ADEQUAN I.A.- polysulfated glycosaminoglycan injection, solution
Luitpold Pharmaceuticals, Inc.

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Adequan® I.A.
(Polysulfated Glycosaminoglycan) (PSGAG)

Solution 250 mg/mL
For intra-articular (I.A.) use in horses

DESCRIPTION
Each milliliter of Adequan contains 250 mg of Polysulfated Glycosaminoglycan and Water for Injection
q.s. Sodium Hydroxide and/or Hydrochloric Acid added when necessary to adjust pH.

PHARMACOLOGY
Polysulfated Glycosaminoglycan is chemically similar to the mucopolysaccharides of cartilaginous
tissue. It is a potent proteolytic enzyme inhibitor and diminishes or reverses the processes which result
in the loss of cartilaginous mucopolysaccharides. PSGAG improves joint function by stimulating
synovial membrane activity, reducing synovial protein levels and increasing synovial fluid viscosity in
traumatized equine carpal joints.

TOXICITY
Toxicity studies were conducted in horses. Doses as high as 1,250 mg were administered intracarpally
to 6 horses once a week for 18 weeks. This dosage is 5 times the recommended dosage and 3.6 times
the recommended therapeutic regimen. Clinical observations revealed soreness and swelling in 1.8% (2
of 109 animals) at the injection site which was mild, self limiting and lasted less than one day. There
was a dose related evaluation on partial thromboplastin time, creatinine and glucose. No animal had any
clinical illness during the trial and none showed clinical evidence of toxicity except transient swelling
at the injection site, possibly due to mechanical invasion of the joint.

INDICATIONS
Adequan is recommended for the treatment of non-infectious degenerative and/or traumatic joint
dysfunction and associated lameness of the carpal joint in horses.

CONTRAINDICATIONS
Do not use in horses showing hypersensitivity to Polysulfated Glycosaminoglycan. Do not administer
Adequan in the face of joint sepsis.

WARNING
Do not use in horses intended for human consumption.

DOSAGE AND ADMINISTRATION
The recommended dose of Adequan in horses is 250 mg (1 vial) once a week for five weeks, intra-
articularly. The joint area must be shaved, cleansed and sterilized as in a surgical procedure prior to
injection. Do not mix Adequan with other drugs or solvents.

ADVERSE REACTIONS
Two major categories of adverse reactions have been reported following the intra-articular administration of Adequan:
1. Inflammatory joint reactions consisting of joint pain, effusion, and swelling with associated lameness.
2. Septic arthritis.

Less frequently, nonseptic arthritis, hemathrosis, and cellulitis at the injection site and surrounding tissues have been reported.

PRECAUTIONS
Adequan is indicated for use only in the carpal joint of horses. Do not mix Adequan with other drugs or solvents.

Reaction in the joint may occasionally occur within 48 hours after intra-articular treatment. If the reaction involves excessive inflammation, cease therapy with Adequan.

Post-injection inflammation may result from possible sensitivity to Adequan; traumatic injection technique; exceeding the recommended dose, frequency of administration or number of Adequan injections; and from combining Adequan with other drugs. Excessive joint inflammation may be manifested by rapid onset, tenderness, swelling and warmth over the injection carpus. Inflammatory joint reactions may successfully be treated by systemic anti-inflammatory drugs, cold hydrotherapy and rest. Serious reactions of this type may indicate the presence of joint sepsis.

Joint sepsis is a rare but potentially life-threatening complication of the intra-articular injection. It usually results from the deposition of skin organisms into the joint space by the needle tip. Gustafson et al., (1989) have demonstrated that Adequan may potentiate a subinfective dose of contaminant bacteria. (2, 3). Hence, strict aseptic injection technique is of utmost importance.

Successful resolution of joint sepsis depends on prompt recognition and rigorous antimicrobial treatment. (1, 4, 5, 6). Early diagnosis of septic arthritis may be complicated by the similar appearance of joint inflammation. Excessive inflammation accompanied by lameness, swelling, and edema extending beyond the joint limits should alert the practitioner to the possibility of sepsis. Synovial fluid analysis with cytology and bacterial culture of the fluid or a section of synovial membrane are valuable diagnostic aids. Upon suspicion of joint sepsis, broad spectrum antibiotic therapy should be instituted without delay and joint lavage considered. It is recommended that samples used for bacterial culture be taken prior to initiating antibiotic therapy.

The concomitant use of Adequan with steroidal or non-steroidal anti-inflammatory agents may mask the symptoms of joint sepsis, thereby delaying the diagnosis and reducing the likelihood of a satisfactory resolution.

Intra-articular injections should not be performed when the overlying skin is scurfed or blistered, as this precluded adherence to aseptic injection technique.

Veterinarians are directed to the Reference Section below for additional information concerning septic arthritis and its treatment.

IMPAIRMENT OF FERTILITY
Fertility impairment studies in mares and stallions have not been conducted. Do not use in horses intended for breeding.
CAUTION
Federal law restricts this drug to use by or on the order of a licensed veterinarian.

HOW SUPPLIED
Adequan solution, 250 mg/mL is available as:
NDC 10797-991-72       1 mL single dose vials           Packaged in boxes of 6
Store at controlled room temperature up to 25°C (77°F) (See USP).

REFERENCES

LUITPOLD PHARMACEUTICALS, INC.
Animal Health Division
Shirley, NY 11967
(631) 924-4000
1-800-458-0163

Made in the U.S.A.
IN 99171
Rev. 6/07
MG #8148

NADA #136-383, Approved by FDA

PRINCIPAL DISPLAY PANEL – 1 mL Carton
Adequan® I.A.
(Polysulfated Glycosaminoglycan)
PSGAG injection
For intra-articular use in horses
• For the treatment of non-infectious degenerative and/or traumatic joint dysfunction and associated lameness of the carpal joint in horses.

ANIMAL HEALTH
ADEQUAN I.A.
polysulfated glycosaminoglycan injection, solution
# Product Information

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<td>Route of Administration</td>
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## Active Ingredient/Active Moiety

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<td>1 mL in 1 VIAL, SINGLE-USE</td>
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## Marketing Information

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## Labeler - Luitpold Pharmaceuticals, Inc. (002033710)

### Establishment

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Revised: 12/2017