

THE NERVOUS SYSTEM

Understanding WHY your horse may be nervous or spooky

Today's horse is the product of millions of years of evolution, during which survival depended on its ability to sense and respond to the environment in which it lived. This included escaping predators, being able to sense the temperature of its surroundings and identify food. While the need to escape predators may not be a requirement for the modern horse, their physiological response to fear is still to run.

To achieve this the various systems and organs in the horse's body must be linked so they work together. The adjustment of an animal's response to changes in the environment and the complex linking of the various processes in the body that this response involves is called co-ordination.

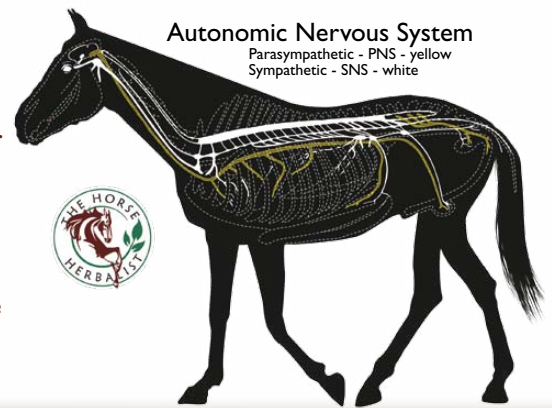
The two main systems involved in the flight response are the nervous and endocrine systems. The first operates via electrical impulses along nerve fibres and the second by releasing special chemicals or hormones into the bloodstream from glands.

From an anatomical perspective the nervous system is made up of the Central Nervous System (CNS) (brain and spinal cord), and Peripheral Nervous System (PNS) (cranial and peripheral nerves), and from a functional perspective it is divided into the Somatic Nervous System (voluntary movement), and the Autonomic Nervous System (ANS), which controls involuntary (visceral) functions demanded for maintaining the overall physiological balance of bodily functions.

In clearer terms the ANS is responsible for the involuntary bodily functions of the cardiovascular system, respiratory system, digestive system, urinary system, reproductive functions and mobilising the body's resources under stress. To achieve this it must be in balance.

OUT OF BALANCE

Any trauma, accident, drugs, chemicals, physical or mental abuse, including a horse being put under too much pressure, or an underlying genetic predisposition, which makes these types more susceptible, may cause the ANS to be out of balance.



Autonomic Nervous System
Parasympathetic - PNS - yellow
Sympathetic - SNS - white

The ANS of the horse is controlled by two branches:

- 1) Sympathetic nervous system (SNS) – **fight or flight**.
- 2) Parasympathetic nervous system - **rest and digest**.

The parasympathetic system is in constant opposition to the sympathetic system.

It can be likened to two sides of a coin. On one side there's the fight/flight/let me out of here response, and on the other side the rest, relax, eat, and digest.

SNS DOMINANCE

Real or imagined circumstances can quickly trigger the nervous response. When the sympathetic side of the ANS is dominant – on a short trigger – this is when the horse cannot help its inappropriate response to everything or anything. At the highest end of this scale you see a horse in a blind panic, eyes boggling, escaping or trying to, even at the expense of hurting itself and others, sweating profusely, heart rate and respiration through the roof. When in the paddock they walk the fence.

CORE HERBS FOR TREATMENT OF SNS DOMINANCE

CHAMOMILE FLOWERS – *Matricaria recutita*
– SNS dominance dramatically affects gut function. Chamomile has been used to treat mild flatulent colic, abdominal distention, gastro-intestinal tract inflammation and ulcers. Chamomile has a mild sedative effect.



HOLY BASIL – *Ocimum sanctum*
– helps the body function optimally at times of stress. Holy Basil has been used for centuries particularly in Ayurvedic medicine to treat anxiety, stress, depression and gut ulceration.



LEMON BALM – *Melissa officinalis*
– reduces stress and anxiety, relieves spasms and flatulent colic (mild). Lemon Balm has a mild sedative effect.



PASSIONFLOWER – *Passiflora incarnata*
– helps to reduce anxiety, irritability, excitability. Passionflower has a mild sedative effect.



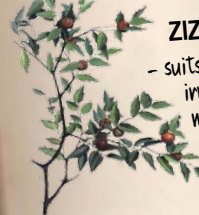
VERVAIN – *Verbena officinalis* –
– this is for the busy, can't-concentrate-on-one-thing, type. Helps to reduce anxiety and irritability.



