**DIAGNOSIS**

Impingement of the dorsal spinous processes (DSPs) is a condition that affects roughly 40% of the horse population. Most often, this condition affects the DSPs within the thoracic section of the back; specifically, where the rider sits. In a normal horse, the DSPs sit parallel and evenly spaced from one another. When impingement occurs, the DSPs are pulled closer together, sometimes touching. In most severe cases, the bones may overlap. Impingent of the DSPs occur when there is increased tension or pressure on the nerve endings of inter-spinous ligament. The inter-spinous ligament runs down the back of a horse in between the DSPs and attaches to the bone. This leads to involuntary muscle spasms of the horse's back, which pull the DSPs closer together, further enhancing the problem. The cause of this condition is thought to be hereditary, however, if a horse is experiencing another overt lameness, it may affect the DSPs that were once asymptomatic. For example, if a horse has a front foot lameness, they may travel with their head higher and back arched to avoid putting excess weight on their leg. The DSPs that normally do not bother the horse may become impinged due to the difference in the way the horse travels. Symptoms of impinging DSPs may include excessive spooking, bucking, hesitation when being saddled, refusing to accept contact from the bit, stopping at jumps, or just a general anxiety when working under saddle.

**TREATMENT**

While impingement of the DSPs may often be treated conservatively, in cases where the impingement is more severe, surgical intervention may be necessary. The most common procedure for correcting impinging DSPs is an inter-spinous ligament desmotomy or ISLD. Once the most active areas of impingement are identified both radiographically and with nuclear scintigraphy (bone scan), a small 1-2 cm incision is made next to the affected DSP. The inter-spinous ligament between the two affected DSPs is cut, relieving the pressure and increasing the space between the DSPs. This process is repeated for all of the affected areas along the back. Once completed, additional radiographs are taken to ensure there is improved spacing between the DSPs. This procedure is done while the horse is standing and typically takes 30-45 minutes.

**PROGNOSIS**

While the prognosis is highly dependent on the individual case and severity of impingement, about 85% of horses can return to athletic activity post-operation.

**SAMPLE REHABILITATION SCHEDULE**

Every horse is different and every rehabilitation schedule is tailored to meet your horse’s specific needs. Below you will find an example of a rehabilitation plan for a horse post-ISLD surgery:

- **Inter-spinous Ligament Desmotomy:**
  - Four weeks of stall rest with walking in hand
  - Four weeks of lunging in a lunging-aid system
  - Recheck exam at eight weeks

**CONTACT**

For more information, please contact the Equine Sports Medicine and Surgery Service at hlasportsmedicine@tufts.edu.