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Exercise Causes Slight Hoof Changes, Researchers Report

by: Marie Rosenthal, MS

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About 30% of lameness in horses is associated with foot problems, yet little research focuses on the biomechanics and function of the equine hoof. Researchers recently found slight differences in horses' hooves following exercise.

Babak Faramarzi, DVM, PhD (now of the Western University of Health Sciences in Pomona, Calif.), and colleagues at University of Guelph in Ontario, Canada, recently investigated the hooves of at 18 Standardbreds. Nine of the horses exercised four days a week at a medium trot on a straight track and nine were housed in a paddock for the same period. The researchers performed MRI on each horse before and after the exercise period to study the inner structures of the hoof.

They believed the exercise would increase blood flow to the hoof, which would accelerate growth and change the hoof wall and shape. However, they only found slight differences in hoof wall growth and shape between the groups.

Faramarzi noted raising the intensity of the exercise might have made more of a difference. The group is doing more research.

"We tried mild-to-moderate exercise in Standardbred horses, whether those changes would be different with intense exercise or in different breeds (type of exercise, different gait pattern, etc.) is not known," he said. "As the equine industry grows, the need for more research becomes more obvious; we definitely need to learn more about horses' foot."

The study, "Changes in growth of the hoof wall and hoof morphology in response to regular periods of trotting exercise in Standardbreds," was funded by the Ontario Racing Industry and was published in the November 2009 *American Journal of Veterinary Research*. [The abstract is available on PubMed](#).

**Readers are cautioned to seek the advice of a qualified veterinarian
before proceeding with any diagnosis, treatment, or therapy.**



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