Weight loss is simply a result of more calories being used by the body than are being consumed. There are several potential causes of chronic weight loss in horses. These causes include poor quality or limited feed supply, health and disease problems, as well as social interaction and competition between horses. Chronic weight loss can also be the result of starvation. Starvation can be caused by intentional neglect, ignorance, economic hardship of owner, disease, dentition, pecking order, parasites, or seasonal variation in availability of pasture. Remarkably, horses can survive chronic weight loss. It has been reported that horses can lose 30% or more of their body weight and still survive. Horses in this condition will have very little muscle mass and will be very weak. They will need special attention and a sound nutrition program to return to a proper body condition. Even with the best of care some horses won’t survive, especially horses that have lost 50% or more of their body weight.

Causes of Weight Loss

Poor Quality or Limited Feed – Probably the most common cause of weight loss is poor quality or limited feed. Forage (hay/pasture) plays a significant role in chronic weight loss since it is the primary component of the diet. In addition, it is difficult to accurately determine the quality of hay and pasture. In other words, a person may be providing enough forage for their horse but the forage is of such poor quality the horse is not able to properly digest it. If horses have free-choice access to as much forage as they will consume and they are losing weight, better quality forage must be provided. In addition, a grain concentrate can be added to provide extra nutrients that are missing in poor quality forage. The other common mistake made with feeding horses is simply to not provide enough feed. For example, an adult horse will require at least 2% of their body weight per day (20lb for a 1000lb horse) in dry hay. If horses are being fed less than this amount, horses will often experience chronic weight loss.

Health & Disease Issues –

Health and disease issues cover an array of topics ranging from dental problems to parasite infestation to diseases such as lameness, COPD, Cushings, Gastric Ulcers, Equine Infectious Anemia, chronic diarrhea, cancer, Lawsonia, liver or kidney disease, chronic infections, and neurologic conditions.

Dental problems are a significant cause of weight loss in horses. If horses cannot properly chew their feed, they will not be able to utilize the nutrients in feed. Signs that a horse may have dental problems include: dropping feed while chewing, nasal charge, discharge, foul-smelling breath and facial swellings. It is important to do a complete oral exam and not just look at the teeth, as other disease processes may be present in the horse’s mouth.

Internal parasites, such as
worms, compete with the horses' body for nutrients and often result in weight loss. Parasites may become resistant to many of the common dewormers, so it is important for your vet to check the feces for parasite eggs to rule out this problem. Even then, larval parasites can be involved that cannot be found in a routine fecal analysis, and treatment for larval parasites may be required to halt chronic weight loss.

A number of other diseases and chronic health problems can result in weight loss. Any disease that affects a horse will increase both protein and energy requirements, often resulting in weight loss. In order for horses to recover from the disease and gain weight, the disease or health issue must first be treated and resolved.

Social Interaction -
As most horse owners have witnessed, horses can be very aggressive toward each other. If you are group feeding horses you have the added complication of the natural hierarchy of dominance. Not only can younger, smaller, more timid horses be pushed away from the feeders, but they may be experiencing high levels of stress which not only includes expending more energy, but can predispose to health problems like stomach ulcers and colic. In general, it is important that underweight horses be fed separately. This will ensure they are actually getting the amount of feed which is intended for them.

Monitoring Weight Loss
Before any nutritional intervention is imposed, a proper estimate of the horse's body weight and body condition score is needed. Estimating body weight and body condition on a routine (i.e., monthly) basis should be a key component of any horse management program. Tracking the weight of a horse will allow the owner to properly calculate the amount of feed required by the horse in order to gain, lose or maintain body weight, as well as indicate how much weight the horse has lost or gained over a certain period of time.

