SINCE 1981 PENN
Veterinary Supply, Inc.
Phone: 800.233.0210
www.pennvet.com

Adequan i.m.®

polysulfated glycosaminoglycan

Unlike any other equine joint product.

The only FDA-approved equine PSGAG intramuscular treatment for non-infectious degenerative joint disease (DJD) of the carpal and hock joints.

Ask your veterinarian if Adequan® i.m. (polysulfated glycosaminoglycan) is the right choice for your horse.

Healthy joints are essential.

Whether your horse is a top athlete or a treasured companion, every ride requires performance.
The stress of performance increases wear and tear on joints. Wear and tear produces changes in bone and soft tissues of the joint, as well as progressive deterioration of articular cartilage, which are hallmarks of degenerative joint disease (DJD).[1]

DJD can occur within any joint that consistently experiences wear and tear. Over time, DJD causes lameness, which may be noticeable by an owner, rider, trainer or veterinarian. DJD is a common problem that affects career longevity of performance horses, regardless of discipline. For most horses, it's not if DJD will occur, but when.[1]

What is degenerative joint disease (DJD)?

Equine DJD, commonly referred to as osteoarthritis (or OA) can cause lameness in horses of all breeds and ages. This painful disease is characterized by progressive deterioration of the articular cartilage, which is accompanied by changes in bone and soft tissues of the joint.[1]

INDICATIONS Adequan® i.m. (polysulfated glycosaminoglycan) is recommended for the intramuscular treatment of non-infectious degenerative and/or traumatic joint dysfunction and associated lameness of the carpal and hock joints in horses.

Start early to help your horse keep moving and performing.

Since joint damage can escalate, it's important to diagnose DJD early and minimize progression of the disease. Many products are available to help reduce pain and inflammation or improve mobility, including NSAIDs and supplements. But there's only one PSGAG treatment that proactively treats the disease and not just the signs of DJD.[2]

The only FDA-approved equine PSGAG that actually treats the disease and not just the signs of DJD.

Adequan® i.m. (polysulfated glycosaminoglycan) not only reaches joints quickly, but also helps to protect and renew joint mobility. After 30 years, it's still the only FDA-approved equine PSGAG intramuscular treatment for non-infectious DJD of the carpal and hock joints proven to:[2,3]

- **Reduce** inflammation
- **Restore** synovial joint lubrication
- **Repair** joint cartilage
- **Reverse** the disease process

Quickly reaches your horse's joints to deliver relief.

After intramuscular administration, Adequan® i.m. is well absorbed, goes to work fast and keeps working for up to 96 hours.[3]

Peak levels achieved in the joints within	HA nearly doubles at	Detected in cartilage and subchondral bone up to
2 Hours	**48** Hours	**96** Hours

Hyaluronic Acid (HA) levels nearly doubled at 48 hours with significant increases noted from 24 up to 96 hours.[3]

Clinical significance of the above results is unknown.

The benefits of 1-4-7 dosing.

Based on findings in a Dose Response Study,[4] the recommended optimal dosage of Adequan® i.m.

1 **Administer 1 (500 mg) dose**

4 **Every 4 days**

7 **For 7 treatments**

For example

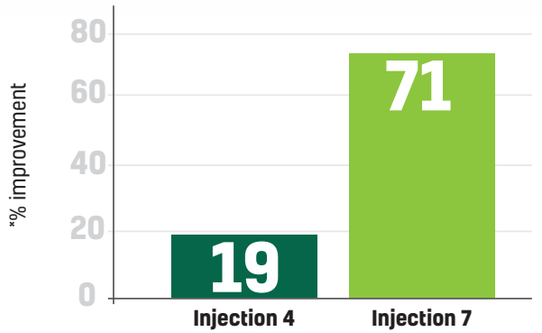
Monthly Calendar

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Restricted to use by or on the order of a licensed veterinarian.

The **benefits of adhering** to the labeled dosing regimen:

Over 50% improvement in maximum carpal flexion.[4]



*% improvement from baseline

*A placebo-controlled, blinded dose titration study was conducted in a total of 36 healthy, mature horses that were either Quarter horses or Thoroughbreds. An induced adjuvant carpitis in the horse was used to assess the dose and efficacy of the intramuscular administration of Adequan® i.m. The adjuvant induced arthritis was produced with a single intraarticular injection of 0.5 mL of Freunds adjuvant. The various treatments comprised sterile saline solution as a placebo control and 50 mg, 125 mg, 250 mg, 500 mg and 1,000 mg of the active drug substance Adequan® i.m. dissolved in sterile water. Injections were given every 4 days for a total of 7 injections. Treatment followed a 10 day acclimation period and a five day model induction period.[4]

There's nothing else like it.

