



PURINA

WellSolve L/S[®]
HORSE FEED
LOW STARCH

VETERINARY RESEARCHED NUTRITIONAL SOLUTIONS FOR WELLNESS

6 Years in Development, 8,786 Individual Tests, 7,576 Feeding Trials

The low starch and sugar diet for horses with special needs

Special needs horses are unique. Starting today, so is their diet. WellSolve L/S[®] horse feed offers a simpler, more streamlined dietary option for veterinarians and horse owners who are caring for special needs horses that may benefit from a low starch and sugar diet.

WellSolve L/S[®] horse feed

- Low starch and sugar - guaranteed maximum of 11%
- No grains or molasses
- Digestible/fermentable fibers as an alternative energy source
- Added antioxidants
- Veterinarian researched

Some of the conditions affecting special needs horses include:

- Insulin Resistance and/or Equine Metabolic Syndrome
- Laminitis
- Cushing's Syndrome

The right product at the right time

We probably could have rushed to market with a low starch and sugar formula years ago. Instead, we spent the past several years studying carbohydrate metabolism in horses, from the unique ways their bodies utilize fuel to how particular fiber types might aggravate the GI tract or a specific health condition.

Building on decades of equine nutrition research, Purina has vigorously examined ingredient combinations, feed form, meal timing, palatability and more. We've conducted numerous controlled studies at Purina Animal Nutrition Center in Gray Summit, MO, as well as extensive field testing.

The result: WellSolve L/S[®] horse feed backed by peer-reviewed, published data showing a low glucose and insulin response to feeding.

Low in starch and sugar—no grains or molasses

While special needs horses require at least some soluble carbohydrates (starches and sugar) for brain function and hoof health, too much can cause glucose and insulin levels to spike. We guarantee the level of soluble carbohydrates in WellSolve L/S[®] horse feed to be no more than 11 percent.

Digestible/fermentable fibers as an alternative energy source

Although many reputable commercial feeds rely on sugars and starches as the primary energy source, the level of calories in these feeds is unnecessary and the calorie sources may not be a safe option for many special needs horses. That's why WellSolve L/S[®] horse feed utilizes a blend of fibers from various feedstuffs such as beet pulp, ground soy hulls and alfalfa meal.

Omega 3 and omega 6 fatty acids

Fats are a dense source of calories. The soybean oil and ground flaxseed in WellSolve L/S[®] are ideal for replacing calories that would otherwise be lacking in a low starch and sugar diet.

Research is ongoing, but there are indications that higher amounts of omega 3 fatty acids may help ward off inflammation. If so, this could prove beneficial to the special needs horse.

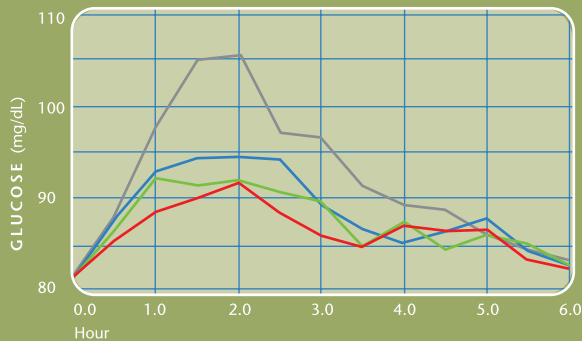
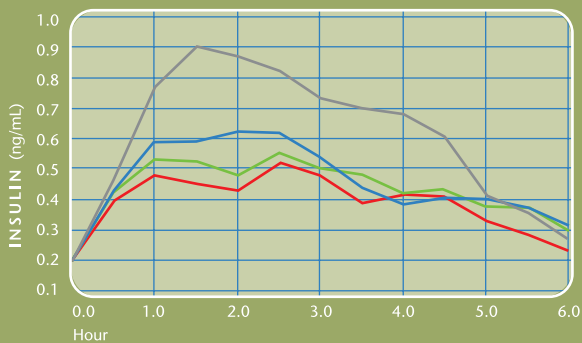
Quality protein and essential amino acids

WellSolve L/S[®] has an ideal amino acid profile for the special needs horse, including lysine, threonine and methionine. All are essential amino acids and aid in tissue repair.

Antioxidants and a healthy immune system—vitamins E, C and selenium

These powerful antioxidants destroy “free radicals” that can wreak havoc on healthy cells. We have added a natural source of vitamin E for the special needs horse, as well as a blend of natural tocopherols to help preserve the supplemented antioxidants and the overall shelf life of the product.





— Control
— Low Starch-Pellet
— Low Starch-Extruded
— Low Starch-Oval

The ideal feed form

In a study comparing large pelleted ovals, to medium pellets, to extruded feed forms, the medium-sized pellet found in WellSolve L/S® horse feed delivered the lowest glucose and insulin response.

