

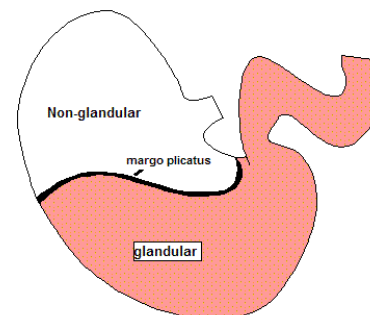


Gastric Ulcers: Equine Glandular Gastric Disease

Two of the most common conditions of the equine stomach can be classified as either ESGD (equine squamous gastric disease) or EGGD (equine glandular gastric disease), in relation to the affected anatomic region. A horse may have one, or both conditions, and they appear to be completely unrelated, and distinctly separate diseases.

The equine stomach can be divided (roughly) into two functionally distinct regions:

- Squamous region (non-glandular): which does not have any protection from acid.
- The glandular region (dark pink): produces the stomach acid, and has its own inherent protective mechanisms to protect it from the harsh acidic environment it is constantly bathed in.



<https://www.paulickreport.com/horse-care-category/nutrition/gastric-ulcers-new-thoughts-old-problem/>

Equine Glandular Gastric Disease:

The glandular portion of the stomach has inherent defense mechanisms to protect it from the harsh stomach acid it produces. The reason ulcers occur in this portion of the stomach are not yet well understood, but it is thought that it may be due to a break-down in this natural defense system. Current research shows an inflammatory response within these lesions, and there is reason to suspect stress and alterations of blood flow associated with exercise may be some of the contributing factors. Current research suggests EGGD is a form of “gastritis” or inflammation of the stomach.



CLINICAL SIGNS OF EGGD:

- Changes in temperament, nervousness, aggression
- Reduced willingness to work or go forward
- Unexplained weight loss
- Reduced appetite or altered eating patterns
- Sensitivity over the flanks, “girthiness”, resistance to grooming, leg pressure or rugging
- Colic, mild & recurrent

HORSES AT RISK:

Risk factors are highly variable for each individual horse.

- In race horses, trainer and staff have been proven to be a factor in development of EGGD.
- Exercising more than 4 or 5 times a week increases prevalence, however INTENSITY of exercise does not.
- The more experienced the horse, the lower the risk of developing EGGD.
- Risk increases (double) during competition.
- High stress horses seem more likely to develop EGGD (cribbing, reactive).
- Possible link to horses with orthopaedic disease (still under investigation).

- Possible link with poor microbiota diversity in the gut.

DIAGNOSIS:

Gastric ulcers can ONLY be diagnosed via the use of a gastroscope.

TREATMENT FOR EQUINE GLANDULAR GASTRIC DISEASE (EGGD):

There are several options for treatment. As this disease is so unique for each individual, it is recommended to choose one treatment option, and then repeat a gastroscope in 28 days, and adjust plans if needed.

1. INJECTABLE OMEPRAZOLE: 4mg/kg intramuscular every 5 to 7 days, for 2-3 doses

- Can use with sucralfate but no data to support as of yet
- Much easier to manage with feeding and schedule!
- May have transient reaction at injection site
- Further efficacy and safety studies still required
- Off-label use.

2. ESOMEPRAZOLE

- 0.5 to 2mg/kg once daily, for 2-3 weeks
- Is a more potent version of omeprazole, may be more effective.
- Currently being researched
- Off label

3. MISOPROSTOL. 5ug/kg orally twice daily, for 2 – 3 weeks

- Misoprostol is a prostaglandin analogue with multiple mechanisms of action that benefit EGGD.
 - Suppresses acid production and inflammation
 - Limited data of efficacy
 - Mild, self-limiting diarrhoea may occur
- Abortogenic in horses and humans
- Off-label use
- Do not use with PPI or in pregnant mares

4. COMBINATION ORAL OMEPRAZOLE AND SUCRALFATE

- **Omeprazole** Use registered dose rate on product of choice.
 - Give on an empty stomach after overnight fasting. Studies have shown that removing food overnight has minimal effect on pH overnight due to normal circadian rhythms.
 - Give 30 mins before feeding. And FEED before exercising.
 - Must be used with Sucralfate.
- **Sucralfate (Carafate):** 12 mg/kg twice daily
 - 1 scoop of Randlab Sucralfate powder orally twice daily for 60 days
 - Give 30 minutes after omeprazole
- Example treatment plan:
 - MORNING:
 - Give omeprazole in the morning 30-60 mins before feeding
 - 1 hour later, feed
 - 30 minutes later, sucralfate
 - AFTERNOON
 - Feed
 - 30 mins later, sucralfate

* * REPEAT GASTROSCOPE at the end of treatment period to assess and modify plan as needed.

PREVENTION RECOMMENDATIONS:

- The addition of corn, rapeseed, or canol oil to the diet may be of benefit:
 - Example: 60ml twice daily for small horses, 100ml twice daily for larger horses. Maximum 200ml corn oil per day. (Introduce incrementally, and slowly over 2-3 weeks).
- Feed any hard feeds VERY wet, sloppy!
- Pectin/Lecithin supplements (See KELATO GASTROAID RECOVERY, or EVERYDAY) may have some benefit.

REDUCING THE RISKS: With this disease it is more about reducing psychological stressors. NOT so much about diet changes.

- Maximise grazing time. Access to pasture has proven to protect against EGGD!
 - If you cannot provide pasture, consider feeding several small meals throughout the day, or ad lib low sugar hay (meadow hay or Rhodes) to mimic grazing.
 - If your horse becomes more stressed when turned out, then do not turn out!
- Minimise changes between handlers, riders, timing of workouts, routine, feeding etc. Reduce any variabilities as much as you can (be consistent and predictable).
- Consider a companion and minimise changes to companions as much as possible.
- Ensure constant access to fresh water
- Feed 3-5L of lucerne chaff or biscuit of lucerne hay prior to work.
- Be consistent, keep routines constant, and keep handlers consistent and limited.
- Reduce frequency of exercise, with 2-3 rest days per week.
- WHEN FINISHED WITH A COURSE OF OMEPRAZOLE do not exercise or transport horses for 48 hours from the last dose and provide adequate roughage to counter any rebound gastric hyperacidity that may occur.