



## **Ferret Neutering**

### **Reproduction**

Sexual maturity occurs in the first Spring after birth and the breeding season of ferrets is usually March to September as day length starts to exceed 12 hours. The gestation period is around 41/42 days. The average litter size of a ferret is eight, and the weaning happens around 6-8 weeks.

### **Reasons for Neutering**

Female ferrets, or jills, are induced ovulators, (i.e. they require the act of mating to stimulate them to release an egg). This means that they will stay in season (oestrus) until they are mated, or until day length shortens. Remaining in season can often cause severe health problems for a jill; including hair loss and even death due to anaemia (deficiency in red blood cells). Hence a neutered female will avoid the health risks of an extended season and the risk of unwanted pregnancy.

Male ferrets, or hobs, can display dominance related aggressive behaviour which can be reduced by neutering. Neutering also helps to reduce their typical musky smell.

Ferrets are sociable animals so neutering allows mixed groups to be kept together in addition to health benefits. Castrated males may even show increased play behaviour.

### **Surgical neutering under general anaesthetic**

When castration and spaying is performed, it is generally advised that it should not be done until after puberty to delay the possible onset of adrenal disease. However, this is open to debate as ferrets are neutered later in the Netherlands and still suffer adrenal disease as do ferrets in the USA neutered at 6 weeks of age.

Spay - Females are neutered via surgical removal of the ovaries and uterus.

Castration - Males are neutered via surgical removal of both testicles. A castrated male may be known as a 'hoblet'. Closure of the operation sites will most often use absorbable sutures placed below the skin surface to minimise operation site interference.

Vasectomy of the male - This is achieved via removal of a section of the spermatic cords/tubes (vas deferens) to prevent transfer of spermatozoa from testicles to penis. The testicles are left in situ with an intact blood supply. The vasectomized male should obviously be kept away from entire females for a period of time after the operation to prevent pregnancy. The male can still mate a female to induce ovulation and stop a season but not produce pregnancy. Intact females can be kept with a vasectomized male but in this situation, there is no reduction in hormone levels in the male and some owners may find the aggressive nature of natural mating behaviour distressing and stressful to the female. Also with testicles still present, the males continue to produce testosterone and exhibit male behaviour including urine spraying in addition to their musky odour.

### **Chemical contraception**

Unfortunately, surgical neutering in ferrets of both sexes has been linked with the occurrence of hyperadrenocorticism (adrenal disease), and adrenal tumours.

Hyperadrenocorticism in ferrets differs from the disease in dogs and humans in that it is not cortisol levels that are increased, and research suggests that it is caused by excessive production of sex hormones following neutering. Castration and spaying removes the production of the sex hormones and this creates a hormonal imbalance causing the pituitary gland in the brain to release excessive amounts of a hormone called Gonadotrophic Releasing Hormone (GnRH) to stimulate the absent testicles and ovaries. This excessive production of GnRH in many ferrets over time causes changes in the adrenal glands and adrenal disease develops. Signs of hyperadrenocorticism in ferrets include hair loss, swelling of the genital area, itchiness, urinary blockage or prostate enlargement and cyst formation in hobs.

An alternative to surgical neutering is available with chemical contraception. Either sex can receive an



implant of deslorelin, 'Suprelorin', placed under their skin - usually this is done whilst sedated or anaesthetized. The implant is performed at regular intervals throughout the ferret's life.

Research suggests that chemical implants are effective in preventing adrenal tumours in ferrets and offer a promising alternative to surgery. The implants can be used in both sexes and work to reduce the release of GnRH from the brain and remove the trigger for sex hormone production in the adrenal glands which causes damage to these glands. If a ferret is surgically neutered and is showing no signs of adrenal disease, then it is still possible to use implants as a preventative measure against such adrenal disease.

Careful consideration and discussion is therefore required between owner and veterinary surgeon to decide upon the risks and benefits of any of the above options of reproductive management and neutering in general.

Surgical neutering is often the most cost effective option but may lead to adrenal disease whereas implant use has many advantages but requires a long-term financial commitment. In some cases, a combined approach may be considered.

### **Suprelorin Implant**

- Used in males and females.
- Suprelorin (deslorelin) implants last 8.5 to 20 months depending on the strength of the implant used.
- These implants will be placed under the skin most usually with the ferret under sedation or general anaesthesia. The implants are slightly larger than a standard pet microchip.
- The implant does not require removal as eventually its efficacy runs out and is absorbed by the body. But the implant can be removed should one want to stop its action.
- After implant a short oestrus (maximum 2 weeks) may occur but is transient.
- How frequently implants are given depends on the amount of hormone in the implant, the individual's response to the chemical agent, and the cost of implants.
- The implants effectively prevent reproduction and the musky odour of intact females and males.

Please make an appointment with one of our vets if you wish to discuss any of the above in more detail.