

What could your horse do with a healthier gastrointestinal tract?

The lining of the horse's intestine consists of a **single layer of cells that regenerate every 10-14 days**. These cells serve two vital functions: absorbing nutrients and creating a protective barrier. Leaky Gut Syndrome occurs when this lining is compromised. This can negatively impact the ability of the small intestine to absorb nutrients and allows harmful substances to be absorbed into the bloodstream.



PERFORMANCE HORSES EXPERIENCE STRESS

Performance horses undergo mental and physical stress. Over time this stress can lead to or exacerbate Leaky Gut Syndrome.

NUTRIENTS FUEL VICTORY

The small intestine is the key site of nutrient absorption. Even with highly bioavailable ingredients, the small intestine needs to be healthy enough to absorb them for peak performance.

LESS SICK DAYS

70% of the **immune** system resides in gastrointestinal tract.

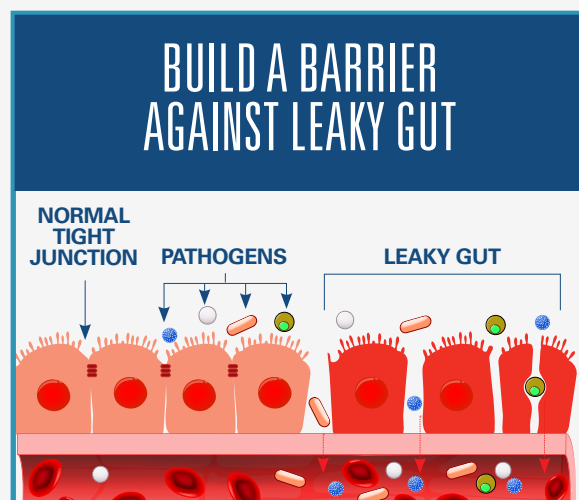
OTHER NOTICEABLE BENEFITS:

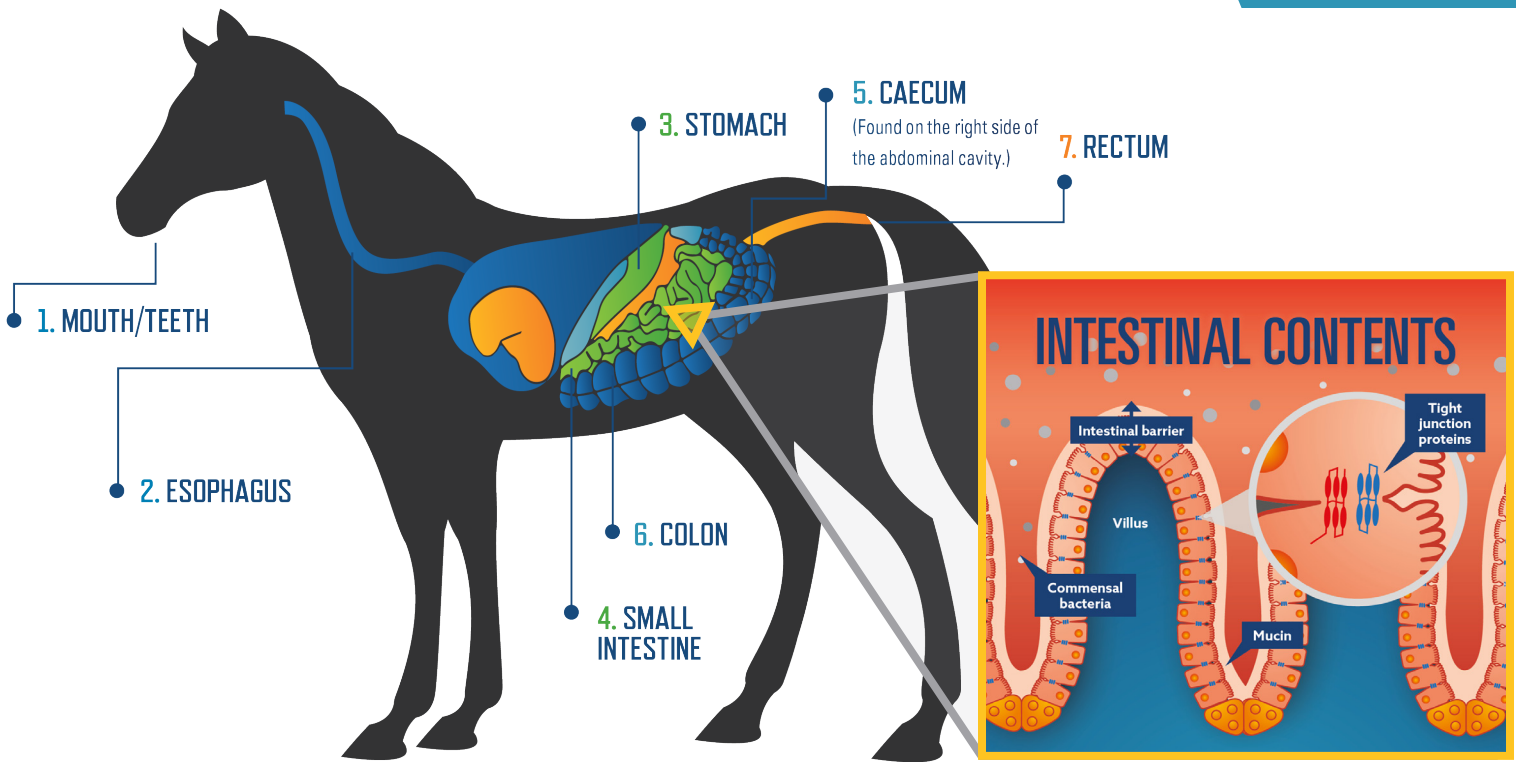
The gut is directly linked to the brain. When we have a healthy gut, cognitive ability and behavior are improved. A happier horse is always a good thing!

