

# Sterilization of Female Dogs

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## Purpose of Procedure

Elective sterilization is done primarily to prevent estrus (heat) cycles and unwanted pregnancies and offspring. This goal is accomplished by removing the ovaries, alone or in combination with removal of the uterus.

Sterilization also prevents or dramatically reduces the incidence of mammary (breast) tumors:

- If sterilization is done before 6 months of age, the risk of mammary gland tumors is almost completely eliminated.
- Some decrease in tumor development still occurs if the surgery is done before the fourth estrus or 2½ years of age.
- Sterilization is also done in the intact bitch after mammary tumors are removed, so that it is easier to detect new tumors.

Ovariohysterectomy is the treatment of choice for uterine diseases such as pyometra (uterine infection), metritis, cystic changes, rupture or twisting (torsion) of the uterus, and tumors involving the uterus. Vaginal prolapse, uterine prolapse, and some hormonal (endocrine) problems, such as diabetes mellitus, may benefit from a sterilization procedure. Pregnancy termination is another indication for sterilization. Some bitches are sterilized at the time of a caesarean section.

## Description of Technique

Ovariectomy (OVE) is removal of the ovaries. Ovariohysterectomy (OVH, OHE) is removal of both the uterus and ovaries and is commonly referred to as a *spay* operation.

An appropriate preoperative evaluation that includes a physical examination and blood tests is usually recommended, even for elective procedures. Comprehensive laboratory tests are advisable in older dogs to detect any problems that may present a risk for anesthesia and surgery. Other preoperative testing depends on the presence of underlying diseases.

The conventional manner of performing a sterilization procedure requires an incision into the abdomen that is long enough to allow the reproductive organs to be found. The incision is significantly longer for removal of a diseased or enlarged uterus, compared with a healthy, nonpregnant uterus. Rarely, a veterinarian may recommend making incisions on both flanks (behind the last rib) when performing an OVE.

### Preparation of Animal

Your veterinarian will instruct you to withhold food and sometimes water for a certain period of time, depending on the anesthesia to be used for the surgery.

## Potential Complications

Most dogs do well after surgery, with no or minimal complications.

- Minor complications include licking at the incision, inflammation or formation of a small pocket of fluid (seroma) or blood (hematoma) beneath the skin at the incision, and premature loss of external skin sutures.
- Hemorrhage after surgery is more common in large, obese dogs and in dogs that are in heat. Bleeding is also more likely in older bitches that have underlying blood clotting disorders and in some breeds with a higher incidence of inherited clotting disorders, such as von Willebrand disease in the Doberman pinscher.
- As is possible with all abdominal incisions, a breakdown of the abdominal wall with herniation of abdominal contents can occur, albeit rarely.
- Delayed complications of removing only the ovaries include a return of heat cycles and infection of the uterus, especially if removal of ovarian tissue was incomplete.
- If the ovaries and the uterus were both removed, the small portion of the uterus left behind may become infected at a later date. This complication is referred to as *stump pyometra*, and it is sometimes associated with incomplete removal of ovarian tissue at the time of the original sterilization procedure.

## Postoperative/Follow-up Care

In many instances, the sterilization procedure is uncomplicated and the dog may be discharged from the veterinary hospital on the same day, often with appropriate pain management. When an OVH is performed in dogs at risk for bleeding or with serious underlying uterine disease, continued hospitalization may be recommended so the animal can be monitored and appropriate therapy delivered.

The dog should be kept quiet for 10-14 days or longer, according to your veterinarian's instructions. Limiting the animal's activity (no running, stair-climbing, or jumping) helps minimize the chance of breakdown of the abdominal incision. If possible, the dog should be kept inside in a clean, dry environment until the incision has healed.

No recheck visits may be needed if external sutures were not used. In other cases, recheck visits are scheduled based on the reason for the sterilization procedure. Notify your veterinarian if any bleeding or persistent oozing occurs at the incision, if the dog continues to lick or traumatize the incision, if any swelling develops under the incision, or if the incision starts to open.