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BALANCING ACT

A healthy gut is the basis for a healthy horse – here's how probiotics can help.

By Jessica Lynn



Have you had your **PROBIOTICS** today? Products like Activia have made people more aware of the benefits for themselves, but horse owners are also learning how probiotics can help their horses' intestinal/digestive health.

Dairy products including yogurt or kefir are not meant for horses. Look for horse-specific probiotics blended with yeast cultures and *Saccharomyces cerevisiae*, which help the fermentation process in the gut and provide essential nutrients for bacteria to properly grow and multiply.

It's no secret that probiotics are good for your horse's gut, but did you know they are also loaded with other benefits too? These include reducing inflammation, boosting immunity, preventing diarrhea, and helping to prevent gas and some types of impaction colic.

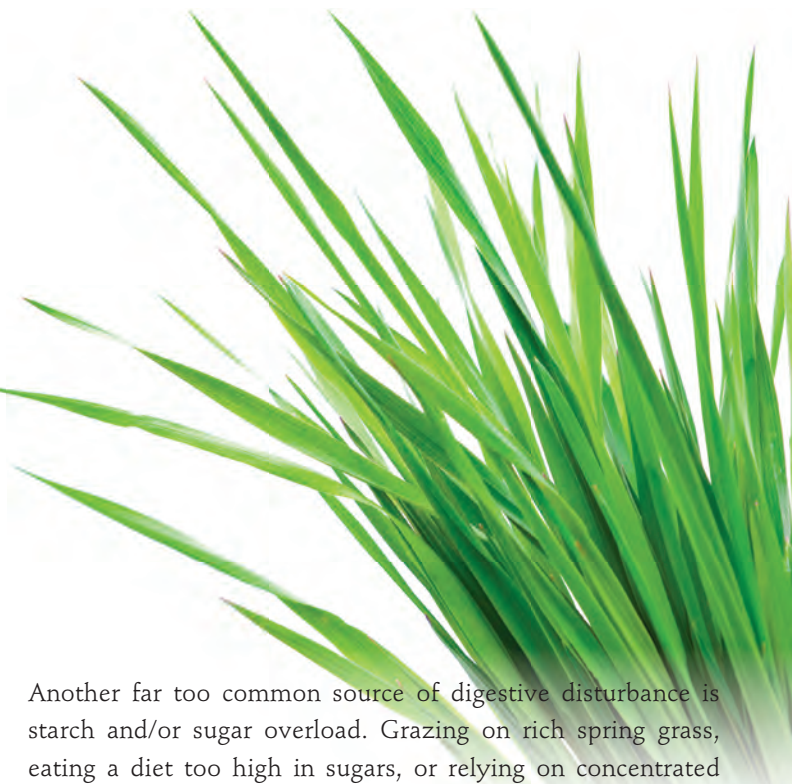
A DELICATE BALANCE

Unfortunately, the microflora/microbial balance in a horse's gut can be upset much faster than it can be restored. The effects may not show up immediately, but beneficial intestinal bacteria can be depleted or destroyed and the pH of their environment severely altered by many situations:

- Stress brought on by sudden changes in food, unseasonable weather conditions, moving, travel, competition, training and showing
- Chemical worming and vaccinations
- Parasitic infestations
- Viruses and fevers
- The use of antibiotics

Another far too common source of digestive disturbance is starch and/or sugar overload. Grazing on rich spring grass, eating a diet too high in sugars, or relying on concentrated chemically-enhanced bag feeds can disrupt beneficial microbials, causing partial die-off of good gut bacteria. This raises acidity in the gut, changing the natural pH balance and resulting in massive destruction of the normal micro-flora. Recent studies have indicated that the toxins caused by this die-off can lead to laminitis.

Continued on page 24.





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UNDERSTANDING THE DIGESTIVE SYSTEM

To fully appreciate beneficial microbials or probiotics, it's important to have a basic understanding of the role they play in the equine digestive system.

1 When a horse starts grinding food with his teeth, his mouth releases enzymes, and thus begins that mouthful's approximately 75- to 100-foot journey through the digestive tract.

The food mixes with digestive juices as it enters the stomach, where digestive enzymes and billions of microbials begin their work.

2 Although a horse's stomach is relatively small compared to his size, it is tasked with initiating the breakdown of nutrients using digestive enzymes and stomach acids; very little absorption takes place here.

3 Soluble carbohydrates, along with minerals, fats and proteins, are absorbed in the small intestine.

4 Insoluble carbohydrates that are not so easily digested, as well as any undigested soluble carbohydrates, then pass to the cecum, the "fermentative vat", before moving into the large intestine. A variety of live microbials that live in the cecum break down the remaining nutrients into a viable usable form – absorbable volatile fatty acids which the horse uses for energy and nutrients.

MICROBIAL DIGESTION

Microbial digestion is the breakdown of organic material such as hay and grass, and especially concentrated bag feedstuffs,

by microbial organisms. It is the basic function of the horse's large intestine, and can be seriously damaged by prolonged or heavy dosing with antibiotics or sulfonamides, or by relying on concentrated bag feeds.

The population of beneficial live microorganisms in the cecum remains relatively "stable" under normal conditions. As long as a horse is never stressed, never needs to be chemically wormed, is never vaccinated, never has a change in feed, and never needs antibiotics, then the balance should remain unaltered. However, as we all know, horses do experience stressful events, may need antibiotics or worming on occasion, and do have feed changes with the seasons and each load of hay.

