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# Peak performance: Show-jumping

## We asked the experts for tips on achieving peak performance in show-jumping

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### How do veterinary problems impact on show-jumping peak performance and how can they be prevented?

The athletic demands placed on the elite show-jumper are huge. A successful show-jumper must be able to jump large fences with precision and care, often at speed. The horse must be supple and able to make sharp turns, jump from a virtual standstill whilst also being able to jump at gallop. It must have tremendous strength in the back and hind-limbs to be able to adjust stride length and jump from 'deep' and still create a natural arc as it jumps.

The majority of modern, successful show-jumpers are naturally well balanced, loose-moving athletes. As any top show-jumper/trainer will tell you there is no single conformation type that makes a good show-jumper. The hind-quarters are critical to creating an upward trajectory - people tend to look for horses with a 'strong' back (usually not too long in the back), a low stifle (able to create greater scope) and hocks that are not too upright. The front of a successful show-jumper must be able to lift the knees high and out of the way, with a high neck and head to allow excellent balance and vision.

The stresses placed on the hind-limbs at take off and the fore-limbs on landing are enormous and there is immense tension placed through the joints when making quick turns. The common areas causing lameness in show-jumpers are those under significant stresses and strains. These include the fetlock in the fore-limb and the hock in the hind-limb; the sacroiliac joint (Figure 1) of the back; the tendons/ligaments that comprise the 'stay' apparatus of both hind and fore-limbs; and foot pain.



Figure 1: Sacroiliac joint medication

### Common lameness conditions seen in the show-jumper

- **Foot pain**, often resulting from damage to the bony, ligament or tendon tissues of the foot.
- Foot pain in the front feet is often related to navicular bone damage or a combination including injury to the Deep Digital Flexor Tendon (DDFT), navicular bursa and navicular support ligaments.
- Inflammation and arthritis of the pastern, fetlock and hock.
- Injury to the Superficial Digital Flexor Tendon (SDFT) and DDFT.
- Inflammation of the suspensory ligament (suspensory desmitis), particularly in the hind-limbs.
- **Back and neck pain**, Most commonly of the sacroiliac joint (the connection between the vertebral column and the pelvis).

### Prevention of lameness

When discussing peak performance and specifically preventing injuries, one of the most important roles in running a competition yard is to build an effective team. This revolves around the rider and their horses but also involves trainers, veterinary surgeons, farriers, physiotherapists and nutritionists.

There are a number of methods employed to prevent lameness; poor foot balance is a huge contributor to poor performance and lameness so regular shoeing is a must. Following a fitness plan is essential, too many horses are pushed too quickly, breakdowns occur and they are often left suffering from long-term unsoundness. Choosing appropriate surfaces to exercise on is important in protecting their legs; protecting a horse's legs from shock and impact will help keep them sound and there are a huge variety of products on the market to help.

Andrew James DipWCF, Show-jumper and farrier, Bodmin, Cornwall

## In the sport of show-jumping how do training and talent influence 'peak performance'?

A potential show-jumper should have a good natural rhythm and conformation; some just find it easier than others. A horse with a good mental attitude and enthusiasm for work makes them easier to train and allows for better performance. At the end of the day the horse has to perform for 2 minutes so everything is aimed at peak physical performance and power for a short period of time.

Most young horses are started at three years old with predominantly flatwork, jumping

starting at home as a four year old with the aim to be competing as a four and a half year old. Perhaps we are pushing these horses too hard too quickly but they have to be pushed in order to get to the stage that's expected of them.

As a show-jumper I focus on the back end, the most important gait is canter and I work on lots of length followed by collection. It is important to maintain variation in their work in order to keep them fresh.



## What role does farriery play in achieving show-jumping 'peak performance'?

Most show-jumpers have good hoof quality as they are well managed and well fed. Their general management means they don't really lose shoes so you can often shoe with good length, width and support.

Foot balance is key to achieving peak performance; foot balance is the state whereby the hoof wall, sole, frog and bars are prepared so that an equilibrium exists around the DIP joint, with a shoe placed on the foot, providing maximum

base of support while still minimising stresses and leverages to the lower limb, both statically and dynamically. Clearly, poor foot balance will alter the stresses and leverages through the limb leading to a reduction in performance.

Studs are essential for show-jumping, usually two in each unless they are prone to treading on themselves. If studs are not used and they slip this is a common reason to lose confidence and so a reduction in performance.



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## What role does physiotherapy play in achieving show-jumping 'peak performance'?

Whether show-jumping is your hobby or livelihood, achieving the best performance each time you compete is important. Having the help of a Chartered Veterinary/Animal Physiotherapist can be very important. Detection of small problems can prevent them from becoming major problems, and seemingly minor weaknesses or asymmetries in the horse's way of working can be corrected.

Horses' like people, are usually slightly one sided. So, for example, by improving

flexibility or strength, the ability to turn tightly into a fence or shorten/lengthen for difficult distances can be improved. Manual treatments and regular stable exercises are important, but schooling exercises such as rein-back into trot, turn on the forehand and more challenging pole exercises are excellent for strength and co-ordination. For more specific muscle or joint targeting, taping and theraband can be utilised to great effect, but should not be used without prior guidance.

