



# Out of Competition Testing

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# Out Of Competition Testing:

## WADA Rules

- S0. Non-approved Substances
- S1. Anabolic Agents
- S2. Peptide Hormones, Growth Factors and Related Substances
- S3. Beta-2 Agonists
- S4. Hormone and Metabolic Modulators
- S5. Diuretics and Other Masking Agents

# Out Of Competition Testing: WADA Rules

- **SO. Non-approved Substances**

- The numbers of animal drugs are not nearly as expansive as for humans, requiring the routine use of non-approved substances.
- FDA: “..acknowledges the use of compounding within certain areas of veterinary practice..”
- AVMA: “The AVMA believes there are ... circumstances in which compounding ... may be medically necessary.”

# Out Of Competition Testing: WADA Rules

- **S1. Anabolic Agents**

- There are appropriate uses of anabolic agents in veterinary sports medicine which have minimal application in human sports
  - Most male racehorses are castrated for which there is NO human corollary....anabolic steroids are an important part of recovery from disease and injury
  - It would be inappropriate to prohibit anabolic steroids in horses as a blanket recommendation, as these products have a myriad of therapeutic effects

# Out Of Competition Testing: WADA Rules

- **S3. Beta-2 Agonists**

- There is ONE approved beta-2 agonist in horses: Ventipulmin ®
- This product is a crucial cornerstone of the treatment of Inflammatory airways disease (IAD) in horses
- Even moderate therapeutic doses cause repartitioning (loss of fat)...but have only a negative impact on most racing disciplines
- Other Beta-2 agonists: Ractopamine, zilpaterol



# Out Of Competition Testing: WADA Rules

- **S3. Beta-2 Agonists**

- The NAARV supports OOC Testing for Clenbuterol administered by the AQHA similar to the way drug testing is handled by the AQHA
- An AQHA representative could meet the trainer's vet, identify the horse, observe sampling by the vet and then handle chain of custody
- Alternatively, the AQHA could impose a similar method to the current method of horse show drug testing

# Out Of Competition Testing:

## WADA Rules

- S2. Peptide Hormones, Growth Factors and Related Substances
  - **Erythropoetin, and synthetic analogues (Darbopoetin)**
  - Chorionic Gonadotropin/Luteinizing hormone (in males)
  - Corticotropins
  - **Growth Hormone and Insulin-like Growth Factor**
  - Other growth factors

# Out Of Competition Testing: WADA Rules

- S4. Hormone and Metabolic Modulators
- **Aromatase inhibitors** including, but not limited to: aminoglutethimide, anastrozole, androsta-1,4,6-triene-3,17-dione (androstatrienedione), 4-androstene-3,6,17 trione (6-oxo), exemestane, formestane, letrozole, testolactone. **Selective estrogen receptor modulators (SERMs)** including, but not limited to: raloxifene, tamoxifen, toremifene. **3. Other anti-estrogenic substances** including, but not limited to: clomiphene, cyclofenil, fulvestrant. **Agents modifying myostatin function(s)** including, but not limited, to: myostatin inhibitors. **Metabolic modulators:** Insulins, Peroxisome Proliferator Activated Receptor  $\delta$  (PPAR $\delta$ ) agonists, (e.g. GW 1516), PPAR $\delta$ -AMP-activated protein kinase (AMPK) axis agonists (e.g. AICAR)



# Out Of Competition Testing: WADA Rules

- S4. Hormone and Metabolic Modulators
  - The preceding long list of substances which could be tested for OOC is comprised of mostly steroid hormone analogs which are used by bodybuilders to offset the side effects of the other anabolic substances they take.
  - The chances that ANY trainer might use any of these NON-performance enhancing agents are NOT worth the cost of testing for them

# Out Of Competition Testing: WADA Rules

## • S5. Diuretics and Other Masking Agents

- Lasix is an important therapeutic medication used both before racing and during training
- The “doping” purpose of diuretics is to mask the identification of illegal substances in urine, rather than a primary effect
- If OOC testing is performed in blood, this rule becomes irrelevant.
- There are valid therapeutic indications OOC for some of the diuretics on this list

# Out Of Competition Testing: WADA Rules

- **Conclusions**

- WADA OOC Rules DO NOT APPLY to Horse Racing
- OOC testing should be applied under limited circumstances and for limited substances:
  - EPO and related substances
  - Substances which are therapeutic at one dose and performance enhancing at another, such as Clenbuterol
- OOC testing can ONLY be applied with jurisdiction reciprocity
- Critical details must be addressed, such as when horses become subject to OOC testing (from birth??)

# Out Of Competition Testing: Tail Hair Testing

- British Horseracing Authority (BHA) to begin enforcing a zero tolerance rule for Anabolic Steroids
  - Banned from **training** for 12 months from date of administration
  - Banned from **racing** for 14 months from date of administration

# Out Of Competition Testing: Tail Hair Testing

- Substances can be tested to the *femptogram* level
- Regulations are crossing over from a stance of public, equine and jockey welfare position to substantially interfering with the ability of veterinarians and horsemen to properly care for the horse.
- The pinnacle of equine athletes will soon be deprived of simple, modern medicine.