Without a strong army of beneficial intestinal bacteria, food moving through the digestive tract is not "fermented" properly, and some remains undigested. When it hits the gastrointestinal tract, this undigested food may lead to colic, bloat, impactions or laminitis, and increase the possibility of developing food-related allergic conditions.

A combination of species-specific bacteria, at approximately 20 billion CFUs (colony forming units) per serving/scoop, along with digestive enzymes and yeast, will help support and maintain a healthy digestive tract in your horse.

SELECTING A PROBIOTIC

In her "Nutrition as Therapy" course, Dr. Eleanor Kellon quotes Dr. Scott Weese, DVM, an expert in equine GI tract diseases and veterinary probiotics. He estimates that, at minimum, a feed additive needs between ten and 20 billion CFUs per





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serving to have any effect on a horse's intestinal tract/gut. Equine nutritionist Dr. Juliet Getty agrees that there should be at least 20 billion CFUs per serving for a supplement to be effective, and it should include multiple strains.

When selecting a probiotic (yeast culture) feed additive to reintroduce good bacteria after a round of antibiotics, or to maintain or replenish good gut bacteria, study all the products out there, read the labels, and find one that has the highest guaranteed CFU count you can. It should also include multiple strains of beneficial bacteria along with added digestive enzymes.

Just because a bag feed says "added probiotics" does not mean the feed contains enough for your horse, or that the probiotics even survived the pelleting process. The bottom line is – do your homework before you purchase a product or additive, and find out the types and CFUs of the probiotics included. A good product will help support your horse's whole system, from the inside out! 

Beneficial microbes for your horse

Here are some of the equine-specific beneficial microbes I like to use and recommend.

- A combination of several *Lactobacillus* strains. This supports the colonization of friendly bacteria in the colon (hind gut area), aiding in the normal breakdown of food and proper digestion.
 - *Lactobacillus acidophilus*: Produces lactic acid that keeps "bad bacteria" in check. Continued colonization by this bacteria helps inhibit the growth of other pathogens (bad bacteria) by competing for nutrients and promoting healthy pH levels.
 - *Lactobacillus subtilis*: Produces specific substances that have been observed to inhibit the growth of some pathogenic microorganisms including *Escherichia coli*, *Staphylococcus aureus*, and *Salmonella sp.*
 - *Lactobacillus lactis*: A naturally occurring microflora that plays a critical role in maintaining a balanced intestinal ecosystem.
- *Bacillus subtilis*: Counteracts deadly bacteria that can cause diarrhea.
- *Bifidobacterium* strains: Help promote a healthy balance of flora in your horse's intestine. What's more, this organism is especially helpful for enhancing immune response and keeping things moving through the intestinal tract. (Note: "*Bifidus regularis*" is a name that was created by Dannon, for marketing purposes, and is also known as *Bifidobacterium animalis* DN-173 010. This strain of probiotics is used exclusively in Dannon's popular Activia™ products, which Dannon "claims" promote regularity in humans.)
- Yeast (*Saccharomyces cerevisiae*) or a yeast culture: Used as a carrier for the added probiotics and digestive enzymes. Although not a probiotic, it will feed and benefit the probiotics above.

Jessica Lynn is a published author and the owner of Earth Song Ranch. She is a certified equine nutritionist, and a licensed natural feed additive manufacturer specializing in super strength horse friendly probiotics, and digestive enzymes, and also probiotics and digestive enzymes for cats and dogs. Jessica has been involved in alternative health care, homeopathy and nutrition for almost 45 years. Jessica@earthsongranch.com, 951-514-9700, EarthSongRanch.com.

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Purica's Recovery Corner



Enhance Equine Performance

By Eryn Kirkwood

Equestrian performance is akin to a desirable lifestyle and isn't always about athletic prowess. Recreational riders and competitive trainers alike understand the importance of maintaining their horses' overall health and well-being. Whether you're training your horse for racing, jumping or competitive showing, or using him for pleasure riding, optimal performance suggests optimal health, on all levels. Proper ventilation, a continuous supply of fresh water, high-quality nutrition, adequate hoof care and dental care can distinguish a horse that is performing at sub-optimal levels from one who trots with the confidence and ease of a champion.

When a horse struggles with pain or is recovering from illness, Recovery EQ speeds up the healing process and helps prevent future wear. By neutralizing lactic acid buildup and regulating inflammation, this food-based supplement combats fatigue, which allows your horse to perform at his best in record time. Nutricol is the predominant active ingredient. It is a proprietary blend of potent ingredients and has been clinically shown to profoundly affect cellular health. The addition of glucosamine, MSM and TMG provides the building blocks of healthy body tissue.

Recovery EQ increases the structural integrity of connective tissue, stabilizes cell structure, and maintains optimum tissue hydration. Your horse will enjoy restored function in his joints, muscles, tendons and hooves. With enhanced physical well-being, his quality of life improves, and with it, equine performance and trainer satisfaction.

Eryn Kirkwood is a freelance writer and editor residing in Ottawa, Canada. As an animal lover and health and wellness aficionado, Eryn publishes humorous and informative articles across a breadth of topics.