- **An exclusive**, injectable formula that's never been duplicated
- **Consistent quality and purity** — the only FDA-approved equine PSGAG manufacturing site in the world
- **Not a supplement**

INDICATIONS Adequan® i.m. (polysulfated glycosaminoglycan) is recommended for the intramuscular treatment of non-infectious degenerative and/or traumatic joint dysfunction and associated lameness of the carpal and hock joints in horses. **IMPORTANT SAFETY INFORMATION** There are no known contraindications to the use of intramuscular Polysulfated Glycosaminoglycan. Studies have not been conducted to establish safety in breeding horses. **WARNING:** Do not use in horses intended for human consumption. Not for use in humans. Keep this and all medications out of the reach of children. **CAUTION:** Federal law restricts this drug to use by or on the order of a licensed veterinarian. ***Please see accompanying Full Prescribing Information or visit adequan.com.***

Reasons why veterinarians start with it and stay with it.

- **Reliable —** the only FDA-approved equine intramuscular polysulfated glycosaminoglycan[2]
- **Proven —** backed by efficacy and safety studies reviewed by the FDA[2]
- **Trusted —** millions of doses administered to equine patients[5]

Adequan® is truly an icon in equine joint treatment. That's why many veterinarians recommend it.

"Diagnosing horses with degenerative joint disease earlier is when we have the opportunity to make a difference. For us, a product that has great ease of i.m. administration and FDA approval behind it is an easy choice."

— Kelly B. Tisher, DVM
Littleton Equine Medical Center

Start with it. Stay with it.®

Adequan i.m.®
polysulfated glycosaminoglycan

1. McIlwraith CW, Frisbie DD, Kawcak CE, van Weeren PR. Joint Disease in the Horse. St. Louis, MO: Elsevier, 2016; 33-48.
2. Adequan® i.m. (polysulfated glycosaminoglycan), Package Insert. American Regent, Inc.
3. Burba DJ, Collier MA, DeBault LE, Hanson-Painton O, Thompson HC, Holder CL: In vivo kinetic study on uptake and distribution of intramuscular tritium-labeled polysulfated glycosaminoglycan in equine body fluid compartments and articular cartilage in an osteochondral defect model. J Equine Vet Sci 1993; 13: 696-703.
4. Freedom of Information Summary, Adequan® i.m. NADA 140-901, http://www.fda.gov/animalveterinary/products/approvedanimaldrugproducts/foiadrugsummaries/ucm054843.htm.
5. Data on file. American Regent, Inc.

AMERICAN REGENT® ANIMAL HEALTH

Adequan i.m.®

polysulfated glycosaminoglycan

SINGLE DOSE

Solution 500 mg/5 mL

For Intramuscular Use In Horses

CAUTION: Federal law restricts this drug to use by or on the order of a licensed veterinarian.

DESCRIPTION: Each 5 milliliters of Adequan® i.m. contains 500 mg of Polysulfated Glycosaminoglycan (PSGAG) and Water for Injection q.s. Sodium Hydroxide and/or Hydrochloric Acid added when necessary to adjust pH. Sodium Chloride may be added to adjust tonicity.

PHARMACOLOGY: Polysulfated Glycosaminoglycan is chemically similar to the glycosaminoglycans in articular cartilage matrix. PSGAG is a potent proteolytic enzyme inhibitor and diminishes or reverses the pathologic processes of traumatic or degenerative joint disease which result in a net loss of cartilage matrix components. PSGAG improves joint function by reducing synovial fluid protein levels and increasing synovial fluid hyaluronic acid concentration in traumatized equine carpal and hock joints.

INDICATIONS: Adequan® i.m. is recommended for the intramuscular treatment of non-infectious degenerative and/or traumatic joint dysfunction and associated lameness of the carpal and hock joints in horses.

DOSAGE AND ADMINISTRATION: The recommended dose of Adequan® i.m. in horses is 500 mg every 4 days for 28 days intramuscularly. The injection site must be thoroughly cleansed prior to injection. Do not mix Adequan® i.m. with other drugs or solvents.

CONTRAINDICATIONS: There are no known contraindications to the use of intramuscular Polysulfated Glycosaminoglycan.

WARNINGS: Do not use in horses intended for human consumption. Not for use in humans. Keep this and all medications out of the reach of children.

PRECAUTIONS: The safe use of Adequan® i.m. in horses used for breeding purposes, during pregnancy, or in lactating mares has not been evaluated.

ANIMAL SAFETY: Toxicity studies were conducted in horses. Doses as high as 2,500 mg were administered intramuscularly to 6 horses twice a week for 12 weeks. This dosage is 5 times the recommended dosage and 3 times the recommended therapeutic regimen. Clinical observations revealed no soreness or swelling at the injection site or in the affected joint. No animal had any clinical or laboratory evidence of toxicity.

