

Osteochondrosis in Yearlings and Future Racing Performance

By [Christa Lesté-Lasserre](#)

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Osteochondrosis—one of the most common forms of developmental orthopedic disease—in young Thoroughbreds can be directly linked to racing performance later in life, according to recent study results from a team of French equine orthopedics authorities.

The researchers found that the type and location of juvenile osteochondral condition (JOCC) lesions can affect when those horses race, how well they race, how long they'll race, and if they'll even end up racing at all, said Céline Robert, PhD, DVM, lecturer and researcher at the French National Veterinary School of Alfort in Maisons-Alfort. The lesions' effect on performance is closely linked to their number and severity, Robert warned.

"Buyers (and especially advising veterinarians) should take into consideration not only the number of visible lesions in all radiographic images but also the severity of those lesions," she said. "A single, isolated lesion that's not very severe will probably have no influence on the horse's career. By contrast, however, a serious lesion or the presence of several lesions could limit the horse's career."

Robert and colleagues followed the racing performances of 328 Thoroughbreds radiographed as yearlings; They found that those horses with the most JOCC lesions and those with the most severe JOCC lesions tended to start racing late, stop racing early, or not race at all, Robert said.

Lesions in the carpus joint (or knee)—which is a common site for racing injuries in Thoroughbreds—were a risk factor for not racing as a 2-year-old, but not as a 3-year-old, she said. "Progressive accommodation to training and maturity would overcome this disability at three years," she reported in the study.

Lesions did not usually stop the horses from racing as 3-year-olds even if they missed their 2-year-olds debuts, she said. However, she noted that horses with a severe lesion, at least two lesions of moderate severity, or a lesion in the stifle had less chance of placing well in the race than the others. Multiple lesions or severe lesions also appeared to increase the risk of ending the racing career before 5 years of age, she added.

"An increase in (lesions) indicates a progressive increase in pathology and, while tolerable in some instances, is probably not acceptable once a certain degree of pathology is reached," she stated in the report.

Radiographic imaging can be helpful before purchase but also before training, Robert said.

"A JOCC lesion is rarely going to stop a Thoroughbred from running, but it could reduce its performance in terms of winnings and career length," she said. "Knowing the kinds of lesions you're dealing with can help you manage the lesion and monitor it while adapting training accordingly, or even applying a treatment when possible."

Above all, Robert said, it's important to not consider horses with JOCC lesions as worthless horses.

"JOCC can reduce a horse's performance if the lesions are severe or if they are numerous on the same horse," she said. "But it's important to interpret radiographic findings correctly. A horse cannot simply be reduced to a lesion on a joint."

The study, "[Influence of juvenile osteochondral conditions on racing performance in Thoroughbreds born in Normandy](#)," will appear in an upcoming issue of the *Veterinary Journal*.