

EQUINE NUTRITION SOLUTIONS FOR SPECIFIC SITUATIONS

Alfalfa Allergy

What to Feed: Products without Alfalfa- *Omolene 200 -OR- 300 -OR- 400 -OR- Amplify -OR- Free-Balance Mineral*. Products with less than 10% Alfalfa- *Ultium -OR- Strategy GX -OR- Omolene 500*

Allergic reactions are essentially an immune system in over-drive. The only reliable diagnosis of a food allergy is an elimination diet. Sometimes that is absolutely impossible because of the long list of potential allergens. Allergy symptoms such as hives, runny eyes, nasal discharge and coughing may be more indicative of an inhaled allergen. Removing long-stemmed hay and using a complete feed like Equine Senior, Omolene 400 or Horse Chow often helps alleviate these problems. Other management options including immersing hay thoroughly in water before feeding, feeding in a trough at ground level, wetting stall bedding or changing the type of bedding, and providing as much pasture time as possible will help minimize exposure to respirable dust and molds. In almost all cases symptoms due to inhaled allergens will improve if the horse is kept outdoors. Even short amounts of time in barns or trailers will exacerbate symptoms.

Skin Irritation: There is anecdotal evidence that feeding omega 3 fatty acids from a fat supplement such as Purina Amplify™ supplement may help resolve symptoms of skin irritation and inflammation. Feeding 1 – 1.5 lbs per day of Amplify™ to horses suffering from sweet itch has been reported to result in cessation of itching and hair re-growth within 45 days.

Corn- Free Products

Enrich Plus, WellSolve L/S and WellSolve W/C and Equine Adult have no corn. Ultium, Ultium Growth, Strategy Healthy Edge, Sr Active, Equine Sr. have less than 10%.

Cushing's Disease (Pituitary Pars Intermedia Dysfunction)

What to Feed: *WellSolve L/S +/- Amplify and Bermuda Grass*

Cushing's is a hormonal disease most often caused by a benign tumor of the pituitary gland that results in the production of very high levels of cortisol and cortisol-like hormones. High levels of cortisol and cortisol-like hormones are responsible for the clinical signs observed in equine Cushing patients- long wavy hair coats, sway back appearance, muscle loss, increased drinking, eating, and urination, recurring respiratory disease, and chronic or recurring laminitis. A variety of tests are available to diagnosis Cushing's in horses. There is no cure for Cushing's in horses. Drug therapy and good management play an important role in helping the horses to live as long as possible and be as comfortable as possible

EPSM or PSSM (Polysaccharide Storage Myopathy)

What to Feed: *Increase Fat/Fiber and Decrease Starch/Sugars*

Ultium +/- Amplify -OR- Enrich Plus + Amplify -OR- Strategy Healthy Edge

EPSM is found in all breeds, but appears more prevalent in Quarter Horses, Arabians, draft breeds and warmbloods. It has been documented in horses from 3 months to 29 years of age. Tying-up is the most obvious symptom of EPSM but there may be many more subtle symptoms. Horses with

EPSM may show a lack of energy, decreased performance, back soreness, abnormal hind leg movement, stiff gait, loss of muscle over the topline and hindquarters, muscle tremors following exercise, episodic colic and/or general irritability and bad attitudes while being groomed, saddled and ridden. Symptoms can suddenly appear in a horse that has never tied-up before.

The underlying cause for EPSM is a defect in muscle metabolism and how these horses store and utilize energy in the muscles. They often respond well to therapy, including diet changes and regular exercise. It is important that they not be stalled for days without exercise. If they must be stalled without exercise, reduce their grain intake or eliminate grain altogether and instead feed a low starch concentrated protein, vitamin, mineral supplement, such as Enrich Plus.

