There's more than one way to crack a nut.



Suprelorin® offers a reversible, alternative to surgical castration with the same benefits as surgery

Shaping the future of animal health

Virbac

Suprelorin® offers a choice to you and your pet owners

25% of pet owners are concerned or very concerned that neutering could be harmful for their dog[1]

1/3 of pet owners would look at alternative methods to surgical castration[2]

67% of pet owners with intact pets have not chosen to surgically castrate because it is permanent[2]

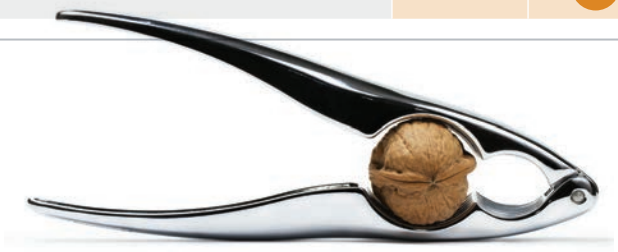
There are many reasons why a pet owner may consider surgical castration.

These include:

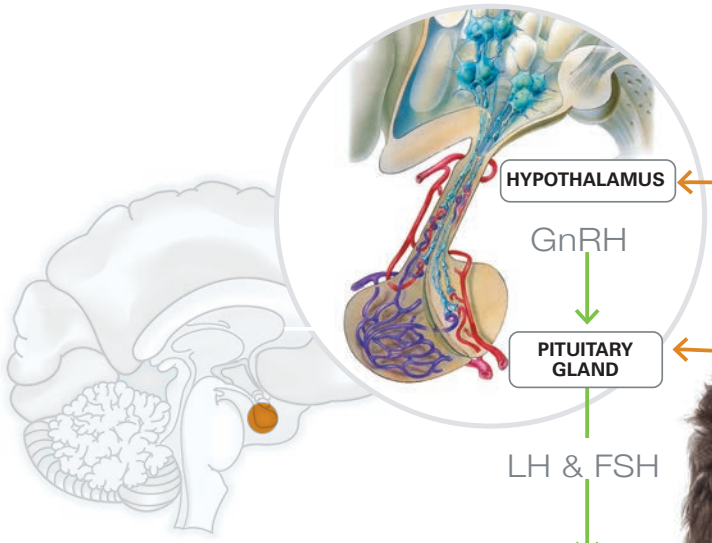
- Unwanted litters
- Urine marking (and odour in cats)
- Hypersexuality
- Unwanted social behaviour
- Testosterone related diseases

Why choose Suprelorin® over surgery?

	DOG	CAT
No need for general anaesthetic	✓	✓
See the effect on behaviour without the permanence of castration	✓	✓
May want to breed at a later date	✓	✓
Behavioural benefits of neutering during training	✓	
Reduce urine marking and urine odour		✓
Allow enough time between neutering, vaccination and homing to minimise stress		✓



Normal regulation of testosterone



HYPOTHALAMUS

GnRH

PITUITARY GLAND

LH & FSH

GONAD e.g. Testes

TESTOSTERONE → Peripheral target cells

Suprelorin® reduces serum testosterone below a functional infertility threshold of 0.4ng/ml*

How does Suprelorin® work?

Suprelorin® contains deslorelin in a slow release lipid matrix.

Modified amino acids at positions 6 and 9 increases the effect, raises receptor affinity and reduces susceptibility to enzymatic degradation - giving a sustained, prolonged action.

Deslorelin is a GnRH super-agonist with a high affinity for receptors in the pituitary gland.

Implantation

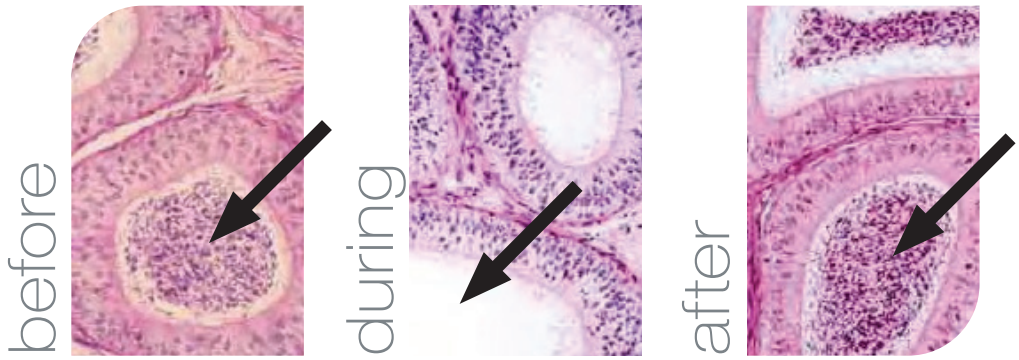
Initial phase stimulation

Long term suppression of FSH and LH release

Produces functional infertility with reduced libido

Reversible reduction of sperm production.*

Testicular tissue under a microscope - before, during and after implant use. Notice the presence, absence and then return of sperm in the tubules of the testes.