Body weight can be measured by three simple techniques. A large livestock scale is the most accurate method of weight estimation, but a weight tape, is also quite useful. If you do not have a weight tape you can also use a simple measuring tape. Measure the heart girth, then measure the length of the horse from the point of the shoulder to the point of the buttock. Use the following equation to estimate body weight (Carroll & Huntington, 1988):

\[
\text{Weight (lbs.)} = \frac{\text{Heart girth (in)} \times \text{Heart girth (in)} \times \text{Length (in)}}{330}
\]

Body Condition Scoring (BCS) is also a useful tool when estimating actual body fatness. Body condition scoring involves the palpation and visual assessment of the degree of fatness of various areas of the horse, such as: over the ribs, tail head area, neck and withers, and behind the shoulders (Henneke et al., 1983). The scoring system uses a numeric scale of 1 to 9 where 1 is emaciated and 9 is obese. Regular condition scoring of your horse will help in detecting weight loss patterns before they become chronic.

Weight Gain Strategies
Once you have rectified the cause of the chronic weight loss in the horse it is time to begin implementing feeding strategies to enhance weight gain. The 2007 National Requirements for Horses suggested that it takes 35 to 45lbs of gain to change a horses body condition score by 1 unit (based on an 1100lb horse). We can safely achieve this amount of weight gain in approximately 60 days by adding
additional calories to the diet. Care should also be taken when feeding for weight gain not to cause digestive disturbances with the increased feed intake. The question then becomes “what should I feed my horse for weight gain?”

There are many feed ingredients that we can add to the diet to increase a horse’s body weight including: oats, rice bran, beet pulp, alfalfa or oil to name a few. It is important to understand the calories content of each of these ingredients in order to evaluate how much will need to be fed to achieve the desired weight gain (Table 1). Table 1 outlines how much of each of the chosen calorie sources would need to be fed over a 60 day period to achieve 40lbs of weight gain in an average sized (1100lb) horse. This is in addition to their maintenance diet, e.g. if the horse was currently being maintained on 15lbs of hay and 4lbs of sweet feed and you chose to use beet pulp as your additional calorie source you would need to feed an additional 4.7lbs of beet pulp (before soaking weight) for 60 days to gain around 40lbs.

Typically we recommend first increasing the amount and quality of forage available to the horse. Adding alfalfa hay, chaff or pellets will increase the calories content of the diet as well as supplying other critical nutrients such as amino acids and minerals. Next we can start to gradually increase the grain portion of the diet – this must be done with care so as not to cause any digestive disturbance. Then we should top dress the grain with a fat supplement or gradually switch the horse over to a high fat concentrate.

Fats and oils are commonly used in horse feeds to increase the calorie content of the feed or to replace the calories supplied by carbohydrates. Fat supplementation has many benefits including, providing calories for weight gain and providing essential fatty acids to improve skin and coat condition. On an equal weight basis vegetable oil provides horses with 2.5 times the digestible energy of corn and nearly 3 times the digestible energy of feeding oats. Thus, adding fat to the diet increases the energy density (number of calories per lb. of feed) of the diet. Thin horses will gain weight and do so without having to eat as much grain if the diet is fortified with additional fat.

Weight loss in horses can be caused by many different factors; once you have resolved those issues and started your horse on a more calorie dense diet it will begin to gain weight. Remember weight gain is a slow process – do not expect results over night. For more help designing the best diet for your horse contact your LMF feeding expert. They will analyze your hay and balance a diet that fits your horses’ needs and your budget.

<table>
<thead>
<tr>
<th>Table 1. Typical Ingredients used for Weight Gain</th>
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<tbody>
<tr>
<td>Ingredient</td>
</tr>
<tr>
<td>LMF Gold</td>
</tr>
<tr>
<td>Rice Bran</td>
</tr>
<tr>
<td>Beet Pulp (dry, no molasses)</td>
</tr>
<tr>
<td>Alfalfa hay</td>
</tr>
<tr>
<td>Oil</td>
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Needed an additional 6 Mcal/day above maintenance
Laminitis is a major disease of equines because of the associated pain and debilitating nature that make it a life-threatening condition. A complete understanding of laminitis and its complex physiology remains poorly understood despite substantial efforts and recent advances by many scientists. We understand that nutrition plays a key role in the prevention and management of laminitis and have developed successful nutritional management programs. However, exercise also plays a significant role in the prevention of laminitis but is less understood in terms of how long and how much.

