

LUPRON® (leuprolide acetate) DEPOT INJECTION

Manufacturer – TAP Pharmaceuticals

Product information – Lupron®, approved by FDA, a GnRH agonist approved for treatment of prostate cancer, is very expensive if purchased, but can sometimes be acquired through donation from the manufacturer. In captive animals it has been used primarily in males to suppress testosterone and sperm production. It is probably not effective in male bovids or marsupials.

Latency to effectiveness - Because the initial effect is to stimulate the reproductive system, it is important to either separate treated animals from opposite sex individuals during the period of enhanced fertility or use another form of contraception. Females treated with a GnRH agonist should be considered fertile for 3 weeks following insertion. Males may remain fertile for 2 or more months, until residual sperm either degenerate or are passed (as following vasectomy).

Suppression of initial estrus/ovulation – The estrus and ovulation that can occur within 2 weeks following implant insertion can be suppressed with supplemental progestin treatment for 15 days (7 days prior- and 8 days post-implant insertion). [Megestrol acetate](#) tablets are the simplest form for short-term progestin administration, as the tablet can be offered as a treat to insure ingestion. If the animal has an unexpired MGA implant in place (less than 2 years old), MGA removal could be delayed until 3 weeks post Lupron® injection. Similarly, Lupron® should not be injected while the animal is being contracepted with Depo-Provera® due to a possible interaction at the cellular level which may inhibit down regulation.

Estrous cycles during contraceptive treatment - Lupron® first stimulates, then suppresses estrus in females. Species with induced ovulation (e.g., felids, some mustelids, bears) may ovulate and become pseudo-pregnant (also canids) when first treated. In males, initial stimulation may be accompanied by increased aggression or sexual interest.

Duration of efficacy and reversibility – Lupron® is available in various formulations lasting from 1 to 6 months, but because the release of hormone from the depot formulation varies by individual, actual duration of efficacy and time to reversal can vary considerably.

Use during pregnancy – GnRH agonists should not be used during pregnancy, as they may cause abortion.

Use during lactation – No available information specifically for Lupron®, but probably acts as other GnRH agonists. Therefore, no known contraindications once lactation has been established; however, treatment during pregnancy may impede proper mammary development.

Use in pre-pubertals or juveniles – Lupron® may prevent epiphyseal closure of the long bones, resulting in taller individuals. GnRH agonist use in prepubertal domestic cats was followed by reproductive cycles after treatment ceased. However, species differences may occur.

Consideration for seasonal breeders – In females, GnRH agonists can induce estrus and ovulation even during the non-breeding season in some taxa. In males, GnRH agonists can transiently stimulate testosterone production even during the non-breeding season. Treatment should begin more than two months prior to anticipated breeding season to prevent initiation of spermatogenesis, because it appears that suppression of sperm production is more easily accomplished before it has commenced.

Precautions - In general, the effects on weight should be similar to those from ovariectomy or castration. Preliminary data indicate that increased appetite will result in weight gain, especially in females, unless food is restricted. In males, muscle loss may result in overall weight loss if not replaced by fat. In sexually dimorphic species, males may become the size (weight) of females.

Reporting requirements - All institutions using Lupron® are asked to submit a complete [Contraception Center Survey](#) to the AZA Wildlife Contraception Center.

Please submit surveys to:

Sally Boutelle, Program Coordinator
AZA Wildlife Contraception Center
Saint Louis Zoo
1 Government Drive
St. Louis, MO 63110
314-646-4595; fax: 314-646-5534
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