



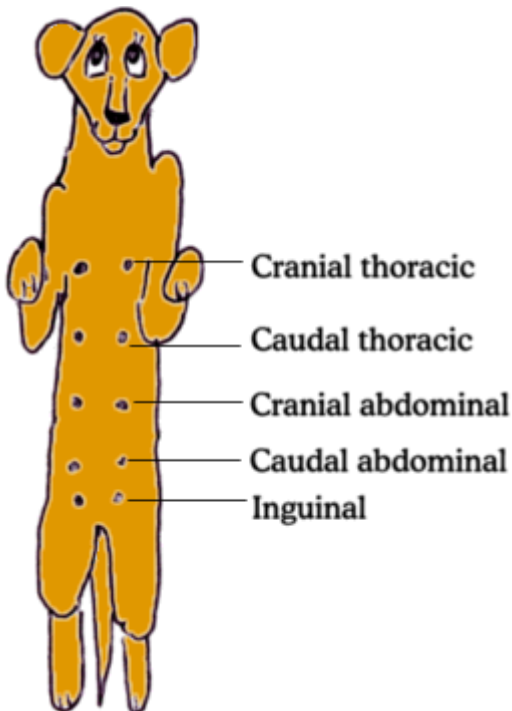
## Royal Animal Hospital – Canine Spay FAQ

Surgical sterilization of the female dog, commonly referred to as spaying, is one of the most significant aspects of female dog care an owner can provide. The benefits to the dog FAR outweigh simply not having puppies, though as pet over-populations looms as a societal problem it is important to be part of the solution rather than part of the problem.

Spaying involves removal of the uterus and ovaries. It is a major surgery but a commonly performed one, ideally performed while a female dog is still in puppyhood, prior to her first heat cycle.

### WHY ALL FEMALE DOGS SHOULD BE SPAYED

#### *Mammary Cancer Prevention*



A female dog spayed before her first heat will have a near zero chance of developing mammary cancer.

After the first heat, this incidence climbs to 7% and after the second heat the risk is 25% (one in four!). It is easy to see that an early spay can completely prevent what is frequently a very difficult and potentially fatal form of cancer.

But is it too late if a dog is already past her second heat? No, in fact spaying is important even in female dogs who already have obvious tumors. This is because many mammary tumors are stimulated by estrogens; removing the ovaries, the source of estrogens, will help retard tumor spread.

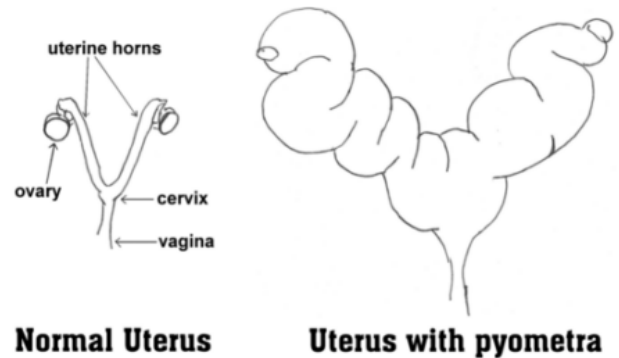
Spaying removes both the uterus and both ovaries and is crucial in the prevention as well as the treatment of mammary cancer.

#### *Pyometra Prevention*

Pyometra is the life-threatening infection of the uterus that generally occurs in middle-aged to older female dogs in the six weeks following heat. The hormone progesterone, which primes the uterus for potential pregnancy, does so by causing proliferation of the blood-filled uterine lining and suppressing uterine immune function. It is thus easy during heat for bacteria in the vagina to ascend to the uterus

and cause infection. The uterus with pyometra swells dramatically and is filled with pus, bacteria, dying tissue, and toxins. Without treatment, the dog is expected to die. Despite her serious medical state, she must be spayed quickly if her life is to be saved.

- This is an extremely common disease of unspayed female dogs.
- Without treatment the dog will die.
- Treatment is expensive.
- Treatment involves surgery in a potentially unstable patient.
- Spaying prevents the whole thing.



