



EQUINE CORE CONDITIONING

Build core strength and develop your horse's body position sense awareness using equine resistance band training techniques.



Encourage the horse to work over the back



Suitable for work in-hand, on the lunge, or under saddle



WWW.EQUINEBALANCEBANDS.COM

EQUINE BALANCE BANDS

Equine Core Conditioning ©2021 Equine Balance Bands for Advance Equine Limited

All rights reserved. No part of this publication may be reproduced, distributed or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the publisher, except in the case of brief quotations embodied in critical reviews and certain other non-commercial uses permitted by copyright law.

Although the author and publisher have made every effort to ensure that the information in this book was correct at press time, the author and publisher do not assume and hereby disclaim any liability to any party for any loss, damage, or disruption caused by errors or omissions, whether such errors or omissions result from negligence, accident, or any other cause.

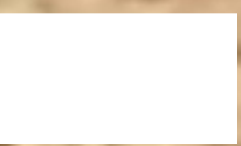
The resources in this book are provided for informational purposes only and should not be used to replace the specialized training and professional judgment of a health care professional.

Neither the author nor the publisher can be held responsible for the use of the information provided within this book. Please always consult a trained professional before making any decision regarding treatment of yourself or others.



EQUINE BALANCE
BANDS

Support of the Trunk During Movement





EQUINE BALANCE BANDS

Resistance Band Training for Horses

Resistance band training for horses is derived from human sports medicine and exercise theory. Incorporating exercise bands into the training regime can help the horse to build muscle by recruiting stabilising muscle groups. They also facilitate a stronger focus on body control and flexibility.

- **Resistance band training** can be used in a wide range of activities from work in hand, to lunging and long reining, work under saddle, over poles and for hacking.
- **The advantage** over other training aids is that it can be applied to horses of any discipline, it is easy to use as part of a normal exercise routine and the bands can be simply clipped or unclipped as required. Because the system does not force a particular head set the horse is given the opportunity to adopt its own self carriage.
- **Younger horses** benefit by quickly learning how to move in balance with greater body awareness and **older horses** benefit from increased top line condition and stability over the back.



How Does Resistance Band Training Work?

