Heat Cycles in Ferrets
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Photoperiod

If the photoperiod (hours of light per day) is correct, jills will be sexually mature at 4 months, and hobs at 6 to 8 months. The natural reproductive cycle of ferrets starts as the hours of daylight gradually lengthen, soon after the New Year.

Jills are 'seasonally polyestrous,' which means that they have multiple heat cycles, but only in the spring and summer. Males come into breeding condition a little earlier in the spring than jills. In the fall and early winter, their testicles are small and may be hard to find, moving away from the scrotum to the inguinal area (the groin). During the breeding season, both males and females have much stronger body odor and greasier skin than usual.

Female reproduction

Jills are induced ovulators, that is, they do not ovulate unless breeding takes place. This has serious consequences for the unbred jill, making her susceptible to certain disease conditions.

Bladder Infections and Stones: When she is in heat, the jill's vulva swells very noticeably, and there is a pale pink watery secretion. This constant dampness plus the open vulva allows bacteria to reach the opening to the urinary bladder, and some jills develop bladder infections and occasionally bladder stones.

Anemia and bleeding tendencies: There is very little risk in spaying a jill when she is in heat, if the surgery is done soon after the vulvar swelling is noticed. Surgery becomes risky when the jill has been in heat for more than three weeks. In some jills, the estrogen produced during the heat period prevents bone marrow cells from dividing as they generally do, and red cells, white cells, and platelets are greatly reduced in numbers. White blood cells provide protection against infection and platelets are required for blood to clot. About 50% of jills that have been in heat a long time gradually become very anemic and weak. They are more susceptible to infection than usual. Very slight injuries cause bleeding because their platelet counts are so low, and some ferrets bleed to death through their intestinal tract. Most severely affected jills die even with treatment. Multiple blood transfusions are necessary to save their lives, and although surgery is hazardous, they must be spayed right away to shut off the production of estrogen.

Hair loss: Jills in prolonged estrus often lose their hair. The hair first thins at the base of the tail and inside the legs. The hair loss then gradually extends over most of the body, with the possible exception of the tip of the tail and the head.

Controlling estrus in jills

Ferret breeders have the option of controlling a jill's estrus periods by:

- manipulating light cycles,
- breeding her whenever she comes in heat, or
- artificially ending an estrus with injectable hormones.

Jills come in heat about 6 weeks after a dramatic artificial change in light cycles, for instance going from 8 to 14 hours of light a day. If the light is not bright enough, results will be less predictable. Maintaining photoperiod at 8 hours of light prevents most jills from coming in heat for about a year.

Injectable hormones to induce ovulation should be given 10 days or more after the swollen vulva is first noticed, and estrus usually ends within a week. The injection will not work if given earlier in the estrus period. About 5 days after hormone treatment, there will be a noticeable reduction in vulvar swelling. If the jill has been in heat a long time (e.g., more than 3 weeks), the hormone will induce ovulation, but because the jill has such high levels of estrogen, the signs of estrus will not immediately subside.

The timing of the next heat after a hormone injection is unpredictable, depending on many factors, including photoperiod, diet, and the duration of the jill's heat before hormones were used.