If blood flow to the laminae is disrupted, inflammation occurs that weakens the laminae structures and interferes with the hoof wall to bone bond making the laminae unable to hold the coffin bone in place.

The laminae are tiny finger like structures that interlock and secure the coffin bone to the hoof wall and keep the bone in place.

When the weight of the horse overcomes the hoof wall to bone bond, it pushes the coffin bone towards the ground and the pull of the deep digital flexor tendon then rotates the coffin bone.

**CAUSES**

- **Obesity** Dependant Laminitis
  - Main cause of laminitis in horses in Australia and most parts of the world.
  - Obese or overweight horses put unnecessary strain on their heart, lung and joints.

- **Nutrition** Induced Laminitis
  - Carbohydrate Overload (starch/sugar/fructan)
    - Carbohydrates are digested in the small intestine, if the capacity in the small intestine is exceeded, the digestion of these sugars/starches overflow into the hindgut where they negatively impact the microflora and increase the of level of acidity.

- **Other** Factors
  - Equine Metabolic Syndrome
  - Insulin Resistance
  - Cushing’s Disease
  - Concussion
  - Mare coming into season
  - Serious cases of colic
  - Infections and toxaemia
  - Retained placenta
  - Drug inducement

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**HEALTHY HOOF**

- Hoof wall
- Coffin bone

**LAMINITIC HOOF**

- Hoof wall
- Coffin bone
- Deep Digital Flexor Tendon
CLINICAL SIGNS

EARLY LAMINITIS

- Bounding digital pulse
- Abnormal gait & and shifting from one foot to another
- Depression of supra-coronary contours

ACUTE LAMINITIS

- Reluctance to move
- Stretching of front feet to the front and position their hind feet under to help lift the pressure of the front feet

MANAGEMENT & PREVENTION

Avoid High Sugar/Starch
Avoid feeds high in cereal grains (e.g. maize, barley, oats) as well as lush spring/autumn pasture.

Restricted Access to Pasture
Limit daily turnout (e.g. 1-3h). Alternatively use a grazing muzzle or strip grazing.

Late-Night/Early-Morning
Turn horses out before 10am or after 10pm as NSC levels in pasture are likely to be at their lowest.

Bare min. 1% Roughage
Your horse requires a bare minimum of 1% of his own body weight as roughage (pasture/hay).

Ideal Roughage Sources
Feed native warm season grasses, lucerne hay, grass hay and alternative highly digestible fibre sources such as beet pulp.

Low Starch Concentrate
Provide your horse with essential amino acids, vitamins and minerals to assist in repairing damage caused by laminitis.