Equine Metabolic Syndrome (EMS)

What to Feed: *WellSolve L/S, +/- Amplify, Bermuda Grass*

Horses with EMS have abnormal fat deposits and insulin resistance. Insulin resistance is a condition in which an increased production of insulin is required in order to maintain blood sugar levels within normal limits. EMS occurs more frequently in horses 8 to 18 years of age who are over-weight, obese, or easy keepers, and in specific breeds. Chronic, re-occurring laminitis is common in horses with EMS. EMS is diagnosed on clinical signs, by ruling out other diseases such as hypothyroidism and equine Cushing's, and by identifying insulin resistance through blood tests. There is no treatment or cure. Preventing the development of EMS is recommended by diet and lifestyle changes.

HYPP (Hyperkalemic Periodic Paralysis)

What to Feed: *Omolene 100 -OR- Omolene 200 -OR- Omolene 300 -OR- Impact 12 Sweet -OR- Strategy -OR- Ultium*

HYPP is an inherited autosomal dominant disorder that is caused by a single-based substitution of guanine for cytosine in DNA. It is believed to be a genetic disorder that appears to have originated as a point of mutation in the Quarter Horse stallion Impressive. Basically, the amino acid sequence is changed in the animal at the cellular level and sodium leaks through the cell pore. In the cell sodium should be pumped out of the cell and potassium within. As long as that gradient is maintained, the cell is at rest and no muscle contraction occurs.

Recommended usually no more than 1% K in total diet, but that can be hard because forages can be fairly high in K (2% and higher). Also usually recommend a sweet feed because higher soluble carbs may be beneficial in helping push K into muscle cells where it belongs. We usually suggest Omolene 100.

Diet and K⁺ content of the feed can help manage these horses but will not cure it. There are many reasons besides K⁺ content of the diet that these horses have seizures. Diet and K⁺ can be within proposed guidelines and the horses can be getting along fine, but if there is any new stress, change in weather, hauling them, training, showing, new horse next to them, change in feeding schedule, etc., they can have problems.

The Equine Family Products will be 1.5 - 1.6%, which is higher than the 1 - 1.3% target, however, it is lower than the 2 - 2.5% commonly found in hay, grass hay usually closer to 2% and alfalfa hay closer to 2.5%, so if you replace hay with one of these products, you will lower the K⁺ content of the diet.

Insulin Resistance (IR)

What to Feed: *WellSolve L/S, +/- Amplify, Enrich Plus +/- Amplify, Bermuda Grass*

IR Overweight Horses *1-2 lbs. of Enrich Plus, Bermuda Grass*

A decreased sensitivity of the horse's cells to insulin resulting in an increased blood sugar level. Contributing factors are thought to be diet, body condition, age, and breed. Common clinical signs are weight gain or loss; muscle loss; development of a cresty neck; regional deposition of fat in areas such as the tailhead, behind the shoulder, or over the loin; lethargy; and chronic laminitis. Diagnosis is challenging and involves measuring insulin and glucose levels in the blood. There is no specific treatment or cure for insulin resistance. Diet and exercise are important for limiting development and prevention of worsening of insulin resistance in horses

Iron Levels

Iron toxicity in horses has only been reported in young foals that were inadvertently given a high level of oral supplements containing iron and in horses that have received injections of iron. Iron absorption and status in horses is tightly regulated, and iron in the body is highly conserved. Only about 15% of total dietary iron is absorbed by the horse. As a result, it is virtually impossible for either iron toxicity (due to excess dietary intake) or iron deficiency (due to lack of dietary intake) to occur. There is also very little data relating the level of iron in the diet to serum ferritin levels in horses.

Laminitis

What to Feed: *WellSolve L/S, +/- Amplify -OR- Enrich Plus +/- Amplify, Bermuda Grass*

An inflammation of the laminae--the interlocking leaflike tissues attaching the hoof wall to the coffin bone

Overweight Horse

What to Feed: *1-2 lbs./day Enrich Plus -OR- 4 lbs./day WellSolve W/C and Bermuda Grass*

How do you determine if your horse is overweight or obese? While weighing horses is a good tool for monitoring body weight, evaluating how fat or thin a horse is by body condition scoring is actually a better tool. You can find the Henneke body condition score chart at horse.purinamills.com under the Nutrition & Management tab. The target for most horses is to be a body score of 5, where ribs aren't visible but are easy to feel. Insulin sensitivity begins to decline when body condition score reaches 7 or higher. Each condition score above 5 represents 45 – 50 lbs so a body condition score of 7 is about 100 lbs overweight.

