

“Doc, my horse is a little sticky in the hind end.”

“You know, she is just having a hard time picking up her right lead.”

“His stops have been great, but he hasn’t been getting under himself lately.”

If you have a performance horse or have had a horse with some soundness issues, you may have heard or used these phrases yourself. Joint injections are great for making a lame horse comfortable to go back to his or her job. However, it is best to consult with your veterinarian before deciding that a joint injection is the right treatment for your horse.

WHAT IS A JOINT INJECTION?

A joint injection is a mixture of drugs injected directly into a mobile, bending part of the body. The goal of the injection is to help reduce the inflammation, or swelling, within it. An inflamed joint can cause discomfort, which may manifest as a sore-moving horse or a noticeable limp. Unfortunately, inflammation doesn’t stop there. Some of the naturally occurring enzymes, or chemicals, that come with inflammation can actually speed up the formation of arthritis in these painful joints. By reducing the inflammation within a joint, your horse may not just feel better but may also form arthritis in that joint at a slower rate.

WHAT IS USED IN A JOINT INJECTION?

There are three things that are commonly used in a joint injection: a steroid, hyaluronic acid, and an antibiotic.

STEROID: Steroids are used to help reduce the inflammation in the joint. If it is no longer inflamed, the swelling in the joint goes down and the horse is often more comfortable to return to work.

HYALURONIC ACID (HA): This is a naturally occurring compound in healthy synovial fluid (joint fluid) and cartilage. When a joint becomes inflamed, the same enzymes that speed up the formation of arthritis can also destroy HA. Destroying HA can decrease the ease of your horse’s mobility in the joint. Your veterinarian may inject this, along with the steroid, to help temporarily replenish the damaged HA.

ANTIBIOTIC: A small amount of antibiotics is frequently used with every joint injection. The skin isn’t 100% clean, regardless of how long you scrub. Therefore, an antibiotic is used to help prevent an accidental infection in the joint.

There are alternative therapies that can be injected as well: interleukin-1 receptor agonist protein (IRAP), platelet-rich plasma (PRP), and stem cells. These are liquids or tissues harvested and purified from your own horse and injected similarly to a steroid and hyaluronic acid. PRP and stem cells are used more frequently for injured tendons and tendon sheaths, but are showing some promise to help joints as well.

IRAP: Your veterinarian will take some blood from your horse and process it in their lab. After a 24 hour period, the purified, sterile liquid is ready to be injected. IRAP has natural enzymes that

help stop the bad enzymes that cause joint deterioration. It doesn't repair the joint, but is a good alternative to get a swollen, painful joint under control.

PRP: PRP is also purified from your horse's own blood to get a high concentration of a normal cell within the blood called a platelet. Platelets contain chemicals that have been shown to help the body repair itself. Studies have found that PRP is helpful to repair bowed tendons and tendon sheaths (capsule around the tendon), but more information needs to be gathered if it can help joints as well.

STEM CELLS: These cells are collected from a piece of fatty tissue or from the bone marrow of your horse's body. Stem cells are then cultured from these tissues in a special lab, purified, and injected into a joint. There has been some promise that this can also help repair a damaged joint, but more studies are still in the process to find out if this is a therapy that can be used.

WHY IS STERILITY IMPORTANT?

You will see that your doctor goes through some length to ensure that the area is sterile before injecting the joint. The area will be cleaned with iodine scrub or chlorhexidine scrub for 7 minutes, followed with a thorough rinse with rubbing alcohol. They will also put on sterile gloves to pull up the medication and inject it. This will help limit any bacteria from entering the joint, causing a joint infection.

It's also important to perform the injection in a clean environment. Blowing dirt can easily get onto freshly-scrubbed skin and even on your doctor's gloves. It is recommended to have the injections done inside at your local clinic to limit contamination from even the gentlest of a breeze. Ensuring your horse is in the cleanest environment possible will help limit the chances of a joint infection.

ARE THERE ANY SIDE EFFECTS?

Like with any medical procedure, there are some side effects to performing a joint injection.

Joint flare

Reactive synovitis, or joint flare, is best described as an allergic reaction within the joint to the medication administered. This usually happens within a few hours in less than 1% of horses. A horse with reactive synovitis often will have a swollen joint with a mild limp.

Joint infection

A joint is at risk for an infection anytime it is injected. In less than 1% of horses injected, bacteria accidentally make their way into the joint. The horse will have a swollen joint, like with joint flare, but will be quite painful within a few days.

Steroid-induced laminitis

One of the side effects of using high levels of steroids on a frequent basis is laminitis (founder). This risk goes up if the horse receiving the steroids has had laminitis in the past. Steroids can act similar to enzymes that can cause laminitis: changing the blood flow in the foot and disrupting the attachment of the hoof capsule to underlying softer tissues. Your veterinarian should know how much is too much and stay under that threshold to help prevent this from happening.

It may not work

After your horse's joint is injected, it is possible that your horse will still be sore. Sometimes the pain your horse is showing is near the joint, but not in it. If that joint has been injected before, the likelihood of it responding to the injections decreases and formation of scar tissue increases the more times you do it. Joint injections should last 12-18 months, sometimes longer. It is said that an injection no longer works if it doesn't hold for more than six months.

CAN MY HORSE HAVE MORE THAN ONE JOINT INJECTED AT THE SAME VISIT?

Absolutely! However, there are some reasons to consider before having multiple joints injected.

You don't know which joint needed it.

For example, someone has a horse that is stiff all over in the back end. Instead of performing a lameness exam to rule out if it's the left hind limb, right hind limb, stifle, hock, or even a forelimb, both hocks and stifles are injected. A few days later, he is miraculously sound! The horse is now more comfortable to go out and work, but the root cause of his overall stiffness was never found. Joint injections typically cost \$150-\$250 each, possibly more if using alternative therapies like IRAP and stem cells. His owner may have just spent a pretty penny to cover up something that may become a serious problem in the future.

Some steroids have been shown to break down cartilage.

Yes, steroids can help reduce the swelling and pain in the joint. However, studies have shown that some steroids may also cause the articular cartilage (cartilage on the joint surface) to deteriorate. Articular cartilage acts as a shock absorber when bones slide and hit each other with normal movement. Without this cartilage, the joint experiences excessive movement that may lead to quicker development of arthritis. Articular cartilage break down is most likely to occur in joints injected frequently with high levels of steroids.

Currently, there are no studies to show that joint maintenance, or getting joints injected on a routine basis to prevent a problem, gives a horse a better competitive edge. In order for a joint injection to work at its optimum, there has to be a certain degree of swelling and inflammation present. And if there is no problem with the joint as it is, is it worth it to spend the money and take the risk to perform a procedure that may not benefit the horse?

Swollen, inflamed joints are a common cause of lameness in all horses. If not controlled, inflammation can lead to continued pain and possibly arthritis. Joint injections are one of the many tools your veterinarian can use to get your horse back to performing. It is best to have a conversation with your veterinarian about the goals for your horse before determining which is the best treatment.