The older unspayed female dog has an irregular heat cycle. There is no end of cycling comparable to human menopause. If you still decide against spaying, be familiar with the signs of pyometra, which include loss of appetite, lethargy, vomiting, excessive thirst, marked vaginal discharge.

### Ovarian cancer prevention

The most common type of ovarian tumor in dogs is ovarian carcinomas. Ovarian tumors are prone to metastasizing (spreading), and some are capable of producing hormones. The most frequent signs we see are fluid build-up in the abdominal cavity or chest cavity, persistent heat with prolonged bleeding, as well as pyometra, severe coat shedding and baldness. By the time these signs are seen sadly the cancer has often already spread beyond surgical cure.

### Simple Convenience

The female dog comes into heat every 8 months or so. There is a bloody vaginal discharge and local male dogs are attracted. Often there is an offensive odor. **All of this Disappears With Spaying.**

### Now That we Know Why it is a Good Idea to Spay, What Exactly Happens?

It is important that the patient has not been fed in at least 8 hours. Anesthetic medications commonly induce nausea and vomiting can be dangerous in a sedated patient (vomit can be inhaled/aspirated leading to pneumonia).

A preoperative evaluation is performed; blood work is recommended for older females and may be recommended as a normal preanesthetic consideration. An intravenous catheter will be placed to facilitate the administration of anesthetic drugs, for any fluid administration, and for use in case of emergency. This necessitates shaving a small patch of skin on one of the legs.



A tranquilizer or other pre-anesthetic medication may be administered to ease the induction of anesthesia.

A medication is given intravenously to induce sleep. This medication is called an induction agent and lasts only long enough to establish the maintenance of anesthesia by the inhalant anesthetic (gas). Once the dog is asleep, a tube is placed in her throat to ensure that a clear airway is maintained through out the procedure.

Sometimes a cough is noted for a couple of days after surgery. This may have been caused by the tube in the throat. Such coughs only last a couple of days; anything that persists longer should be re-evaluated.



The tube is hooked up to a machine that delivers a specific concentration of inhalant gas mixed in 100% oxygen. An anesthesia technician is assigned to the monitoring of this pet so that the concentration of inhalant gas can be changed, color, heart rate, respiration and other parameters are followed.

In the surgical prep area, the abdomen is shaved and scrubbed. The bladder is emptied and the patient is moved to a surgical suite, where she is draped with surgical cloths or papers to isolate the area where surgery will take place.

An incision is made on the midline of the abdomen, and the three points where the ovaries and uterus attaches are tied off and cut. The abdomen is checked for bleeding and two or three layers of stitches are placed to close the incision.

It is helpful to know that should the skin stitches come out, there are two layers below holding everything closed. Sometimes skin stitches are not placed but if they are, you will need to return in 10 to 14 days to have them removed.

The anesthesia technician continues monitoring until the dog wakes up and coughs out the throat tube.

The patient is kept in an observation room until she is able to walk.



### **What to Expect at Home**

Most spay patients go home the same day as if nothing had happened, although some will need pain medication for a few days.

Some nausea may occur in the first couple of days after surgery and it would not be unusual for the dog to refuse food for a day or two after surgery.

As noted above, a cough may persist for a couple of days as a result of the throat tube. This should not persist longer than a couple of days.

Dogs who show a propensity to lick their stitches will need an Elizabethan or "E" collar to restrict access to the stitches. This is not very comfortable for the dog but it must be used strictly until the stitches are out and the incision is healed.

Activity should be restricted during the days following surgery and you have visited for your post – op check-up. Full wound strength will take up to three weeks so excessive activity can lead to swelling or fluid accumulation under the incision. If a fluid pocket does form, it should resolve on its own after a few weeks. If a fluid pocket forms and drains liquid from the incision, the dog should be re-checked with the veterinarian.



### **What about Behavioral Changes?**

The female dog's reproductive tract is dormant for most of the year. It only activates for the three-week period of heat. This means that from a behavioral stand point, the female dog acts spayed most of the time. This said, there has been a documented slowing of metabolism after spays and it may be necessary to use a reduced calorie food in an adult dog. Check with your veterinarian about nutritional recommendations.