

PSSM/EPSM DIETS

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Goals: To provide no more than 15% total daily calories from starch and sugar, and at least 20-25% of total daily calories from fat

Forage:

Either **grass or legume hay** (such as alfalfa) can be fed. Alfalfa hay does not have a high enough starch content to be a concern.

Grain hays such as oat hay and barley hay with remaining seed heads should be avoided.

The amount of forage is not critical - it can be varied depending on whether the horse needs to gain or lose weight. Just do not feed less than 1% of the horse's body weight in forage per day.

Lush spring pasture will be higher in starch and sugar than summer grass, and the amount of dietary fat may need to be increased during this time.

Vitamins and minerals:

Vitamin E: At least 1 IU vitamin E per lb of horse per day is important for all horses, especially those not on alfalfa products or green grass for much of the year. You cannot hurt a horse with extra vitamin E.

Selenium: About 1-2 mg selenium per 1000 lbs of horse per day is essential in areas that are selenium deficient. Selenium can be toxic at high levels, though, so be aware of all sources of selenium in your horse's diet, and ask your veterinarian to have blood tested for selenium levels if there is any question of selenium deficiency or excess.

"Broad spectrum" vitamins and minerals: Horses on fat supplemented diets often will not be eating the manufacturers recommended amounts of fortified commercial concentrated feeds per day. If forage quality is good, most vitamins and minerals will be adequately supplied by forage. For horses on lesser quality forage, hard working horses, breeding horses, and growing horses, addition of a daily vitamin and mineral supplement is important.

Other supplements: Hoof supplements, joint supplements, etc. are not a problem when feeding EPSM horses.

Fat: Most PSSM/EPSM horses need at least 1 lb of fat per 1000 lbs of horse per day.

Hypothesis: If young horses are fed a modified PSSM/EPSM diet they may not need the full fat "dose" during their lifetime.

Start with small amounts, such as 1/4 cup oil per feeding, and increase by about 1/4 cup every few days. Use the general rule that **two cups of oil = 1 pint = 1 lb.**

Treats for PSSM/EPSM horses: Most EPSM horses are fine with carrots and apples in moderation. Avoid treats based entirely on grain or sugar. My horses like Kellogg's Cracklin Oat Bran, which has about 20% calories from fat.

Specific Diets for PSSM/EPSSM Horses

***It is very difficult for feed companies to design commercial feeds high enough in fat to provide what I believe to be the proper calorie ratios to PSSM/EPSSM horses. Therefore, my dietary recommendations include an additional fat source**

In general, aim to feed no more than 5-6 lbs of any feed other than a pure forage based feed per 1000 lbs of horse per day.

Feed the minimum amount of feed in the bucket that gets the horse to eat the maximum amount of daily fat while maintaining good weight.

If it takes a small amount of something “sweet” (molasses, carrots and apples, apple juice, peppermint flavoring, a handful of oats or sweet feed, etc.) to get your horse to eat the right amount of added oil early on, this is not a problem. You can aim to decrease or eliminate this small amount of starch and sugar later.

Examples of very low starch and sugar feeds:

Alfalfa pellets
Other hay pellets
Alfalfa cubes - soak in water when adding oil
Beet pulp, low molasses content - soak in water
Complete feeds - meant to replace hay if needed
Dengie or chaff products
Chopped hay products

Examples of low starch and sugar feeds*:

*In general, feeds higher in protein and fat will be lower in starch and sugar. Ingredients such as soy hulls, beet pulp, bran, wheat brans, and wheat middlings are relatively low in starch and sugar.

Below are examples of low starch and sugar feeds, there are many others. If in doubt, contact the company and ask about starch and sugar content. Look for feeds no more than 33% starch and sugar.

If you can see grains in the product it is likely too high in starch and sugar for an EPSSM horse.

Purina Strategy (14% protein – NOT 12% protein)
Nutrena Compete
Nutrena Safe Choice
Blue Seal Hunter, Demand, Vintage Gold
Senior feeds
LMF Stage 1
LMF Complete
Equi-Pro Carb-Safe
Platform horse feeds
Triple Crown Senior, Complete, Growth
Triple Crown Lite
Triple Crown Low Starch
Purina WellSolve L/S and W/C

Update 2023: There are many more low starch and sugar feeds now for horses!

Examples of higher fat feeds and supplements:

These are examples of feeds that allow addition of less added fat. Most companies suggest using these only as an addition to other feed. For EPSSM horses, feed these alone along with good quality forage or a daily vitamin and mineral supplement:

Kent Feeds Omegatin (20% fat)
Nutrena Empower (22% fat)
Farmer’s Cooperative High Fat Low Carb (20% fat)
Moorglo (15% fat)
Rice bran, powdered (20% fat)
Buckeye Ultimate Finish (25% fat or 40% fat)
Nutrena Farr XTN (12% fat)
Re-Leve (about 10% fat)
Purina Ultium (12% fat)
Purina Amplify (30% fat supplement)

Calculate amounts of fat fed from these products by multiplying lbs fed per day by the percentage of fat. For example, 3 lbs of Ultimate Finish is $3 \times 0.25 = 0.75$ lb of fat.

Feeds with 20% or more fat can be supplemented with rice bran (20% fat) to provide additional fat. All other feeds require addition of a 100% fat source.

100% fat supplements:

Any salad type vegetable oil, such as soy, canola, corn, safflower, cottonseed, etc. Cocosoya and wheat germ oil are also fine, just more expensive.

Cool Calories 100 dry fat product, by Manna Pro
PSSUltimate Finish 100, Buckeye Feeds