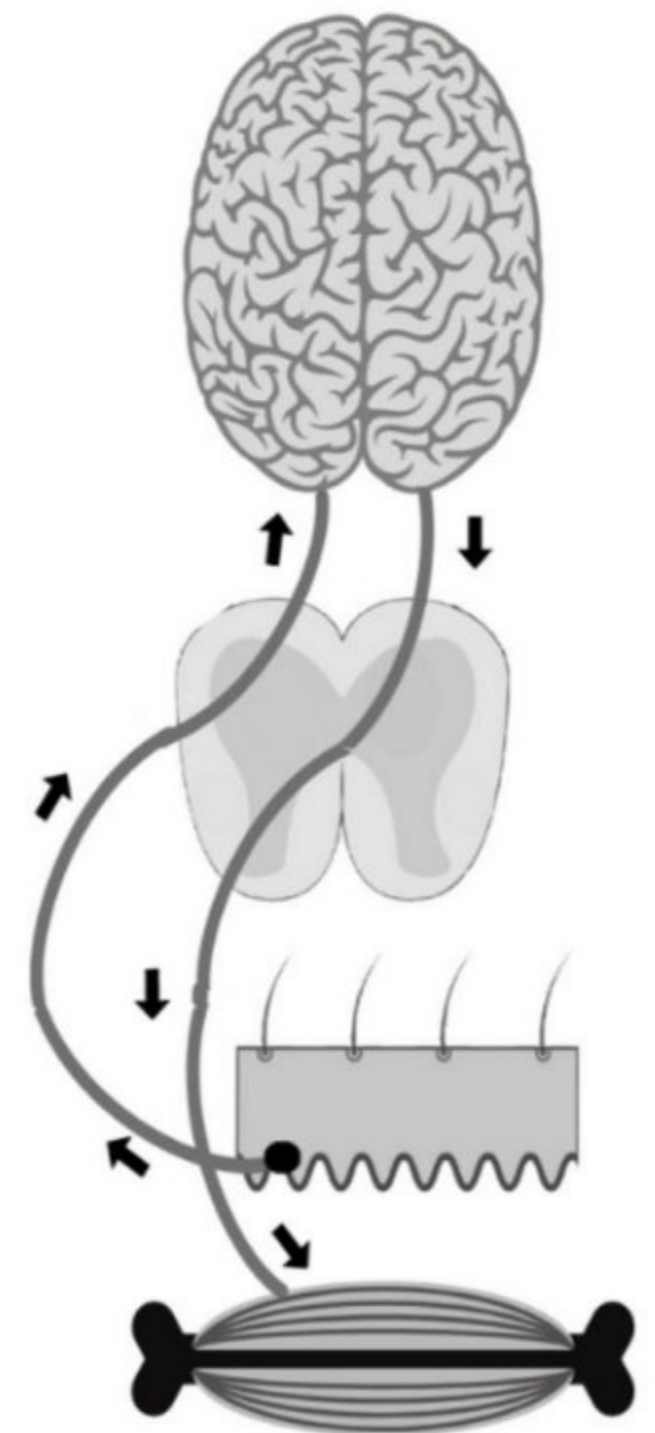


- The resistance bands maintain contact with the horse's body providing continuous feedback to the central nervous system so that the horse becomes more aware of his body and limbs.
- Understanding this mechanism can help us formulate an effective training plan.

Neural Pattern Programming

Retraining the Movement Pattern

- This is achieved by **engagement of the core muscles**, triggered when **the bands stimulate receptor cells in the horse's body**, causing a specific neurological response. This causes the horse to become **more aware of how and where he places and positions his body**, allowing him to work with increased confidence, strength and suppleness.
- By learning to **activate the desired motor or movement pathways** the horse is better able to make balancing adjustments during movement. When this response is conditioned by regular training over a period of time the horse will become less dependent upon the balance bands, the musculoskeletal system will be strengthened, and **the new movement pattern will be adopted unconsciously**.





EQUINE BALANCE BANDS

Goals of Resistance Band Training

Improve Balance and Increase Muscle Tone

- **Physically the horse frame will change as he builds supporting musculature and develops top line condition.** This will enable the horse to work more comfortably and effectively under saddle, maintaining a balanced form for athletic endeavors whilst supporting and carrying the rider on his back.
- **The rider may feel as though they are being carried or lifted by the horse during movement,** as the horse engages the spinal stabilizing muscles, works less on the forehand and takes more weight behind.
- **Mentally the horse may become less anxious** and may be more willing to move forward or receptive to the rider's aids or communications.

General Conditioning vs Rehabilitation

- **For horses that have had a previous illness or injury** it is recommended to consult your attending veterinary surgeon or physiotherapist for advice on exercise type and frequency.
- **Equine Balance Bands** are beneficial in cases where an improvement to the horse's balance, carriage and way of going is required but where the horse may find this difficult. For example, in cases of previous injury where pain has subsided, but the horse continues to move with compensatory or altered movement patterns.

Application of the Bands

Considerations regarding the decision to use both bands or the abdominal band only.



Abdominal Band

The abdominal band passes directly under and around the horse's abdomen. During movement, the horse receives a gentle stimulus or reminder to engage the muscles that help to flex and round the back. The application of this band is particularly useful for horses that move with a hollow or inverted posture, and for horses that need to develop strength and suppleness over the back. The band does not restrict extension of the hind limb and so can be used in situations

where extension of the hind joints is required in addition to engagement over the back, for example during the flight phase when jumping fences. A commonly desired jumping position with extension of the hind limb with simultaneous engagement of the back is referred to as the bascule.

In veterinary and physiotherapy referral cases this band is often recommended in the rehabilitation stages following treatment for kissing spines or recovery post colic surgery.



EQUINE BALANCE BANDS

Hind Quarter Band



The hind quarter band passes around the hindquarters and under the tail. It helps the horse to become more aware of how and where he places and positions the limbs. This is particularly useful for horses with asymmetrical movement, or horses that need to develop more muscle, strength and suppleness behind. Its application during training can help the horse to position itself during exercise, encouraging the hind quarters closer to the centre of gravity and optimum balance point. This band is often recommended in a therapeutic role to build up supporting musculature of the hind end when there is a weakness. It is recommended that the hind band be used in combination with the abdominal band to help prevent hollowing or disengagement over the back.

Abdominal and Hind Band

Combining the action of the two bands best assists the horse to recruit the deep supporting and stabilising musculature of the spine and pelvis. The stimulus from both bands causes sensory receptors in the skin to initiate a neurological response that increases the horse's proprioception or sense of self movement and body position. Using the bands as part of a progressive training and conditioning program can help to build topline muscle and increase pelvic / spinal stability. The simultaneous use of both bands is recommended for general conditioning where the horse may engage in such activities as general flat work, lunging, long reining and small jumps of up to 2'6". Both bands are commonly recommended for the rehabilitation of horses suffering from sacroiliac discomfort.

