



Antidoping: The Nordic model

Birgit Ranheim

DVM, PhD

Leader of the Norwegian Equine Antidoping Committee

The Norwegian Trotting Association

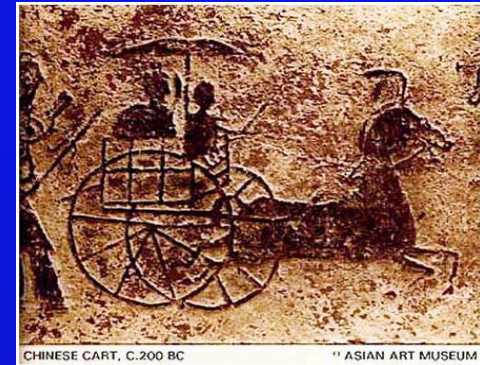




Presentation:

- ② Historical background
- ② Animal welfare legislation
- ② Antidoping and medication regulations in the Nordic countries
- ② Nordic harmonisation
- ② European harmonisation

Historical background



CHINESE CART, C.200 BC

ASIAN ART MUSEUM

- What is the origin of the word doping?
- First reports of doping were "depressant doping", with the intent to stop a horse
 - 1792: lead poisoning
 - 1812: arsenic poisoning



Historical background

- End of 1800-Century
- Stimulation drugs and remedies were started to be used
- Started in the US, spread to England and then on...
- "Yankee alchemists"
 - cocaine



Common cocktail

- ***Heroin*** ***1 ½ gr***
- ***Strychnine*** ***2 ½ gr***
- ***Nitroglycerine*** ***10 minims***
- ***Tinc. digitalis*** ***5 minims***
- ***Cola nut*** ***2 oz.***

– *From Tobin: Drugs and the performance horse*

Historical background



- ❑ the medication of a horse was made an offence against the rules of racing in England and France in 1903
- ❑ First conviction in a doping case: *Bourbon Rose* in France in 1912
- ❑ The first regulations were aimed at protecting the betters more than protecting the horse

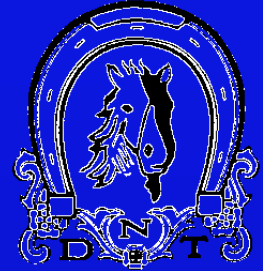




Historical background

- Doping increased, and there were no analytical methods available to control doping in horses
- First testing was in saliva
 - Today: urine and blood





Animal welfare legislation

- In the 1930's
- Animal welfare:
Regulations from the authorities were at first not detailed, but doping was prohibited according to animal welfare laws

Legislator (Stortinget/ The Parliament)



Animal welfare legislation: Role of the government and racing authorities

Animal welfare law



The Norwegian Trotting Association

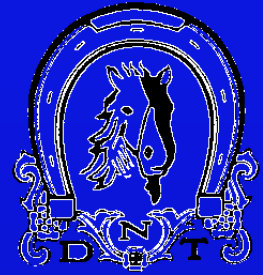
Animal welfare regulations

Rules and regulations on:

- *doping*
- *medication*
- *equipment*



Animal welfare in Nordic countries



- The animal welfare laws and regulations can be regarded as the umbrella which influences the doping and medication rules from the racing authorities
- Long tradition of animal welfare
 - drugs and medication
 - equipment



Animal welfare legislation in the Nordic countries



- Close link/cooperation between the racing authorities and the government
- There are (detailed) guidelines from the government as to what the doping and medication rule book shall contain
- Positive cases are prosecuted and judged by the racing authorities



