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HORSE AROUND

January/February 2015

New Mexico

FREE

*Jump into
the New
Year!*

*Hitting the Wall
(on the trail)*

2015 Gear Guide

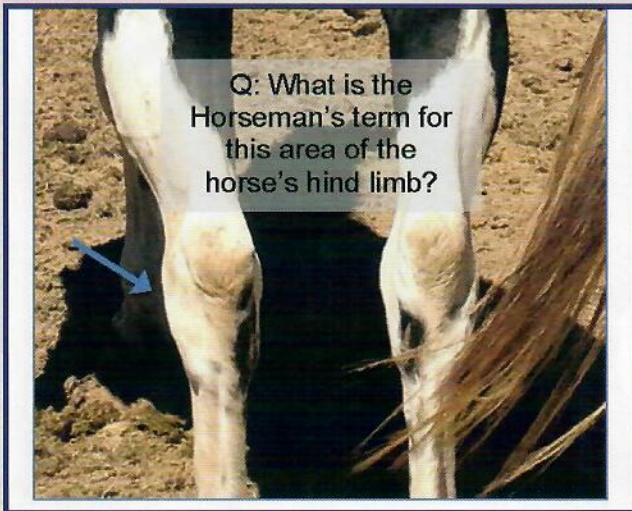
Beat the Newbie Blues



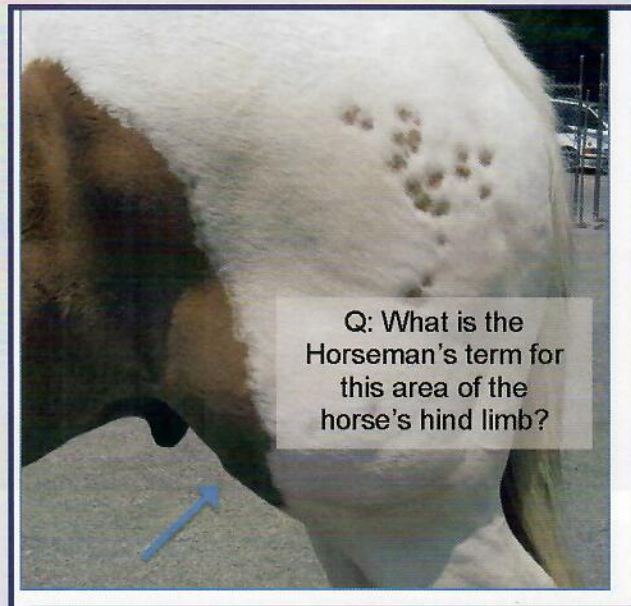
Do you think you know all there is to know about your horse's hind end? Test your knowledge! Let's see if veterinarian Stacie Boswell can stump you with any of these questions. Answers on page 24.

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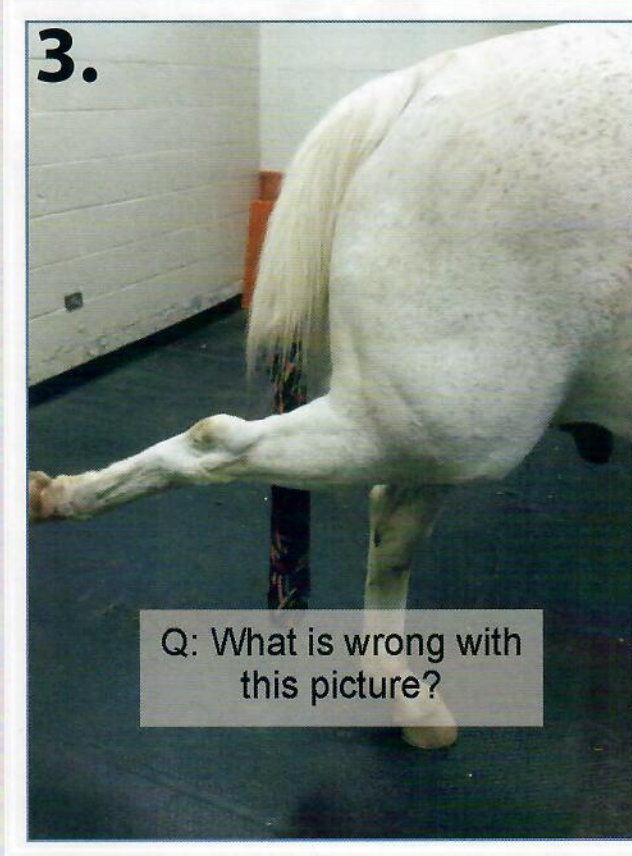
1.



