Pregnant Mares and Insulin Resistance

HEIRO is used in broodmares to assist in getting in foal, or to help avoid pregnant mare laminitis or abortion.

Broodmares having problems getting in foal or with being pregnant, but getting laminitis or aborting due to Equine Insulin Resistance is a growing problem.

Many of these mares have chronic inflamed uterine tissues which are directly due to Insulin problems. High Insulin not only inflames the feet, but also the reproductive tract. This problem is also seen in women with Insulin Resistance problems.

Many of these mares have chronic uterine infections due to high Insulin. While attempting to get in foal antibiotics are needed multiple times due to mucus created by inflamed tissue in the uterus.

Insulin normally elevates during pregnancy; this is part of the developing process in horses. If the mare is already at a high Insulin level to start with then the Insulin surge in pregnancy puts the Insulin sugar super high and they cannot get into foal, fall off the cliff into Laminitis or abort. The HEIRO program can help mares because it provides the right feeding program and the right supplement to keep Insulin from super high levels.

Routine farrier care is crucial in these mares to discover any foot issues early. The farrier can report any evidence of early laminitis such as abnormal hoof growth, white line disease, and foot pain. Trims should be scheduled every 4-6 weeks after pronounced in foal and every 4 weeks at 6 months in foal mark.

Mares with preexisting Equine Insulin Resistant need special diets to ensure the right amount of nutrients from Day 1 of the pregnancy. Like other Insulin Resistant horses, the right snacks, farrier care, turn out, hay, grain, and supplements are needed. The ration balancers listed in the HEIRO program under Best Diet will be fed throughout the pregnancy. In early stages these, along with HEIRO, will be given and as the foal develops, increasing amounts of ration balancer will be given along with senior feeds. It will be a combo of both to meet increased needs. Large amounts of sweet feeds and carbs have shown in several studies to create huge Insulin spikes in the mares, and bone/muscle defects in the foals.

“Maternal obesity can severely impact offspring when they grow up. Having an obese mother may be worse than having nutrient restrictions.”

“In early pregnancy, many people are feeding too many calories and the mare is fat, but the actual diet is short of vitamins/minerals. That is when ration balancer pellets are ideal...Having the mare on a ration balancer supplement is critical during early gestation if you want to give her foal the best chance of being healthy and strong.”

-Dr. Cubitt, The Equine Chronicle (2012)

“The foals can become Insulin Resistant if their mares are fed high-starch diets late in pregnancy.”

-Dr. George, Domestic Animal Endocrinology (2009)

“Pregnant mares on high-starch diet in last trimester have a more increased Insulin response to the high-starch feeding than non-pregnant mares. At 7 months pregnant, Insulin levels of broodmares are higher than non-pregnant.”

-Dr. George, American Journal of Veterinary Research (2011)

“Insulin levels were lower in early lactation than in late pregnancy. Foaling and milk production helps naturally lower Insulin.”


The mares are kept on HEIRO during lactation. Of interest, Vitamin E is shown to pass in milk and to increase foal’s blood levels of Vitamin E in studies. HEIRO is high in Vitamin E.

Laminitis in the brood mare negatively affects the foal.

- Mare’s pregnancy time is shorter, so the foal has less time to develop
- Foal born has less weight, so weaker
- Placenta weight (nutrition source of foal) is lower so less nutrients getting to them

Conclusion: Laminitis creates vascular changes in the placenta of mares resulting in shorter gestation and lower birth weight

Avoid vaccine reactions in these Insulin Resistant mares.

Mares that are obese/IR cause bone abnormality in foals.

- Obese mares with IR going into pregnancy have higher IR, higher Insulin, and high leptin
- Foals from obese mares become IR
- Foals from obese mares have more bone abnormality like osteochondrosis

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Proper diet and exercise is essential for horse health. This product is a supplement to help maintain horse health. This product is not intended to diagnose, treat, cure, or prevent disease.