Animal welfare legislation in the Nordic countries



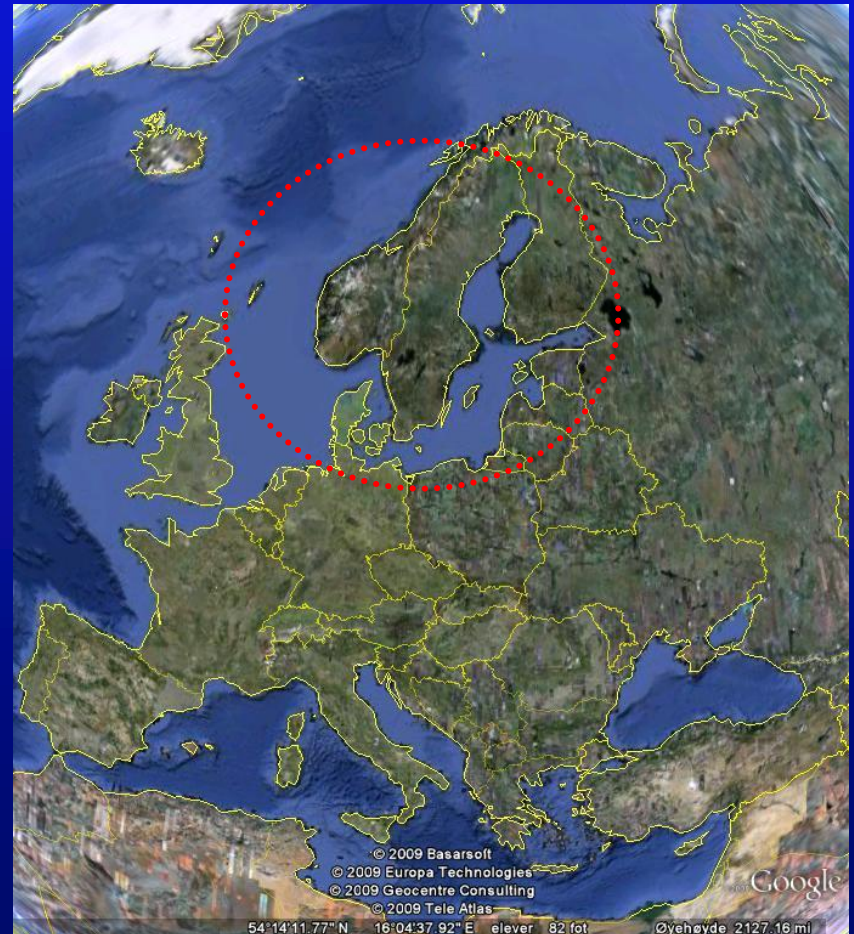
- If positive cases are considered to be a serious violation of the animal welfare law, the case will also be pursued by the public authorities
- Examples:
 - Anabolic steroids
 - High levels of analgesic substances



International differences in doping and medication control



- o Large differences between North America and Europe
- o Some differences between continental European countries and Nordic countries
- o Minor differences between the Nordic countries (Denmark, Finland, Norway and Sweden)





Nordic antidoping and medication regulations

❑ *Prohibited substances*

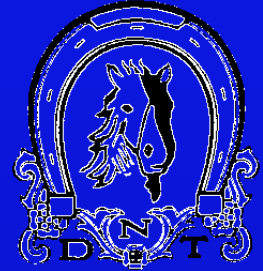
- ✓ Anabolic drugs
- ✓ EPO like drugs

❑ *Prohibited practices*

- ✓ Surgical or chemical nerve cutting

- ## ❑ Drugs, substances and procedures/ methods with withdrawal times





Nordic antidoping and medication regulations

- **Definition of a Nordic withdrawal time:**
 - **An absolute time period, defined by the racing authorities, after treatment in which the horse is not allowed to race**
- **Set by the racing authorities**
- **Based on welfare considerations**



Nordic withdrawal times

Different withdrawal times, examples:

I. 0 hours

- ✓ Cooling (water)
- ✓ Topical application of protective, softening, disinfecting substances

II. 96 hours

- ✓ Antibacterial treatment
- ✓ Sedative drugs

III. 14 days

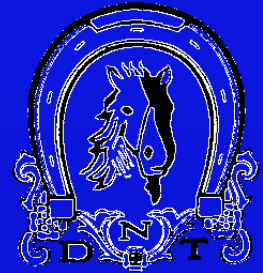
- ✓ Non-steroidal antiinflammatory drugs (NSAIDs)
- ✓ Intraarticular injections



Nordic withdrawal times

IV. 28 days

- ✓ **Intraarticular injections of glucocorticoids**
- These withdrawal times are based on welfare considerations, not on the the detection times of the drugs relying on analytical methods
 - “*If a horse needs antiinflammatory or pain reliving treatment it is not fit to race*”
- In this instance we consider a rest period of minimum 14 days to be mandatory, followed by a recovery phase before returning to racing



Comparison between Nordic countries and other parts of the world: phenylbutazone ("Bute")

USA*	France	Denmark Finland Norway Sweden
Permitted medication	Detection time 7 days	14 days



Comparison between Nordic countries and other parts of the world: furosemide (Lasix)

USA*	France	Denmark Finland Norway Sweden
Permitted medication	Detection time 48 h	96 h

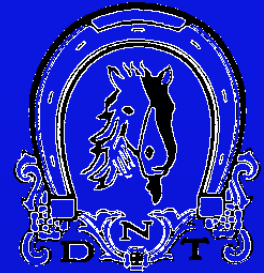


Nordic withdrawal times:

pros **and** **cons**

- **Better animal welfare: horses are allowed to be treated and to recover before next race**
- **Easier to follow**
- **Less pressure on veterinarians from trainers**

