

# ANIMAL BIRTH CONTROL



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# Why Birth Control for Dogs

- Control population
- Prevent transmission of disease
- Eliminate behavior problems
- Prevent pseudopregnancy
- **The Municipality is under pressure from certain sectors of the community who see the dogs as a nuisance, and are afraid, dogs also transmit rabies**

# Non-surgical methods for controlling the reproduction of dogs and cats

- Synthetic progestins, androgens and receptor blockers
- GnRH agonists and antagonists
- Zinc gluconate solution (Neutresol)/Calcium chloride intratesticular
- **Vinylcyclohexene Diepoxide** VCD works by up-regulating cellular and molecular processes of apoptosis, thereby accelerating the natural process of follicular atresia.
- **Retinoic Acid Receptor Antagonists** are compounds believed to inhibit biosynthesis of testicular retinoic acid, resulting in reduced spermatogenesis

Group	Active ingredient		Trade Name	Company	Pack/ Conc.
Progestins	Megesterol acetate	Tab.	Endace 40	Samrath Pharma	40 mg
	Hydroprogesterone caproate	Inj.	NT-Natal	Kee Pharma	250 mg/ml
		Inj.	Gynonys depot	Unisankyo	250 mg/ml
		Inj.	Duraprogen	Ag.Vet. Unichem.	250 mg/ml
		Tab.	Megest	Uni Sankyo	2.5 mg, 10 mg
	Medroxy progesterone acetate	Tab.	Orgamed	Infar	10 mg
		Tab.	Meprate	Serum Institute	10 mg
		Tab.	Duphaston	Duphar India	5 mg
	Dydrogesterone	Tab.	Duphaston	Duphar India	5 mg
Progesterone	Tab.	Uaiprogestin	Unichem	50 mg	
Estrogens	Diethylstilboesterol	*			
	Forfesterol	Tab.	Honvan	Khandelwal Lab	120 mg
	Ethinyl estradiol	Tab.	Lynoral	Infar	0.01 mg, 0.05 mg
	Estradiol Valerate	Tab.	Progynova	German Remedies	1 mg
		Inj.	Progynon	German Remedies	10 mg/ml
	Estriol	Tab.	Evalon	Infar	1 mg
	Estradiol cypionate	Inj.	Ovalan	Schering*	
	Mestranol	Tab.	Ovulen	Searle	0.1 mg mestranol 1 mg ethynodiol acetate
Androgens	Testosterone propionate	Inj.	Testanon-25, 50	Infar	25 mg, 50 mg/ml
	Testosterone Phenylpropionate	Inj.	Sustanon 100	Infar	Propionate-20 mg Phenylpropionate-40 mg
					Isocaproate-40 mg
	Mibolerone	Drops	Cheque	Upjohn*	

Antiestrogens	Tamoxifen	Tab.	Tamofen	Torrent	10 mg
		Tab.	Nolvadex	ICI	10 mg
	Clomifene	Tab.	Oncotam	Cadila	10 mg
		Tab.	Rejun-25 Fertomid	Unisankyo Cipla	25 mg 25 mg, 50
mg					
Antiprolactin	Bromocryptine	Tab.	Proctinal Serocryptin	Biddle sawyer Serum Institute	2.5 mg 2.5 mg
Antiandrogens	Delemadinone acetate	Tab.	Profar	Infar	25 mg
	Allylesterenol Finasteride	Tab.	Finpecia	Cipla	1 mg
Prostaglandins					
PGF2 $\alpha$	Carboprost	Inj.	Prostodin	Astra, IDL	125 $\mu$ g, 75
$\mu$ g	Tiaprost	Inj.	Iliren	Intervet	0.196 mg/ml
	Dinoprost	Inj.	Lutalyse	Upjohn	5 mg/ml
PGE2	Dinoprostone	Tab.	Primiprost	Astra IDL	0.5 mg
		Cream	Cerviprime Gel	Astra IDL	0.5 mg/3 gm

- The Animal Birth Control (Dogs) Rules were notified in 2001 in India
- **What are street dogs?**

Most free-roaming dogs belong to an ancient canine race known as the Pariah Dog. Dogs have existed all over Asia and Africa ever since humans started living in settlements.

They were the first animals to be domesticated. They are, and have always been, scavengers. In India the breed has existed for perhaps 14,000 years or more.

The word 'stray' is used for street dogs in the context of the animal not being an 'owned' dog or a 'pet' dog.

