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Equine ulcers have become an epidemic

It is estimated that up to 80 % of horses have stomach ulcers. They are often misdiagnosed or not diagnosed at all

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What are ulcers?

Lesions or sores caused by damage to the gastric or intestinal lining.

Identified as pits or craters in the tissue lining

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Types of Ulcers

Gastric (stomach) Ulcers

- Squamous region (upper)
- Glandular region (lower)

Classified as 3 types

- Equine Squamous Gastric Disease (ESGD)
- Equine Glandular Gastric Disease (EGGD)
- Equine Colonic Ulcer Syndrome (ECUS)

In a post-mortem study (545 horses): 55% were found to have ulcers in the hindgut region and 65% of performance horses

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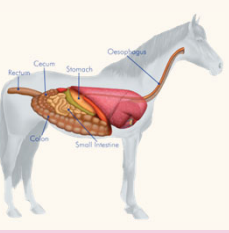
Signs, symptoms and behaviors

- Poor appetite, or slow and picky eating
- Laying down frequently
- Dull haircoat and poor shedding
- Weightloss
- Body soreness
- Cinchy
- Belly kicking and not wanting to be touched
- Sucked up flanks
- Fatigue
- Anxiety
- Chronic or recurring colic
- Burning or acid reflux
- Cribbing
- Teeth grinding
- Eating wood or manure
- Explosive outbursts

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How do ulcers develop?



The stomach produces 5-6 cups of HCl per hour and never shuts off. HCl breaks down protein and minerals.

Lack of food in stomach will allow acid to eat through the mucosal lining into the gastric tissue.

The area will produce more mucus and become inflamed first.

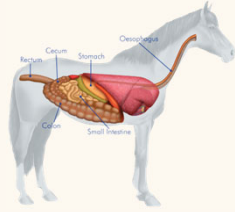
Excess HCl can also leak into the small intestine and hindgut.

A common cause of gastric ulcers in horses is infrequent feedings

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Root cause #1: Excessive sugars and grains



Excess sugar, starches, and grains affect the gastric ecosystem and microbiome. Grains can ferment in the stomach.

Unhealthy bacteria interfere with mucus production

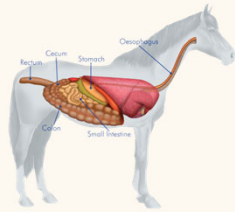
Leaky gut byproducts can also result systemic toxicity, auto-intoxification, and histamine production and eventually cause stomach ulcers!

Leaky gut can cause stomach ulcers!

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Root cause: Food allergies and intolerances



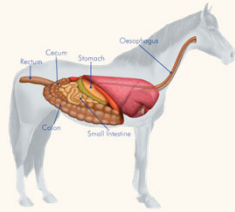
Soy, alfalfa, oats, wheat, corn, and certain hay types release histamines causing rapid inflammation and lactic acid production as well as HCl in the stomach.

Leaky gut can exacerbate food sensitivities

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Root cause: Infrequent feedings



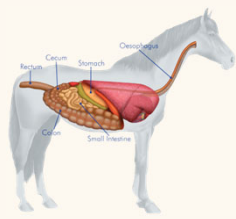
Infrequent feeding: HCl never stops so when stomach is empty it can slosh in the upper squamous region burning the stomach membranes.

Also a source of emotional stress!

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Root cause: NSAIDS



Non-steroidal anti-inflammatories suppresses inflammatory prostaglandin production to reduce pain and inflammation.

They also block the healthy kind of prostaglandin that protects the stomach and intestines called PGE2.

PGE2 buffers acids, regulates pH, maintains circulation, reduces inflammation, and produces mucus.

Horses with severe fevers or colic should not be given NSAIDS. Dehydration + NSAIDS can damage the kidneys.

It is not recommended to combine PPI's with NSAIDS.

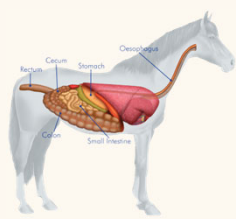
Long-term corticosteroid use can also cause or exacerbate ulcers

NSAIDS are the most common cause of colon ulcers!

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Root cause: Parasites



Bot fly larvae

Small strongyles

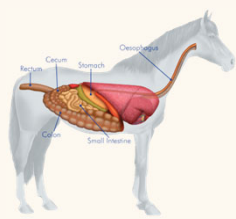
Tapeworms (between cecum and small intestine)

NSAIDS are the most common cause of colon ulcers!

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Root cause: Stress



Emotional, mental or physical

Cortisol inhibits prostaglandin production and can break down the intestinal linings.

