



EXCELLENCE IN EQUINE NUTRITION



# GNF

## GUT NUTRITION FORMULA

# WHAT IS EGUS?

The horses' stomach has a limited capacity of approximately 15 litres. It is made up of a non-glandular proximal region and a glandular area, which is protected from acid splash by a mucus layer. In a natural grazing situation, the horse requires a steady flow of acid for digestion. For that purpose:

## A horse's stomach produces acid

**24** hours a day  **7** days a week

If for any reason the stomach is empty for a long period of time, the natural acids that help digest food builds up, causing Equine Gastric Ulcer Syndrome (EGUS) as acid attacks the protective lining of the stomach.



## SIGNS OF EGUS INCLUDE

- Intermittent diarrhoea.
- Mild or recurrent colic.
- Decreased performance.
- Poor condition including dull coat.
- Poor or 'picky' appetite.
- Diarrhoea in foals.

Effective management strategies for EGUS focus on increasing stomach pH by inhibiting or buffering gastric acid, which allows a permissive environment for ulcer healing, and environmental and dietary management.

EGUS is a debilitating condition which has been increasingly recognized in recent years as the reason for poor performance in competition horses. EGUS has been found to be widely prevalent in both racing, and non-racing horses.

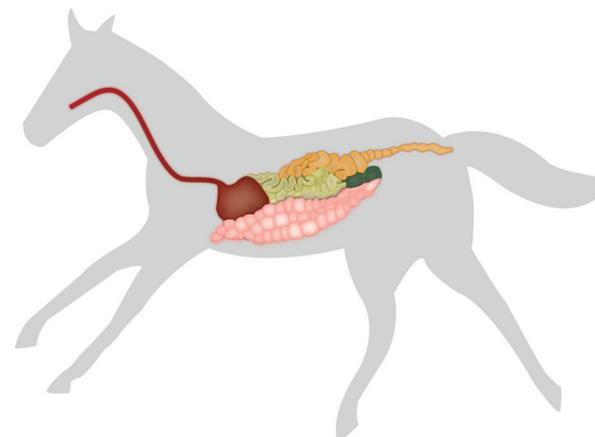
Up to **93% of racehorses** and **60% of sports horses** have been found to suffer from ulceration after endoscopic examination

Hammond et al (1986)

The reasons for the high prevalence of gastric ulcers can be attributed to high concentrate/low forage diets, stall confinement and exercise induced stress. However, it is impractical to remove horses with EGUS from training and turn them out to grass. Proper nutritional support is a vital component in ensuring that valuable competition horses maintain a healthy digestive system in these trying conditions.

It is a common consensus that the incidence and severity of ulcers are greater in horses under intense training. Ulcers are a major health problem in foals (particularly in the first few months of life), yearlings and performance horses. A foal's stomach lining is thinner than that of the adult horse, it is particularly susceptible to damage.

An estimated **50%** of foals confined in stables may **have mild ulcers**, depending on age and performance training levels.

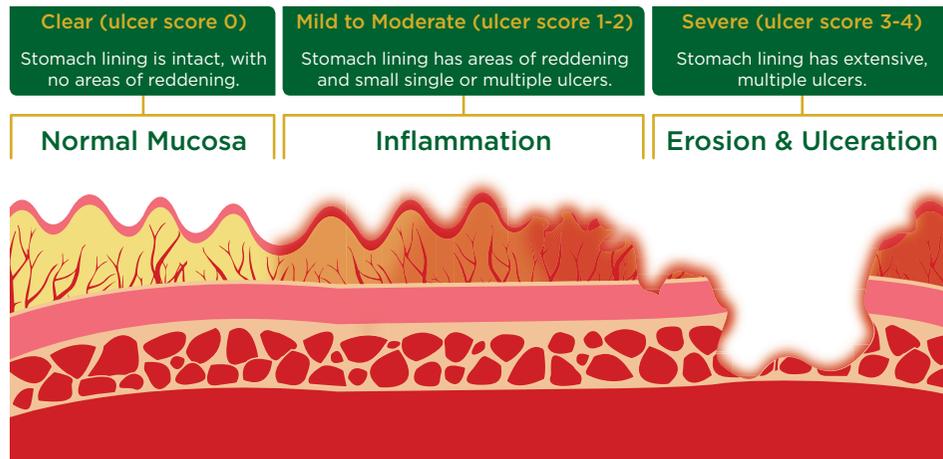


With this in mind TRM have developed a unique dietary supplement, GNF. It is suitable for feeding as a nutritional adjunct to horses suffering from EGUS.

