Veterinarians are frequently called upon to help horse owners control the estrus behavior (“heat”) in mares used as performance horses or as show animals. When some mares come in heat, the hormonal and behavioral shifts that take place distract from their ability to perform their sport.

Mares have a 21 day heat cycle. They are in “estrus” for about 1 week and then in “diestrus” (out of heat) for approximately 2 weeks. While in estrus, the ovaries produce large quantities of estrogen that is responsible for the changes in behavior. After they ovulate, the ovary produces the overriding hormone progesterone, which is responsible for suppressing the estrus behavior. Before deciding to manipulate your mare’s hormones, you should consult with your veterinarian. Sometimes a mare’s history can be suggestive of a hormonal problem. For example, a mare with a Granulosa thecal cell tumor of one of her ovaries often displays stallion like behavior.

There are several ways to maintain a high level of progesterone in mares thereby suppressing estrus behavior. The most reliable and the most common method is to administer an oral form of progesterone known as Regu-Mate®. This is the only method of progesterone supplementation in mares that has been approved by the Food and Drug Administration. Regu-mate works very well at suppressing estrus behavior, is easy to administer, and does not have any long term adverse effects associated with its use. The down side is it is relatively expensive (about $4.00/day) and can cause menstrual cramps in women if it comes in contact with their skin. If administering this drug you should make sure you have one of the dosing “guns” they sell for safer delivery. There are also intra-muscular shots of progesterone available that provide the desired effect in some mares. The down side is the need to administer shots on a regular basis, expense involved, off label drug use, and reduced efficacy.

For many years, veterinarians would use cattle progesterone implants placed under the skin of horses to prevent estrus. This involved a minor surgical procedure and off-label use of the product. Research has shown that this method of progesterone supplementation is largely ineffective in horses and has been abandoned by many.

One of the newest methods of estrus suppression was suggested at a fairly recent meeting of the American Association of Equine Practitioners and involves placing a Uterine Glass Ball (UGB) in a mare’s uterus at the end of her heat cycle. Uterine glass ball is just a little more medical sounding than marble, which is what it is. We get them at the toy store and they need to be 35mm in diameter (a “shooter”). Nobody has proven why this can be effective but some feel that the marble signals the uterus similar to a pregnancy. Our experience has been that this
technique is effective in about 50% of mares which is similar to the published data. The marble should be removed towards the fall when mares typically stop cycling.

Another way to suppress estrus behavior that often goes overlooked is spaying. People think of spaying oftentimes as a procedure for just dogs and cats but it can be a very feasible option for owners of performance mares with no plans to ever breed. Spaying mares has had a precarious past as it used to involve a dangerous procedure with a scary complication rate. The widespread use of laparoscopy in horses has revolutionized spaying of mares. There are many laparoscopic techniques available to do this, and all have advantages and disadvantages. Dr. Tom Yarbrough, a boarded surgeon from the Sacramento area has developed an exciting technique that is probably the least traumatic way to spay a mare yet. One of the main issues with spaying a mare by any means is how to control bleeding where the ovary is removed. Laparoscopic sutures can be difficult to place and laparoscopic stapling equipment is very expensive. Dr. Yarbrough found that if you occlude the blood supply of mare’s ovaries, you do not have to remove them. Left in place and with no blood supply, the ovaries appear to turn to fat and not produce anymore hormones. This is accomplished with a “zip-tie”, yes the thousand-and-one use zip ties you have in your kitchen drawer. The zip-tie is introduced into the mare’s abdomen through a laparoscopic instrument. The ovary is manipulated through the loop which is carefully tightened and the free end cut short. The procedure has been effective at reducing or eliminating estrus behavior in about 100 test mares. To get a feel for the behavioral changes you can expect, try a several week course of Regu-Mate first. Once spayed, the mare’s behavior should be close to what it was like while on Regu-Mate. Mares are held a gradually decreasing diet for several days before surgery because it is important to have their intestines as empty as possible prior to surgery to aid in visualization. The procedure generally takes about an hour and leaves two stitches on either side of the abdomen which are removed in several weeks. While other procedures to spay mares oftentimes cause abdominal discomfort for several days, mares undergoing the laparoscopic zip-tie procedure generally are back on full feed that night. Hospitalization is typically for about 4 days and they go back to work in several weeks. Call the office for a current estimate on the cost for the procedure.
Tim G. Eastman DVM, DACVS, MPVM was raised in Monterey County California where his family had deep roots in the local horse industry. Like many veterinarians, he decided to become an equine veterinarian at a very young age. He obtained a degree in Animal Science at Cal Poly San Luis Obispo and a business minor. He also obtained a doctorate in Veterinary Medicine from the University of California at Davis in 1996’ as well as a Master's Degree in Preventative Veterinary Medicine. He performed a one year internship at Littleton Large Animal Clinic in Littleton Colorado and then a 3 year surgical residency at Texas A&M University in College Station Texas. He met his wife, Alexandra (Alex) in veterinary school and got married during his surgical residency. They now work together as co-owners of Steinbeck Country Equine Clinic in Salinas California.