- In countries such as India, where exposed garbage and slums encourage the existence of street dogs, killing or removing them has proved ineffective in controlling rabies or the dog population.

# ABC Program

- 1. Street dogs are sterilized and put back in the same territory.
  2. Since territories are not left vacant, new dogs will not enter.
  3. Mating and breeding also cease.
  4. With no mating and no puppies, street dog fights and accidental bites to humans also becomes scarce.
  5. The street dogs are immunized and hence they cannot spread rabies.
  6. Over time, street dogs die a natural death and their numbers dwindle.
- As a result, the street dog population becomes stable, non-breeding, more friendly and rabies free, with a gradual decrease in numbers over a period of time.

# Catching Techniques

- Street dog catching staff must be vaccinated against rabies.
  - The following four methods are acceptable for catching street dogs:
    - ☐ By Hand
    - ☐ Sack and Loop Method
      - ☐ Use of Dog-catching hoops with nets (Butterfly Nets)
    - ☐ Use of the Balinese pole-net
- Use of tongs, wires and chains to catch street dogs are strictly prohibited, since these cause injuries and extreme stress to the animal.**

# Dos and Don'ts with regard to catching of street dogs

Street dogs should be caught and released preferably in the early morning hours to avoid heat stress and to prevent the dog-catching vehicle being delayed by traffic jams.

The street dogs must be released at the point of capture, ideally following the GPS app which is widely available in India.

The street dogs that are caught should not be under 6 months of age.

Old street dogs and visibly pregnant bitches should not be caught.

Street Dogs with severe mange or scabies or those with signs of possible infectious diseases should not be caught along with healthy street dogs.

Females that are lactating should not be caught

Use a 'periphery to centre approach' of catching street dogs.

# Transport of stray dogs to ABC facility

- Vehicle should be such that it can go to small lanes
- ☐ The street dogs should also be transported in a manner that they do not fight with one another.
- ☐ The vehicle must be adequately ventilated.
- ☐ The vehicle must be cleaned, watered and disinfected on a daily basis.



# Basic infrastructure for ABC Programmes:

- Before an ABC Program can be carried out, care must be taken to ensure that minimum standards of housing, feeding, hygiene and veterinary care are provided for the street dogs. The preparation room and operation theatre must be well equipped with necessary instruments, equipments and medicines to adequately handle the volume of work as well as to ensure that surgery carried out on the dogs is free of any untoward complications. Care must also be taken to ensure that adequate number of personnel are available on duty to run the ABC Program efficiently. There must be provision for a doctor's room, pre-operative preparation room, post-operative recovery room, kitchen, medicine stock room, attendants' quarters, suitable kennels, quarantine facility with a separate entrance etc.



- ABC Implementing Agency that undertakes 200 ABC surgeries and 200 anti-rabies vaccinations per month, the following personnel should be employed:
  1. One Veterinary Surgeon who can do the FTE (full time equivalent) work of 40 hours /Week.
  2. One Veterinary Surgical Assistant, para-vet, Veterinary Nurse or an experienced Veterinary Assistant.
  3. At least two dog handlers or attendants who will attend to the catching, transportation, feeding, exercise and post-operative care of the dogs.

# Surgical approaches

- Gonadectomy refers to the surgical removal of the male or female gonads (testes or ovaries)
- Ovariohysterectomy refers to the surgical removal of the ovaries and the uterus

# Pediatric neutering

- Sterilizing puppies and kittens aged over 6 weeks and weighing more than 2 pounds ... shelters and breeders can ensure the inability of those animals to be accidentally or intentionally bred by new owners.  
Owned pets may best be served by scheduling surgery at 4 months of age or older to allow time for the development of immunity through vaccination.

