

Peter Physick-Sheard: Cardiac Arrhythmia and the Death Registry

The high sudden death rate for Standardbred and Thoroughbred racehorses have led researcher Dr. Peter Physick-Sheard of the Ontario Veterinary College to explore the cause behind this problem, which has become increasingly complex. Horses naturally have very robust hearts that make them capable of high intensity exercise, and it's not cardiac arrest, but rather cardiac arrhythmia – serious disturbances in cardiac rhythm – that racehorses experience.

Physick-Sheard's past research – using electrocardiographic technology to monitor various cardiac mechanisms during and after racing—showed that almost one in five Standardbred horses experienced serious rhythm disturbances immediately after a race, when heart rates had lowered.

The results from his study on Thoroughbreds did not yield similar results. But Physick-Sheard believes this is because of the Thoroughbreds' more easily excitable natures, which might have contributed to the Thoroughbreds' heart rates remaining elevated until well after the monitoring equipment was removed post-race.

Physick-Sheard is currently broadly analyzing information in the Ontario Racing Commission's Death Registry to identify connections that might help researchers better understand why some horses are more susceptible to these sudden fatalities, and identify any emerging or lasting trends.

His research has critical implications for improving the welfare of horses. It will help with future research in determining the heart rate ranges that could cause lasting muscle damage, and whether horses have evolved enough to safely handle work at such high intensities—and if not, what steps need to be taken to accommodate for the horses' physiological limits.