ButiPEARL Z EQ

The unique encapsulation technology used to make ButiPEARL Z EQ ensures the target nutrients are released slowly throughout the entire intestinal tract of the horse. Through this extended release process, the tight junctions are coated and strengthened — improving the integrity of the intestinal lining.

- ✓ Butyric acid functions:
 - Strengthen tight junctions^{1,2}
 - Provide energy source used in the growth and development of the intestinal lining³
 - Support immune function⁴
 - Reduce gut inflammation⁴
- ✓ Zinc functions:
 - Strengthen tight junctions⁵
 - Expedite wound healing⁶





LEAKY GUT SYNDROME

SUMMARY

Leaky gut syndrome (LGS) occurs when the lining of the gastrointestinal (GI) tract is compromised, allowing harmful substances to cross the intestinal barrier and be absorbed into the bloodstream. A leak into the bloodstream will cause intestinal inflammation, resulting in various systemic problems for your horse.¹ These leaks often start slowly, but with time can result in a wide variety of health and performance issues you see every day in your horse.

SYMPTOMS

Quite often your horse simply seems “off” and is not performing at their previous level or a level that is expected. Personality or behavior has changed (dull or irritable) and they are often “girthy” when saddled. You may see occasional loose manure, skin allergies or recurrent low-grade colic.² The result is that your horse does not feel well, and their overall performance and well-being is being negatively impacted.

CAUSES

Pathogenic bacteria, mold toxins, parasites and common stressors such as exercise, training, transportation, heat and even simple hay changes, can all lead to LGS.¹ Any of these stressors can result in damage to the tight junctions of the intestinal lining that are an important barrier between toxic intestinal contents and the bloodstream. Repeated exposure to any of these common stressors will result in small, recurrent intestinal leaks, causing greater health and performance issues over time.



1-800-752-2864
 LEARN MORE AT [Kemin.com/LeakyGut](https://www.kemin.com/LeakyGut)

1. Peng L, et al. Butyrate Enhances the Intestinal Barrier by Facilitating Tight Junction Assembly via Activation of AMP-Activated Protein Kinase in Caco.
 2. Cell Monolayers. 2009. J. Nutr. 139: 1619-1625;2. Ma X, et al. Butyrate promotes the recovering of intestinal wound healing through its positive effect on the tight junctions. J Anim Sci. 2012. 90: 266-268.
 3. Kotunia A, et al. Effect of sodium butyrate on the small intestine development in neonatal piglets fed by artificial sow. J Physiol Pharmacol. 2004. 55: 59-68.
 4. Guilloiteau P, et al. From the gut to the peripheral tissues: the multiple effects of butyrate. 2012 Nutr Res Rev. 23:366-384.

5. Zhang B, et al. Zinc prevents Salmonella enterica serovar Typhimurium-induced loss of intestinal mucosal barrier function in broiler chickens. 2012. Avian Pathology. 41:361-367.
 6. Lansdown ABG, et al. Zinc in wound healing: Theoretical, experimental, and clinical aspects. 2007. Wound Rep Reg 15:2-16.