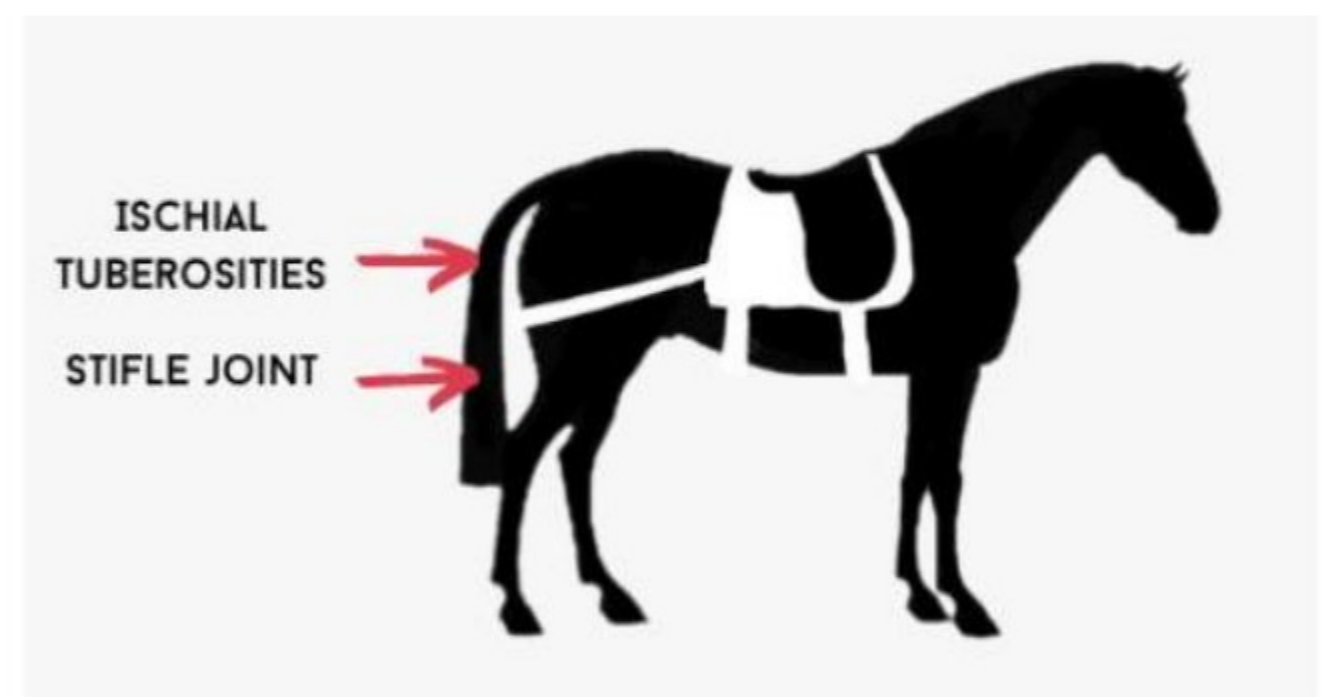
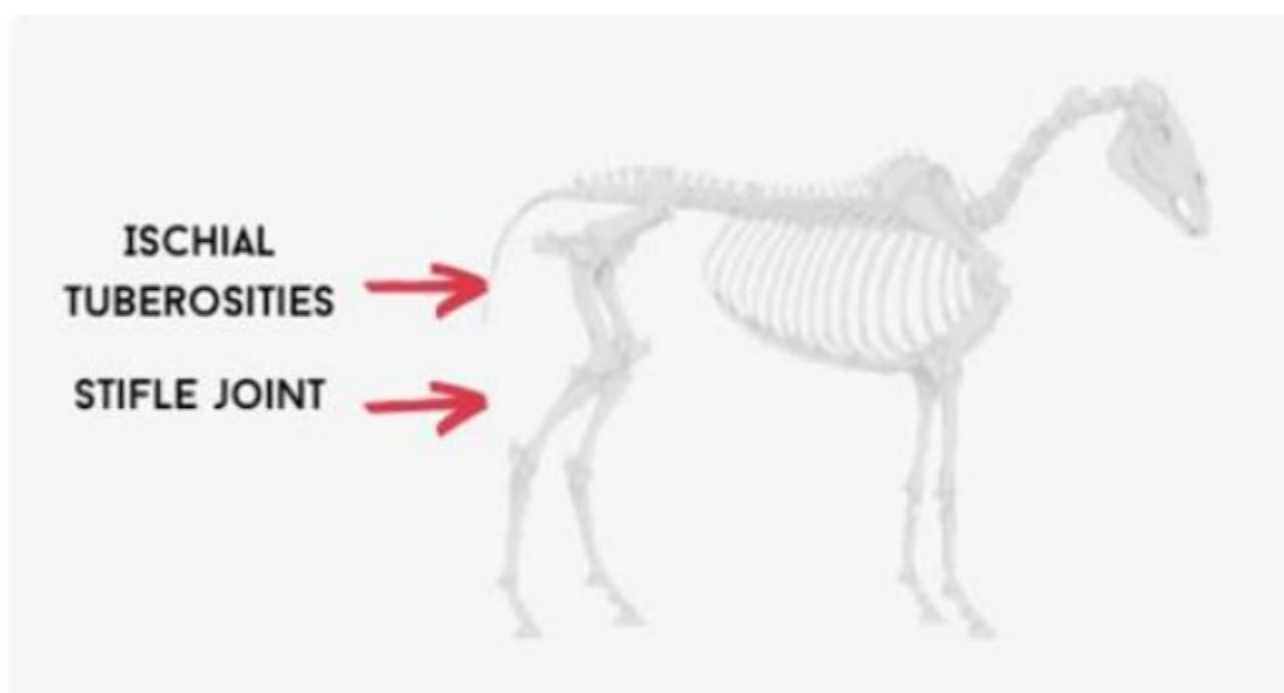




