

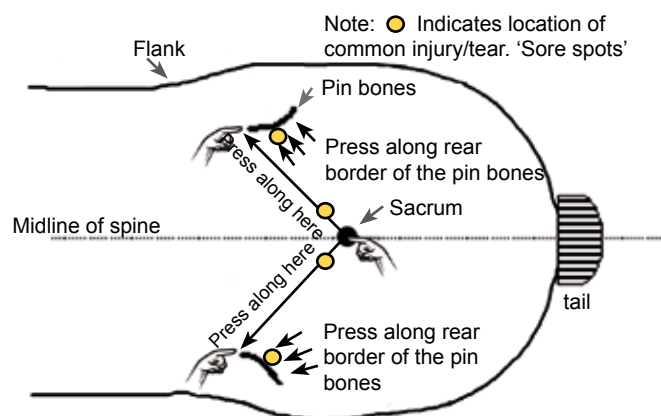
# Sacroiliac Pain

By Dr John Kohnke BVSc RDA

Lower back pain can cause changes in gait and behaviour, loss of impulsion and resisting transitions in dressage horses. Sacroiliac ligament strain and joint sprain, stress fractures and chronic arthritic pain account for 50% of all back injuries. 15% of all horses with back problems have been shown to have chronic, long standing sacroiliac joint injury. Because a rider is positioned 'deep in the seat' when performing dressage, more weight loading is imposed on the lower back and croup.

## Diagnosis

The diagnosis of sacroiliac discomfort is based on symptoms and examination of the sacroiliac region by pain reaction to deep finger palpation around the dorsal sacroiliac ligament attachments. Refer to the diagram below to locate the painful ligament tear (Press along here points).



### Handy Hint

#### Loss of Back Muscle Bulk in Sore Horses

Horses with chronic, sacroiliac discomfort do not develop or maintain 'topline' and 'bulk up' in the croup and rump as they avoid engaging their hindquarters when working, often resisting collection to improve hindlimb impulsion.



*The pony in the photo above was diagnosed with chronic sacroiliac pain on the left side. This photo was taken before diagnosis and it illustrates some classic signs of sacroiliac pain; difficulty flexing in the direction of the affected side, 'hollowing' of the back & a short hindlimb stride length on the affected side."*

## Recognise these symptoms?

If you recognise 4 or more of these typical symptoms, then your horse could have a chronic sacroiliac injury.

1. Lugging to one side or inability to work smoothly around a bend or circle on one side.
2. Resisting the transition, throwing the head up, and 'dipping' in the back when asked to canter or work with hindlimb impulsion.
3. Dipping the back when ridden in a 'collected' gait, with lack of lateral flexion.
4. Working with one hind leg swinging in under the hindquarters, especially when turning.
5. Dragging the toe of the hind limb of the affected side when walking, with a short hindlimb stride length.
6. Bucking when asked to work up a rise or refusing to jump over rails.
7. Failure to develop backline croup muscles, with short hind limb stride movement.
8. Intermittent lameness and shortened stride in the diagonal front limb.
9. Swishing the tail when under saddle, particularly during warm-up exercises.
10. Presence of a 'hunters bump' or prominent sacrum area just in front of the rump.
11. Discomfort and leg 'trembling' when the affected hindlimb is lifted up for hoof trimming or cleaning.
12. Some short term relief after chiropractic manipulation but not long lasting improvement.



*The horse in the photo above is showing a lack of topline and weakness in the rump area. The horse resists engagement of the hindlimbs due to sacroiliac pain.*

## Therapy and Treatment

The treatment for back problems are many and varied and because many back problems often become chronic in nature, there is no single therapy that is the 'cure' for most sacroiliac related injuries. The majority of sacroiliac strains involve ligament and soft tissue injuries, often with displacement injury to sacral and pelvic structures associated with a fall, overloading or slipping on a wet working or arena surface.

