

# TECHNICAL BULLETIN

## Rationale for Adequan® i.m. (polysulfated glycosaminoglycan) Dosing Regimen

Marian G. Little, DVM Luitpold Pharmaceuticals Technical Services Veterinarian

One of the most common causes of loss of use in the performance horse is lameness due to non-infectious degenerative and/or traumatic joint dysfunction. Adequan® i.m. (polysulfated glycosaminoglycan), has been available to veterinarians for management of equine degenerative joint disease (DJD) of the carpal and hock joints for almost three decades. Commonly asked questions relative to Adequan® i.m. dosing include:

### 1. "What is the FDA approved dosing regimen for Adequan® i.m.?"

- The recommended dose of Adequan® i.m. in horses is 500 mg every 4 days for 28 days intramuscularly (for a total of 7 injections)

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8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

**Please see accompanying Full Prescribing Information.**

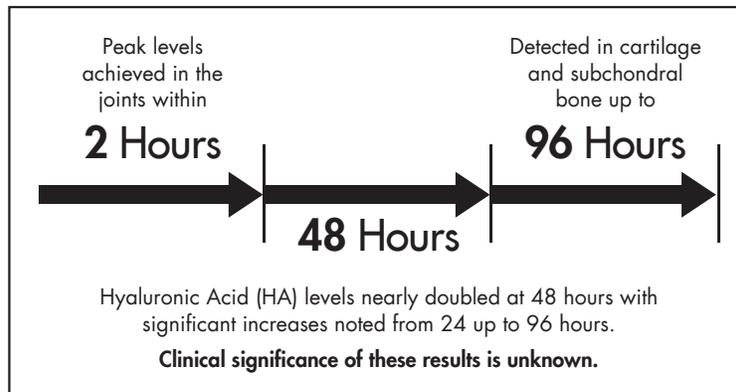
### 2. "Why is Adequan® i.m. administered every 4 days?"

- Pharmacokinetics of Adequan® i.m. 96 hours post-injection in the horse were investigated by Burba et al.<sup>1</sup> Burba et al demonstrated that Adequan® i.m. diffused into the circulation, was transported into synovial fluid, and was absorbed by articular cartilage at therapeutic levels reported to inhibit certain cartilage degrading enzymes.<sup>1</sup> These findings supported the FDA approved dosing regimen for Adequan® i.m.
  - Concentrations of Adequan® i.m. peaked in serum and synovial fluid within 2 hours post-injection, then rapidly declined and remained at or above therapeutic levels for the remainder of the 96-hour test period<sup>1</sup>





- Concentrations of hyaluronic acid nearly doubled 48 hours post-injection, with significant increases noted from 24 to 96 hours<sup>1</sup>
- Concentrations of Adequan® i.m. (polysulfated glycosaminoglycan) at or near therapeutic levels were detected in the cartilage of all eight horses 96 hours post-injection<sup>1</sup>



### 3. "Is there an FDA approved monthly maintenance dose for Adequan® i.m.?"

- No. Based on the pharmacokinetics established by Burba et al, persistence of Adequan® i.m. in serum, equine joint fluid, or articular cartilage beyond 96 hours has not been shown.<sup>1</sup> There is no published data to support maintenance dosing regimens for Adequan® i.m. Current recommendations are to repeat the 7-dose series (500 mg every 4 days for 28 days intramuscularly) as needed upon recurrence of the clinical signs of DJD of the 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.

### IMPORTANT SAFETY INFORMATION

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.**

### References

1. Burba DJ, Collier MA, Default 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. *The Journal of Equine Veterinary Science* 1993; 696-703.
2. Adequan® i.m. [package insert]. Shirley, NY: Luitpold Animal Health; 2008.

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