Physical

Make sure to support your horse emotionally and physically

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Horses at higher risk

- Performance horses or horses in rigorous showing and training schedules have a significantly higher incidence of ulcers than the general population of horses.
- Broodmares
- Foals at the time of weaning
- Horses that are confined without turn-out or kept in a stall develop ulcers.
- Horses that have been abused including rescue horses.
- Horses that travel a lot in trailers.
- Horses on high sugar diets or grain such as oats or barley.
- Horses that are fed infrequently.
- Horses that are in chronic pain, including laminitis.
- Horses with unresolved parasite infections.
- Horses administered antibiotic prescriptions.
- Horses using or have used NSAIDs (non-steroidal anti-inflammatories)

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Conventional treatment

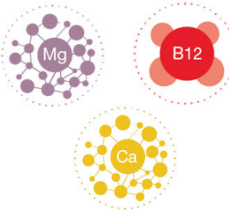
- 1) Proton pump inhibitors (PPI's) such as **omeprazole** block the action of an enzyme that is produced by the parietal cells and is responsible for acid production. They are more effective for squamous ulcers and have little efficacy for glandular ulcers. PPI's are intended for short term use.
- 2) **H2 receptor antagonists** are drugs which block Type 2 histamine production. Histamines stimulate the parietal cells to produce more acid.
- 3) **Sucralfate** is a drug that buffers acid by increasing bicarbonate secretion and stimulating prostaglandins. It also coats the sores with a sticky mass.
 - 1) Does not stop acid production or protect the tissues
 - 2) It can also interfere with the absorption of nutrients, supplements, and other medications.
 - 3) Decreases the rate of gastric emptying and slows down the overall intestinal transit time.
 - 4) Contains aluminum, a toxic heavy metal which a lot of horses already have stored in organs and tissues in toxic levels. This drug should only be used short-term.

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Medication induced nutrient deficiencies

- Vitamin B12
- Folic Acid
- Iron
- Calcium
- Zinc
- Magnesium



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THE HOLISTIC APPROACH TO ULCERS

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The holistic approach: Lifestyle

- Regular exercise
 - Spread out hay nets, away from water
- Forage
 - Frequent feedings
 - Hay balls
 - Auto feeders
 - Hay pillows
- Freedom
 - Stalling for as little as possible
- Friendship
 - Close or in a herd




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The holistic approach: Diet

- Eliminating commercial feeds and multi's
- Add more fibre to the diet
- Small amount of alfalfa cubes
- Assess hay – choose a softer less coarse (perhaps temporary) depending on sugar and protein levels.




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SOURCES OF FIBRE

- ✓ **Beet pulp: 1 cup soaked daily**
Provides extra fibre and nutrition. Prebiotic.
- ✓ **Wheat bran**
Source of fibre and beta glucans
- ✓ **Cooked Barley**
Contains beta glucans to soothe and reduce inflammation
- ✓ **Low sugar cubes**
Additional short-stem forage
- ✓ **Soaked Chia seeds: 2 tbsp**
Superfood that is rich in fibre. Mucilage acts as a thickening agent.
- ✓ **Crushed Flax**
Source of fibre. Can be beneficial for bulking stool.




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REGULATE pH

- ✓ **Sodium Bicarbonate (baking soda)**
Excellent source of antioxidants and minerals. Supports cellular detoxification.



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The holistic approach: Nutrients

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Nutrients

- ✓ **Probiotics: 50 – 100 billion CFU's daily**
Pre- and probiotics, improves digestion and nutrient absorption, aids intestinal immunity, aids leaky gut.
- ✓ **Potassium Citrate: 1000 mg daily**
pH regulation, eliminating waste, digesting protein.
- ✓ **Folic acid: 1 tsp daily (=10 mg daily)**
Supports protein digestion and promotes the natural production of probiotics. Is necessary for tissue repair.
- ✓ **Magnesium Citrate: 1500 mg daily**
Helps carbohydrate digestion. Soothes nervous system and relaxes the tissues.
- ✓ **Zinc Citrate: 150 mg daily**
Helps support a healthy mucosal lining in the stomach.

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Herbs

- ✓ **Pro-Digest herbal blend: 2 Tbsp daily**
Intestinal cleanser and detoxifier. Protects intestinal membranes from mal-digested feed material and irritations.
- ✓ **Marshmallow root: 1 tbspd daily**
Helps soothe and repair the intestinal lining
- ✓ **Calm & Cool herbal blend: ¼ cup daily**
Supports the nervous system and adrenals in cases where stress is a significant factor in causing the ulcers. Soothes the digestive system.
- ✓ **Stomach Ease: 2 tbspd daily**
A digestive blend of herbs to support the health of the stomach lining and the intestinal membranes of the hindgut. Helps to maintain normal digestive pH in acidic horses.
- ✓ **Five Herb Digest: ¼ cup daily**
Promotes healthy digestion and soothes the intestinal tract. Helps to lessen gas and bloating. Supports the intestinal immune system.

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Homeopathy

Gastriccol

- Helps eliminate toxicity from chemicals and parasites. It also helps address digestive symptoms such as acid reflux, indigestion, bloating, and gas.

Arsenicum (chilly and aggravated by cold)

- Great restlessness and anxiety
- Helps with burning, acid reflux and symptoms of gastritis
- Diarrhea especially with anxiety

Nux Vomica (chilly and worse with cold)

- Irritability and impatience
- Anger from contradiction
- Liver remedy
- Stomach pains worse with anger
- Cramping and sharp pains



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