Reproductive Cycles in the Dog and the Cat

Now that routine desexing has been delayed to beyond six months of age, we are finding that some animals have been coming onto heat. What does this mean and how can we prepare ourselves for what is to come?

DOGS

Heat in a dog is another name for the oestrous cycle. This is a regularly reoccurring cycle during which the female is sexually active and receptive to the male and where pregnancy is possible.

Female dogs or bitches become sexually mature on average between six to twelve months of age with a range of four to twenty-four months.

Smaller breeds reach puberty sooner than larger breeds. Maturity is marked by changes in the size and shape of the vulva and nipples (both becoming more prominent and swollen) , changes in hormone levels, vaginal bleeding and changes in behaviour. Female dogs are able to become pregnant during this time. The average time between cycles in dogs is six months but can range between 4 and 24 months. The oestrous cycle is divided into the following phases:

1. **Pro- oestrous** lasts 7-10 days and its beginning is marked by a blood vaginal discharge. During this time the female dogs will develop an obviously swollen vulva as well. During this time, female dogs will attract male dogs but they will not stand for them to allow mating, sometimes even becoming aggressive to the male dog that tries to mount her. The purpose of this phase is to prepare the uterus for a potential pregnancy and to advertise to all the male dogs that the bitch will soon be ready to mate and hold a pregnancy. Some dogs are very fussy about cleanliness and may be seen licking themselves more often. They may be clingier.
2. **Oestrous** lasts approximately 9 days and the beginning is marked by a willingness of the bitch to accept the male - this is characterized by “flagging” where the bitch will stand squarely with her tail lifted high over her back or too the side. The vaginal discharge often becomes less bloody during this stage too – either becoming clearer or browner in colour (rather the more typical bright red blood seen earlier in pro-oestrous) . Ovulation occurs two to three days after mating. You may notice your dog urinating more frequently and marking spots within and outside your home to spread pheromone messages indicating her readiness to breed. If an intact male is present, your female dog is likely to present herself to him, hindquarters first, and with her tail held to

the side. There can be multiple suitors and a pregnancy may have pups fertilised by multiple dogs.

3. **Diestrus:** This phase occurs directly after the “in heat” stage and lasts for about two months. It is when the uterus and hormones are most conducive to implantation and growth of the developing foetus. Her body will proceed with the pregnancy or return to rest, as her vulva returns to normal size and the vaginal discharge disappears. This phase lasts approximately 60 days. If pregnant, birth will occur within 63 days (+/-5 days). Pseudopregnancy can also occur during this phase (see article from Dr Caitlyn Martin following).
4. **Anoestrous:** this is the rest and repair period for the uterus and occurs between the end of dioestrous and the beginning of the next pro-oestrous. This is the least reproductively active phase.

General Rules of Thumb

- The age at which a dog experiences her first oestrus varies greatly between breeds. Toy and small breeds mature much earlier than giant breeds and can come into heat as early as four months of age. Giant breeds may be two years old before they experience their first heat.
- On average, a female dog will come into her first heat between six and 15 months of age.
- Most dogs have two oestrous cycles per year.
- Male dogs will be attracted to a female dog entering her heat cycle before she is receptive. Watch for defensive aggression that warns males to back off.
- Remember—just because your dog is no longer bleeding, does not mean she can no longer get pregnant. She’s much more likely to let a male mate immediately after the bloody discharge stops.
- Dogs can get pregnant during their first heat cycle, but this is *not advisable* as a six-month-old dog is not yet fully grown/mature, and complications for the mother and the puppies are more likely.
- To prevent a possible pregnancy while your dog is in heat, keep her separated from male dogs for at least three to four weeks after the first sign of bleeding.
- Remember that active marking with urine can lead male dogs back to your house. Try to avoid walking your dog directly from the dog park home. This is where driving is recommended to put a break in the scent trail leading to your front door.

CATS

Oestrous cycles in cats can begin as early as four months of age through to ten months of age. On average six months is the most common, but will be influenced by daylight hours and body condition. Spring and summer are the most common seasons.

How will I know if my cat is on heat?

Cats will generally have overt changes in behaviour associated with coming onto heat.

- Increase in vocalization- this is often described as a yowl and is louder than your cat's normal meow. It can sometimes be confused with an expression of pain or anxiety.
- Increases in affection towards people and cats. They may roll on the ground or seek increased physical contact. Occasionally some cats show more aggression towards their owners
- Changed mannerisms – often exhibiting a bottom up, head down stance with their tail held to the side
- Increased licking of genitals or urination (including spraying of urine)
- Increased attempts to escape outside
- Reduced appetite

Cats are known as polyoestrous species. This means that they have multiple oestrous cycles within a year. The cycle begins with the behaviours described above and can last 7-10 days. There are three possible scenarios:

1. The cat mates and becomes pregnant. She will come back into heat approximately 8 weeks after the birth of the kittens. However, this can be as short as one week so care should be taken that a queen does not get pregnant again soon after giving birth.
2. The cat mates and does not become pregnant has what is called a pseudo or fake pregnancy. She may gain weight, make milk but won't actually have any kittens. She will return to heat approximately 4-6 weeks later.
3. The cat does not mate and she will return to heat in 2 weeks. This will continue multiple times unless she is mated or the breeding season ends.

Desexing is still the recommended protocol for all dogs and cats. If your pet happens to come onto heat before this is done, then please keep them safe and protected from getting pregnant or escaping. The surgery should be performed in the anoestrous period, i.e. when there is no swelling or bleeding and before the next heat cycle. Please contact us for more personalized advice directly.

Dr Caryn