- **More difficult to control**
- **Racing authorities have to rely more on the law-abiding trainers, owners and vets**



Nordic doping and medication control



- Urine and blood samples
 - In racing
 - In training
- Sampling in training is based on the trainer keeping a medical record of each horse
- The medical record and an equine passport is a demand from the EU and the national authorities
- If the horse will test + on a substance which is not stated in the medical record, it may be viewed as a doping/medication violation

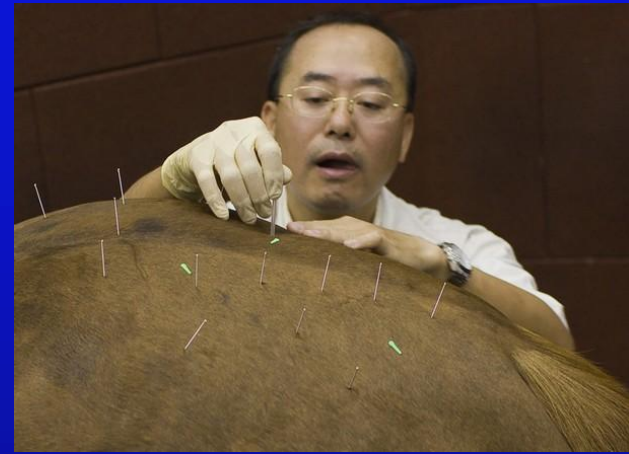


Withdrawal times on methods and non- medical treatments

- Example: acupuncture **96 h**

- Based on animal welfare

thinking: *If a horse needs pain relieving treatment it is not fit to race*

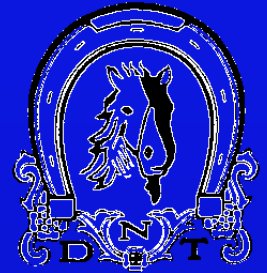


Nordic harmonisation of antidoping and medication regulations

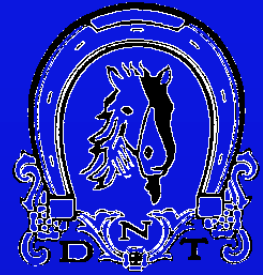


- Extensive exchange of trotters between the Nordic countries
 - Sweden: 4%
 - Norway: 6 %
- Nordic cooperation started in 1986 in order to handle an outbreak of equine influenza
- From 2001: harmonisation regarding doping and medication started

Nordic Equine Medication and Antidoping Committee (NEMAC)



- The need to harmonize rules and withdrawal times between these neighboring countries is obvious
- Veterinarians and analysts meet 2-3 times a year
- Agree (very rarely disagree) on common issues, drug withdrawal times and methods



Elitloppet 2006

- Winner (french horse) tested positive on diclofenac (NSAID)
- Second (Italian horse) tested positive on etakrynacid (diuretic)
 - The third horse (Swedish) declared the winner





European harmonisation

- This incident stimulated the contact between continental and Nordic racing authorities
- Aim: to harmonize doping and medication rules as far as possible



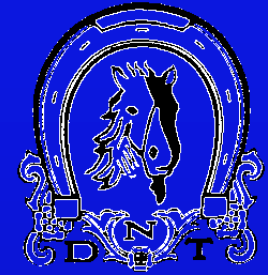


European harmonisation

- The Nordic countries were invited as observers in EHSLC
- EHSLC = European Horseracing Scientific Liason Committee



- Nordic countries members from 2009



European harmonisation: naturally occurring substances

- **Endogenous substances and certain contaminants**
 - Have threshold values
- **Example:**
 - Cortisol
 - Testosterone





European harmonisation: prohibited substances

- The lowest level of detection possible is wanted in order to control for exposure of such substances
- "Zero-tolerance"
- Example:
 - EPO
 - Stanozolol



European harmonisation: therapeutic medication

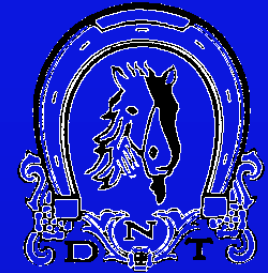


1. Horses must be able to race a certain time period after a legitimate therapeutic intervention
2. The drug must not have effect on race-day



Scientific method based on pharmacological science is used to determine which drug concentration (in urine or blood) that is irrelevant





European harmonisation: Reporting levels of detection (RLOD's)

- Is established for therapeutic drugs intended for use in horses
- Will only be applicable if one substance is found
- Drugs with such established RLOD's are published, however not the specific concentration

**Thank you for your kind
attention**

