

Horse Health:

Roaring

What is it?

“Roaring” is the everyday name given to a condition officially known as laryngeal hemiplegia. It is one of the most common causes of abnormal respiratory noise in horses.

This condition affects the larynx, also known as the voice box, which sits at the top of the windpipe. In a healthy horse, nerves control the muscles that open the airway wide during exercise. This allows large amounts of oxygen to flow freely into the lungs - essential for stamina and high-level performance.

In horses with roaring, one side of the larynx (almost always the left side) becomes partially or completely paralysed. The cartilage cannot move properly, meaning the airway narrows. When air rushes past this restricted opening, it creates a distinctive sound, often described as a roar, whistle, or wheeze.

For some horses, roaring is little more than a noise. For others, particularly those in fast or demanding work, the restricted airflow can result in reduced performance, exercise intolerance, and can even cause safety issues if the horse struggles to breathe efficiently.

What causes it?

Roaring is caused by dysfunction of the recurrent laryngeal nerve, which supplies the muscles that open the left side of the larynx. For reasons not

completely understood, this nerve gradually degenerates, meaning it cannot transmit signals properly.

Key points:

- It almost always affects the left side of the larynx (hence the term left recurrent laryngeal neuropathy).
- It is considered a neurological disorder, not a structural injury.
- Right-sided cases are extremely rare.

Potential contributing factors include:

- **Size of the horse:** Tall, long-necked horses (such as Thoroughbreds, Warmbloods, and Draft horses) are more commonly affected. This is likely because the recurrent laryngeal nerve is particularly long in these horses, making it more vulnerable.
- **Genetics:** Certain bloodlines seem predisposed, suggesting a heritable component.
- **Trauma or secondary disease:** Rarely, nerve damage can follow direct trauma, infections such as guttural pouch disease, or other upper airway disorders.
- **Age:** Most cases are diagnosed in young to middle-aged performance horses, often just as their athletic workload increases.

What horses are at risk?

While roaring can technically occur in any horse, some groups are at greater risk:

- **Large breeds** such as Thoroughbreds, Warmbloods, and Draft breeds.
- **Male horses** are more frequently affected than mares.
- **Performance horses:** Racehorses, eventers, hunters, and show jumpers often show signs earlier because their high oxygen demand

makes the airway restriction more obvious.

- **Horses with affected relatives:** Family history plays a role, particularly in some bloodlines.

What are the symptoms?

The most recognisable sign of roaring is the distinctive respiratory noise, usually heard during fast or strenuous exercise. Owners often describe it as a roar, whistle, or wheeze.

Other symptoms may include:

- **Noise during exercise only:** The sound often disappears when the horse is resting.
- **Exercise intolerance:** The horse may tire sooner than expected, slow down, or be unable to maintain speed.
- **Reduced performance:** Particularly in competition horses, the narrowed airway restricts oxygen intake, which limits stamina and recovery.
- **Occasional coughing or abnormal swallowing:** More likely in severe cases.

Milder cases may only cause noise, but in advanced cases, roaring can significantly affect a horse's ability to perform and compete.

How is it diagnosed?

If your horse develops an unusual noise while exercising, your vet will start by taking a detailed clinical history and performing a physical examination.

The key diagnostic tool is an endoscopy:

- A flexible camera is passed up the horse's nostril and into the throat.
- This allows the vet to directly observe the larynx and check how well

it opens and closes.

- Sometimes, a treadmill endoscopy or overground endoscopy is performed while the horse is exercising, as abnormalities are more visible when the horse is working hard.

This step is crucial because other conditions, such as soft palate displacement or epiglottic problems, can also cause noise during exercise.

Other tests that may be used include:

- Ultrasound of the laryngeal muscles to assess size and symmetry.
- Blood work or nerve studies (although these are rarely used outside of research).

How can it be treated or managed?

Treatment depends on the severity of the condition and how much it affects the horse's breathing and performance.

Mild cases

- If the horse only makes a noise but performs well, treatment may not be necessary.
- Some horses can continue happily at lower levels of work with careful management.

Moderate to severe cases

For horses whose performance is limited, surgery is often recommended.

The most common options include:

- **Prosthetic laryngoplasty ("tie-back" surgery):** A permanent suture is placed to hold the affected cartilage open, widening the airway. This is considered the gold standard treatment for performance horses.

- **Ventriculectomy or ventriculocordectomy (“Hobday” procedure):** Removal of the vocal cord tissue to reduce noise. This is often combined with a tie-back.
- **Arytenoidectomy:** Removal of part of the cartilage, usually reserved for cases where other procedures are unsuitable.

Following surgery, many horses return to good levels of performance. Success depends on the severity of the original condition, the horse’s discipline, and whether there are complications.

Can it be prevented?

Unfortunately, there is no guaranteed way to prevent roaring in horses. Since it is usually linked to nerve degeneration and possibly genetics, prevention isn’t straightforward.

That said, there are sensible steps owners can take:

- Monitor young horses closely. If you notice unusual breathing noises, ask your vet to investigate early.
- Avoid breeding from horses that are affected to reduce genetic transmission.
- Maintain good overall respiratory health. Vaccination, regular worming, and minimising dust exposure all help your horse breathe more easily, even if they don’t directly prevent roaring.

What do I do next?

Roaring (laryngeal hemiplegia) is one of the most common causes of respiratory noise and reduced performance in horses. While the abnormal sound can be startling and worrying, many horses with mild cases continue to live full, active lives without treatment.

For horses in demanding athletic work, surgery offers an excellent chance of restoring both performance and comfort.

If your horse is making unusual noises when exercising, or you've noticed changes in their stamina, the best step is to contact your vet. With a proper diagnosis and tailored management plan, most horses with roaring can return to a happy and productive career, but starting diagnostics earlier means less time before they can return to work.