# TRIAL

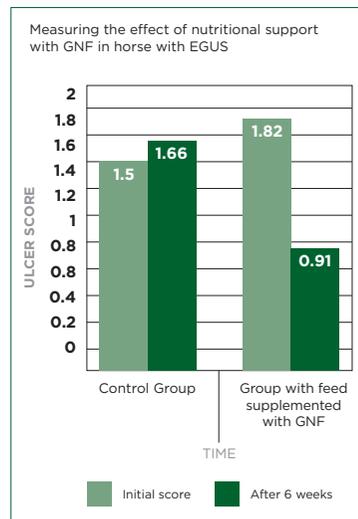
A study was undertaken to assess the benefits of feeding GNF in a National Hunt Thoroughbred training yard.

Gastrosopic examination was performed on 17 horse after a fasting period of 20 hours, and water was withheld for 4 hours prior to scoping. The horses were then divided into 3 groups; Clear (ulcer score 0), Mild to Moderate (ulcer score 1-2) and Severe (ulcer score 3-4). 11 horses had their normal rations supplemented with GNF, while 6 horses with a similar range of ulcer scores were retained as a negative control.



After the trial period of 6 weeks the entire sample size of 17 horses were re-scoped and evidence of improvement/deterioration was recorded.

The 11 horses which had their feed supplemented saw a reduction in average ulcer score from 1.82 to 0.91, a reduction of 50%. The average ulcer score for the 6 negative controls increased from 1.5 to 1.66, an increase of 11%. In the group of horses with mild to moderate ulcer scores the results were even more convincing with the 4 negative control's ulcer score increasing by 40% and the 7 horses with mild to moderate ulceration fed GNF recording a reduction in average score of 70%.



E.Hatton, C.E. Hale and A.J. Hemmings. (2006) An investigation into the efficacy of a commercially available gastric supplement for the treatment and prevention of Equine Gastric Ulcer Syndrome (EGUS). 3-4, 6.

# RESULTS



The results of the study found:

**GNF IS A USEFUL NUTRITIONAL SUPPORT FOR HORSES WHICH ARE SUFFERING FROM EGUS**

The benefits of feeding are particularly marked where the horse is suffering from mild to moderate ulceration.

“At Greg Eurell Thoroughbred Racing we feed GNF as it ensures our horses are well from the inside out. Our horses are eating up happily, keeping condition better, and are overall much brighter and more relaxed when on the GNF. We have not had an issue with ulcers and have gone completely off other ulcer treatments, which is saving us money. The GNF keeps the entire digestive system in top condition. We would highly recommend GNF to anyone with performance horses – it works!”

**GREG EURELL**  
AUSTRALIAN TRAINER

# GNF

## Gut Nutrition Formula

GNF Pellets is a unique supplement, for daily feeding to horses prone to gastric disturbances.

GNF will assist in maintaining optimum gut health and function, allowing maximum utilisation of feed. GNF supplies a unique formulation of prebiotics, amino acids, seaweed extract and specific minerals necessary to aid in the maintenance of a healthy digestive tract.

### Instructions for Proper Use:

**All horses:** Feed 50g twice daily.

**Ponies and foals:** Feed 25g twice daily.

### Composition:

Calcium Carbonate 20%, Fructo Oligosaccharides 10%, Magnesium Hydroxide 10%, Seaweed Meal (from Laminaria Hyperborea) 10%, L-Glutamine 3.8%.

### Additives:

|           | per 100g  |
|-----------|-----------|
| Kaolin    | 15,000 mg |
| Threonine | 4,720mg   |

### Analytical Constituents::

Calcium 8.47%, Magnesium 4.17%.

PRESENTATION:

3KG

10KG



# GNF PASTE

## Gut Nutrition Formula

GNF PASTE is a combination of minerals, amino acids and a prebiotic which have a role in general metabolism and are required for normal feed conversion. It should be used to complement the feedingstuff of horses.

### It contains:

- Calcium Carbonate and Magnesium Hydroxide which can stabilise the gastric fluids.
- Seaweed Extract (Laminaria Hyperborea) which can protect the non glandular portion of the stomach from acid splash.
- Fructooligosaccharides which form a food substrate for the beneficial bacteria in the hind gut.
- Glutamine which is an important amino acid for the repair of epithelial cells.
- Threonine is an amino acid, restriction of which may limit intestinal mucin synthesis.
- Slippery Elm, a complex mixture of polysaccharides rich in mucilage.

### It is suitable for feeding:

- To maintain digestive function.
- To horses with depressed appetites, weight loss, or exhibiting stable vices such as cribbing or wind sucking.

