



Nonsurgical Joint Therapies

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It is such an exciting time for equine medicine. We are engaged in an era of true medical breakthroughs and are discovering revolutionary options for treating joint disease in both horses and humans. New imaging technologies, such as MRI, CT, digital ultrasound, and nuclear scintigraphy, have helped us understand anatomy better and improved our ability to visualize joint injury and pathology.

This growing knowledge about physiology has led scientists to helping the body heal itself, using advances such as stem cells, for example. Young researchers that grasp not only the experimental model, but are also out in the field working on real horses in real clinical settings, have added a “real-life” research component.

We also better recognize benefits and failures of old treatments, such as those of cortisone injections. When cortisone was first discovered it was seen as a miracle for treating joint inflammation. Then its overuse led to the discovery that too much of a good thing was harmful to the joint. Now, we understand through new research that it can actually help prevent cartilage damage when used in small amounts, carefully and judiciously. Cortisone essentially is the body’s naturally produced anti-inflammatory substance. We’re also mixing in hyaluronic acid, which is a component in the body’s own joint lubricant.

When a joint is inflamed, it creates an unhealthy environment for healing. The natural response of inflammation is Mother Nature’s way to tell us to rest: If it hurts, don’t use it. Let it rest. The negative side, however, is that the inflammatory process can create a less-than-optimal chemical mix in the joint fluid. Researchers developed interleukin receptor antagonist



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Techniques for treating joints have come a long way in recent years, and they’re advancing daily.

protein (IRAP) therapy as an answer to this problem. Basically, IRAP is an incubated “soup” that’s produced from the horses’ own blood that has been collected and incubated overnight with chromium-coated glass beads, then put in a centrifuge and filtered. The collected serum is then injected into the affected joint (or tendon sheath). This “soup” then locks up inflammatory receptors, creating a more normal, healthy joint fluid environment.

Intra-articular stem cell use has also been an exciting new direction for treatment of joint disease. While research is still under way, it is a promising avenue of therapy. One of our biggest challenges in treating osteoarthritis is replacing damaged, degenerating, or destroyed cartilage. Once the cartilage is gone, there are few options for a bone-on-bone situation. Early evidence suggests that stem cells

injected into a joint can make new cartilage. It is only a matter of time before researchers will discover how to “program” stem cells to produce the new tissue. Early clinical results of stem cell use in joints have been promising in my practice.

Intra-articular platelet-rich plasma (PRP) use is also on the table, and there is some interesting new research available, but it is too early to recommend it for regular clinical use. Platelets contain many growth factors that signal the body’s own mechanism to heal, so there is potential for using it to treat tendon and ligament injuries and possibly joint damage.

The concept of helping the body heal itself is a fundamental shift from the medical approach of yesterday, which was, “Got a problem? Take a pill.” As we understand the body better through basic medical research and new technology in imaging, we can approach treatment of disease and injury with greater success. We are now looking at the “whole horse,” not at just the leg, for example. If the horse has an injury and has an underlying disease (insulin resistance, for example), we must treat the insulin resistance in order for the joint or tendon to have optimal healing.

These are exciting and promising times in equine medicine, and help for your horse is advancing daily. Injuries that were career-ending just a few years ago are now manageable. What’s next? 🐾

ABOUT THE AUTHOR

Richard Markell, DVM, of Encinitas, Calif., has been the official vet at four World Cup show jumping and dressage finals, treating vet at two Olympic Games trials, and has a client list of many celebrity and Olympic horses worldwide. His practice, Ranch and Coast Equine, is limited to sport horses. He and his wife, Kristin, have a son, Henry, and the Markell menagerie includes two horses, a Miniature Donkey, two dogs, a guinea pig, and a gecko.