A therapy program which includes initial rest, followed by specific exercises to 'work' the sacroiliac ligaments and increase their flexibility and strength provides the best long-term chance of rehabilitation in up to 47% of horses with sacroiliac ligament strain and joint arthritis.

### Simple Rehab Program

Where the sacroiliac ligament or joints are inflamed and painful, initial ice-packing and injections of long acting cortisone helps provide relief from long standing discomfort, followed by an appropriate withdrawal period before returning to training or competition. Consult your vet for advice.

Long rest periods by turning the horse out are contraindicated because the back muscles and associated ligament structures need to be 'worked' to improve flexibility and strength, although a new ligament tear with severe local inflammation and discomfort may require up to 30-45 days of stall and yard rest. Controlled daily straight line hand walking (avoid a circular walking machine) will help to avoid further strain injury. Do not turn out a horse with a severe injury into the paddock as uncontrolled paddock exercise may aggravate the injury.

Follow a program of massage and exercises designed to strengthen the sacroiliac area. See next page for details on an exercise program.

### Did You Know that...

- The prominence of the sacroiliac or 'hunters bump' is dependent on the conformation, physical condition (lean and fit or overweight) and the muscular development of the lower back and hindquarters. A horse's individual low tolerance to pain may result in poor performance and a change in gait.
- A mild 'hunters bump' may have no influence on gait or performance. However, a study in Standardbred trotters found that an increase in prominence of the sacrum of more than 10mm (1cm) was associated with poor performance. In one survey, 61% of racing Thoroughbreds were classified as having moderate sacroiliac changes.
- Horses that are stabled for long periods in training do not maintain flexibility or optimum strength in the pelvic and lower back area, compared to horses which are turned out and can twist and turn when exercising during the day.

### Handy Hint

#### Checking for Sacroiliac Pain

Place the index finger of the right hand on the highest point on the midline of the back (sacrum), and the index finger of the left hand on the front border of the pin (hip) bone at the flank. (Refer to diagram on page 1). Join the two points by moving the right finger to the left finger to leave a line in the hair. Press down firmly with the fingers together along this line - affected horses will dip in the back at the point of sacroiliac pain. Press along the rear border of the pin bones for discomfort. Consult your vet for a diagnosis.

### Handy Hint

#### Tips on Rehabilitation

Controlled exercise, initially with low doses of 'bute' and backing the horse for 5-6 steps to tension the sacroiliac ligaments daily for 2-3 weeks, followed by 4-6 weeks of ground pole and lateral exercises, have been shown to be the most helpful in promoting repair and strength of a chronic sacroiliac ligament injury. Providing a supplement, such as **Kohnke's Own Cell-Vital, Cell-Vital PREMIUM, Aussie Sport** or **BCS**, to provide vitamin A, zinc, copper, manganese and vitamin E will help correct low dietary levels of important nutrients required for ligament repair.

### Handy Hint

#### Some Tips to Help a Horse With Chronic Back Pain

Include a warming massage (or a warm hot water bottle placed over the sacroiliac area for 2-3 minutes) before daily exercise, then the figure-8 hand walk over poles as part of daily warm-up before training in a horse with a chronic sacroiliac problem. A magnetic therapy rug, positioned over the hindquarters overnight, will also facilitate the warming and healing process.

### Handy Hint

#### Changes in Horse's 'Hunter's Bump'

Horses with well-developed back line and hindquarters are less likely to develop sacroiliac injury, with the risk increasing in all horses that jump at speed (hurdlers, showjumpers and eventers) or use their lower back for acceleration and impulsion (pacers, dressage horses, polocrosse). Evaluation of the clinical relevance of a 'hunters bump' or prominent 'tubera sacrale' area must consider the horse's work history, stage of fitness, breed, condition and ideally, how the size of the 'bump' has changed over time.

### Handy Hint

#### Tips for Massaging your Horse

When massaging, close the fist and roll it over onto the top knuckles in a kneading action, working towards the midline around the sacrum and spinal column.