### Instructions for Proper Use:

Feed two 80g servings per day for 14 days.

(one 80g serving in the morning prior to feeding, and one 80g serving prior to the afternoon/evening feed).

GNF Paste can also be fed for maintenance of a healthy digestive tract by feeding one 80g serving per day. (40g in the morning prior to feeding, and afternoon/evening feed).

Alternatively as a maintenance nutritional adjunct feed 100g of GNF Pellets per day divided between the meals.

### Composition:

Propylene Glycol, Glycerine, Sorbitol, Calcium Carbonate (10,000mg/80g), Seaweed Meal (from Laminaria Hyperborea) (5,000mg/80g), Magnesium Hydroxide (5,000mg/80g), Fructooligosaccharides (5,000mg/80g), Slippery Elm (4,000mg/80g), Glutamine (1,900mg/80g).

### Additives

|             |                    |
|-------------|--------------------|
| L-Threonine | per 80g<br>2,350mg |
| Xanthan Gum | 100mg              |

PRESENTATION: **28 X 80G**



# INGREDIENT ANALYSIS

## ✓ SEAWEED EXTRACT (FROM LAMINARIA HYPERBOREA)

- Creates a floating raft of gel which helps to protect the non glandular part of the stomach from acid.



## ✓ GLUTAMINE

- An important amino acid for maintenance of epithelial cells.
- Glutamine supplementation has proven to increase intestinal performance (Yan and Qiu-Zhou, 2006), and has been found to decrease over-expression of pro-inflammatory genes, thus leading to a reduction in intestinal damage of rats receiving acetic acid supplementation. (Fillmann et al., 2007).



## ✓ FRUCTO-OLIGOSACCHARIDES (FOS)

- Classified as prebiotics (Mikkelsen and Jensen, 2004); substances that are recognised to stimulate growth of desirable bacteria (Kapiki et al., 2007), which can result in a positive symbiotic relationship between bacteria and host (Gibson and Roberfroid, 1995).
- Form a food substrate for the beneficial bacteria in the hind gut.
- Fructooligosaccharides can remain available as substrates for microbial populations to utilise, and thus promote increased intestinal efficiency.



## ✓ CALCIUM AND MAGNESIUM

- recognised as alkaline providers, and have been shown to increase intestinal mucosal integrity. (Wang, 2000).

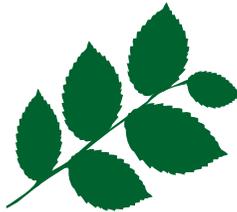
12MG  
20CA





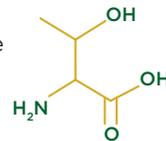
### ✓ **SLIPPERY ELM (PASTE ONLY)**

- Rich in mucilage.
- Used to soothe the digestive tract.
- It is an easily assimilated food particularly in young foals and elderly horses.
- The action of slippery elm is gentle and will not harm the most sensitive of horses.
- When slippery elm preparations are taken internally they cause reflex stimulation of nerve endings in the gastrointestinal tract, leading to mucus secretion.
- The mucilage of slippery elm is a demulcent and emollient to the digestive system. A demulcent is an ingredient that is able to form a soothing layer over mucous membrane, gastric mucosa, and therefore provides a soothing action. A emollient soothes and softened by preventing water loss.



### ✓ **THREONINE**

- Is an essential amino acid and studies have shown that restriction of this nutrient may limit intestinal mucin synthesis. (Hamard et al., 2007; Faure et al., 2005).



“Gastric Ulcers in racehorses are a major headache for trainers. That is why I use GNF to keep my horses in top condition”.



**JESSICA HARRINGTON**  
LEADING IRISH RACEHORSE TRAINER



“I work toward perfection every day, this means paying attention to all the small details. With GNF I start everyday with healthy horses from the inside-out”.

 **MARCUS EHNING**  
GERMAN SHOWJUMPER

“It is important to me that my horses don’t suffer from gastric disturbances. I have found that by using GNF my horses are in top condition and perform well all year round”.



 **SAM GRIFFITHS**  
AUSTRALIAN EVENTER



“Zero stomach problems, horses look great and perform consistently – GNF is a must for any competition horse.”

 **DENIS LYNCH**  
IRISH SHOWJUMPER



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MANUFACTURED IN IRELAND BY:  
 TRM, INDUSTRIAL ESTATE, NEWBRIDGE, CO. KILDARE, IRELAND  
 Tel + 353 45 434 258 Fax + 353 45 434 149

[www.trm-ireland.com](http://www.trm-ireland.com) | Email: [info@trm-ireland.com](mailto:info@trm-ireland.com)

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