

New IUD for Suppressing Estrus in Mares

Researchers successfully tested a drug- and hormone-free approach for suppressing estrus in mares they say is safe, easy, and doesn't affect future fertility.

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Owners of marish mares are always on the hunt for ways to suppress [undesirable estrus-related behaviors](#) in these horses. While many methods exist, some are more effective, practical, and even safe than others. A researcher at the University of Massachusetts has devised a new drug-free approach for suppressing estrus in mares—one that could help manage performance mares and more.

Carlos Gradil, DVM, PhD, Dipl. ACT, professor in the school's Department of Veterinary and Animal Sciences, in Amherst, and adjunct associate professor at Tufts University's Cummings School of Veterinary Medicine, in North Grafton, described how to use the magnetic intrauterine device (IUD) and reported on its efficacy at the 2018 American Association of Equine Practitioners Convention, held Dec. 1-5 in San Francisco, California.

[Existing techniques for suppressing estrus in mares](#) include administering progesterone or progestins (the estrous cycle's dominant hormones), the hormone oxytocin, or a gonadotropin-releasing hormone vaccine (not approved for use in the United States); and inserting IUDs that mimic pregnancy. Historically, IUDs such as marbles have been problematic, causing inflammation and infection, breaking, adhering to the endometrium (the uterine lining), and being unintentionally left in the mare for years—all of which can compromise her fertility.

So Gradil tested a new IUD he designed with safety in mind. Composed of three shatter-proof magnetic beads, the device self-assembles into a ring upon insertion with an applicator into the mare's uterus. Veterinarians can place it into the mare during any stage of estrus, he said. Gradil described the device's benefits, noting it:

- Is drug- and hormone-free;
- Has a high retention rate;
- Prolongs diestrus (the period between estrous cycles);
- Is very convenient to insert and retrieve;
- Does not affect fertility; and
- Is easy to visualize via ultrasound and identify with a metal detector.

In his study Gradil inserted the IUD into 15 mares in estrus and 14 control mares—regardless of stage of estrous cycle—and found that it extended their diestrus period by an average of 74 days. It was more effective in younger mares than older ones. He removed the devices after three to 18

months using a magnetic retriever designed specifically for the IUD. The mares had a 100% retention rate and 100% pregnancy rate afterward, he said.

Gradil said this IUD can potentially help curb undesirable estrous behavior in performance mares, synchronize estrous cycles for embryo transfer, and control wild horse populations. He warned against using it in pregnant mares or those with existing uterine fluid or inflammation.