



## **DEPO-PROVERA® (MEDROXYPROGESTERONE) – Does this Medication Block Estrus in Mares?**

Patrick M. McCue

DVM, PhD, Diplomate American College of Theriogenologists

Horse owners, trainers, and veterinarians are all looking for easy, inexpensive, and effective methods to block behavioral estrus in performance mares. Some mares are more difficult to train or exhibit performance issues when in heat. A number of medications and management strategies have been used over the years to prevent estrus in mares. This article is the first in a series on the efficacy of medications or techniques used in mares to suppress heat.

Depo-Provera® is the brand name of the synthetic progestin hormone medroxyprogesterone. Depo-Provera® is used in human medicine as a method of birth control. Medroxyprogesterone has been administered to performance mares with the intention of blocking behavioral estrus.

A controlled study was recently performed to test the efficacy of medroxyprogesterone in suppressing estrus in mares. Eighteen mares with a history of normal estrous cycles and normal estrous behavior were selected for the study. The horses were randomly assigned to one of three treatment groups. Six horses were administered a saline placebo treatment once per week as controls. A second group of six horses were administered altrenogest (Regumate®) once daily for 6 weeks. Six additional horses were administered an initial dose of 1,600

mg of medroxyprogesterone as an intramuscular injection, and then received 400 mg once per week for an additional 5 weeks. This dose and treatment frequency were purposely chosen to be even higher than commonly used in mares to suppress estrus.

The goal was to compare the effect of medroxyprogesterone with that of a placebo treatment, which should not alter the estrous cycle, and altrenogest, a medication known to suppress estrus.

Mares were teased individually once per day by a stallion and the response recorded. Ultrasound examinations were performed three times per week and then daily when a follicle greater than 35 mm in diameter was detected. The size of the pre-ovulatory follicle and day of ovulation was noted. In addition, blood samples were collected for analysis of luteinizing hormone (LH) and progesterone concentrations. The researchers performing the behavioral (teasing) examinations, ultrasound evaluations, and hormone analyses were not privy to the treatment status of the mares.

The results of the study were clear. As expected, all mares treated with the saline placebo came into heat, developed a large follicle, ovulated and formed a normal corpus luteum. In contrast, mares

administered altrenogest (Regumate®) every day failed to show heat and did not ovulate during the 6-week treatment period.

Mares that received the medication of interest (medroxyprogesterone) all came into heat on schedule, exhibited normal follicular growth, ovulated, and formed a normal corpus luteum during the treatment period. In addition, there was no effect of medroxyprogesterone administration on concentrations of luteinizing hormone. In contrast altrenogest treatment resulted in marked suppression of LH levels. In summary, there was no evidence that medroxyprogesterone had any biological activity when administered to cycling mares.

Fact Check:

Medroxyprogesterone was not effective at suppression of estrus in this controlled study and therefore cannot be recommended for that use in performance mares.



**Mare exhibiting estrus when teased to a stallion**