## Exercise Program to Strengthen the Sacroiliac area and back muscles

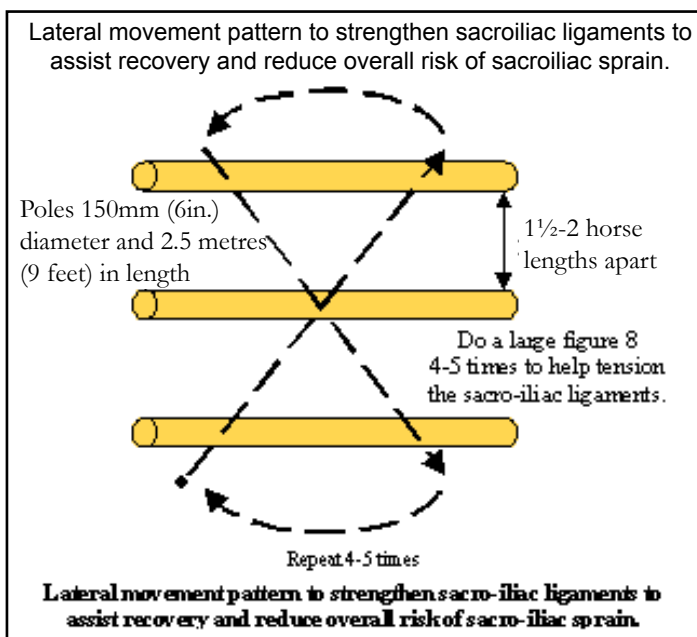
1. Before exercise massage over the sacroiliac on each side for 1-2 minutes. The massage could be done with or without an oily muscle liniment. Wipe off the excess oily residue after the massage.
2. Walk over poles daily for 10-14 days. Use 3 ground poles spaced 1 ½ - 2 horse lengths apart at a 45° angle approach in a 'figure 8' pattern (see figure below). Lead the horse over the poles 4-5 times to help flex and twist the sacral and pelvic area as the horse lifts each leg individually as it walks over the poles. This can be done before riding but it must be done on a lead. The horse can be saddled and geared up for work and then led over the poles as part of the 'warm-up' exercise. Do not ride over the poles.
3. Once under saddle, walk the horse at an angle as in a 'shoulder in' lateral movement for 4-5 'zig zags' across the arena. This will further help to strengthen the sacroiliac ligaments and associated joint structures.
4. Place feed bin off the ground to avoid the horse having to tense its back when head down feeding.
5. Check the hind hoof angles. This is very important to avoid overloading the lower back area. See next page for information on hind hoof angles.
6. After the first 10 days once the horse is again using its hindlimb muscles, supplement with a muscle 'builder', such as **Kohnke's Own Muscle XL** after exercise for 14-21 days, to help build topline and the hindquarters to strengthen the lower back muscles.



*Massage the sacroiliac on both sides for 1-2 minutes before commencing exercise. You could use your knuckles in a downward rolling & pressing movement over the sacroiliac area. Lift the hands at the bottom of the massage movement and move them to the top of the sacro area to roll the knuckles down again. This avoids continually massaging up & down against the hair, which may be uncomfortable for the horse.*



*Lead the horse at an angle over poles before mounting and starting the warm-up routine. The horse might 'tap' the poles in the first few days of this exercise. As the sacroiliac area becomes stronger the horse will find it easier to lift its feet over the poles.*



*Photo at right: Include zig-zags across the arena in 'shoulder-in' as part of the warm-up routine. Some horses might find this hard at first, either because they're not used to the 'shoulder-in' movement or they are sore and weak in the sacroiliac area and they find the movement difficult to perform. Be patient and remain relaxed when asking for this movement and don't expect 'perfect' shoulder-in, which can be particularly hard to achieve without the arena edge as a guide. The horse will adjust to the lateral movement when it begins to understand the instruction and when it gains strength after several days of the exercise program.*