Recent research at the University of Liverpool looked at the effects of exercise on inflammatory markers in laminitis prone and normal ponies. Increases in inflammatory markers have been shown in laminitic ponies and are thought to play a role in the development and progression of laminitis.

The researchers evaluated low intensity (10 min walking and 5 min trot) exercise over short (1 day) and longer (14 days) terms. They evaluated several inflammatory markers pre and post exercise in laminitis prone and normal ponies. Short term exercise had no effect on inflammatory marker in either group. After 14 days (long term) of exercise however inflammatory markers significantly decreased in the laminitis prone ponies to levels similar to the normal ponies.

The researchers concluded that regular low intensity exercise was sufficient to have an anti-inflammatory effect, which was greater in the pre-exercise laminitic prone ponies, and so may be beneficial in preventing this supposed risk factor in pasture-associated laminitis.

Take Home Message – Prevention is always the best option. Spring grasses will be here before we know it and once again we will be walking the fine line of allowing our horses’ access to the forage they need along with fresh air and sunlight and not allowing them to develop laminitis from this influx of carbohydrate rich abundant pasture. Make sure your horses and ponies are on a regular exercise program whether it involves riding or lunging or working in a round pen. If they are doing no exercise at present, gradually build them up to 3 to 4 days a week of low intensity exercise such as 10 min walk and 5 min trotting.

Do you know how to slow an aggressive eater?

Horses that tend to bolt their feed have a higher likelihood of choking. Slowing horses feed intake down can decrease a horse's risk for choke. Ways to do this include placing a large rock or brick in the horse's feed tub, feeding hay first, wetting down the feed and feeding horses out of tubs on the ground.

Do you know when the best time to feed horses before exercise is?

It really depends on exercise intensity. Horses doing short bouts of high intensity exercise should not be fed concentrate or hay less than 4 hours prior to exercise. Horses doing medium intensity exercise for a moderate duration should also have concentrate withheld 4 hours prior to exercise but should have constant access to hay. It is important that all horses have access to water at all times.
**LMF Gentle Balance**

*LMF Gentle Balance* is a feed formulated for pleasure horses performing light to moderate levels of exercise. If you have been wanting to feed your horse in a way that would provide gentle energy, vitamins, minerals, live yeast culture and balanced nutrition without adding excess energy from grain........The answer is here, *LMF Gentle Balance*, a pelleted, fiber and fat based feed that does not include grain. Since *Gentle Balance* does not include grain, the amount of sugar and starch in this feed is low. A high fiber and fat, low sugar feed may help control fluctuating levels of blood sugar that may result in favorable mood or behavior changes. Tired of feeding the sugars. Try feeding *LMF Gentle Balance*.

Feed LMF Gentle Balance at the following recommended intake levels, along with good quality hay, free-choice plain or iodized salt, and fresh water. Provide sufficient high quality forage, plain salt and plenty of fresh water.

Feed LMF Gentle Balance to adults (mature) horses at a rate of 3 – 8 pounds per day (for a 1000 pound horse). Vary the intake of Gentle Balance based on activity, body weight, and body condition of the horse.

Vicki Woosley found out first hand the effects of *LMF Gentle Balance* this is her and Ciara Mistique’s Story:

“I have a 19 year old Arabian mare that I rescued 4 years ago. She had been injured, was underweight by a good 200 lbs. and flighty as a bird. My formula for weight gain was working but she couldn’t seem to settle down and for every pound on she burned 2lbs off. I started thinking it might be too much grain so I asked my feed store (Copper Creek) for something with little or no grain in it.

They recommend *LMF Gentle Balance*. I tried it for her and within 2 months I noticed a major change in her level of hyper activity. She started calming down and walking out of her stall instead of exploding out. I also noticed she was putting on weight.

She is a typical Arabian, high headed, energetic and beautiful. I took her to a couple of horse shows and she was better mannered than my seasoned Quarter Horse.

Since I had tried several different feeds with this horse, I have to conclude that the *LMF Gentle Balance* is the feed that made the difference in her.”

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