Suprelorin® enables pet owners to see the effects of castration without the permanence of surgery.



*Testosterone suppression and reversible sperm production for dogs only

Key facts

- Sharp, elongated needle for ease of use.
- Available in packs of two preloaded needles with a reusable syringe body.
- Blue spacer in the needle lets you know the implant has been inserted successfully.
- Simple subcutaneous injection between the shoulder blades.
- No need to remove the implant.
- Can be used repeatedly for continuous infertility in dogs.[3]
- Testicular size significantly reduces in dogs during effect. This can be used as a visible measure for vets and pet owners.
- Long shelf life - 9.4mg can be kept for 2 years and the 4.7mg presentation has a shelf life of 3 years.





White wax-like slow release lipid matrix containing **deslorelin**.

Successful implantation and blue spacer visible.

Licensed in ferrets too!



Ferrets are neutered to suppress fertility, reduce odour and reduce aggressive territorial behaviour.[4]

Surgical castration in ferrets may be associated with an increased incidence of hyperadrenocorticism.[5]

Suprelorin® offers an alternative.

Available in two presentations:



Suprelorin® 4.7mg for dogs



- Licensed for use in entire male dogs.
- Infertility lasts for at least 6 months.

Functional infertility from 6 weeks. Normal return to blood testosterone in at least 80% within 12 months, and 98% by 18 months.[3]

Suprelorin® 9.4mg



- Licensed for use in entire male dogs and ferrets.
- Infertility lasts for at least 12 months in dogs. In ferrets, the implant can last up to 4 years when implanted at commencement of the breeding season.

Functional infertility from 8 weeks in dogs and from 5-14 weeks in ferrets. In dogs, at least 68% return to normal blood testosterone levels within 24 months, and 95% by 30 months.[3]

Suprelorin® 4.7mg for cats

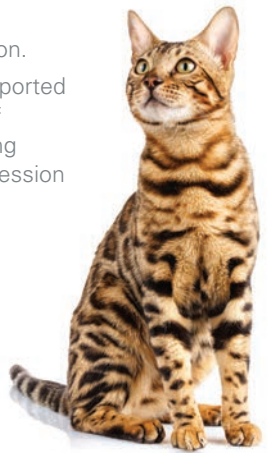


- Licensed for intact male cats over 3 months of age
- Infertility and reduction of sexual behaviours and urine odour lasts approximately 12 months

Functional infertility from approximately 6 weeks and sexual behaviours from just one week post implantation. When implanted in 3-month old male kittens, suppression of fertility lasted at least for 12 months in 100% of cats and for more than 16 months in 20% of cats.

The maximum duration observed is 28 months following implantation.

There is a 1-3% lack of efficacy reported based on continued expression of sexual behaviours, mating resulting in pregnancy, and/or lack of suppression of plasma testosterone levels[3].



References: 1. Mo Gannon & Associates (2017). Do you think neutering is harmful for dogs?. MG&A. **2**. Harris interactive. Understanding the usages & attitudes around cats & dogs sterilization and evaluating the potential of Suprelorin. (2017). **3**. Suprelorin EMA MA Dossier; **4.** Mullen, H. (1996). Soft Tissue Surgery. In: Hillyer, E.V. ed. Ferrets, rabbits and rodents: clinical medicine and surgery. Philadelphia: Saunders, pages 131-144. **5.** Schoemaker, N.J. & van Zeeland, Y.R.A. (2013). Endocrine Disease in Ferrets, Utrecht University Repository, 23 (4), 19-30;

Suprelorin® contains deslorelin acetate UK: POM-V IE: POM

For further information contact: Virbac Ltd, Woolpit Business Park, Windmill Avenue, Woolpit, Bury St Edmunds, Suffolk IP30 9UP.
Tel: 01359 243243
UK: Email: enquiries@virbac.co.uk Web: https://uk.virbac.com
IE: Email: enquiries@virbac.ie Web: https://uk.virbac.ie

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