	Pros	Cons
<b>Female Dog</b>	<ul style="list-style-type: none"> <li>▪ Completely effective sterilant</li> <li>▪ Decreased incidence of mammary neoplasia (depending on timing of gonadectomy) (a)</li> <li>▪ Decreased incidence of reproductive tract (ovarian/uterine) disease (b)</li> <li>▪ Decreased incidence of reproductive behaviors (c)</li> <li>▪ Eliminates the risk of difficult birth (dystocia)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Surgical complications</li> <li>▪ Increased incidence of urinary incontinence (e)</li> <li>▪ Increased incidence of hematologic, bone, and bladder tumors (f)</li> <li>▪ Increased disposition to knee injury (g)</li> <li>▪ Obesity (h)</li> <li>▪ Possible breed-related decreased lifespan (d)</li> </ul>
<b>Male Dog</b>	<ul style="list-style-type: none"> <li>▪ Completely effective sterilant</li> <li>▪ Decreased incidence of reproductive tract (testicular and prostatic) disease (except prostate tumors) (b)</li> <li>▪ Decreased incidence of reproductive behaviors (c)</li> <li>▪ Possible increased lifespan (d)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Surgical complications</li> <li>▪ Increased incidence of hematologic, bone, and prostate tumors (f)</li> <li>▪ Increased predisposition to knee injury (g)</li> <li>▪ Obesity (h)</li> </ul>

## Ovario-hysterectomy

Indications: i) **elective sterilization** to prevent objectionable estrus and pregnancy, ii) as a **therapy for uterine, ovarian, vaginal and other genital pathologies** and iii) as a elective means for **preventing diseases like those of the mammary glands** and to prevent hormonal changes that interfere with medication in diseases like diabetes and epilepsy.

The customary age for elective spaying of dogs and cats is **6 months**.

**Preoperative considerations** Fasting for 24 h, complete blood count

**Anesthesia** General anaesthesia

**Operative procedures:** Flank or midline laparotomy and Laparoscopic

**Post-operative complications**

Haemorrhage

Uterine stump pyometra →→→→

Estrus following surgery due to remnants of ovarian tissue

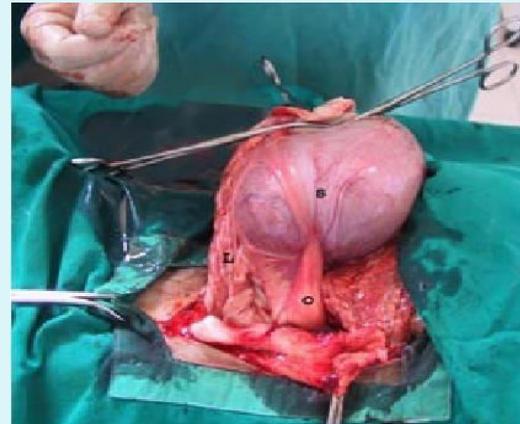
Ligation of ureters leading to hydronephrosis

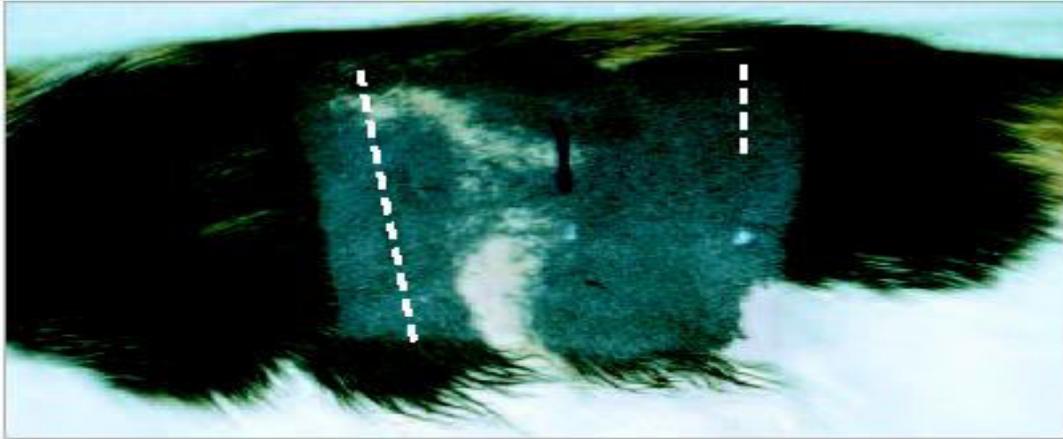
Fistulous tracts

Urinary incontinence

Body weight gain

*Eunuchoid syndrome* (decreased aggression, interest in work and decreased stamina)





**Figure 2.** Prepped surgical area and proper incision location for a left lateral flank approach in a cat (*dashed line on left: location of the last rib; dashed line on right: location of the iliac crest*).

## Procedure of flank laparotomy for spaying in the cat



**Figure 3.** Exposure of the ipsilateral ovary in a cat.



**Figure 4.** Exposure of the contralateral ovary in a cat.



**Figure 5.** Exposure of the uterus in a cat.

# Thank You

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