

# Not so romantic...

# Kissing Spines

with **Dr Paula Williams**  
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Paula qualified in the UK in 1993 and has been an equine veterinarian since then. She completed an internship at Rosedale and Partners in Newmarket, UK and has subsequently

worked in equine hospitals both in the UK and Australia. Paula is currently an equine practitioner at WestVETS Animal Hospitals in Queensland.

Her clinical interests include diagnostic imaging, the investigation and management of musculoskeletal issues in the equine athlete, the equine foot, neonatology and internal medicine.

**E**quine back problems and pain are fairly common in the horse causing alterations of gait and performance issues in the athlete. Kissing spines is one of the causes.

## What are kissing spines?

Kissing spines is more formally known as overriding (or impingement) of the dorsal spinous processes (ORDSP). It occurs when the dorsal spinous processes (the top blade of the vertebrae) are too close together rather than being spaced out with gaps in between them. This results in overlapping or touching of two or more of the dorsal spinous processes – hence “kissing” as the adjacent processes are very close.

## What causes the pain?

The pain can be attributed to the bone changes, the muscles of the back overlying the bones or sometimes secondary to a hindlimb lameness causing the muscular pain. Often there will be a combination of these.

## What sort of horses get kissing spines?

The condition is most often found in Thoroughbreds, Quarter Horses, Arabs and Warmbloods. It is seen in all different disciplines but commonly showjumpers, eventers and dressage horses.

## What are the clinical signs of kissing spines?

The signs can be variable and some horses with mild kissing spines may not show any clinical signs. Clinical signs include:

- Vague or obvious lameness
- Sore to touch back and sides
- Fidgeting when being groomed or tacked up
- Nipping, biting or kicking when having girth tightened
- Fidgeting or jiggling when rider is mounting
- Misbehaviour under saddle – bucking, rearing, bolting, pig-rooting, kicking out, head tossing, resistance
- Difficult for farrier
- Stiffness to one side
- Issues with canter
- Awkward transitions of gait
- Flexion or collection problems
- Jumping issues

## How are kissing spines diagnosed?

The significance of kissing spines can be difficult to assess. The presence of back pain and the possible cause needs to be evaluated very carefully as there are many factors that can contribute to back pain, including poor saddle fit, riding style, localised muscular issues secondary to other hindlimb issues, as well as kissing spines.

### Presence of back pain

The back is palpated and the range of movement assessed. This can be very subjective and there can be individual variation depending on the sensitivity of the horse.

### Lameness evaluation

The horse is examined at the walk, trot and canter in varying conditions including in a straight line, on the lunge and under saddle. A lameness locator may be used by some veterinarians.

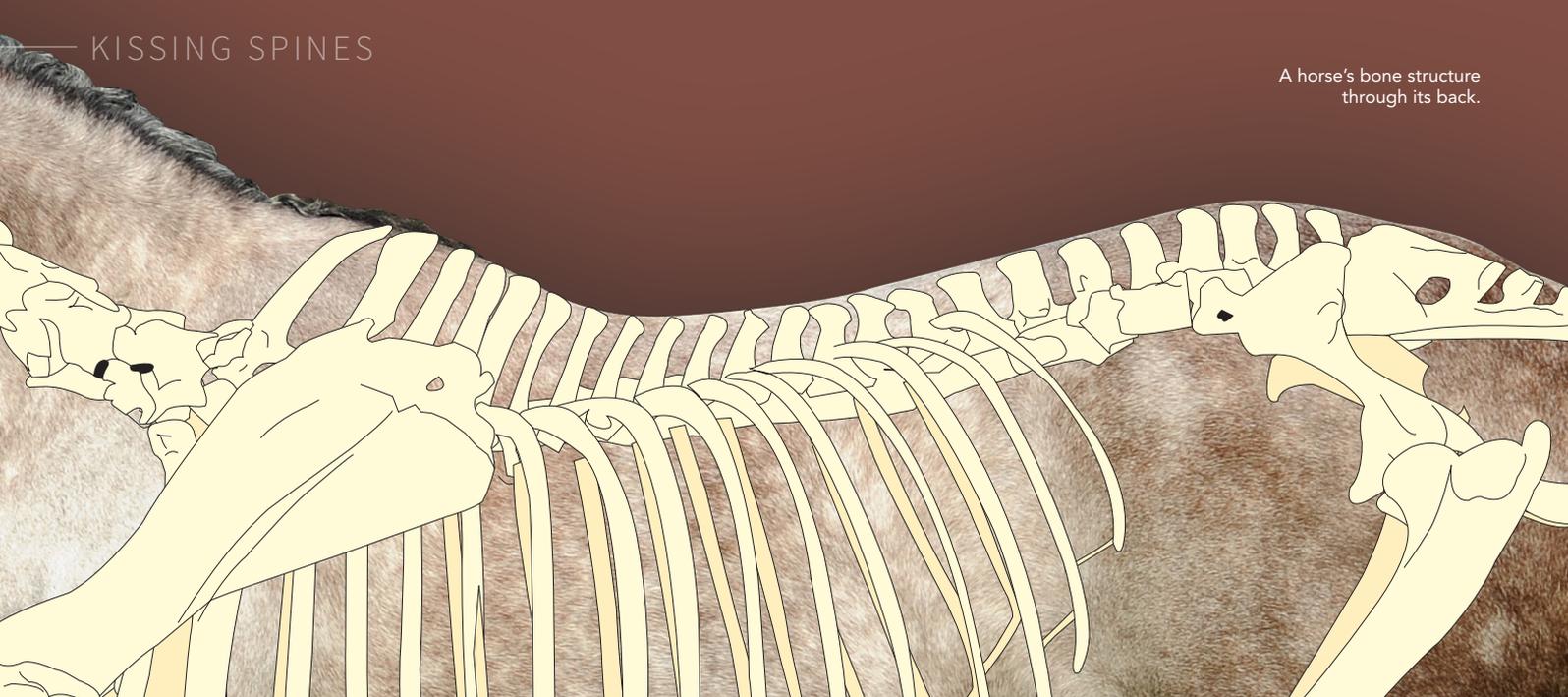
### Evaluation of the owner's complaint about the horse

