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INSULIN RESISTANCE

Written by Dr. Carolyn Dean

"Insulin's job is to open up sites on cell membranes to allow the influx of glucose, a cell's source of fuel. Cells that no longer respond to the advances of insulin and refuse the entry of glucose are called insulin-resistant. As a result, blood glucose levels rise and the body produces more and more insulin, to no avail. Glucose and insulin rampage throughout the body, causing tissue damage that results in overuse and wasting of magnesium, and increased risk of heart disease, and adult onset diabetes.

*One of the major reasons the cells don't respond to insulin is lack of **magnesium**. Some studies show that chronic insulin resistance in patients with type II diabetes is associated with a reduction of magnesium; magnesium is necessary to allow glucose to enter cells. Additional studies confirm that when insulin is released from the pancreas, magnesium in the cell normally responds and opens the cell to allow entry of glucose, but in the case of magnesium deficiency combined with insulin resistance the normal mechanisms just don't work. However, the higher the levels of magnesium in the body, the greater the sensitivity of the cells to insulin and the possibility of reversing the problem."* – Dr. Carolyn Dean

While not many equate Insulin Resistance (Diabetes Type II) in humans to horses, the metabolics are similar and the same parameters of IR hold for both species.

The following raw fruits and vegetables are those which are high in **Magnesium** and are beneficial and safe to feed IR horses: Small amounts daily or use as treats during training to help get more Magnesium into your horse's diet.

Fruits:	Vegetables:	Nuts:	Most legumes are a good source of Magnesium but these are the highest.
Avocado Banana Blackberries Blackcurrants Breadfruit Dates Guava Kiwi Loganberries Mulberries Passion Fruit Pomegranate Prickly Pear Raspberries Watermelon	Amaranth leaves Artichoke Butternut squash French Beans Lima Beans Okra Peas Spirulina Swiss Chard	Almonds Amaranth Brazil Nuts Cashews Oats Peanuts Pine Nuts/Pignolias Pumpkin Seeds Quinoa Rye Wheat - Durum Wheat - Hard Red Wheat - Hard White	Adzuki Beans Black Beans Black Eye Peas Edamame Navy Beans Pinto Beans Soy Beans White Beans Winged Beans