

# ***Swiftsure Equine Veterinary Services***

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## **Feeding a Horse with Insulin Resistance**

Similar to humans with Type II Diabetes, horses with Insulin Resistance (IR) do not respond normally to the insulin produced by their body. Our hope and goal is that with strict feed management, regular exercise and maintaining and lean body mass, the disease will not progress much further.

Maintaining the horse on a steady supply of low sugar/starch/carbohydrate foods so that their glucose and subsequent insulin levels do not spike, is crucial. Feeding horses small frequent meals, and through a slow feeder net helps us achieve our goals.

Regular exercise to burn any stored or circulating glucose, as well as encourage weight loss is equally important. Fat cells store many inflammatory mediators that encourage the propagation of inflammation throughout the body. These mediators lead to the desensitization of tissues to insulin as well as the inflammation of the laminae in the feet. So by eliminating excess fat cells, we can actually prevent the progression of the disease.

### *General guidelines to follow are:*

- ✓ No grass
- ✓ No sugary treats like apples and carrots
- ✓ Minimize unnecessary carbohydrates from their diet, such as: bran, oats, pellets, etc
- ✓ Feed hay with less than 11% non-structural carbohydrates (NSC). NSC is calculated by adding %WSC (Water Soluble Carbohydrates) + % Starch. If your hay analysis shows NSC percentage higher than 11%, you should soak the hay in clean water for 1-2hrs prior to feeding. Sugar concentration can be reduced by as much as 30% if submerged in clean water for 2 hours. Make sure to change the water between soakings
- ✓ Feed hay with less than 5% Fructans. Fructans have a strong association with triggering laminitis
- ✓ Maintain a lean body mass with minimal to no fat deposits
- ✓ Monitor changes in weight closely
- ✓ Regular exercise regime ie 7 days a week, same intensity of exercise every day
- ✓ Energy should be supplied by means of protein and fibre such as alfalfa pellets or cubes
- ✓ Note some alfalfa hays can be high in Fructans
- ✓ Repeat bloodwork to monitor for changes in circulating insulin and glucose levels

### Articles:

<http://www.thehorse.com/articles/32982/nutritional-management-of-insulin-resistance-in-horses>