Cox Street Vets
Small Animal & Equine | Vet Clinic & Hospital

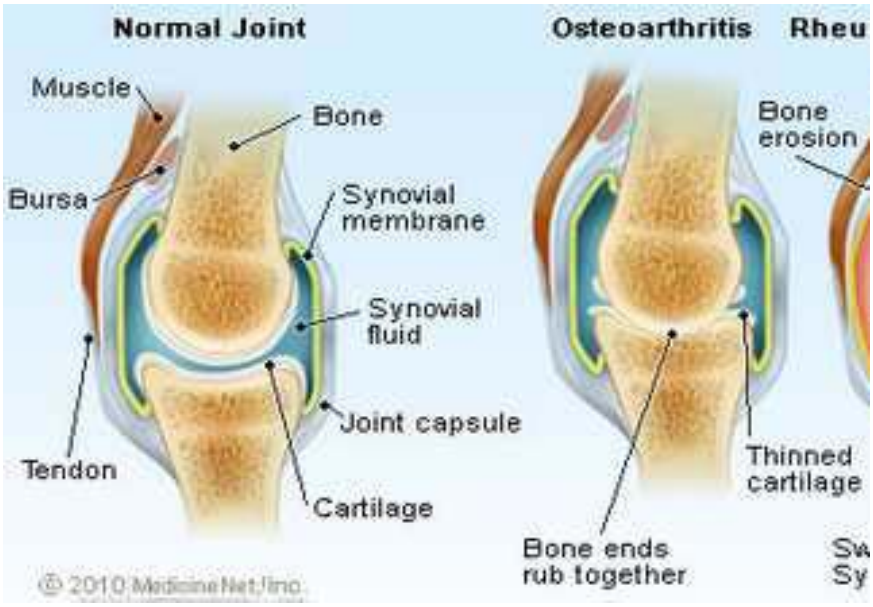
Equine degenerative joint disease (Arthritis)

The effects of traumatic joint disease can be devastating, often resulting in poor performance, downtime, and economic loss for performance horses.

A joint consists of articulating surfaces of bone covered by cartilage, contained within a fibrous joint capsule with a synovial membrane lining. The cavity within these structures contains synovial fluid. Examples of synovial joints include the fetlock, carpus (knee) and hock joints.

Articular cartilage consists of glycosaminoglycans (GAGs) such as hyaluronic acid (HA), chondroitin sulfate and collagens. Cartilage does not have its own blood supply; instead it relies upon receiving nutrition from the joint fluid and the bone directly beneath the cartilage. Joint fluid also reduces friction between the articular cartilage during movement. Healthy joint fluid viscosity (thickness) is high, and is directly related to the HA content.

Oseoarthritis is characterised by the erosion of articular cartilage. Joint disease is prevalent in horses because their joints must handle extreme weight loads on a very small surface area. When trauma causes inflammation in a joint, the blood supply to the cells that produce cartilage and joint fluid are disrupted, leading to less joint fluid and cartilage.



Inflammatory cells and destructive enzymes are activated within the joint, `which degrade proteins and GAGs in the cartilage and joint fluid. Eventually lubrication, resilience, and shock absorption qualities of the cartilage and joint fluid decrease, and the underlying bone (subchondral bone) starts to respond to the abnormal stresses it is now absorbing by laying down extra bone. This results in the production of rough, bony spurs at joint edges. It is important to understand that osteoartritis is progressive and cannot be cured, only managed. The treatment goal in early arthritis is to manage the disease- reduce pain and inflammation, reduce cartilage breakdown, and encourage cartilage and subchondral bone healing.