Is Adequan or Legend Best?

These injectable drugs have research and anecdotal evidence to support their use, even given as a preventative measure.

Professional reining trainer Diianne Sommerfeld of 3D Performance Horses in Petaluma, Calif., knew one day her champion cutter and reining cow horse stallion Brudder would show signs of wear and tear. His long competitive career surely had caused some joint-related problems, but the heart of this stallion endured until recently, at the amazing age of 31. Diianne started to notice that Brudder was stiff on his hind end.

After long conversations about cortisone injections in his hocks and joint supplements, Diianne decided to try a Legend injection. Within days of his injection, Brudder not only began to feel better under saddle, but he also started to act like a young energetic horse again. She was amazed at how this simple monthly injection could make such a positive difference for her horse.

From reining to endurance, dressage to racing, horse owners in every discipline seem to find themselves in situations like Dianne’s, pondering the use of joint supplements.

Two of the most popular injectable joint supplements are Adequan and Legend, and both research and anecdotal evidence suggest that they can help horses with joint-related issues. More than that, they can help slow the onset of arthritis, making them a good preventative measure, as well.

INFLAMMATION DEFINED.

No matter what you do, repeated trauma or stress to the joint during everyday riding, athletic training or performance will result in joint inflammation at some level in your horse. This is the start of “arthritis.”

Inflammation symptoms include:
- Heat
- Pain
- Swelling
- Loss of function.

To counter inflammation, joints try to regenerate the damaged structures, including cartilage. But because cartilage has a poor blood supply, it regenerates slowly. In fact, the rate of degeneration usually exceeds the rate of regeneration. Consequently, cartilage continuously erodes over time, leaving the ends of the bones exposed.

When that happens, bone reacts by adding extra bone, called “bone spurs.” That’s osteoarthritis, or inflammation in a joint with permanent bone remodeling. Once new bone production begins in your horse, it won’t stop.

CAN IT BE PREVENTED? There are thousands of research articles regarding the use of joint supplements in horses, and true to form, many contradict one another. This can make it difficult for an owner to decide whether or not to endure the expense of these products.

However, one universally agreed upon point is this: Joint supplements do far more to prevent inflammation and joint breakdown than they do to treat it once it has started. In other words, don’t wait until your horse has a problem to start using joint supplements.

JOINT STIFFNESS. There are dozens of indicators that a problem has developed, but the most common are:
- Lameness
- Decreased range of motion
- Swelling/excess fluid in a joint
- Pain reaction to flexion tests
- Abnormal joint shape/contour
- Reluctance to perform
- Agitated or unhappy behavior
- Unwillingness to hold a gait (especially cantering)
- Difficult for the farrier.

Signs or no signs, we feel it’s a good idea to give your horse a joint
supplement now because it may well prolong the usable life of his joints. They’re expensive, though, and many people need more justification. That’s understandable.

**WHAT JOINT SUPPLEMENTS DO.** When horse owners see components such as hyaluronan, glycosaminoglycans (GAGs) and chondroitin in diagrams of cartilage, it seems intuitive to supplement a horse with them since they appear to be “building blocks” to cartilage structure. Unfortunately, it’s not that simple. Think of cartilage like a tree. The roots, trunk and branches can all be represented by hyaluronan, GAGs and chondroitin. However, if a tree falls down (analogous to cartilage being damaged) simply throwing pieces of trees on top of the fallen trunk will not make it regrow. So what are these joint supplements doing?

*Joint supplements mainly function as anti-inflammatory agents throughout the body.* Since joints in constant use always have some degree of inflammation, it makes sense to give a joint supplement on an ongoing basis to counter the inflammation.

**LEGEND AND ADEQUAN.** Veterinary professionals are trained to use pentosan systemically via intramuscular injection as anti-inflammatory agents. The drug Legend may knock out some of them, and Adequan may take care of others, while pentosan has an affinity for a different group. The ability of any given joint supplement to work depends largely on whether or not the inflammation the horse is experiencing is mediated by the particular set of inflammatory mediators that the supplement targets. Of course, dose amount and frequency also influence an injectable joint supplement’s ability to show results in a sore horse.

**BOTTOM LINE.** Pentosan is another type of injectable systemic joint supplement available on the market. Do your homework to determine whether or not the pentosan that you are using is compounded or “approved.” Beware of the dangers of compounded medications, especially injectable ones! The risk is too high, in our opinion.

Pentosan may work in your horse (depending on the chemical mediators that predominate his inflammation) and is worth a shot if you are experiencing ongoing lameness or performance issues that would require a joint supplement. You may also want to consider switching to it if you are getting lackluster results with your current joint supplement.

It’s available by prescription, so consult your veterinarian to see if it is the right fit for your horse.

*Article by Contributing Veterinary Editor Grant Miller DVM.*
Veterinarians frequently recommend Legend and/or Adequan, possibly because they’re injected into your horse, rather than fed. That means they bypass digestion and absorption and get directly into your horse’s body, making them potentially more effective. They’re also FDA-approved.

Many folks prefer Adequan over Legend because it costs less and is easier to administer. Adequan is polysulfated glycosaminoglycan (PSGAG), which is proven to have an anti-inflammatory effect in the body. It’s a prescription item, administered intramuscularly and usually involves a loading dose regimen initially and then tapers off to one injection per month.

Adequan (seven vials) sells for around $280 or $40 per injection. Chances are you can give it to the horse yourself. If you consider it at $40/month, it’s relatively low compared to Legend or to most oral supplements. Adequan is safe. Few reactions or side effects have been reported, and horses seem to tolerate the 5cc injection well. It’s legal for most competitions and clients who use it usually report improvements in their horse’s movement and performance within a couple of weeks.