EQUINE BALANCE BANDS

Where are the Bands Placed?

The **abdominal band** passes directly under the barrel, hugging the abdomen.

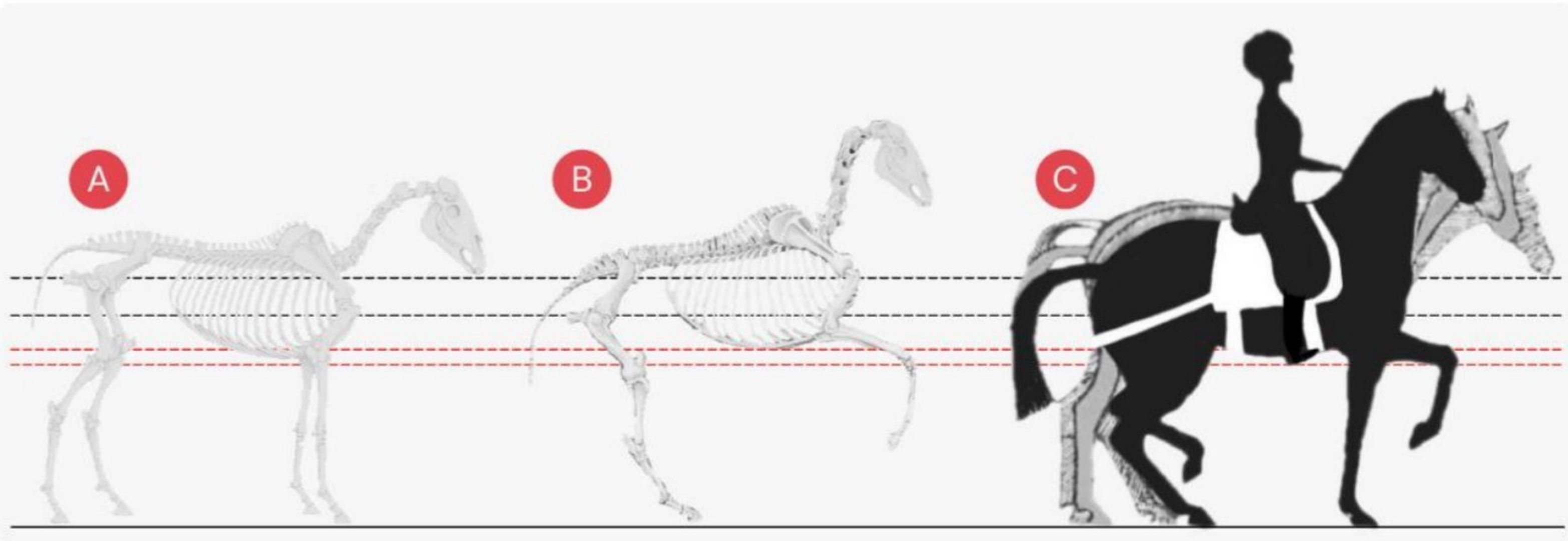


The **hind quarter band** passes around the hind quarters and lies below the ischial tuberosities (point of buttock) and above the stifle joint.