STORAGE CONDITIONS: Store at 20°-25°C (68°-77°F); (See USP Controlled Room Temperature). Discard unused portion.

Dispose of spent needles in accordance with all federal, state and local environmental laws.

HOW SUPPLIED: Adequan® i.m. solution, 500 mg/5 mL (100 mg/mL) in a 5 mL single dose glass vial.

NDC 10797-995-70 5 mL Single Dose Vials Packaged 7 vials per box

AMERICAN REGENT, INC.
ANIMAL HEALTH
Shirley, NY 11967
(1-888-354-4857)

Made in U.S.A.
IN99501
Rev. 9/2021
MG #44455

Approved by FDA under NADA # 140-901

Adequan i.m.®

polysulfated glycosaminoglycan

MULTI-DOSE

Solution 100 mg/mL in a 50 mL Preserved Multi-Dose Vial

For Intramuscular Use In Horses Only. Not for Intra-Articular Use.

CAUTION: Federal law restricts this drug to use by or on the order of a licensed veterinarian.

DESCRIPTION: Each mL contains Polysulfated Glycosaminoglycan (PSGAG) 100 mg, Benzyl Alcohol 0.9% v/v as a preservative, and Water for Injection q.s. Sodium Hydroxide and/or Hydrochloric Acid added when necessary to adjust pH. The solution is clear, colorless to slightly yellow.

PHARMACOLOGY: Polysulfated Glycosaminoglycan is chemically similar to the glycosaminoglycans in articular cartilage matrix. PSGAG is a potent proteolytic enzyme inhibitor and diminishes or reverses the pathologic processes of traumatic or degenerative joint disease which result in a net loss of cartilage matrix components. PSGAG improves joint function by reducing synovial fluid protein levels and increasing synovial fluid hyaluronic acid concentration in traumatized equine carpal and hock joints.

INDICATIONS: Adequan® i.m. Multi-Dose is recommended for the intramuscular treatment of non-infectious degenerative and/or traumatic joint dysfunction and associated lameness of the carpal and hock joints in horses.

DOSAGE AND ADMINISTRATION: Practice aseptic techniques in withdrawing each dose to decrease the possibility of post-injection bacterial infections. Adequately clean and disinfect the stopper prior to entry with a sterile needle and syringe. Use only sterile needles, and use each needle only once.

The vial stopper may be punctured a maximum of 10 times.

The recommended dose of Adequan® i.m. Multi-Dose in horses is 500 mg every 4 days for 28 days intramuscularly. The injection site must be thoroughly cleansed prior to injection. Do not mix Adequan® i.m. Multi-Dose with other drugs or solvents.

CONTRAINDICATIONS: There are no known contraindications to the use of intramuscular Polysulfated Glycosaminoglycan.

WARNINGS: Do not use in horses intended for human consumption. Not for use in humans. Keep this and all medications out of the reach of children.

PRECAUTIONS: The safe use of Adequan® i.m. Multi-Dose in horses used for breeding purposes, during pregnancy, or in lactating mares has not been evaluated.

SAFETY AND EFFICACY: Safety and efficacy studies utilizing Adequan® i.m. Multi-Dose were not performed. Adequan® i.m. Multi-Dose was approved based on the conclusion that the safety and effectiveness of Adequan® i.m. Multi-Dose will not differ from that demonstrated for the original formulation of Adequan® i.m.

ANIMAL SAFETY: Animal Safety studies utilizing Adequan® i.m. Multi-Dose were not performed. Safety studies were conducted in horses using the single dose formulation. Doses as high as 2,500 mg were administered intramuscularly to 6 horses twice a week for 12 weeks. This dosage is 5 times the recommended dosage and 3 times the recommended therapeutic regimen. Clinical observations revealed no soreness or swelling at the injection site or in the affected joint. No animal had any clinical or laboratory evidence of toxicity.

STORAGE CONDITIONS: Store at 20°-25°C (68°-77°F); excursions permitted to 15°-30°C (59°-86°F) (See USP Controlled Room Temperature). Avoid prolonged exposure to temperatures ≥ 40°C (104°F).

Use within 28 days of first puncture and puncture a maximum of 10 times. Dispose of spent needles in accordance with all federal, state and local environmental laws.

HOW SUPPLIED: Adequan® i.m. Multi-Dose solution, 5,000 mg/50 mL (100 mg/mL) in 50 mL multi-dose glass vials.

NDC 10797-959-01 50 mL Multi-Dose Vials Packaged 1 vial per box

AMERICAN REGENT, INC.
ANIMAL HEALTH
Shirley, NY 11967
(1-888-354-4857)

Made in U.S.A.
IN959
Rev. 9/2021
MG #44453

Approved by FDA under NADA # 140-901