

Fact Sheet Compiled by: Monica McDonald
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Depo-Provera®

Active Ingredient

Medroxyprogesterone acetate

Product Type

Progestin

Manufacturer

Pfizer

Product information

Depo-Provera, containing the synthetic progestin medroxyprogesterone acetate in a liquid, slow-release vehicle for injection, has been used most often in reproductively seasonal species (e.g., prosimians, bears, pinnipeds), species in which anesthesia for implant insertion is problematic (e.g., giraffes, hippos), and as an immediately available interim contraceptive (e.g., if an implant is found missing or to prevent post-partum estrus in callitrichids).

Safety to humans

There is no health risk to humans when administered as directed.

Dosing

Effective doses and injection intervals have been found to vary according to species. For most species, 2-5 mg/kg body weight every 2-3 months has been effective, with the following exceptions. In general, larger bodied animals require a smaller per kg body dose than small bodied animals.

- Giraffe - 450mg every 6 weeks
- Hippopotamus - 800-1200mg every 6 weeks
- Marine Mammals - 2-5mg/kg body weight every 30 days
- Bats - 5mg/kg body weight every 2-3 months
- New World Primates - 20mg/kg body weight every 30 days
- Lemurs - 5mg/kg body weight every 40-60 days as follows:
 - Lemur catta*- every 40-45 days from early September through the end of March
 - Eulemurspp.* - every 60 days from early October through the end of March
 - Varecia spp.* - every 45 days from early November through the end of April
 - Propithecus spp.* - every 45 days from early June through the end of December

Latency to effectiveness

Although individuals vary, threshold levels of the hormone should be reached in the blood within 1 to 3 days following IM injection. However, pre-ovulatory follicles are difficult to suppress, so, if cycle stage is not known, extra time must be allowed. Therefore, separation or alternative contraception should be used for 1-2 weeks after initiation of the product.

Signs of estrus during treatment

Synthetic progestins may achieve contraception by blocking ovulation, causing thickening of cervical mucus, slowing ovum transport, and/or interfering with fertilization or implantation. However, follicle growth may continue and sometimes be accompanied by estrogen production sufficient to cause estrous behavior. Ovulation may occur even though pregnancy does not ensue. Higher progestin doses may be preferred so that estrous behavior is prevented, but may not be effective in completely suppressing follicle growth and all estrogen production.

Duration of efficacy and reversibility

Duration of efficacy, and thus latency to conception following last injection, can be extremely variable and has been seen to vary from 4 weeks to 2 years in some individuals. The recommended dose for most species (2-5 mg/kg) is effective for at least 2 months in most species. However, New World primates require 20mg/kg every 30 days. Hippos and giraffe have been treated at lower doses but appear to need re-treatment every 6 weeks.

Use during pregnancy

Progestins are not recommended in late pregnancy because of the possibility of prolonged gestation, although the effect may depend on species and dose.

Depo-Provera is not recommended for females that might be pregnant, because its potentially long duration of efficacy may interfere with parturition; females should be confirmed not pregnant before starting treatment.

Use during lactation

Progestins are sometimes prescribed for lactating women and are considered generally safe for nursing infants.

Use in pre-pubertal animals

Lack of data on pre-pubertal treatment and potential long-term effects on fertility contraindicates recommending contraception before puberty. Future reproduction was not affected in calves of domestic cows on MGA-treated feed, but no published studies of pre-pubertal treatment with MGA or other progestins have been conducted with other species, so possible long-term effects on fertility are not known.

Precautions

Progestins may cause weight gain in all species. Possible deleterious effects on uterine and mammary tissues vary greatly by species; see cautions for each taxon.

In the human literature, Depo-Provera has been linked to mood changes. Because it readily binds to androgen receptors and is anti-estrogenic, females may experience male-like qualities (increased aggression, development of male secondary sex characteristics, etc.).

Consideration for seasonal breeders

Treatment should begin at least 1 month before the anticipated onset of the breeding season. However, in canids, treatment should begin more than 2 months before the time of anticipated estrus, because proestrus increases in estradiol can begin as much as 2 months before estrus, and it is known that this endogenous estradiol can exacerbate deleterious effects of progestins on the uterus and mammary glands. This synergy of estradiol and progestins may also occur in other carnivores, such as mustelids and ursids.

Reporting Requirements

All institutions using this product are asked to contribute contraception information for their animals to the AZA Reproductive Management Center's Contraception Database (<https://www.zoocontraceptiondata.org>). It is essential that accurate records of doses and treatment intervals be maintained, and results reported, to contribute to dosage development.

For questions about the RMC Contraception Database, contact:

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