Sometimes the horse won't repeat the behaviour that the owner is concerned about when the veterinarian is present, so video footage can be very useful.

### Phenylbutazone test

The horse is put on non-steroidal anti-inflammatory drugs (usually phenylbutazone - “bute”) for a short period of time to see if there is an improvement when on the medication. This should only be performed under veterinary guidance. If there is an improvement then it confirms that there is a pain focus that needs to be located.

“The clinical signs can be variable from lameness to palpable pain to issues under saddle.”



**Radiographs**

The radiographs of the back evaluate the underlying bone. However, interpretation can be complicated and needs to be evaluated in light of the clinical picture of the horse. For example, some cases have minimal bone changes but have significant back pain, and other cases have what appear to be severe bone changes and no clinical issues. It is therefore imperative that all factors are taken into account when the diagnosis is being made.

**“The ultimate goal is to increase the back musculature/topline and abdominal musculature.”**

**Local anaesthetic at the site of kissing spines – nerve blocks**

Your veterinarian may infuse local anaesthetic at the sites located on radiographs, and if these locations are contributing to the pain, then there should be an improvement of clinical signs. However, interpretation needs to be careful

as muscular pain will also be improved by the presence of local anaesthetic.

**Ultrasonography**

Your veterinarian may evaluate the muscles with ultrasound, but this does require expertise in this area.

**Nuclear scintigraphy**

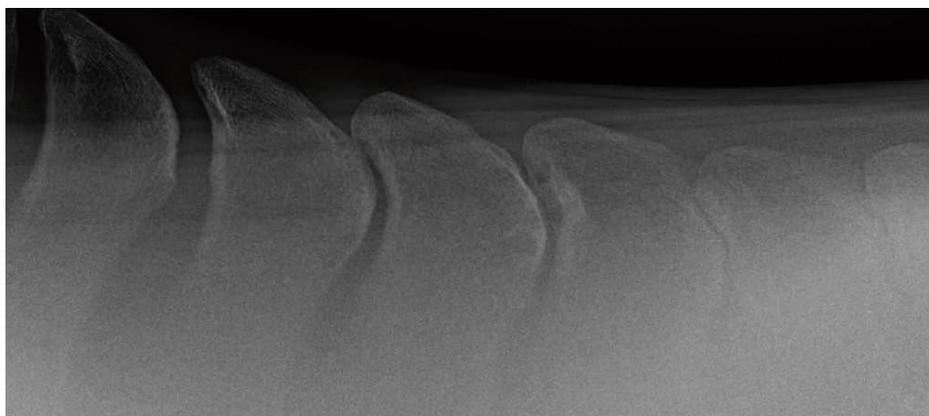
This involves the use of a radioactive substance (Technetium) which is taken up by the bone for a short period of time. It is injected intravenously and then a few hours later the horse's skeleton is imaged with a camera that detects radioactivity. This modality is very sensitive at picking up active bone changes.

As can be seen by this list of techniques that are used for diagnosing kissing spines, it can be an involved process requiring a combination of modalities to confirm the diagnosis.