Height and Position of the Bands Explained

As the horse begins to build muscular strength and develop his carrying capacity there is increased flexion of the hind quarters. The closing of the joint angles causes a slight lowering of the hind quarters. the relative position of the point of the buttock and stifle joint changes. This can create the illusion of a lower band position. This change in positioning is the reason why one may find that they need to 'tension' or adapt the length of the band as training progresses.

EQUINE BALANCE BANDS



The diagram above illustrates how the position of the hind quarter band appears lower, and the abdominal band appears further back in a horse that has increased flexion of the hind quarters.

- **The black dotted line** illustrates the respective ischial tuberosity height of a horse in a neutral carriage (A), and with increased flexion of the hind quarters (B).
- **The red dotted line** illustrates the respective stifle joint position of a horse in a neutral carriage (A) and with increased flexion of the hindquarters (B).

Note that in both instances the bands remain effectively placed between the ischial tuberosities and stifle joint and over the superficial abdominal musculature, respectively.

Fig C depicts the change in the flexion of the hind quarters as the horse develops increased muscular strength and suppleness. This position reduces tension on the hind quarter band. Therefore, as training progresses, the band may need to be shortened or the tension of the band may need to be increased.

Band Tension

Knowing the correct tension to apply to the bands will allow the system to act in the most effective position whilst optimising the level of sensory stimulation provided by the bands.

The correct tension level will vary between different horses and is dependent not only upon the actual length or stretch of band, but depends also upon such variables as fitness, coat length and conformation.

To Find the Optimum Tension for Your Horse

- **Begin by applying a light stretch to the bands.**
- **The horse should appear comfortable with the application.**
- **Check that the bands are secure yet fastened without excessive tension by placing a flat hand between the band and the horse. The bands should appear comfortable to the horse.**
- **It is suggested to begin by stretching the band to increase the length by approximately 20%.**



The tension level is correct when the horse moves comfortably and reacts positively to the stimulus.



- E.g. Band measuring 200cm unstretched.
- For an elongation of 20%, apply a light stretch to the band, increasing the length to 240cm.
- Do not exceed 50% elongation.



EQUINE BALANCE BANDS

Introducing the System

It is recommended to familiarise your horse to the feel of the bands and to ensure that the horse willingly accepts the band contact before mounting.

Guidelines for Use

- **Introduce the abdominal band first.** Fitting the hind band first may not be as effective if the back is inclined to hollow.
- **To help the horse understand the concept** of recruiting the abdominal musculature it may be helpful to do some rounding and thoracic lifting exercises from the ground.
- **When the horse shows signs of maintaining engagement** during basic exercise it is appropriate to add the hind quarter band.
- **Introduce the bands at the beginning of a training session.** This is the most effective way to begin training a new or different motor pattern and way of going.
- **Progression will differ between individual horses.** However, as a guide it can take between 3 to 4 weeks of daily or regular conditioning for the motor pattern to become established.
- **Consider that the horse may be recruiting new or previously under used muscle groups.** This activation of the deep supporting musculature may cause the horse to fatigue if demanded for too long or at too high an intensity.
- **To avoid fatigue,** it is recommended to decrease the normal training session duration by half and gradually increase use in accordance with the horse's progress.