Legend is also a prescription injectable. It consists of 4 ccs of hyaluronan given intravenously. It can be given as a series of loading doses like Adequan, and it eventually will also taper off to one injection per month for most horses.

Because it must be administered intravenously, in most cases, you’ll need a vet to give it. Herein lies one of the challenges.

Legend can be purchased in a six pack, which is competitively priced at around $468 (or $78 per dose). That is almost twice the cost of Adequan and still doesn’t include the costs involved with the vet coming out and giving the injection.

For those who wish to try intravenous injections themselves, there can be serious reactions to Legend if it is accidently injected into an artery rather than a vein. It’s best given by someone skilled in intravenous injections.

Legend also has an excellent anti-inflammatory effect in the body and is legal for most competitions. Legend works within days of being given, which makes it a great last-minute choice to help tune a horse up for a show.

**BOTTOM LINE.** You can feel confident using either Legend and/or Adequan, although we’ve seen slightly more noticeable results with Legend than with Adequan. Some research indicates that the two given in conjunction will have a much greater positive effect in your horse than if you just used one or the other alone.

Whatever you decide, being proactive about joint supplements appears to be wise. Oral or injected, joint supplements do far more to prevent osteoarthritis than they do.

---

**Preventative Management**

Two major factors that will influence the health of your horse’s joints are weight and movement. If your horse is overweight, each pound will create a noticeable strain on joints. It’s absolutely vital to keep your horse at an ideal weight. We suggest between a 5 and a 6 on the Henneke Body Condition Scale, which runs from 1 (extremely emaciated) to 9 (extremely obese). See [http://www.kentuckyhorse.org/henneke-body-condition-scoring](http://www.kentuckyhorse.org/henneke-body-condition-scoring) for further information. Be sure you find someone who can be objective about your horse’s weight. Much confusion exists as to when a horse is at the right target weight.

Access to turnout makes a huge difference in joint health. It’s no secret that bodies in motion tend to stay in motion. When we make our horses stand in a stall for extended periods, they stiffen up quite a bit. This stiffness represents an unnatural, unhealthy state in their joints. If a horse is allowed to move about freely and constantly, the joints are much happier.

Finally, don’t neglect proper warm-up and cool-down practices. They’re also an important part of joint health.

---

Relaxing hacks after a work are good for mind and body, horse and rider.
### Legend vs. Adequan vs. PentAussie

<table>
<thead>
<tr>
<th></th>
<th>Legend</th>
<th>Adequan</th>
<th>PentAussie</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical agent</td>
<td>Hyaluronan</td>
<td>Polysulfated glycosaminoglycan</td>
<td>Pentosan polysulfate and N-acetyl glucosamine</td>
</tr>
<tr>
<td>FDA Approved?</td>
<td>Yes</td>
<td>Yes</td>
<td>Not for arthritis</td>
</tr>
<tr>
<td>Competition Legal?</td>
<td>In most cases</td>
<td>In most cases</td>
<td>Yes</td>
</tr>
<tr>
<td>Prescription Required?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Cost</td>
<td>$90 per vial</td>
<td>$50 per vial</td>
<td>$60 per vial</td>
</tr>
<tr>
<td>Route of Administration</td>
<td>Intravenous (may require veterinary help)</td>
<td>Intramuscular (horse owner may be able to inject)</td>
<td>Intramuscular (horse owner may be able to inject)</td>
</tr>
<tr>
<td>Loading Dose</td>
<td>Recommended</td>
<td>Recommended</td>
<td>Recommended</td>
</tr>
<tr>
<td>Frequency</td>
<td>Once monthly</td>
<td>Once monthly</td>
<td>Once monthly</td>
</tr>
<tr>
<td>Ease of use</td>
<td>Difficult due to IV route</td>
<td>Relatively easy</td>
<td>Relatively easy</td>
</tr>
<tr>
<td>Noticeable results</td>
<td>Days</td>
<td>One to two weeks</td>
<td>One to two weeks</td>
</tr>
</tbody>
</table>

### Oral Or Injectable? Which Is Best?

Most of us use oral joint supplements because they’re available without a prescription or because we prefer not to give injections.

Although the risk of having a bad reaction or an infection from an injection is relatively low, it can happen. In addition, about a third of horses jump or twitch when poked with a needle. All this makes feeding a supplement preferable. And maybe it is for you.

However, you should also consider that:

- Oral joint supplements cost more than injectable ones (sometimes by over $2 per day).

- The digestive process can substantially lower the amount of a fed supplement actually getting into the body (a phenomenon known as bioavailability), meaning money in the manure pile.

- The biggest downside of an oral supplement is the dreaded concept that it might not contain what the label claims. Because joint supplements are classified as nutraceuticals, the FDA doesn’t verify label claims, and so it’s a matter of trust (products from members of the National Animal Supplement Council, or NASC, may be audited—see www.nasc.cc or call 760-751-3360).

- The efficacy of oral or injectable varies on a horse-by-horse basis. Adequan may work wonders in one horse, while oral glucosamine helps another. Owners may try an oral joint supplement for three months, and then try an injectable one to see if it yields better results. In other words, finding the right choice can be a long process.

Note: If you’re decide to stop your nutraceutical to see if it really “works,” be sure you’re aware that it can take up to six weeks for the product to be completely out of your horse’s system. Consider, too, that the biggest benefit of these products is as a preventative.

---

Radiograph of a horse carpus (knee). Bone spurs can form on the edges of the joint space and cause pain.