Kentucky Horse Racing Commission
Withdrawal Guidelines
Thoroughbred, Quarter Horse, Appaloosa, and Arabian
KHRC 40-02 (December 2013)

General Notice

Unless otherwise specified in these withdrawal guidelines or the applicable regulations and statutes, the following withdrawal guidelines are voluntary and advisory. The guidelines are recommendations based on current scientific knowledge that may change over time. A licensee may present evidence of full compliance with these guidelines to the Kentucky Horse Racing Commission (the "Commission" or "KHRC") and the stewards as a mitigating factor to be used in determining violations and penalties.

These withdrawal interval guidelines assume that administration of medications will be performed at doses that are not greater than the manufacturer's maximum recommended dosage. Medications administered at dosages above manufacturer's recommendations, in compounded formulations and/or in combination with other medications and/or administration inside the withdrawal interval may result in test sample concentrations above threshold concentrations that could lead to positive test results and the imposition of penalties. The time of administration of an orally administered substance, for the purposes of withdrawal interval, shall be considered to be the time of complete ingestion of the medication by the horse via eating or drinking.

In addition to the requirements contained in KRS Chapter 13A, the KHRC shall give notice of an amendment or addition to these withdrawal guidelines by posting the change on the KHRC website and at all Kentucky racetracks at least two weeks before the amendment or addition takes legal effect.

Withdrawal Guidelines

1) Furosemide shall be administered pursuant to 810 KAR 1:018 for Thoroughbreds and 811 KAR 2:096 for quarter horse, appaloosa, and Arabians.

2) The following substances may be administered or applied up to the scheduled paddock time of the race in which the horse is to compete:

- Topical applications such as liniments, leg paints, salves, and ointments which may contain antibiotics or DMSO, but do not contain steroids, anesthetics, or any other prohibited substances.

3) The following substances may be administered up to 24 hours prior to the scheduled post time of the race in which the horse is to compete as long as their use follows the general notice on page 1 of these withdrawal guidelines:

- Antibiotics (except those containing prohibited drugs such as Procaine);
- Antiprotozoals (i.e. ponazuril [Marquis®] toltrazuril [Baycox®], SMZ/Daraprim, etc.);
- Anti-Ulcer and Gastro-Protective Medications (specifically Omeprazole [Gastrogard®], Cimetidine, Ranitidine, and Sucralfate);
- Antifungal Agents (specifically Griseofulvin and Ketoconazole);
- Certain Inhalation Agents (specifically Intal®, and acetylcystiene [Mucomyst®]) that do not exhibit bronchodilator properties;
- Electrolytes, Vitamins and Minerals (IV, IM or oral), and/or other oral supplements/nutrients not containing drugs;
- Hyaluronic Acid (Legend®) IV;
- Misoprostol;
- Non-Androgenic Reproductive Hormones (HCG, Regumate, GnRH, etc.);
- Polysulfated glycosaminoglycan (Adequan®) IM; and
- Proprionibacterium acnes suspension (Eqstim®), or comparable immunostimulants.

4) Non-steroidal anti-inflammatory drugs (NSAIDS):

A) ELECTED NSAID: The applicable regulations require compliance with the following: only one of the following three NSAIDS may be administered up to the manufacturer's maximum labeled dosage until 24 hours prior to the scheduled post time of the race in which the horse is to compete as long as their use follows the general notice on page 1 of these withdrawal guidelines and the requirements of 810 KAR 1:018 for Thoroughbreds and 811 KAR 2:096 for quarter horse, appaloosa, and Arabians:

- Phenylbutazone (Butazolidin®) 2.0 mg/lb (Intravenous Only)
- Flunixin Meglumine (Banamine®) 0.5 mg/lb (Intravenous Only)
- Ketoprofen (Ketofen®) 1.0 mg/lb (Intravenous Only)

B) The following withdrawal intervals shall be observed for all NSAIDS, except for the one selected in 4A above, for administration prior to the scheduled post time of the race in which the horse is to compete as long as their use follows the general notice on page 1 of these withdrawal guidelines:

