

Science Media Centre Fact Sheet

Phenylbutazone (bute) and horsemeat

Background

Phenylbutazone (bute) is a painkiller and anti-inflammatory drug used in horses and dogs.

Bute is one of the most widely used drugs in horses; it is an inexpensive, highly effective treatment that can be injected intravenously or given orally to horses as a powder or paste.

Findus have been ordered by the FSA to carry out tests for bute on their products which have been found to contain horsemeat.

Rules regarding use of bute in horses

- Since 2005, European law has required all horses to have a passport which declares whether it is for human consumption
 - Horses marked for human consumption have a limited number of medicines which can be administered
 - Use of any products that are not on a prescribed list of allowed substances automatically means a horse must be permanently excluded from the food chain.
 - **This includes phenylbutazone**
- Around 8-10,000 horses are slaughtered for human consumption every year in the UK
- Bute continues to be found in horses that have been slaughtered for human consumption
 - Between 2 and 5% of samples taken at abattoirs have tested positive for bute in the UK over the last 5 years
 - Detection of bute in horses destined for the food chain can be either from non-compliance with the passport scheme, or because feed containing bute is eaten by a horse other than that for which it was intended

Human health

Bute was used as a treatment for rheumatoid arthritis and gout in humans in the 1950s but was removed due to adverse health impacts.

Phenylbutazone is known to be able to induce blood disorders, including aplastic anaemia, leukopenia, agranulocytosis and thrombocytopenia.

- Toxic reactions to bute occurred in a minority of patients when used as a medicine

Aplastic anaemia means the bone marrow stops making enough red blood cells, white blood cells and platelets for the body. People with severe or very severe aplastic anaemia are at risk for life-threatening infections or bleeding.

Metabolites of bute (substances which bute is broken down into in the body) can cause these blood disorders, and are detectable in the flesh of horses, but at concentrations considered far too low to be of concern.

- The reported adverse reactions were associated with the human clinical use of 200 to 800 milligrams phenylbutazone per day

Bute is known to be a carcinogen in rats, but there is not conclusive evidence for it to be carcinogenic in humans.

Sources / further information

Veterinary Medicines Directorate

Position Paper – Residues of Phenylbutazone in horses, Published July 2012

http://www.vmd.defra.gov.uk/VRC/pdf/PositionPaper_Phenylbutazone.pdf

Guidance on horse medicines and horse passports

http://www.vmd.defra.gov.uk/pdf/leaflet_horses.pdf

Toxicology Data Network – Extensive evidence on the toxicology of bute

<http://toxnet.nlm.nih.gov/cgi-bin/sis/search/a?dbs+hsdb:@term+@DOCNO+3159>

Journal of Veterinary Pharmacology and Therapeutics - Phenylbutazone in the horse

<http://www.ncbi.nlm.nih.gov/pubmed/3517382>

Mount Sinai Hospital information on aplastic anaemia

<http://www.mountsinai.org/patient-care/health-library/diseases-and-conditions/aplastic-anemia#risk>

FDA information on human health impacts of phenylbutazone

<http://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/ucm124078.htm>

Toxicology and Carcinogenesis Studies of Phenylbutazone on rats

<http://ntp.niehs.nih.gov/?objectid=0708CAA4-0E21-4DD3-A165B607853F9C9B>

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