VALERIAN – *Valeriana officinalis* – for those that become tight in the muscles, hold themselves rigidly, particularly when stressed. Helps to reduce anxiety, panic and irritability. Valerian has a mild sedative effect. Do not use for three days before possible performance swab.



ZIZYPHUS – *Zizyphus spinosa*
– suits excessive sweaters. Reduces anxiety and irritability. Zizyphus has a mild sedative effect. Do not use Zizyphus if your horse is scouring. Species adulteration is not uncommon so make sure you source your dry herbs from a reputable supplier.

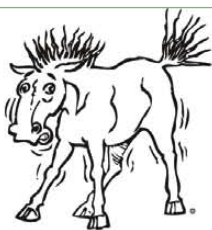


MAGNESIUM is an essential co-factor in numerous metabolic processes. If your horse has a deficiency then introducing magnesium to the daily diet will have a beneficial effect on the nervous system and muscle relaxation/contraction.

B VITAMINS are essential for a healthy nervous system. Brewers yeast contains easily absorbed B vitamins.

If your horse is suffering from anything but a minor ANS imbalance then seek the services of a fully qualified horse herbal practitioner.

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NERVOUS?
STRESSED?
JUMPY OR FLIGHTY?**



Release stress, tension, fears & worries with the incredible



Settle Petal®

Settle Petal can calm and soothe in times of stress, or taken over a period of time can change the physical and mental reactions to previously fearful or stressful situations.

If you or your horse are overexcited, nervous, spooky, restless, scared, stressed or overwrought - for whatever reason (or even no reason at all!) Settle Petal will calm you down and aid relaxation.

Settle Petal is a synergistic formula - a carefully blended selection of medical grade herbal extracts and flower remedies. It is completely safe and non-addictive, has no contra-indications or known drug interactions. All Horse Herbalist formulas have been researched, tried and tested over 20 years.

No Horse Herbalist remedy or application is designed to take the place of qualified medical or veterinary attention or advice.



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The Nervous System continued...

The very best of horsemen or women know they have to wait until the adrenalin levels drop and the horse starts to settle before attempting to work with a horse exhibiting these symptoms.

The horse cannot help its response; it is involuntary, as there is an imbalance of the ANS.

Many horses suffer ANS imbalance to a lesser degree. They are regarded as being nervous, highly strung, inconsistent, or said to have poor temperaments. These are some of the nicer things said about these poor souls. Often the best of trainers have problems with horses with ANS imbalance. The trainer may feel like at last they've found the key to a particular horse then suddenly, for no apparent reason, the horse falls to pieces again and can't concentrate on the job at hand. The lesser trainers blame the horse, saying it has an attitude problem, instead of realising there may be a fundamental physical problem.

STRESS SHUTS DOWN DIGESTION

Horses with SNS dominance often suffer from an overly acidic gut, which may be ulcerated; they may not be able to gain or hold condition - absorption of nutrients is poor; they may lack interest in feed. Some horses only show the latter symptom as they internalise their anxiety. This makes it clearer to understand why only treating the gut is often a short term solution for these horses.

Classically, using herbal medicine, you are looking at treating the horse, dog or human for six to nine months to help the autonomic nervous system balance. Over this period you can expect either subtle or obvious improvements as the triggers decrease.

If your horse is suffering from anything but a minor ANS imbalance then seek the services of a fully qualified horse herbal practitioner.

AUTONOMIC NERVOUS SYSTEM – ANS

Divides into two branches:

Parasympathetic Nervous System PNS	Sympathetic Nervous System SNS
Controls vegetative functions Feed Breed Rest Relax INCREASES Digestion Intestinal mobility Fuel storage (increases insulin activity) Resistance to infection Rest and recuperation DECREASES Heart rate Blood pressure Body temperature	Functions under stress Fight or flight response INCREASES Heart rate Blood pressure Body temperature Stimulates sweat glands Blood to skeletal muscle Bronchodilation Release of glucose stores from liver DECREASES Digestive activity Blood flow to abdomen

About the Author: ANGELA DAVISON - THE HORSE HERBALIST



Angela was one of Australia's first female jockeys before retraining as a Classical Herbalist, Cranio-Sacral and Equine Bowen Therapist. As well as creating a range of Herbs for Horses (go to thehorseherbalist.com), Angela pioneered a unique hair assessment system for horses in the 1990's and has formulated many hand-blended proprietary herbal formulas to address the core of most human and horses complaints. Angela is also the author of 'Flower Remedies for Horses, Pets and People'.

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