- Flunixin Meglumine (Banamine®) 0.5 mg/lb IV — 48 hrs
- Phenylbutazone (Butazolidin®) 2.0 mg/lb IV — 48 hrs
- Ketoprofen (Ketofen®) 1.0 mg/lb IV — 48 hrs
- Diclofenac Sodium Topical (Surpass® Cream) — 48 hrs
  Single 5" application
- Firocoxib* (Equioxx®) .045 mg/lb
  Single oral or IV dose — 48 hrs
  Repeated daily administration — 14 days

5) The following substances may be administered up to 48 hours prior to the scheduled post time of the race in which the horse is to compete as long as their use follows the general notice on page 1 of these withdrawal guidelines:

- Acepromazine (Promace®) IV at .05 mg/kg;
- Beta-2 agonists by inhalation (albuterol, terbutaline, salmeterol, fenotorol);
- Butorphanol (Torbugesic®) IV at 0.1 mg/kg;
- Corticosteroids by inhalation (Azmacort®, Beclovent®);
- Dantrolene (Dantrium®) oral at 500 mg total dose;
- DMSO IV, oral, topical up to 60 ml;
- Ergot Alkaloids (Ergonovine, Methergine, etc.);
- Flumethasone (Flucort®) 5 mg IV;
- Glycopyrrolate (Robinol®) IV, 1 mg total dose;
- Guaiacol Derivatives (Guaifenesin);
- Ipratropium;
- Isoflupredone (Predef 2X®) 20 mg IV or IM;
- Isoxsuprine;
- Methocarbamol (Robaxin-V®)—Single IV or oral dose at 15 mg/kg;
- Pentoxyfylline (Trental®);
- Prednisolone—oral at 1 mg/kg;
- *Procaine penicillin IM at 17 mg/kg; and
- Xylazine—IV.

**Mandatory treatment reporting and race day surveillance as described in Threshold section (page7).*

6) The following substances may be administered up to 72 hours prior to the scheduled post time of the race in which the horse is to compete as long as their use follows the general notice on page 1 of these withdrawal guidelines:

- Dexamethasone (Azium®)—Oral, IV, IM at 0.05 mg/kg;

- Detomidine (Dormosedan®) 40 mcg/kg IV;
- Lidocaine--subcutaneous at 200 mg total dose;
- Mepivicaine (Carbocaine®) Subcutaneous at 0.07 mg/kg;
- Romifidine (Sedivet) 50 mg IV dose; and
- Tripelennamine HCl (Recover, etc.) 400 mg IM dose.

7) The following substances may be administered up to 96 hours prior to the scheduled post time of the race in which the horse is to compete as long as their use follows the general notice on page 1 of these withdrawal guidelines:

- Hydroxyzine (Atarax);
- Pentazocine;
- Phenytoin (Dilantin); and
- Pyrilamine.

8) The following substances may be administered up to 7 days prior to the scheduled post time of the race in which the horse is to compete as long as their use follows the general notice on page 1 of these withdrawal guidelines:

- Betamethasone—Intra-articular (IA) at 9 mg total dose in a single articular space;
- Fluphenzine Decanoate (Prolixin®);
- Methyprednisolone (Depo-Medrol®)—IA at 100 mg total dose in a single articular space;
- Reserpine (Serpasil®); and
- Triamcinolone (Vetalog®)—IA at 9 mg total dose in a single articular space.

9) The use of an extra corporeal shock wave therapy or radial pulse wave therapy machine must be done under current KHRC regulations and may be performed until 10 days prior to the scheduled post time of the race in which the horse is to compete.

10) The following substance may be administered up to 14 days prior to the scheduled post time of the race in which the horse is to compete as long as its use follows the general notice on page 1 of these withdrawal guidelines:

- Clenbuterol (Ventipulmin™) orally up to 0.8 mcg/kg twice daily.

