



# U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

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Volume 13, Issue 10

October 2015



## Research Update: Estrus and Mare Performance

Variation in the athletic performance of some mares that appear related to the estrous cycle have been observed. Estrus-related behavioral or performance problems include difficulties during riding or training, back or flank pain, aggressiveness to other horses or people, frequent urination, colic signs, and undesirable estrous behavior during competition or training. Synthetic progestins, including altrenogest (Regu-Mate), are used to modify undesirable estrus-related behavior or poor performance in mares. Bilateral ovariectomy (BLO) is regarded by some as a treatment of last resort for mares with estrus-related problems that fail to respond favorably to pharmacologic treatment. It is widely held that mortality accompanying surgery are reduced when mares are ovariectomized using laparoscopic techniques, and BLO is increasingly popular for treatment of estrus-related problems in working mares. Therefore, the objective of this research, conducted at Michigan State University, was to compare the perceived improvement in mares with estrus-related problems administered altrenogest and BLO.

Owners of mares with estrus-related problem(s) that had undergone BLO after altrenogest treatment completed a telephone survey. They rated the behavioral or performance improvements with altrenogest and after BLO on a 1 to 5 scale (1 = no response; 5 = complete resolution). They also compared improvement with altrenogest and following BLO (1 = better response with altrenogest; 2 = comparable responses; 3 = better response with BLO). Scores for the two treatments were then compared.

Twenty mares meet the inclusion criteria for the study. Mares ranged in age from 3 to 15 years with an average age of

9.4 years. Principal estrus-related problems, identified by owners or trainers, included kicking, bucking, or rearing; colic during estrus or ovulation; refusal to work during estrus; aggressiveness to other horses, people, or both; stallion-like behavior; undesirable estrus behavior during work; and flank pain during estrus.

Complications related to the BLO procedure were rare. Incisional swelling that resolved without treatment was reported for one mare, and two mares experienced mild colic signs shortly after discharge from the hospital that resolved with treatment of nonsteroidal anti-inflammatory drugs.

Median scores for BLO were significantly higher than those for altrenogest. The association of the perceived response to altrenogest and BLO was positive but relatively weak. In a substantial proportion of mares with estrus-related problems, a salutary response to altrenogest was associated with a favorable response to BLO; however, some mares showing limited improvement with the progestagen still responded favorably to BLO. In this series, BLO was perceived by owners or trainers to be at least as effective as altrenogest administration as a means of diminishing a number of estrus-related behavioral and performance problems. A clearer association of the responses to the two treatments, enabling clinicians to predict improvement after BLO, might be better established with a larger sample size and collection of endocrinologic data to establish the link between undesirable behaviors and hormonal status of affected mares.

For more information on this study, click [here](#).

*Summarized by Krishona Martinson, PhD, University of Minnesota.*

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### Upcoming Events Regional Horse Owner Program

Tuesday, October 27, 2015  
6:00—8:30 pm  
Bay View Elementary  
Duluth, MN  
\$15 per person  
Program registration required by October 23, 2015. To register, click [here](#). For more information, click [here](#).

### Lunch and Learn Webinar

December 1, 2015  
Noon to 1 pm (central)  
“Feeding Whole Grains”  
presented by Dr. Marcia Hathaway, Univ. of Min.  
To join, click [here](#).

Visit (and share) our [Webinar Library](#) for recorded lectures on over 20 horse health and management topics.

Visit our [Facebook](#) page for “Weed of the Week Monday”, “Tip of the Week Wednesday”, “Friday Funny” and special events.

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## Basic Trail Riding Etiquette

By: Krishona Martinson, PhD, University of Minnesota

Minnesota has an active equine industry with an estimated 90,140 horses and 13,048 farms, ranking Minnesota 13th in the nation with a \$1 billion impact on the state annually. In Minnesota, more than 1,000 miles of horseback riding trails are managed by the Department of Natural Resources, with more than 200 miles of additional trails on other lands. Minnesota is home to over five million people, of whom 4.5% participate in horseback riding. In a recent survey, horseback trail riders identified seven major reasons for trail riding, including to view the scenery, be close to nature, get away from the usual demands of life, experience nature, explore and discover new things, relax physically, and be physically active.

Fall is a wonderful time to explore trails and enjoy fall colors, cooler temperatures and fewer bugs. However, all riders should remember basic trail riding etiquette. Trail etiquette and safety are closely related since poor trail etiquette typically leads to an unsafe riding experience. Basic trail riding etiquette includes:

- Ensuring your horse is properly conditioned for the trail ride and hoof care is appropriate for the terrain
- Checking tack regularly for proper fit
- Ensuring at least one rider carries a working cell phone
- Packing basic horse and human first aid kits and a trail map
- Suggesting all riders, especially youth, wear helmets
- Encouraging all rider to wear appropriate clothing and foot wear (boots)
- Riding at the level and speed of the least experienced rider
- Maintaining at least one horse's body length between horses
- Announcing trail hazards including low branches, holes, dogs and other trail users and rocks
- Checking with other riders before changing gaits
- When passing other horseback riders or trail users, ride single file
- Ensuring horses depart and return to the trailer at a walk
- Allowing horses the opportunity to drink at water crossing and waiting nearby until all horses have drank

- Waiting for other riders in your group who have dismounted, for any reason, to remount
- Placing a red ribbon on tails of horses known to kick
- Avoiding drinking alcohol while riding

Many trails are open to multiple users (i.e. hikers or bicyclists) and part of good trail etiquette is ensuring horseback riders are respectful of trails and other trail users. This includes:

- Parking only in designated areas
- Riding only on trails designated for horseback riding
- Not littering
- Greeting other trail users
- Announcing your presence and passing other trail users slowly, in single file and on the left side

Good trail riding etiquette includes ensuring safety of horses and riders and consideration for fellow horseback riders, other trail users and the environment. Remember to expect the unexpected and be prepared to cross paths with other trail users. Finally, make sure to enjoy the ride!

## Ask the Expert: Acorn Toxicity in Horses

Question: My horses love eating acorns, but a friend of mine told me acorns are toxic to horses. Should I be concerned for the safety of my horses?

Response: Oak trees are commonly found throughout Minnesota and the U.S. Oak buds in the spring, and green acorn hulls in the fall are associated with horse toxicity. Tannins have been reported as the toxic agent in oak buds and green acorn hulls. The concentration of tannins seems to

decrease as leaves develop and the acorns mature and turn brown.

The toxic dose of green acorn hulls or oak buds is not known. However, animals ingesting large amounts of oak buds or green hull acorns for two days to more than a week may develop anorexia, constipation, diarrhea, colic, edema (swelling) of neck and abdomen, and polyuria (frequent urination). Liver damage rarely occurs in horses. Oak trees in horse pastures should not be cut down, but branches

should be kept out of reach of horses (i.e. trimmed above their reach). Young or small oak trees should be fenced for protection and horses should be fenced out of areas where green hull acorns are plentiful.

Bottom line, green hull acorns pose a much greater threat to horses compared to mature or brown acorns. For more information on oak toxicity, click [here](#).

By: *Krishona Martinson, PhD, University of Minnesota*