



British Horseracing Authority medication and doping control research summary report: Testosterone – updated April 2012

Why the research was needed

Detection of the administration of synthetic and natural 'anabolic' steroids has been a challenge to the regulation of all sports ever since it became clear that these drugs can have marked performance enhancing effects through their anabolic (muscle building) action on the body. Testosterone, naturally present in males, is one such substance. Whilst it has been reliably detected for many years by analytical laboratories involved in the regulation of horseracing and other sports, their techniques and approaches need to be constantly reviewed and updated. With the advent of so-called 'designer' steroids (i.e. steroids specifically made to be chemically difficult to detect) this is even more the case. This particular study did not involve such a designer drug, but a long-acting synthetic preparation of testosterone licensed for treatment of dogs and cats (no such product is licensed in the UK for use in the horse). We particularly wished to look at new ways of approaching this class of drugs, looking at long term detection via steroid derivatives and hair as an additional matrix to blood and urine.

Overview of the study

The study was conducted using horses at the Authority's Centre for Racehorse Studies with analysis at HFL Sport Science. Research procedures, complying with the Animals (Scientific Procedures) Act 1986, were subject to ethical review and analyses conducted to industry standard quality procedures. The study was carried out in three horses and ran over a total of 12 months. A single dose of the testosterone product was administered. Care was taken to check the horses for side effects; administration of a hormone such as testosterone may cause increased aggression or other male-related behaviour.

Outcomes and conclusions

The study went well, with the only effects seen being slight weight increase and possible temporary 'stallion like' behaviour in the mare. Analysis of all plasma, urine and hair samples was completed successfully. Specific results will not be published, as with any of our work involving substances of potential abuse (the use of steroids in Britain is strictly prohibited in both horses on the racecourse and those in training). However, this study has directly informed our testing strategies with long term detection of these substances, improvements to the logistics involved in this and importantly a great improvement on the wherewithal to differentiate exogenous ('artificial') administration from naturally present hormone patterns. Further work is planned for 2012 to build on this with another anabolic steroid administration.

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