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Joint Supplements by Gregory Dowd, BVetMed, MRCVS (first published in Creature Corner)

My horse takes longer and longer to loosen up when I start riding him, but once he's warmed up he seems to move fine. Could he already have arthritis at 11 years old? If so, what are my options for treatment?

Your vet can help you confirm whether your horse suffers from Osteoarthritis (OA) by taking x-rays, but it's certainly a possibility. OA can occur at any age unfortunately. A joint's ability to withstand deterioration is influenced by many different factors, including confirmation and degree to which those joints have been stressed. A barrel racing Quarter Horse with cow-hocked conformation is pretty much destined to have arthritic hocks. A horse who has suffered a traumatic injury to a joint or had an infection within a joint (septic), would also be at increased risk of OA.

Joints are a dynamic environment, and must be able to withstand tremendous forces placed upon them. The bones that interact in joints are capped with cartilage and together with joint fluid, provide a very impressive system of gliding and shock absorption that prevents rigid bones from grinding on each other. The joint fluid bathes the cartilage, and contains substances that help nourish and repair.

As you know, or will soon find out, there are many products available that supplement the normal components of joint fluid, and seek to help fortify the repair process. They can be taken orally, or injected into the vein, muscle, or joint. These products are also encouraged to be used as prophylactic supplementation to minimize the degradation process, similar to the philosophy of changing the oil in our car every 3,000 miles to help prevent breakdown.

Some of the more common oral supplements contain Glucosamine and Chondroitin, both of which are key components in healthy cartilage. These products generate hundreds of millions of dollars annually in the human market. Hyaluronic acid (HA), a viscous gel-like substance responsible for lubrication and shock absorption, is also sold in an oral form. There are many combinations of these products commercially available. They are marketed as products that can help maintain and even repair joints, with the added convenience of simply being added to the horse's feed (depending on how picky your horse is).

There are a few controversial issues surrounding oral joint supplements. One is based on the fact that because they are classified as "nutritional supplements", they are not tightly regulated like pharmaceutical agents, and as a result, there can be considerable variation in published label amounts versus the actual content of active ingredients found in the product. Some manufacturers, aware of this concern, have attempted to distinguish themselves from the rest by voluntarily submitting their product to be tested by independent testing laboratories (ex. ConsumerLab.com) for verification. Certain products will display a seal of approval on their label to show they have been tested by an independent laboratory.

The other hotly debated topic surrounding oral supplements is the degree to which the horse's body can actually utilize these products (or bioavailability) after they've been broken down by the intestinal tract. Most of the studies testing bioavailability of glucosamine have been human studies, but as you can imagine, a horse digestive tract is quite different than a humans. The trials in horses are starting to get more convincing from a laboratory result perspective, but there are countless testimonials by horse owners that highly endorse these products.

All of these products are available in the injectable form as well, and by bypassing the digestive tract, have generally been reported to be more bioavailable. Most of these injectables are Food and Drug Administration (FDA) approved, which means they must consistently meet high standards of safety and reliable potency.

As far as injectables go, the decision of whether to choose intravenous (IV), intramuscular (IM), or intraarticular (IA), (i.e. into the joint), depends on the horse's condition, and also on what form the drug is available. Injections directly into the joint have the obvious benefit of being placed right at the site where it is needed most, and don't rely on delivery by the bloodstream. The common scenario for injection directly into the joint is for the horse who has had a previous injury to a specific joint, a horse whose conformation predisposes them to degenerative joint disease, or a horse who has a grueling exercise schedule and is breaking down cartilage faster than it can be repaired. Although the risks associated with joint injections are minimal with proper technique, there is always the possibility of infection, and every time a joint is entered with a needle, there is a certain, albeit small, degree of trauma that results in an inflammatory response. If the joints are bad enough that intraarticular injection is indicated, or if their workload is intense, than the benefits outweigh the risk. The cost of these drugs in conjunction with the expense of having the vet out to do the injections, can make this an expensive option, but often results in very satisfying improvements.

As far as your specific scenario of "the horse that takes longer to loosen up than he used to", he would probably be a good candidate for daily oral supplements. He would also certainly benefit from a course of intravenous and/or intramuscular injections that will circulate throughout his body and be deposited in the major joints. The frequency with which you would have to repeat the treatment course depends on the condition of the joints, but for many, once or twice a year is sufficient to keep their horse comfortable and moving well.

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