

# Movement, Movement, Movement

A low-calorie, low-starch/low-sugar diet is an excellent start. But don't neglect the necessary component of weight loss: Exercise! Exercise will: 1. Make cells more sensitive to insulin, 2. Build muscle mass, 3. Burn more calories, and 4. Increase the metabolic rate. Encourage your horse to move.

## Even Fat Horses Need To Eat

Never limit feeding hay in an attempt to help your horse lose weight. Restricting forage creates a stress hormonal response that tells the horse he's in "starvation mode" and he needs to store more fat. He will eat more and consume it more quickly each time he receives his hay.

You can offer hay free-choice, so that it never runs out (not even for a few minutes), but you will need to use a slow feeding bag or feeder to accomplish this. With free-choice hay, your horse will start to self-regulate his intake, eat more slowly, and be less anxious. His metabolic rate will increase, and his tissues will become less resistant to insulin.

## Are Treats OK?

If they contain cereal grains or molasses, no. While an occasional carrot or apple won't tip the sugar scale for the entire diet, it is best to avoid sugary fruits and veggies on a daily basis. Better choices are alfalfa cubes or pellets, apple peels, banana peels, and watermelon rinds.



*Avoid sugary fruits and treats.*

## What Is Insulin Resistance?

Carbohydrates are digested down to a simple sugar—glucose. Insulin, a hormone secreted by the pancreas, acts as the "password" to get the glucose out of the bloodstream and into cells where it is stored as glycogen until the body needs energy. When this system works properly, the body is said to be insulin-sensitive. With insulin resistance, the cells don't always recognize the password, so the glucose remains in the bloodstream at rising levels, stimulating the pancreas to make more insulin. Not only do the cells suffer because they aren't getting enough energy (leading to muscle loss or hyperlipemia), but elevated insulin levels stimulate more fat storage. The more fat is deposited, the more insulin-resistant the cells become, leading to still more fat storage—a vicious cycle.

A definitive blood test for insulin resistance is difficult to obtain. Results from a one-time blood draw your veterinarian can do on site can be highly variable depending on when and what your horse last ate and how stressed he is about the procedure. Fasting beforehand can create false positive results due to the stress of having an empty stomach. The ideal test is the Combined Glucose-Insulin Tolerance Test (CGIT), in which your horse is given a set amount of glucose via IV, and then samples are drawn on a regular schedule over the next few hours to look at the insulin and glucose levels. However, doing this test outside of a clinic isn't practical.