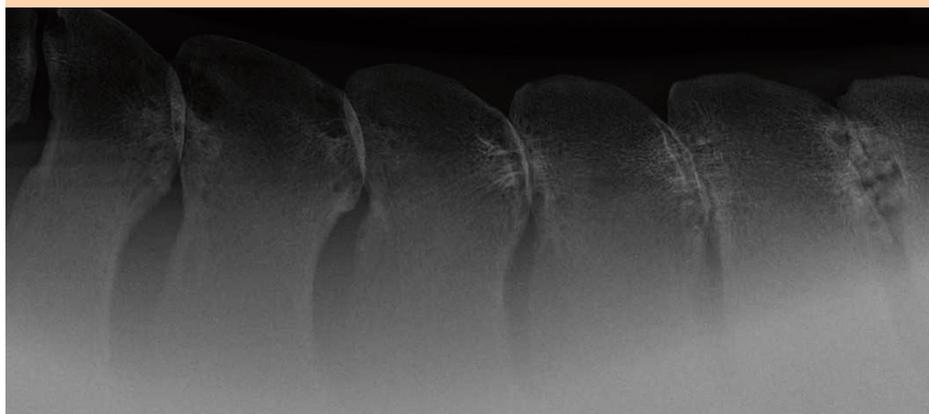
**How are kissing spines treated?**

Just like the diagnosis of kissing spines can involve several different modalities, so too can the management or treatment. Different treatment regimes will be used in different cases – there isn't a one treatment works for all approach.

The ultimate goal in both the short and long term is to increase the back musculature/topline and abdominal musculature, stabilise posture and improve mobility. Increasing the musculature helps provide support to the bone structures in a similar way to managing back pain in people – improving “core strength.”



Both of these radiographs show different degrees of kissing spines.



## Treatment Options

### Exercise programme/physiotherapy

These programmes involve physical exercises including lunging, long reining, the use of a Pessoa or Equiband, pole work, aqua treadmill and kinesthetic tape. On the ground, stretching exercises are utilised in combination with these physical exercises – horse pilates or yoga!

The exercise regime is a key part of managing back pain. Your veterinarian may engage the services of a qualified physiotherapist to assist in this regime.

It is also important to evaluate saddle fit in kissing spine cases, as a poorly fitting saddle may contribute to the pain. The balance of the feet, particularly the hindfeet, should also be evaluated as poor foot balance can be implicated.



A radiograph showing a flat hind foot with negative pedal bone angle.

### Systemic pain relief

Your veterinarian may suggest the use of pain relief/analgesics/non-steroidal anti-inflammatory medications, in combination with an exercise regime. Most commonly used is phenylbutazone.

### Adjunct therapies

Acupuncture, extracorporeal shock wave therapy, therapeutic ultrasound, chiropractic and mesotherapy (injections of various medications in the region of the pain along the back) are used by some veterinarians as part of their management regime.

### Corticosteroid injections

Often corticosteroids will be infused at the site of kissing spines to assist in pain relief.

### Surgery

If there is minimal response to the less invasive methods listed above or in very severe cases, then surgery may be a preferred option. There are two main surgical techniques that are used.

- Cutting the interspinous ligament between the dorsal spines to give more room
- Removing part of the dorsal spinous processes to create more space to stop the impinging

After surgery, a rehabilitation programme is followed and used to maintain the supporting back musculature.

“It is important to evaluate saddle fit in kissing spine cases, as a poorly fitting saddle may contribute to the pain.”



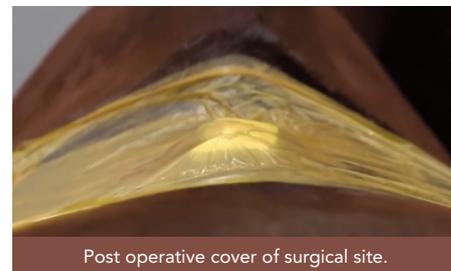
The use of an osteotome to remove bone.



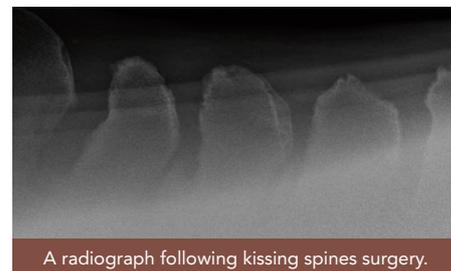
Showing reduction of kissing spines (more of a gap between spines).



The removal of bone wedge.



Post operative cover of surgical site.



A radiograph following kissing spines surgery.

## Summary

Kissing spines are one of the causes of back pain in the horse and involve the impingement or touching of the dorsal processes of the vertebrae in the back. The clinical signs can be variable, from lameness to palpable pain when handling the horse, to issues under saddle. Diagnosis involves radiography as the main technique, but are carefully interpreted in light of the clinical picture.

Treatment also may involve multiple techniques with appropriate exercise/physiotherapy being the main key in the management of these cases. In very severe cases then surgery is an option.

Although kissing spines is feared by many owners, most cases do have a good response to appropriate case-based multi-faceted management, guided by your veterinarian. 🐾