



# WHY PROBIOTICS ARE IMPORTANT

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**A** horse that is allowed to graze 14-20 hours per day on a good clean healthy pasture, will continually ingest naturally occurring digestive probiotics (bacteria, plant enzymes, yeasts) from the dirt, grass and weeds to keep their digestive systems operating effectively. These naturally occurring probiotics (good bacteria) are the raw material that allows the body to manufacture the gut microbes that the particular animal needs. Horse grazing on dirt/grass

Some people believe that probiotics do not work for horses and they may have good cause to believe this. Some equine probiotic products do not actually contain true probiotic organisms and probiotic products that are contained in processed feed are often not live - or true probiotics. Many other probiotic products use temperature sensitive ingredients that are not live or reproducible and/or do not survive the stomach acid in significant enough quantities to be effective in a horse's hind gut.

The Equine Choice Probiotic and Prebiotic product contains organisms that the horse would get if he were grazing in a natural environment for several hours day and night. They are temperature stable, live, reproducing probiotic organisms that survive stomach acid and can reach the hind gut alive in large enough quantities to make a positive impact on the hind gut microbes. They are not a drug and do not test.

Research shows that beneficial gut microbes are key players in maintaining healthy mucosal linings throughout the digestive tract. High numbers of these beneficial digestive microbes are important for effective digestion, allowing helpful nutrients to pass through intestinal walls and blocking unwanted substances from passing into the body cavity ( as happens with leaky gut syndrome). The mucosal lining is an integral part of the body's immune system, is involved with hormone regulation, and plays an important role in hydration, ensuring proper water and electrolyte absorption is happening in the hind gut.

Adequate levels of beneficial gut microbes are also essential for ensuring good quality hind gut fermentation takes place. This is the process that results in volatile fatty acid production and provides 80% of a horses energy. ( Horses use fiber to produce Volatile Fatty Acids for their primary energy source - not carbohydrates like us). In fact, too many carbohydrates can cause a change in hind gut pH levels resulting in a decrease in the beneficial microbes.

When the pH levels shift and a more acidic environment develops in the hind gut, hind gut acidosis develops. When this happens, the beneficial microbes are rapidly replaced with harmful microbes. Now, not only is the mucosal lining compromised, but the overgrowth of harmful gut microbes results in unwanted by-products such as gas and endotoxins. It is believed that a continual leak of endotoxins into the horses system, can be a contributing factor in non-structural unsoundness problems and can also be a factor to consider in compromised hoof structure, poor sole quality and an increase in sole abscesses.

Inadequate levels of beneficial digestive microbes can also manifest as poor overall health, loose stools, flatulence, diarrhea, difficulty keeping weight on, picky eaters, prone to colic, pica (wood chewing, dirt and manure ingestion) and vices such as kicking stall wall and biting at flanks. Many horses that are depleted in beneficial gut microbes exhibit "attitudes" and are mistaken for being cranky and ill mannered especially around the flank, when being brushed, saddled and cinched up (the large colon lies just above where the cinch goes). Some horses present with low energy, or depressed attitudes and some show high strung, anxious or nervous behaviors. Many other factors can contribute to these issues of course, (tack, companions, handlers, training... to name a few) but what is being discovered by many of the top trainers is that huge numbers of these 'behavioural issues' are frequently due to gut pain (hind gut acidosis, fore and hind gut ulcers, acid splash).



We do many things with our horses that create conditions that compromise the beneficial gut microbes on a continual basis. Horses that are stalled, mentally stressed, given severe or inconsistent exercise, are hauled long distances, have grain or processed feed diets, are on anti-inflammatory drugs or antibiotics, are all at risk for a depletion of their beneficial gut microbes. Even the chemicals in dewormers can have a negative effect on the microbes in the digestive tract.

Most horses will benefit from probiotic supplementation at some point in their life. It may be the old horse with fewer teeth, the horse in training, the foal being weaned, the horse who just had surgery, or horses being hauled to competitions. Deciding whether probiotic use is appropriate for a specific horse will depend upon the horse's lifestyle, his history, current health and the type and quality of the current feed. Some hays may contain more natural probiotic elements than others, processed feeds as a rule do not contain true probiotic

elements. Most 'kept' horses do not have access to sufficient probiotics -remember, in a natural setting they continuously replenish them by ingesting them all day and night while foraging.

The goal is to be as proactive as possible in protecting the horse's digestive tract. As we now know, a healthy digestive tract supports nutrient uptake, immune function, hormone regulation and energy production. Keeping in mind that the equine digestive system is designed for 'trickle foraging' (to ingest small amounts constantly from a variety of plants), Equine Choice believes that the essential components in good horse nutrition are simple and basic; high quality roughage and clean water available 24/7 plus adequate salt and a good vit/mineral supplement. Probiotic supplementation is essential for optimum digestive tract health when the horse's lifestyle does not allow a sufficient quantity of digestive probiotics to be ingested from natural sources - or the demands placed on his system exceed the definition of natural activity.

