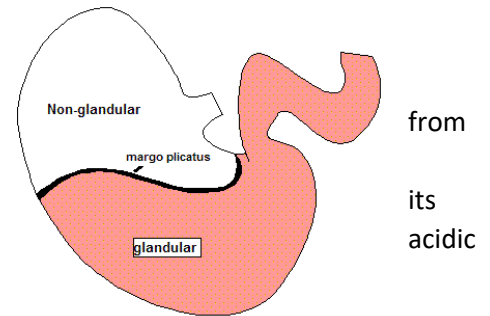


## Gastric Ulcers

Equine Gastric Ulcer Syndrome (or EGUS) is a general term to describe erosive and ulcerative diseases of the stomach. This syndrome can be further classified into 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.

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

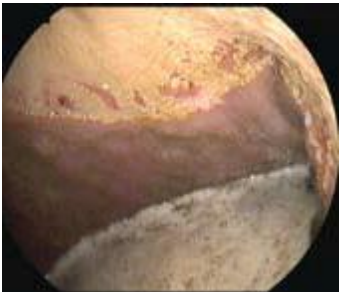
- Squamous region (non-glandular): which does not have any protection from acid.
- The glandular region (dark pink): produces the stomach acid, and has its own inherent protective mechanisms to protect it from the harsh environment it is constantly bathed in.



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

### Equine Squamous Gastric Disease:

The squamous (non-glandular) portion of the stomach comprises the “top half” of the stomach. This portion of the stomach lacks protection from stomach acid, which (especially during exercise) splashes on the mucosal surface causing damage to the tissues of this area, resulting in hyperkeratosis (thickening) and then ulceration.



It has been found that before training, 37% of thoroughbreds have EGSD, while during training up to 80-100% develop EGSD. By comparison, 44% of Standardbreds have EGSD before training, rising to 87% during training. 17-58% of show/sport horses have been found to have EGSD, and 37-59% of pleasure horses are affected.

Image courtesy of Randlab.

### 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.

EGGD has been reported in 47-65% of racing thoroughbreds in Australia, with only 27-33% in endurance horses that are competing. Nearly all EGGD lesions are found in the pylorus.



Image courtesy of RANDLAB.

## **HORSES AT RISK:**

Horses at higher risk for Equine Gastric Ulcer Syndrome (EGUS) include horses training in metropolitan areas, those lacking contact with other horses, and those housed with solid barriers instead of rails. Feeding high amounts of starch/grain also increases the risk of developing EGUS.

## **CLINICAL SIGNS:**

- Poor appetite or 'picky eating'
- Poor body condition
- Abdominal discomfort
- Chronic weight loss
- Chronic diarrhea
- Poor coat condition
- Bruxism (teeth grinding)
- Behavioural changes (aggressive or nervous behaviours)
  - Cribbing
- Acute, or recurrent colic, sometimes after eating
- Poor performance

## **REDUCING THE RISKS:**

Below are several husbandry changes that can be made that have been PROVEN to be effective at reducing ulcers:

- Allow time for pasture turnout, alone, or with other horses (even better)
- Allow access to free, fibrous feed, or frequent small meals throughout the day to simulate foraging
- Ensure constant access to fresh water
- Small feed (1.5 scoops or 5L) prior to work, preferably Lucerne chaff as it has a buffering effect to neutralise the acid and reduce acid splash.
- For glandular ulcers it is recommended that feeds be very wet, including hay if possible and the addition of corn oil into the diet
  - Example: 60ml twice daily for small horses, 100ml twice daily for larger horses. Maximum 200ml corn oil per day. (Introduce incrementally, and slowly over a 2-3 weeks).

## **DIAGNOSIS:**

Gastric ulcers can ONLY be diagnosed via the use of a gastroscope (and in the hands of a skilled professional who is able to investigate all regions of the stomach). The nearest available gastroscope is at Murdoch University, in Perth. We are lucky to have a representative from RANDLAB visit our clinic to perform discounted scoping, but this often only occurs once to twice yearly. If referral for gastroscopy is not an option, then it is recommended to start a treatment trial as directed, keeping in mind that in some cases, horses will not show an improvement in clinical signs until complete healing of lesions has occurred (which in severe cases can take several months).

## **TREATMENT FOR EQUINE SQUAMOUS GASTRIC DISEASE (ESGD):**

- **Omeprazole (Uclershield)** 4mg/kg (6ml per 450kg) orally once daily for 30 days, then 3ml once daily while in training.
  - MOST EFFECTIVE WHEN GIVEN ON AN EMPTY STOMACH, 30 MINUTES PRIOR TO FEEDING
  - 1 box of Uclershield lasts 30 days at treatment doses. At maintenance doses, 1 box will last ~2 months.
- Example treatment plan:
  - Give omeprazole in the morning before feeding
  - 1 hour later, feed

## TREATMENT FOR EQUINE GLANDULAR GASTRIC DISEASE (EGGD):

- **Omeprazole (Uclershield)** 4mg/kg (6mls per 450kg), orally once daily for 60 days, then 3ml orally once daily while in training.
  - MOST EFFECTIVE WHEN GIVEN ON AN EMPTY STOMACH, 30 MINUTES PRIOR TO FEEDING
  - 2 boxes of Uclershield lasts 60 days at treatment doses. At maintenance doses, 1 box will last ~2 months.
- **Sucralfate (Carafate):** 20mg/kg (9g, or 9 tablets per 450kg, or 1 scoop of Randlab Sucralfate powder) orally twice daily for 60 days.
  - Either crush tablets and give with hard feed, or dissolve powder in syringe and give orally at time of feeding, 30 minutes after Uclershield.
- Example treatment plan:
  - MORNING:
    - Give omeprazole in the morning before feeding
    - 1 hour later, feed
    - 30 minutes later, sucralfate
  - AFTERNOON
    - Feed
    - 30 mins later, sucralfate

\* Ideally, a repeat gastroscopy exam is performed to confirm resolution before changes in treatment are made.

We recommend being very cautious about trying nutraceutical (natural) products such as herbal remedies, as there is little to no scientific, research based evidence to support their use, and they can be quite expensive!