### Handy Hint

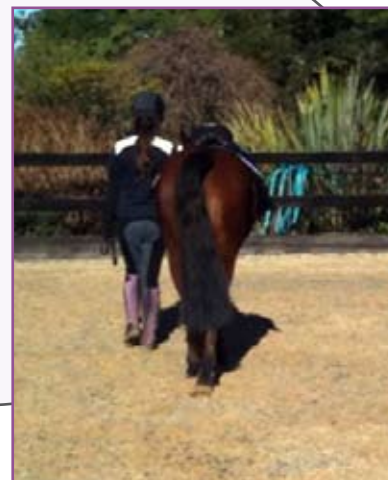
#### The Value of Different Therapies for Back Pain

Of all the therapies used, simple massage, physiotherapy and therapeutic ultrasound, electrical stimulation of surrounding muscles (muscle contraction – not lasers) and magnetic field therapy were found to be the most beneficial when used to relax and relieve pain prior to exercise. A study in the United States has found that chiropractic manipulation and acupuncture were helpful for short term relief, but did not significantly assist healing or long-term rehabilitation because occasional manipulation did not help to strengthen the lower back structures.

### Handy Hint

#### A Sore Back Can Make Lifting the Hindleg Difficult

During the first 3-5 days of pole exercise, the horse may 'clip' the pole with the toe of the worst affected hindlimb as it walks over the poles until the exercises strengthen the lower back muscles and sacroiliac area. This weakness in an affected limb can often be seen when looking at a horse walking away from the observer. The horse might place the hoof of the affected limb well over to the other side rather than straight underneath its body. It might have a shortened stride on the affected limb and it might even 'twist' its hindend in the direction of the affected side, as can be seen in this photo.



### Checking the Angle of the Hind Hooves

The front angle of the hoof wall on the hind limbs should be more upright than the corresponding slope of the front hooves, with a shorter toe and higher heels.

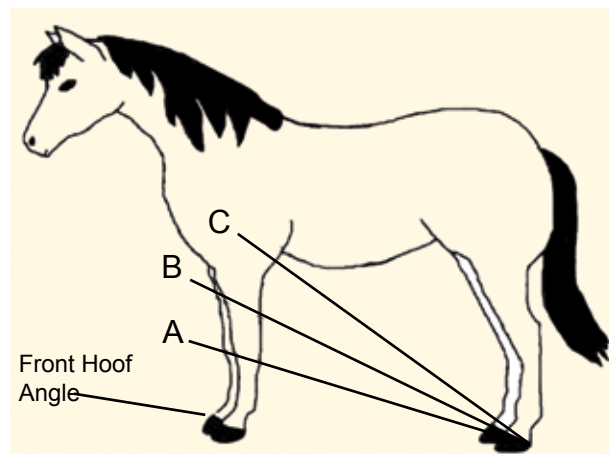
A long toe, low heel hoof shape transfers more weight loading to the lower back and may perpetuate a 'sore back' due to chronic sacroiliac pain.

The slope of the coronary band can be checked by placing the end of a piece of string (eg length of baling twine) on the coronary band on the back of the heel, and then running it parallel to the slope of the coronary band to determine where it intersects on the front limb (See Diagram).

Line A: This is the optimum hind limb coronary angle, with the string line intersecting at the back of the knee, or no higher than mid way between the knee and elbow on the front limb.

Lines B & C: These lines intersect too high, indicating that the coronary angle of the hind hooves is too high, because the toes are too long and the heels are too low.

The heels should be assessed for height as well, with low heels being corrected by careful trimming over 3-4 trims.



### Handy Hint

#### To achieve Natural Hoof Angles

The horse should be stood squarely on a hard, level surface (eg concrete or sealed bitumen area) with the cannon bones positioned vertically. The hoof angle can then be determined as being low, high or normal, and the hoof trimmed accordingly to achieve as near as possible to the matching parallel line of the pastern and hoof.

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