

Progressive Nutrition's "Recover™" ***How it works and How to use it***

Recover™ is an innovative nutritional supplement administered to horses with loose stools or non-specific diarrhea. A healthy large intestine is essential for optimum water absorption, and the unique combination of nutrients in Recover™ can help restore proper colon health. Recover™ – Equine Powder contains a blend of *nutrients and electrolytes* to counter the effects associated with dehydration that often accompany diarrhea.

How does this work? The gut of a healthy horse has a very complex and crucial bacterial population. If this bacterial population gets out of balance due to sickness, diet, or antibiotic therapy, moderate to severe diarrhea can result. Currently, treatment involves the use of fibers, probiotics (active bacterial cultures) and pharmaceuticals. Yet, a new class of products called prebiotics are gaining popularity. Prebiotics are defined as any product that selectively promotes the growth of beneficial bacteria (*Lactobacillus*) while limiting the growth of pathogenic bacteria (*E. coli*, *Salmonella*, or *Clostridia*). One main prebiotic source is fructo-oligosaccharide (FOS) derived from chicory root, Jerusalem artichoke and onion. Fructo-oligosaccharide is a non-digestible sugar, which can be fermented by, and provide food for, the beneficial bacteria in the gastrointestinal tract.

Some beneficial bacteria selectively use Prebiotics. In the case of oligosaccharides, like FOS and Inulin in Recover™, has been documented that certain beneficial bacteria (*Lactobacillus*, *Bifidobacteria*) can use these sugars as an energy source. In contrast, some of the classic pathogenic bacteria, like *E. coli*, *Salmonella*, *Clostridia*, cannot utilize prebiotics. As the beneficial bacterial grow, some *Lactobacillus* species will secrete organic acids, which lower the intestinal pH. Pathogenic bacteria prefer a higher, less acidic pH, thus they don't grow as well under these conditions. The inhibition of their growth is indirect through stimulation of beneficial bacteria followed by the competitive inhibition of pathogenic strains. This process results in a restoration of normal gut microflora, helping to shorten the duration of loose stools or diarrhea.

Recover™ -Equine Powder also incorporates electrolytes formulated for the dehydrated horse due to illness. This differs from performance electrolytes that tend to be slightly acidic. The differences are necessary in these two different types of electrolytes because: 1) during exercise the horse's body mass becomes alkaline and this is offset by the acidic formulations in a performance electrolyte; and 2) a sick horse that is dehydrated by diarrhea, the intestinal tract and body mass becomes acidic. To deliver optimal results to the ill horse, a pH basic electrolyte like the one in Recover™ works best. Both sick and performance horse electrolytes are absorbed in the small intestine and do not affect the pH of the horses' fermentation vat or large intestine.

Recover Basics & Usage

- ✓ Prebiotics are non-digestible sugars that are substrates which can be used for food by the beneficial bacteria population in the equine intestinal tract
- ✓ Horses that are off feed and/or dehydrated should have Recover™ administered via a nasal-gastric tube, by mixing 1 liter of warm water with every 2 oz of Recover™ needed. This will provide the optimal absorption rate of the electrolytes in the small intestine
- ✓ **Therapeutic dose:** Use Recover™ daily, at 2 oz (1 enclosed scoop)/100 lbs of body weight and continue for 5 days “after the return of normal stools”. Stopping too soon may result in the reoccurrence of loose stools because of the possible reoccurrence of the pathogenic bacteria
- ✓ Only mix enough Recover™ in water that will be used in a 15-20 minute time frame
- ✓ **Preventative dose:** Horses that have minimum loose stools, are not dehydrated and are eating normally, can have ½ of the daily therapeutic dose of Recover™ top-dressed onto their grain mixture or mixed with water, into a paste consistency, and drawn up into a 60 cc syringe and administered orally 2 to 4 times/day.

This product is distributed to and sold only by licensed veterinarians.

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