



# Weird withers

Withers can easily bruise or fracture in a fall, but the prognosis is often surprisingly good, says **Graham Hunter MRCVS**

## Q WHY ARE WITHERS SO VULNERABLE?

THE fact that the top of the withers is always above the shoulder blades makes the area prone to injury. A horse's survival instinct leads him to evade threat. As a result of this response, a frightened horse may rear up and flip over backwards, leading to fracture of the spinous processes.

Fractures can also result from traumatic incidents such as getting stuck in a fence, falling into a ditch or becoming wedged under the breast bar in a trailer, or perhaps during a colic episode or a seizure. Injury has even been known to occur when a horse falls because of other neurological problems which have left him weak or uncoordinated.

A traumatic incident may not always be witnessed and sometimes an owner will report finding their horse in the stable or paddock with pain and swelling over the withers. Wither fractures can also cause neck stiffness, with the horse being unable to extend his neck to the ground or to either side. Forelimb lameness may be seen, with a very short, stiff gait.

Where significant neurological signs are present, an extensive neurological examination of the

whole horse with appropriate imaging should be performed.

## Q HOW ARE WITHER FRACTURES DIAGNOSED?

THE withers are formed by dorsal extensions between the horse's shoulder blades, from around the third to the 11th thoracic vertebrae.

At their highest point, approximately midway, these spinous processes can be up to 30cm long. The height of these bony projections provides significant attachment for the nuchal ligament, which runs from the poll to the withers, and the substantial muscle mass required to support the weight of the horse's head, neck and shoulders.

Fracture of the withers tends to be easy to spot on radiographs (X-rays), as there are generally a number of spinous processes involved, typically between two and seven. The most common of the spinous processes to be injured is the sixth, the tallest one, and the first to hit the ground when a horse falls over backwards.

On a lateral X-ray (from the side), there is often what looks like a separate piece of bone at the top of each spinous process. These should not be mistaken for fractures; they are what we call "separate

centres of ossification" and can be seen in a horse of any age.

Nearly all fractures are complete across each process and the fracture piece is generally displaced deeper into the horse and off to one side.

## Q WHAT IS THE TREATMENT?

AS long as there is no open wound, initial treatment will generally involve prescribing anti-inflammatory drugs such as bute. The injury should be iced and the horse put on box rest for about four to eight weeks, depending on the number and severity of the fractures.

• The horse should be fed from chest height so he doesn't have to stretch to the floor for food. Unlike fractures in other areas of the body, which might need to be immobilised, this is not generally required at the withers.

• If the injury is associated with an open wound, the wound should be cleaned and flushed out, and any contamination or bone fragments removed. In some cases antibiotics may be required. A stent dressing can be used if needed in this area.

• Healing of these fractures is generally uneventful and horses can return to work in four to six months.

Complications can occasionally occur,

Elite Syncopation's withers 'look bizarre', says his rider Nana Dalton, but last year he jumped clear around Burghley CCI4\* despite having previously fractured four vertebrae (see box, right)

## THREE LEADING LIGHTS WHO BOUNCED BACK FROM BREAKS

Some high profile horses have recovered from serious withers injuries, including:

• Clifton Lush (right), who was third at Badminton in 2015 with Jock Paget, broke his withers when he was spooked in the paddock by a thunderstorm and slipped under a gate. Consequently the chestnut, who was living in New Zealand at the time, has a very flat withers area.



• Elite Syncopation (left), who jumped clear around Burghley last year under Nana Dalton, broke his withers on the way to the field when pain from a tooth abscess caused him to rear up and fall backwards onto a hardcore surface. "There were visible cuts on his withers," recalls Nana, who had to wait an agonising 10 minutes before the horse regained consciousness. "He fractured four vertebrae, which later became infected and parts of bone had to be removed. He now looks bizarre, but he's on great form."