2.



3.



4.



Answers:

1. This region is commonly referred to as the hock or tarsus. The correlating structure in people is our ankle. The point of the hock is the talus, and is the same structure as our heel. This area is often called the hock joint, although it is a complex area with 4 major joints. The tarsocrural (tibiotarsal) joint is the largest joint, and is the high motion joint. The other small, low-motion joints (proximal intertarsal, distal intertarsal, and tarsometatarsal) are prone to osteoarthritis, which is a common source of lameness in sport horses.

2. This region is commonly referred to as the stifle. The correlating structure in people is our knee. This area is where the femur and the tibia meet, along with the patella (which is commonly called the kneecap in people). There are multiple joint pouches in this region: the femoropatellar, and the medial and lateral femorotibial joints. The stifle and hock must always flex together.

In addition to osteoarthritis, problems causing lameness arising from this area include developmental problems such as osteochondritis desiccans (OCD), or subchondral cyst-like lesions (commonly called bone cysts), and upward fixation of the patella (UFP). In UFP, the horse is unable to “unlock” his patella and the horse’s stifle may “catch” while he is being ridden, which may be especially notable in small circles.

3. A: The stifle is flexed and the hock is extended. The horse’s normal anatomy that allows him to sleep while standing prevents this from happening. A rupture of the peroneus tertius ligament has happened in this horse. This is typically the result of trauma, often when the horse slips and falls with his leg behind him. Horses with this injury are reported to have an 80% chance of return to function.

4. This region is commonly referred to as the horse’s knee. This terminology is very confusing, because a more accurate description is the carpus. Our carpus is commonly called our wrist, and the structure that actually correlates with our knee in the horse is known as the stifle.

The carpal region is also a conglomeration of three major joints. The “upper” two joints are the high-motion joints and consist of the radiocarpal (also called the antebrachio-carpal), and the intercarpal. The low-motion joint is the carpometacarpal joint.

Racehorses, and some sport horses, may sustain chip fragments of the carpal bones. These fragments may be removed or, if they are large enough, repaired. If they are left alone, they will result in severe osteoarthritis.

The carpus is also a source of conformational defects such as “back at the knee” (see picture), “over at the knee”, carpal valgus “knock kneed”, or carpal varus “bow legged”.



“Back at the Knee”

5.



Q: What is the term for this area of the horse’s limb?

5. This region is commonly referred to as the fetlock or ankle of the horse. Our correlating structure is our first knuckle. This area has less complicated anatomy than the multi-joint hock, stifle, and carpus. It contains simply the metacarpophalangeal joint in the forelimb, and the metatarsophalangeal joint in the hind limb.

This area is a major shock absorber in the horse’s limb, with significant flexion occurring as the horse’s leg impacts the ground (see picture; the suspensory ligament is highlighted in green). The fetlock area has many important soft tissue structures, (e.g. collateral ligaments of the fetlock joint, suspensory ligament branches, and intersesamoidean ligaments) which may contribute to lameness. Osteoarthritis of the fetlock joint is also a fairly common problem.

Stacie G. Boswell, DVM, contributed this anatomy quiz section. She is an equine veterinarian at Western Trails Veterinary Hospital in Edgewood, NM and has an active interest in lameness and surgery. She can be reached at stacie@staciebowell.com.