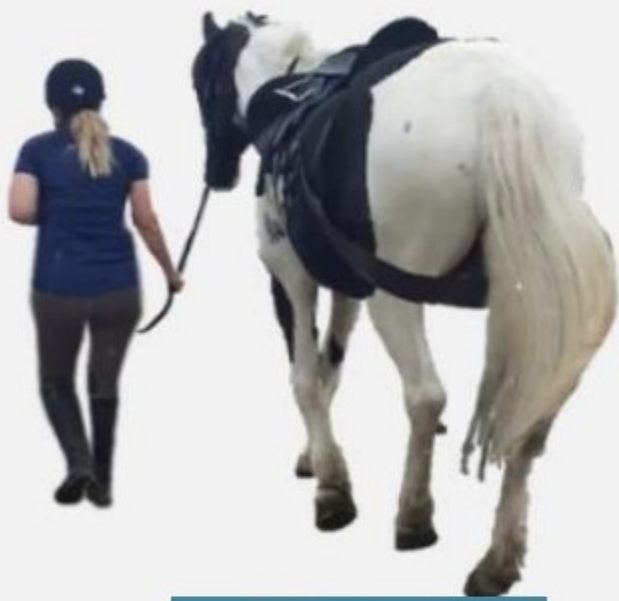
Suggested Training Program

There are 3 progressive training stages to the program. A change in the horse's way of going is often noted from the first use, however topline condition and muscle memory may take up to 3 months to develop. Equine Balance Bands recommend adopting a patient but progressive approach to training, taking into consideration the horse's individual characteristics, current level of fitness, and the exercise duration and intensity.

Stage 1

1

Initial Training Sessions (First 3 – 4 weeks)



1. Use Equine Balance Bands on a regular/daily basis.

In the initial stages of training the horse is subject to a regular stimulus by the daily application of the bands, this provides the nervous system with sufficient body-brain-body feedback to program the desired neural pattern.

Stage 2

2

Progressive Training Sessions (Following 6 – 8 weeks)



2. Reduce the Frequency of Application .

In the progressive stage of training the bands can be applied less frequently. By this stage, the horse should have adopted the required movement output pattern and be capable of engaging the core and maintaining balance for longer periods of time. Use of the bands can be decreased to 2 - 4 sessions weekly.

Stage 3

3

Maintenance (As per individual requirements)



3. Use as necessary to maintain tone and condition.

When satisfied that the horse has fully developed the supporting musculature and can maintain balance during training, the goals in stages 1 and 2 have been achieved. Equine Balance Bands can be used as required to maintain muscle tone and ensure the correct motor pattern is holding.



EQUINE BALANCE BANDS

Further Training

A planned and progressive approach to training allows the horse to make gradual balance adjustments and positively influences muscle tone and function.

The complexity and intensity of training sessions can be gradually increased as the horse maintains the required movement output pattern for longer periods and becomes more consistent in his ability to engage the core.

In the beginning the horse may show signs of more balanced movement, although he may only be able to sustain this for short periods of time. During the next few weeks of training the horse will continue to develop the muscles that will help to support the frame, allowing him to train without undue stress or strain.

At this stage we can begin to add more variety to the training and begin to ask the horse increasingly more challenging questions as his strength and suppleness improve. With continued but less frequent use of the bands the

topline muscle will begin to become more apparent and muscle definition may be notably improved. As muscle tone and memory begins to increase use of the bands can be decreased to 2 - 4 sessions per week.

The rider or trainer must be observant to changes occurring to the horse's way of going, carriage, physical and mental development, and respond appropriately by adjusting the training program to suit the needs of the horse. Riders are likely to find that the duration of training can be increased and may find that as the horse begins to work more under the centre of gravity that there are notable changes in his carriage and performance. Riders may feel this as a lightening of the forehand or a more uphill way of going. Note that as the horse begins to change his balance the bands may have to be adjusted.

Exercise Tolerance – Progression and Fatigue

Incorporating resistance band training into a systematic conditioning regime can aid the development of the core stabilising muscles. This can enhance athletic performance and decrease the likelihood of injury. However, the success or failure of any conditioning program is reliant upon the suitability and consistency of exercise and the ability to recognise, measure, and monitor the horses physiological and mental response to the training over time. It takes a sustained and continued effort over a period of months to cause soft tissue changes and develop a new mindset. Be vigilant; adjusting the pace, complexity and intensity of the exercise to suit the horse will yield the best results.

