significant risk factors were identified. Risk factors associated with HLF included: weight carried and age in hurdle racing; and season, number of runners and first race type in steeplechase racing. Risk factors associated with PF included: season, going, race distance, jockey and trainer success and previous racing history. The only risk factor shared between injury and discipline types was previous flat racing history. There is variation in the risk factors for similar injuries between racing disciplines. The results of this study will direct future research and shape the development of interventions to minimise the risk of hind limb fractures in NH starts in the future.