11) The following substances may be administered up to 60 days prior to the scheduled post time of the race in which the horse is to compete as long as their use follows the general notice on page 1 of these withdrawal guidelines, and the applicable provisions of 810 KAR 1:018 for Thoroughbreds and of 811 KAR 2:096 for quarter horse, appaloosa, and Arabians:

- Anabolic Steroids (Limited to Boldenone, Testosterone, and Nandrolone).

12) Any horse that has been treated with therapeutic medications found in sections 6 through 10 of this document may, at the trainer's request and expense, and on permission of the Commission veterinarian, have samples of blood and/or urine collected by the Commission veterinarian for analysis by the Commission authorized laboratory prior to entry to race in the state of Kentucky. As a condition of this elective testing, the trainer will be required to disclose the date and time, dose, and route of administration of the substance for which clearance testing is requested. A report from the commission laboratory of a negative finding in this pre-race, elective testing does not provide a safe harbor for the owner, trainer, veterinarian or horse. A report from the commission laboratory of a positive finding in a post-race sample shall be treated as a violation of KHRC regulations even if there was a negative finding by the commission laboratory in the pre-race sample.

Available Threshold Levels Associated to KHRC Withdrawal Guidelines

Acepromazine	Hydroxyethylpromazine sulfoxide 10 nanograms per ml in urine
Betamethasone	10 picograms per ml in serum
Boldenone	
Male horses other than geldings	Free and conjugated 15 ng/ml in urine or free 200 pg/ml serum
Fillies, mares, and geldings	1 nanogram per ml in urine
Butorphanol	Free butorphanol 2 nanograms per ml in serum or total butorphanol 300 nanograms per ml in urine
Clenbuterol	140 picograms per ml of urine or limit of detection in serum
Dantrolene	5-OH dantrolene 0.1 nanograms per ml of serum
Detomidine	3-carboxydetomidine 1 nanogram per ml in urine or limit of detection in serum
Dexamethasone	5 picograms per ml in serum
Diclofenac	5 nanograms per ml in serum
DMSO	10 micrograms per ml in serum
Firocoxib	20 nanograms per ml in serum
Flunixin	20 nanograms per ml in serum
Furosemide	100 nanograms per ml in serum and urine specific gravity < 1.010
Glycopyrrolate	3 picograms per ml in serum
Ketoprofen	10 nanograms per ml of serum
Lidocaine	Total 3-OH-lidocaine, 20 picograms per ml in serum
Mepivicaine	OH-mepivicaine 10 nanograms per ml in urine or mepivicaine at limit of detection in serum
Methocarbamol	1 nanogram per ml in serum
Methylprednisolone	100 picograms per ml in serum
Nandrolone	
Geldings and female horses	Free and conjugated, 1 nanogram per ml in urine or free, 50 picograms per ml in serum
Male horses other than geldings	45 ng/ml of metabolite, 5å-estrane-3β, 17 å-diol in urine or a ratio in urine of 5å-estrane-3β, 17 å-diol to 5å-estrene-3β, 17 å-diol of >1:1

Omeprazole	Omeprazole sulfoxide, 1 nanogram per ml in urine
Phenylbutazone	2 micrograms per ml in serum
Prednisolone	1 nanogram per ml in serum
Procaine penicillin*	25 nanograms per ml in serum
Testosterone:	
Geldings	Free and conjugated, 20 nanograms per ml in urine or free, 25 picograms per ml in serum
Female horses (unless in foal)	Free and conjugated, 55 nanograms per ml in urine or free, 25 picograms per ml serum
Triamcinolone	100 picograms per ml in serum
Xylazine	0.01 nanograms per ml in serum

**Procaine penicillin treatments must be reported to the stewards no later than 24 hours after the last injection is administered. Horses so treated will be required to be under KHRC-approved, continuous surveillance for the six hour interval prior to the post time for the race in which the horse is entered. The owner of the horse is responsible for all costs associated with the surveillance. Prospective surveillance arrangements must be submitted to the stewards no later than close of business on the day of entry.*

All other NSAID's not listed on the withdrawal guidelines have a threshold set at limit of detection.

Approved by the KHRC December 11, 2013