A new product, Purina WellSolve W/C, was researched and developed to help facilitate weight loss in overweight horses. WellSolve W/C contains no grain, is low in calories, contains a wonderful balance of nutrition, and allows overweight horses to be fed a more satisfying 4 lbs per day. Horses fed WellSolve W/C and 1 lb of hay per 100 lbs of body weight, lost an average of 1 lb per day. When WellSolve W/C was fed and horses were exercised for an average of 30 minutes of light trotting six days a week, weight loss was increased to 1.5 lbs per day. The research showed that providing the nutritional balance in WellSolve W/C along with restricted hay intake caused loss in body fat while maintaining muscle mass. Horses fed WellSolve W/C also had an increase in insulin sensitivity and a decrease in cortisol levels. WellSolve W/C is an excellent option for helping overweight horses shed those unwanted and potentially unhealthy extra pounds.

Tying-Up

What to Feed: *Ultium -OR- Omolene 500 + Amplify -OR- Strategy Healthy Edge*

Tying up has less to do with lactic acid build up during exercise and more to do with diets high in complex carbohydrates like starches, also genetics can be a factor. When it comes to tying up it may be sporadic or chronic. If your horse repeatedly ties up, is chronically body sore or is unwilling to work, discuss your horse's diet and exercise patterns with your veterinarian. It's possible that your horse has a genetic muscle disorder like PSSM or RER, both of which are manageable with diet and exercise. A muscle biopsy or a hair DNA analysis is recommended, also checking your horse's electrolyte levels, because an imbalance can resemble tying-up.

The horse needs to still be exercised (for at least 30-40 minutes/day), and if the horse is confined to a stall you need to cut their grain in half for those days. Keep in mind, it is very important to keep the horse on light work every day.

Ulcers: Equine Gastric Ulcer Syndrome (EGUS)

What to Feed: *Ultium Competition -OR- Strategy -OR- Omolene 400, plus Alfalfa*

Developing a feeding and management program to prevent ulcers should begin with maximizing daily turnout and grazing time. If turnout is not available, offering free choice hay of any variety shows benefit over offering nothing at all which results in an empty stomach. If free choice hay is not an option, then providing at least 4 – 6 feedings of hay per day is necessary to maintain gastric pH levels (Jones 2006). Alfalfa hay offers a buffering effect, so if available, alfalfa hay is preferable to grass hays when feeding to prevent ulcers. Feeds that are higher in fiber require more mastication that produces more saliva, therefore offering more buffering capacity which is helpful in ulcer prevention. Some concentrate feeds that offer high levels of fiber include Ultium (18.5%), Strategy (12%), and Omolene 400 (18%). Some complete feeds, meaning the hay or roughage is built into the feed, with high levels of fiber include Equine Senior (17%), Omolene 400 (18%) and Equine Adult (25%). In addition to hay and feed selection, some management issues to consider include the timing and spacing of meals, gradually presenting changes in routine or diet, and slowly increasing work load or intensity of training. Feeding several small meals per day has many benefits in addition to keeping the gastric pH from dropping too low, including better feed utilization and lower insulin response. Offering a small meal of hay (2-4 pounds) before exercise can also help prevent ulcers by helping to reduce acid exposure of the squamous epithelial during exercise.

Underweight Horse

Extremely Underweight (BCS 1-2): *Equine Senior -OR- Ultium, + Amplify*

Slightly Underweight (BCS 3- 4): *Ultium-OR- Strategy + Amplify*