Feeding the HYPP Horse

Hyperkalemic Periodic Paralysis (HYPP) is an inherited genetic defect that affects muscle function in the horse. Symptoms can vary widely among horses, from mild muscle tremors to death from cardiac arrest or respiratory failure. A test is available to identify horses that carry the defective gene. HYPP horses are sensitive to high levels of potassium in their diets, as well as sudden changes in potassium levels that can be brought on by stress, pregnancy and activity.

Symptoms of HYPP:

- Muscular fasiculations (tremors) down the rib cage and under the flank.
- Eversion of the third eyelid.
- Horse exhibiting signs of colic or "tying-up".
- Elevated blood serum potassium levels, 3-4 milliequivalents per liter (mEq/L) is a normal serum potassium, but can be as high as 12 mEq/L with a severe episode.
- Tetany, paralysis and death in severe cases.

Hay can have a much higher potassium level than commercial horse feeds or feedstuffs like oats. Feeding large amounts of Triple Crown Growth for growing horses or Triple Crown Senior for mature horses, with a limited amount of hay, allows for more control over the potassium level of the total diet. Grass hay usually contains a lower potassium level than alfalfa hay so only grass or mixed hay is recommended for HYPP horses. Feed the limited amount of hay twice per day and the horse feed three to four times daily, if possible. Here are some ways to safely feed horses that have been diagnosed or suspected of having HYPP by keeping dietary potassium levels low, less than 1.3%.

1. For mature horses, feed whole or crimped oats (0.4% potassium) and Triple Crown 30% Supplement even if you are feeding growing or lactating horses. Adjust the amount of oats fed to maintain proper body condition. Triple Crown Rice Bran Oil Plus can also be safely added to the feeding program. Or feed Triple Crown Low Starch (0.75% potassium) at a minimum of 6 lbs. per day in addition to your normal amount of hay. For mature horses in heavy exercise requiring a lot of feed to maintain desired body condition, the Triple Crown Training Formula (0.70%) will be an excellent choice.

2. If you have not tested your hay, or if the potassium level of your hay is 1.5% or more you may want to limit the amount of hay you are feeding to keep potassium levels low. You can contact your local or state extension specialist about testing your hay for potassium content. A test for potassium and several other minerals and nutrients should cost less than $20. Provide Triple Crown Low Starch (o.75% potassium), at 1% of body weight and feed only 0.5% of body weight of hay per day. This would be 10 pounds of feed and 5 pounds of hay for a 1,000 pound horse on a daily basis, which is the minimum amount of feed that should be provided for an inactive horse. For a more active horse, increase the amount of feed but not the amount of hay to keep the total dietary potassium level as low as possible.

3. Another method for growing horses is to feed a limited amount of hay and Triple Crown Growth as the main part of the diet. The following table shows the amount of hay and Triple Crown Growth to feed at different ages.

Feeding Guidelines for Growing HYPP Horses (lbs per day)*

Age	Body Weight	Triple Crown Growth	Grass Hay
6 months	550	9.0 - 11.5	3
12 months	850	11.0 - 13.0	4.5
18 months	1100	10.0 - 12.0	6
24 months	1250	9.5 - 12.5	6.5

*Mature weight of 1300 pounds.

Example 1: Feeding a Yearling Horse (850 pounds) Grass Hay and Triple Crown Growth.

11 pounds Triple Crown Growth (1% potassium)
4.5 pounds Grass Hay (1.5% potassium)

11 pounds Triple Crown Growth x .01 = .11 pounds potassium
4.5 Grass Hay x .015 = .0675 pounds potassium

Total Dietary Potassium = .178 pounds or 1.15% dietary potassium
(.178 lbs x 15.5 lbs x 100 = 1.15%)

Example 2: Feeding a Mature Horse (1200 pounds) Triple Crown 30% Supplement, Oats and Grass Hay or Triple Crown Low Starch and Grass Hay.

4 pounds of Oats (.4% potassium)
2 pounds of Triple Crown 30% Supplement (1% potassium)
14 pounds of Grass Hay (1.3% potassium)

Total Dietary Potassium = .218 pounds or 1.09% dietary potassium

OR

6 pounds of Triple Crown Low Starch x .0075 = .045 pounds potassium
12 pounds of Grass Hay x .013 = .156 pounds potassium

Total Dietary Potassium = .201 pounds or 1.12% dietary potassium