We fed 4 lb meals of the low starch test feed and a control feed, taking blood samples before feeding, and every half-hour for six hours after feeding, to measure glucose and insulin response to the meal. The low starch pellet had the lowest average glucose and insulin concentration. For you statistics buffs, it was statistically significant ($P < 0.05$) versus the low starch oval and control. But what's really amazing is the extremely low glucose and insulin response to feeding. The peak glucose response to feeding the WellSolve L/S® pellet was 91.61 mg/dL. This is still considered fasting range by many laboratories. The peak insulin response to the WellSolve L/S® pellet was 0.52ng/mL, also still considered to be in fasting range.

Vitamins and minerals proportioned for the special needs horse

Special needs horses can easily become deficient in key vitamins due to grazing restrictions or because of eating large amounts of stored hay. WellSolve L/S® compensates for these deficiencies with the proper combination of vitamins and minerals, including added vitamins A and D, as well as a natural source of vitamin E. We've also added minerals like copper and zinc, which are involved in chemical reactions related to connective tissue synthesis and maintenance in tissues such as tendons and cartilage.

Added biotin, no need for additional supplementation

At present, there is no established biotin requirement for horses. However, there is research with horses that have issues in regard to hoof quality and growth that suggests additional biotin could support hoof regrowth in some horses. For this reason, we have added biotin to WellSolve L/S® at a level of 3.6 mg/lb. Consequently, there is no need for any additional supplementation by the horse owner.

Palatability, without grains or molasses

In the end, it doesn't matter how good a feed is if a horse won't eat it. For this reason, WellSolve L/S® is formulated with an extra hint of natural flavors to be highly palatable for horses with special needs.

Why hay plays an especially critical role in feeding special needs horses

Fasting is bad for many special needs horses and can provoke wide fluctuations in blood glucose/insulin levels. When long-stem, low carbohydrate hay is offered along with WellSolve L/S® horse feed, it prolongs feeding time, thereby shortening the fasting time between meals. Also, because the horse spends more time chewing and digesting the hay than he would if eating a concentrate, blood glucose and insulin levels stay lower and steadier. As an added benefit, a longer meal may make the horse feel more satisfied. Plus, hay is a good source of fiber for horses.

Unprecedented research

WellSolve L/S® horse feed is backed by 6 years of research involving 8,768 individual tests and 7,576 feeding trials. This data was published for veterinarians in the November 2007 issue of the *Journal of Equine Veterinary Science*.

Purina FeedGuard® Nutrition System assures ingredient quality and performance

When managing the diet of a horse on a low starch and sugar diet, nutritional consistency is absolutely critical. The Purina FeedGuard® Nutrition System is one of the industry's most innovative and exacting quality assurance programs. Here's what it provides:

- Minimizes the risk of ingredients containing potentially harmful contaminants.
- Helps increase nutritional consistency by testing with Near Infrared Reflectance, a process measuring actual nutrient levels of specific ingredients instead of using supplier averages.
- Stringent quality standards help ensure many of the industry's highest quality ingredients available are used.



FeedGuard® is one more reason why you can trust WellSolve L/S® horse feed.

Guaranteed Analysis

Protein, min.....	12.00%	Copper, min	65.00 ppm
Fat, min.....	5.50%	Selenium, min	0.60 ppm
Fiber, max	23.00%	Selenium, max.....	0.61 ppm
Lysine, min	0.70%	Vitamin E, min	225.00 IU/lb
Calcium, min	0.65%	Vitamin A, min.....	3500.00 IU/lb
Calcium, max	1.15%	Biotin, min.....	3.6 mg/lb
Phosphorus, min.....	0.50%	Starch, max	7.0%
Magnesium, min	0.50%	Sugars, max.....	4.0%
Zinc, min	220.00 ppm		

Ingredients

Alfalfa, Shredded Beet Pulp, Wheat Middlings, Ground Oat Hulls, Ground Soy Hulls, Ground Flaxseed, Soy Oil, Calcium Lignin Sulfonate, Calcium Carbonate, Mono-dicalcium Phosphate, Salt, Vitamin A, Natural Flavor, Vitamin C, Biotin, B₁₂ Concentrate, Calcium Pantothenate, Choline Chloride, Vitamin E, Tocopherols, Vitamin D, L-Lysine, Magnesium Oxide, DL-Methionine, Niacin, Riboflavin, Selenium, Thiamine, Cobalt Carbonate, Copper Sulfate, Ferrous Carbonate, Manganous Oxide, Calcium Iodate, Zinc Oxide.