CURRENT EVIDENCE ON TREATMENTS OF JOINT DISEASE
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Key points
- The main goals of treating OA are reducing pain and minimizing joint deterioration.
- While randomized clinical trials would be optimal for comparison of joint treatments they for the most part don’t exist and experimental models provide the vast majority of the comparative information.

There are two main goals for medical treatment of osteoarthritis (OA) in the horse: reducing pain (lameness) and minimizing progression of joint deterioration. When formulating a treatment plan, the optimization of these goals will be influenced by an accurate and specific diagnosis, the stage of disease, severity, available treatment modalities, and rehabilitation time. Clinicians realize that treating joint disease is an art and does not follow any specific recipe. To make the correct decisions the clinician can be helped by scientific studies that have defined potential risks and benefits of certain medication. An extensive review of the research pertaining to joint medication is beyond the scope of this abstract however, highlights of some of the most common medications based on surveying equine practitioners will be discussed. Recent studies using an experimental model of equine OA have assessed the use of hyaluronic acid (HA), pentosan polysulfate, polysulfated glycosaminoglycan (PSGAG) and polyglycan.1-3

No significant improvements were noted in clinical signs of pain with either PSGAG or hyaluronan compared to placebo treated control horses.1 Histologically, the degree of synovial membrane vascularity and subintimal fibrosis was significantly reduced with PSGAG treatment (trend for HA p=value <0.07), compared with controls. Histologically, significantly less fibrillation was seen with hyaluronan treatment, compared with controls. Articular cartilage fibrillation was substantially reduced by pentosan treatment and concentrations of chondroitin sulfate 846 epitope (aggrecan synthetic marker) were significantly increased in the synovial fluid of osteoarthritic and non-osteoarthritic joints of treated horses.2 Intraarticular treatment of OA-affected joints with polyglycan resulted in significant improvement in clinical pain (lameness scores), bone proliferation radiographically and degree of full thickness articular cartilage erosion seen grossly when compared to placebo treated OA affected joints.3 Administration of polyglycan intravenously resulted in improved cartilage erosion but more pathologic response to flexion as well as an increase radiographic pathology.3

More research has been done into commonly used IA medications allowing the clinician a greater degree of choices in the field based on scientific rigor.

References