



SYNOVEX® IMPLANTS – Can Progesterone Implants Made for Cattle Block Estrus in Mares?

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Synovex® implants are designed and approved to promote weight gain and feed efficiency in cattle. A dose of 8 Synovex® 'S' pellets contains a total of 200 mg of progesterone and 20 mg of estradiol benzoate. The pellets are designed to release their hormone product over a period of 100 to 150 days in cattle. Assuming a constant rate of pellet degeneration (which is unlikely), these implants would release approximately 1.3 to 2.0 mg of progesterone daily. We know from studies performed in the late 1970's and early 1980's that suppression of estrus requires administration of 100 to 150 mg of progesterone *per day*. However, mare owners and trainers continue to implant mares with Synovex® pellets in hopes of blocking estrus behavior for several months despite the lack of research data.

Consequently, a clinical trial was performed to evaluate the ability of Synovex® implants to suppress estrus in mares. Twenty-four mares were randomly assigned to one of four treatment groups of six mares each. Mares in one group received a subcutaneous placebo treatment, while mares in the other groups received subcutaneous implants of 8, 32 or 80 progesterone/estradiol pellets. Mares were teased with a stallion and the reproductive tract monitored by ultrasonography daily for 45 days. In addition, blood samples were collected for hormone analysis.

The results of the trial confirmed that Synovex® implants did not suppress estrus, inhibit follicular development or block ovulation in mares at any of the doses tested. In fact, there was no difference in behavior in mares receiving Synovex® implants and mares treated with a placebo. All mares exhibited normal heat behavior when teased to a stallion.

A small follow-up study was performed in which 8 Synovex® implants were administered to each of six geldings. Blood samples were collected from the geldings every 5 days for 45 days to evaluate progesterone levels. It was not surprising that progesterone levels remained undetectable in blood throughout the 45-day evaluation period.

In summary, the low amount of progesterone in the implants and the slow release rate are responsible for the lack of efficacy in suppressing estrus. The implants are designed for use in cattle and were not ever intended for use in mares.

Fact Check:

Results of this study clearly showed that Synovex® implants are not effective at suppressing estrus in mares. Consequently, they cannot and should not be used as a low-

cost 'short-cut' technique for blocking estrus
in performance mares.