

# HORSESENSE

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## Dealing with hormonal behavioural issues in the competition mare

Veterinary surgeon in equine reproduction Susan Salter talks all things hormones and what to do when your mare 'gets her flirt on'

The origins of behavioural problems in the competition mare can be divided into reproductive and non-reproductive causes. This article will predominantly focus on reproductive and hormonal causes, however, it is important to resist the temptation to always blame 'hormones' as the cause of poor performance in mares.

Behavioural problems in competition mares and fillies can be frustrating and challenging to deal with. They often inhibit a mare from focusing on the task at hand, preventing her from reaching her full performance potential.

This is especially important on competition and race days. Owners, trainers and veterinary surgeons must work together in order to reach a diagnosis and an effective treatment protocol that adheres to any specific competition withdrawal periods.

"Oestrous" is the time period in the mare's cycle when she will stand to be covered by a stallion (in season) unlike "dioestrous", the period of sexual quiescence.

In order to make a diagnosis as early as possible and determine the correct management protocol, it is imperative that you provide your veterinary surgeon with as much information about the mare's behaviour as possible.

Intermittent or persistent behaviour relating to poor performance and the nature of that behaviour can offer large clues to the potential source of the problem. Aid your veterinary surgeon by giving them as precise and detailed a history as possible, noting especially when the behaviour occurs.

### POSSIBLE CAUSES

The possible causes can be divided into three categories: normal hormonal behaviour,

#### THE TYPICAL CLINICAL SIGNS THAT A MARE THAT IS IN SEASON OR HAS ABNORMAL HORMONE LEVELS CAN BE:

- A change in attitude
- A reluctance to move away from other horses
- Squealing, winking, tail swishing
- Increased frequency of urination
- Back pain
- Very sensitive to touch
- Sometimes poor athletic performance
- Aggression or stallion-like behaviour



abnormal hormonal behaviour and abnormal behaviour unrelated to the mare's hormones.

#### 1. NORMAL HORMONAL BEHAVIOUR

The oestrous cycle normally lasts for approximately 21 days consisting of oestrogen dominant and progesterone dominant phases.

During the "oestrogen" dominant phase (roughly seven days in length) the mare will stand for the stallion. The "progesterone"

dominant phase (roughly 14 days in length) overrides the oestrous phase, mimics pregnancy and results in the mare rejecting the stallion.

It is the oestrogen dominant phase that can affect performance, hence why a change in behaviour is often witnessed for approximately one week in every three week cycle.

A concise history as well as scanning the reproductive tract can determine if the normal oestrous cycle is the cause of the change in

behaviour and subsequent poor performance.

#### 2. ABNORMAL HORMONAL BEHAVIOUR

When a mare is in season for more than a week (persistent oestrous behaviour) this can be due to her being in "transition". This behaviour is typical of mares during Spring time. Increased daylight reduces the production of melatonin in the mare's brain. Melatonin plays a pivotal role in the seasonality of reproduction.

Increased daylight and a decrease in melatonin levels awaken hormones in the mare's brain initiating follicular growth on the ovaries.

At normal levels this will allow for ovulation of a dominant follicle, the production of progesterone and normal cycling. Until normal levels exist, the mare may well stay in transition.

Spring time and the transitional period can be very frustrating for owners and trainers due to the extended time the mare is in season and can cause poor performance unless managed correctly.

Endometritis (infection of the uterus) can cause a mare to "short cycle" meaning that she comes back into season quicker than the normal two weeks or so, sometimes remaining constantly in season.

This happens because the inflamed uterus produces a chemical called prostaglandin which acts to destroy the source of progesterone production, leaving oestrogen as the dominant hormone.

Veterinary surgeons can often see signs of infection on scanning of the uterus such as fluid and/or excessive uterine "oedema" (a pattern identified on scan that can be a sign of inflammation) and can perform a range of diagnostic tests to rule infection in or out. If infected, further antibiotic



sensitivity tests are done to determine the most appropriate antibiotic treatment of choice.

Granulosa cell tumours (GCTs) on the ovaries can cause a range of different clinical signs all of which fall under the term "abnormal hormonal behaviour".

They include failure to come into season or continuous signs of being in season, or even stallion like aggressive behaviour.

It is important to rule GCTs in or out on the clinical examination and/or blood tests.

On ultrasound your veterinary surgeon will be able to see and feel one very large GCT ovary and one very small ovary.

Treatment for GCTs is via standing surgical removal of the single affected ovary and these mares can be reproductively normal within a year after surgery.

#### 3. NON HORMONAL ABNORMAL BEHAVIOUR

A range of non hormonal problems can lead to a change of behaviour in the mare and should be considered especially if no hormonal explanation has been found.

Orthopaedic problems (lameness or back disease), dental problems, tempero-mandibular joint abnormalities, gastric ulcers and psychological abnormalities as well as a natural lack of talent and ability are some of the issues which should be considered as possible causes of poor performance.

#### SUPPRESSING OESTROUS BEHAVIOUR

There are a range of options available for managing mares with hormonal behavioural issues.

It is important to know the rules and withdrawal