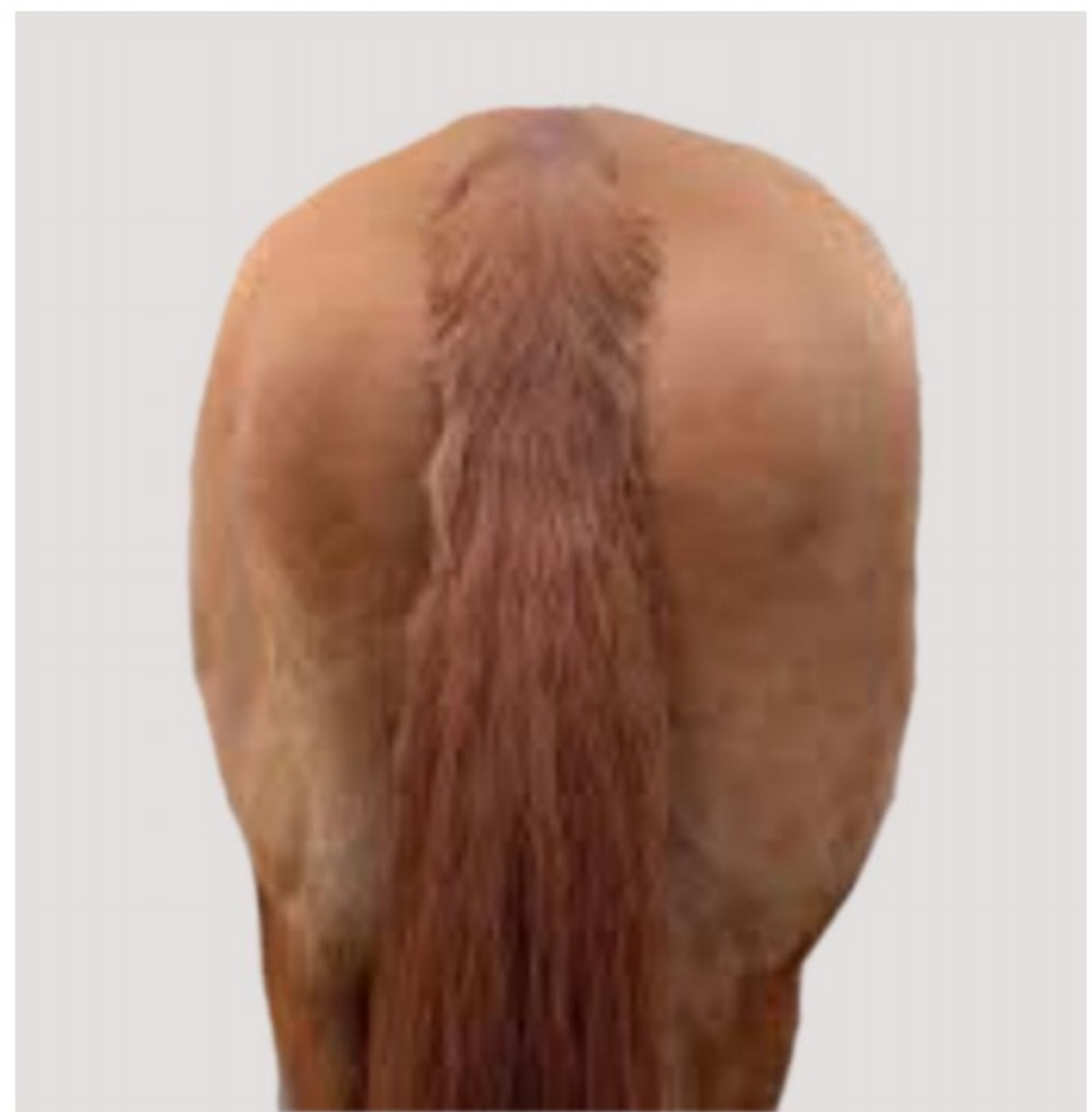
The Initial Assessment

An initial assessment of the horse prior to commencing the training program should include an evaluation of the following parameters:

- Age
- Temperament
- Previous workload / experience
- Current fitness level
- Conformation
- Condition score
- Soft tissue symmetry
- Muscle Tone
- Rhythm and regularity of the paces

Dated measurements, photographs and videos provide a starting point upon which future measurements or values can be compared. In this way the trainer can build a picture of the horse's progress or change over time.

Referring to these records will prove most useful when it comes to determining the suitability of a particular exercise for the horse and provide the basis for creating specific objectives and training goals.



Evaluating the symmetry of the hindquarter musculature. Left side muscle atrophy may be a sign of weakness or injury.



EQUINE BALANCE BANDS

The Exercise Response

Familiarity with the behavioural, physical and physiological peculiarities that your horse displays pre, during, and post exercise can be strong indicators of training capability and tolerance. The rider or trainer must be observant to changes to the horse's way of going, carriage, physical and mental development and respond appropriately by adjusting the training program to suit the needs of the horse.

What is the horse's normal behavioural response?

- Pre exercise is he happy to be caught, tacked up, and mounted. Does he walk willingly to his place of exercise?
- Or is he inclined to show little interest or get over excitable or agitated?
- During Exercise is he co-operative and compliant or un/ over-enthusiastic.
- Post exercise does the horse happily relax and resume his usual activities or does he appear subdued / listless or on edge and tense.
- Take note of the times or changes in exercise or circumstance that cause positive and negative changes in response.