• Quisto Van De Helle Z (right), who showjumps with Alex Coats, is thought to have slipped and fallen in the stable. Alex found him one morning sweaty and in obvious pain, with a split poll and sore, swollen withers. The stallion was reluctant to lower his head to eat. It was discovered that Quisto had broken vertebrae T3 to T11, and he was boxed before being brought very slowly back into work, returning to showjumping a year later.



"He still wears the same saddle but with an orthopaedic pad that's built up slightly in some areas to compensate for any unevenness," says Alex, who went on to head the area trial with Quisto at Royal Cornwall Show.

Pictures by Peter Nixon, Helen Revington and Stephen Sparkes, and Sarah Radford

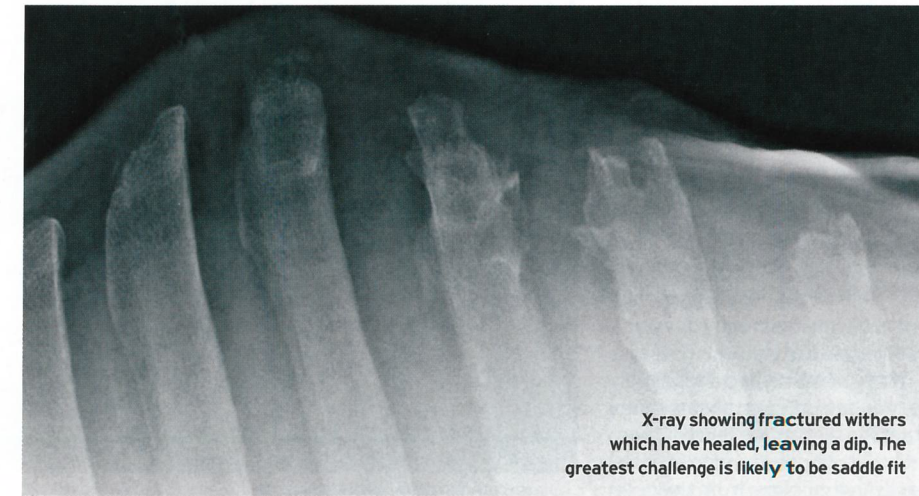
however, particularly if the injury was associated with an open wound. Infection can result and, if it persists, could affect the bone and result in delayed healing and a chronic discharging tract.

- If there is infection, surgery is best performed — under standing sedation — to remove the infected tissue and bone, including the damaged top of the spinous process.
- In some horses, fractures can be associated with persistent wither pain. Surgery may be necessary to remove the fractured pieces of bone.

## Q WILL THERE BE PERMANENT DAMAGE?

THE long-term prognosis for these injuries is often extremely good, with nearly all horses regaining their full athletic ability by six months. However:

- 1 Most end up with chronic thickening and flatter, lower withers, and the greatest long-term issues therefore relate to saddle fit.
- 2 As the withers end up low and asymmetric, the saddler has a tough job. Solutions may involve croup, point or balance straps.
- 3 Other injuries to the withers can include bites and rug or tack rubs, which can lead to local skin



X-ray showing fractured withers which have healed, leaving a dip. The greatest challenge is likely to be saddle fit

infections or abscesses.

4 There is a fluid bursa that sits just under the nuchal ligament at the withers. If infection of this bursa occurs, chronic recurrent infection — called "fistulous withers" — can result.

5 A few years ago this condition was frequently caused by the bacteria brucella, which also caused brucellosis in cattle. Thankfully, both conditions have now been almost eradicated. **H&H**

## ABOUT THE AUTHOR

GRAHAM HUNTER MRCVS, an XLEquine vet, is the senior equine vet at Arden House Veterinary Practice in Aberdeen, where he is a director.

Although interested in all aspects of equine medicine and surgery, Graham's main focus and passion over recent years has been based around orthopaedics and surgical cases. [www.ardenehouse.co.uk](http://www.ardenehouse.co.uk) 01224 740700