



# Understanding Laminitis and Foundering

This guide explains the difference between two critical, painful conditions that affect your horse's feet.

## 1. What is Laminitis?

Laminitis is the **initial disease process**. It is a medical emergency that requires immediate veterinary attention.

Feature	Description
<b>Definition</b>	Inflammation of the <b>laminae</b> —the delicate, finger-like structures that interlock the coffin bone (P3) to the inside of the hoof wall.
<b>Pathology</b>	This inflammation disrupts the blood flow to the laminae, causing them to swell, weaken, and potentially die. This weakens the crucial connection between the bone and the hoof wall.
<b>Stage</b>	Considered the <b>acute</b> (initial) or <b>subacute</b> stage of the disease.
<b>Common Causes</b>	<ul style="list-style-type: none"><li>* <b>Metabolic/Endocrine:</b> Equine Metabolic Syndrome (EMS), Pituitary Pars Intermedia Dysfunction (PPID or Cushing's disease).</li><li>* <b>Dietary:</b> Sudden access to lush pasture ("grass founder") or excessive intake of high-starch/sugar feeds (grain overload).</li><li>* <b>Systemic Illness:</b> Severe infections, high fevers, or toxins (e.g., colic, retained placenta).</li><li>* <b>Trauma:</b> Excessive work on hard surfaces ("road founder") or disproportionate weight-bearing due to injury in the opposite leg (supporting-limb laminitis).</li></ul>

<b>Key Signs (Acute)</b>	Extreme pain, reluctance to move, standing in a characteristic "sawhorse" stance (front feet stretched out, hind feet tucked under to bear weight), heat in the hooves, and a <b>strong/bounding digital pulse</b> felt over the fetlock. As well as shifting weight between the front legs.
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## 2. What is Foundering (Chronic Laminitis)?

Foundering is the **structural consequence** of severe or prolonged laminitis.

Feature	Description
<b>Definition</b>	A term often used to describe the point at which there are <b>physical and structural changes</b> inside the hoof capsule.
<b>Pathology</b>	When the laminae become severely damaged or separate from the hoof wall, the strong pull of the deep digital flexor tendon, combined with the horse's weight, causes the coffin bone (P3) to rotate. This movement is the definition of founder.
<b>Stage</b>	Considered the <b>chronic</b> stage of laminitis.
<b>Structural Changes</b>	<b>Rotation:</b> The tip of the coffin bone rotates downward. <b>Sinking:</b> The entire coffin bone sinks vertically within the hoof capsule.
<b>Key Signs (Chronic)</b>	Rings on the hoof wall that are wider at the heel than the toe (divergent rings), a "dished" or abnormally shaped hoof, a stretched or widened white line, reoccurring sole abscesses, and a dropped or flat sole.

### 3. How to Tell the Difference: Laminitis vs. Foundering

Think of it this way: All foundering starts as laminitis, but not all laminitis progresses to foundering.

Feature	Laminitis (Acute Phase)	Foundering (Chronic Phase)
<b>State</b>	Inflammation and pain only.	Permanent structural damage (bone displacement) with varying severity of pain.
<b>Veterinary Diagnosis</b>	Based on clinical signs (pain, stance, digital pulse).	Requires <b>radiographs (X-rays)</b> to confirm rotation or sinking of the coffin bone.
<b>Appearance</b>	Hooves may look outwardly normal, but can be hot and painful, as well as the horse being reluctant to move.	Often visible changes to the hoof structure, growth rings, and white line.
<b>Prognosis</b>	Good chance of full recovery if the cause is quickly identified and aggressively treated <b>before</b> bone movement occurs.	Recovery is lengthy, often resulting in permanent foot changes and a guarded prognosis for return to full athletic work.



#### Key Takeaway for Clients

The goal is to stop the inflammatory process of **Laminitis** before it has time to cause the structural damage of **Foundering**.

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## 4. Immediate Action Steps

If you suspect your horse is experiencing an episode of acute Laminitis:

1.  **Call Your Veterinarian IMMEDIATELY:** This is a life-threatening emergency.
2.  **Confine Your Horse:** Restrict movement to a small, deeply bedded stall (sand or shavings). **Do not force the horse to walk.**
3.  **Apply Cold Therapy:** **Aggressively chill the feet** with ice water boots or ice baths up to the knee/hock for at least 48-72 hours, or until instructed otherwise by your vet. Cold therapy can minimize the inflammatory damage in the early stages.
4.  **Remove the Cause:** Immediately remove all concentrates, grains, and access to lush grass. Feed only low-sugar/low-starch hay (ideally tested hay or hay that has been soaked).
5.  **Supportive Care:** Your veterinarian will initiate pain relief, anti-inflammatory medications, and supportive foot care.

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*This informational handout is not a substitute for professional veterinary care. Always consult with your veterinarian and farrier if you suspect your horse has laminitis or founder.*

