

Medication Detection Times in the Equine Athlete

By Dr. Elizabeth Dean

This article is intended as a brief review of drug and medication guidelines put forth by both the United States Equine Federation (USEF) and Federation Equestre Internationale (FEI). These guidelines were created to promote a fair competitive playing field and also to protect the equine athlete. It is ultimately the responsibility of the owner and trainer to ensure that their equine athlete does not test positive for forbidden substances. Therefore, it is imperative to know which set of guidelines will govern the competition. In addition, medication rules are typically modified at least once per year so it is important to stay current. Always remember to never use medications without consulting a veterinarian and it is important to have an accurate weight when dosing drugs correctly.

Non-steroidal anti-inflammatories (NSAIDs) are a popular category of drugs used on equine athletes. These drugs work by blocking an enzyme which is part of the inflammatory cascade called cyclooxygenase (COX). Examples of commonly administered NSAIDs are phenylbutazone (bute), flunixin meglumine (Banamine®), firocoxib (Equioxx®), diclofenac (Surpass®), and ketoprofen (Ketofen®).

For the USEF sanctioned shows, low blood levels of NSAIDs are allowed as long as certain rules have been followed. First, you must complete an NSAID disclosure form prior to competition. Secondly, you may only use a maximum of two NSAIDs concurrently and that combination cannot be bute and Banamine® together. In order to comply with tolerable serum levels, the USEF has provided suggested medication dose and medication detection times. The amount of time it takes a medication to not be detected (FEI rules), or be detected at permissible amounts in the blood (USEF rules) is considered the detection time. The following are dose recommendations for a 1000 pound

horse followed by USEF detection times: bute 2 grams orally: 12 hours, Banamine® 10 cc (50mg/ml) IV: 12 hours, Equioxx® 1000 pound dose orally: 12 hours, Ketofen® 10 cc (100mg/ml) IV: 6 hours and Surpass® 5 inch ribbon, ½ inch thick at one site: 12 hours. Also, a 7 day withdrawal period must be used when switching from bute to Banamine® or vice versa.

The FEI does not allow any level of medication detected in blood and therefore their drug detection times for NSAIDs are different. The FEI recommendations for a 1000 pound horse are as follows: bute 2 grams orally: 7 days, Banamine® 9 cc (50mg/ml) IV: 6 days, and Ketofen® 10 cc (100mg/ml) IV: 4 days. Equioxx® and Surpass® did not have specific detection times provided. Keep in mind that prolonged NSAID detection has resulted from accidental ingestion of bedding and manure from the stall, especially with oral medications. Therefore, it is important to muck out stalls frequently the week prior to competition.

Two other categories of medications which are frequently administered to show horses are sedatives and corticosteroids. Sedation includes but is not limited to acepromazine, detomidine and xylazine. The USEF has a general detection time of 7 days for all short acting sedatives, which includes all of the aforementioned drugs. The FEI detection time for a 1000 pound horse that received 0.9 cc (10mg/ml) detomidine is 2 days. Other forms of sedation are not specifically addressed by the FEI. In regards to corticosteroids, dexamethasone is the only medication for which FEI or USEF has provided detection times. For a 1000 pound horse, a dose of 10 cc (2 mg/ml) can be given intravenously to a 1000 pound horse up to 12 hours before competition according to the USEF detection times. The FEI allows 5 cc (2 mg/ml) dexamethasone given intravenous 2 days prior to competition.

The take home message regarding drug detection time and using medications in the show horse is that it is important to do your research with the

appropriate show regulatory committee prior to using a medication. Furthermore, detection times are based off small numbers of horses, which means that the data should be interpreted with caution and is probably not accurate to the exact hour for every horse. A buffer of time should be added to the detection time to ensure that a violation will not be issued. Also, additional paperwork is often required including medication log books, and forms that need to be filed with the show steward. Information on additional medications and further details regarding drugs described in this article are available on the FEI and USEF official websites which are <http://www.fei.org/> and <http://www.usef.org/> respectively. When in doubt, show horses should be scratched from their competition when medications have been administered where drug detection guidelines are lacking or ambiguous. The health of the horse should always come before the importance of competition; and it is essential to consider ethically whether it is in the best interest of the horse to compete if he requires medication.

Contact Brandon Equine Medical Center at 813-643-7177 or email info@brandonequine.com with any questions regarding this topic.

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