What Physical signs does the horse display?

- Pre exercise does the horse stand comfortably with good posture or does he appear stiff /hollow?
- During Exercise does he move regularly, deliberately and with purpose? Or does he move sporadically, un-evenly or stiffly?
- Does he demonstrate suppleness of the neck, back and limbs when travelling on straight lines and circles, to both the left and right?
- Does his physical way of going depend upon the type of exercise, gait or surroundings?
- Post exercise does the horse stand with even weigh over his limbs, or does he appear to lean one way or favour a particular stance?

EQUINE BALANCE BANDS

Evaluating the horse's physiological response.

The horse's response to exercise is in part dependant upon duration, intensity and type/frequency of exercise. During exercise, the body systems work to provide the skeletal muscles with a supply of oxygen and substrate whilst removing carbon dioxide and metabolites.

These requirements by the body systems can initiate changes in:

- Breathing/ Respiratory Pattern
- Heart rate
- Temperature
- Perspiration pattern
- Appetite.



Changes in perspiration pattern identified in a warmblood dressage horse. The horse previously showed considerable sweating to the lower neck and chest area. After beginning resistance band training there was a moderate sweat response in the area behind the saddle, abdomen and hind quarters.

Monitoring changes in physiological response give the trainer a better understanding of how the horse's capability for exercise may increase over time. It is necessary to perform the exercise at an intensity and for a duration which initiates a change in muscular use and recruitment.

It is also necessary to recognise the point at which increased exercise demands placed upon the horse cause a depletion in glycogen stores and energy reserves, and alter the metabolite concentration.

In this first scenario the horse will gradually develop the supporting musculature over time. In the second scenario the horse will fatigue, performance will decrease and compensatory movement patterns will come into effect.



EQUINE BALANCE BANDS

Identifying Factors which Contribute to Progression, and Factors Which may Indicate a Problem

Indicators of a positive training response include:

- Willingness to work
- Calm yet active way of going
- Horse takes deliberate and controlled steps
- Increased engagement 'over the back'
- Increased support and engagement of hind leg
- Horse works less on the forehand
- Increased suppleness
- Improved contact



When to Re-evaluate Training or Seek Advice:

For the well being of the horse it is best to cease physical exertion and further investigate the cause if the horse displays:

- A marked behavioural response
- Abnormal physical traits
For example, an irregular stride pattern
- An exaggerated physiological response
E.g. Unusually high heart rate or temperature
- Continued lethargy or lack of Interest
- Uncoordinated or sporadic movement



Whilst undergoing the movement retraining phase one can expect the horse to make the odd mistake, react inappropriately or appear a little clumsy whilst learning to alter and adjust his balance. However abnormal or persistent irregular movement patterns and behaviours should be noted and discussed with the attending veterinarian.

Examples of atypical behaviours include amongst others:

- Repeated stumbling
- Toe Dragging
- Loss of action
- Delayed patella release (Hind leg)
- Notable preference for using one side of the body over the other

EQUINE BALANCE BANDS

When performing any form of physical exertion, it should be remembered that if the horse begins to fatigue the supporting musculature cannot function efficiently and the horse may resort to using compensatory movement patterns. This results in excessive stress being placed on other soft tissue structures which over time can cause damage and unsoundness.

It is during the rest and recovery phase that soft tissues have a chance to repair and build. At intervals during the training session, it is important to allow the horse to walk and relax, and to offer him ample opportunities to stretch out.

Alternating between different types of exercise on consecutive days and allowing for an extended recovery period following more strenuous work can give the body time to recover.



EQUINE BALANCE BANDS

Summary

During normal riding and training practice it is often difficult to target the specific soft tissue areas of the horse's body that are responsible for symmetry of movement and stability of the spine and pelvis.

- Using Equine Balance Bands in combination with a structured conditioning program can help to educate and strengthen the horse's neuro muscular system and tone the muscle fibres that are responsible for producing finely tuned coordinated movement.
- To achieve these aims the horse's progression is carefully monitored and care is taken to avoid the fatigue response.



- Under the guidance of a veterinarian, following treatment of a soft tissue injury, Equine Balance Bands can be used as part of the rehabilitation strategy for returning to work.
- The post operative care and prescribed exercise plan can significantly increase the likelihood of a successful return to work.