

Rogue Valley Equine Hospital

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Staff Veterinarian(s)

W. Ferguson, D.V.M.
T. Timmons, D.V.M.
A. Northcutt, D.V.M.
M. Benson, D.V.M.

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equine health care
needs.

541-826-9001

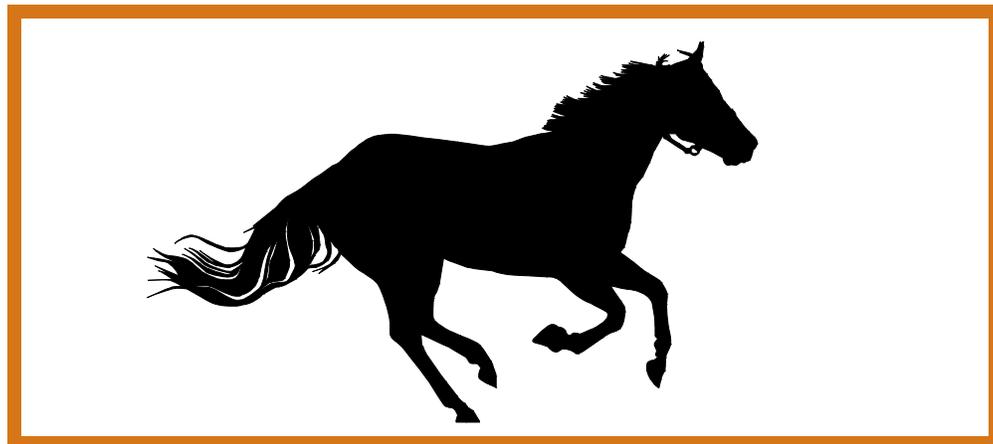
In case of emergency:

541-826-9001

Ext. 32

Office Hours

Monday-Friday
8 a.m. to 5 p.m.



Growing More Durable Equine Athletes

Avoiding Developmental Orthopedic Disease (DOD)

DOD is a group of conditions, including osteochondrosis (OCD) and physitis, that can adversely affect a young horse's athletic career by causing early onset joint disease or arthritis. Research has identified some of the causes of this condition many of which occur while the foal is still developing in the uterus of the mare. We, as horse owners and health care professionals need to be aware of what we can do to prevent this common problem. Genetics, diet and exercise have all been identified as factors that are involved in DOD.

Genetics: Foals that are genetically programmed for rapid growth are more likely to be affected by DOD. In the last month of gestation and the first few months of life foals experience explosive growth rates, growing to 50% of their mature weight, and 80% of their mature heights by six months of age. The biggest, fastest growing foals have the highest incidence of DOD. This indicates that during very rapid growth spurts foals are more vulnerable to developing DOD.

Start With High Quality Hay

The foundation of any feeding program should be a the best grass hay available. Horses have evolved eating grasses, and the mineral content of grass hay more closely matches their mineral needs than alfalfa. Alfalfa can be fed as a good source of protein along with grass hay, but if it is the only hay available you will need to balance the excess calcium by supplementing with a mineral supplement designed to be fed with alfalfa.

Ideally, you would like to meet as much of your growing horses' needs as possible with a good quality grass hay, then choose a well researched supplement or concentrate to provide whatever else is needed.

In our area, that supplement or concentrate needs to be a good source of **Selenium**, a mineral that is deficient in our soils. Mineral salt blocks are not usually adequate sources of this important mineral.

After your mare is in foal, nothing can be done to change the foal's genetics, but many things can be done to minimize the risks from other factors.

Nutrition: After genetics, the factor most affecting growth rate is caloric intake. *Carbohydrates are accelerators of growth rate.* Protein has little effect on growth rate even when fed in excess. More is not necessarily better, and is often a problem. Remember that the quality of growth depends on a balance of many different nutrients. The ratio of calcium and phosphorus, proper amounts of minerals such as Copper and Zinc, and essential amino acids such as methionine and lysine are all critical to growing horses.

Overfeeding concentrates high in nonstructural carbohydrates (NSC's) is the most common mistake made. Limiting concentrates to a reasonable level will help foals to grow in a steady, more controlled manner that avoids explosive growth spurts that can predispose them to DOD. Foals fed moderately will get just as tall as they would otherwise, and be much healthier when they mature than foals fed excessively.

Exercise: Research and experience have clearly shown a relationship between early exercise and DOD. Growing horses allowed free exercise or exercised moderately in addition to free exercise have less of an incidence of DOD and have less severe DOD than horses raised in confinement. Simply put, raising foals in stalls and small paddocks predisposes them to lameness problems later in life. Growing horses need to exercise regularly to develop properly strengthened bones and ligaments in preparation for future athletic pursuits.

Take Home Messages

- Genetics is the primary determinant factor for DOD.
- Remember that you are feeding a growing foal during your broodmare's pregnancy and provide an adequate and balanced diet.
- Feed for moderate growth rates.
- Provide abundant free exercise or a well structured forced exercise program along with adequate turn-out to growing foals.
- For horses with DOD, reduce caloric intake but maintain adequate protein, vitamin and mineral intake.

With all the feeds and supplements available today, designing a feeding program can be challenging. At Rogue Valley Equine Hospital, we strive to stay current on recent research and would be glad to help you formulate a balanced feeding program for your pregnant mare and growing foal.
