



OVARIOHYSTERECTOMY (SPAY): ROUTINE, CONSIDERATIONS & PLANNING

Ovariohysterectomy (OHE), or spay, is a commonly performed surgical procedure that will permanently prevent pregnancy. Female dogs adopted from animal shelters undergo spay surgery to aid in population control by preventing future pregnancies. There are several reasons that you should consider having your puppy “spayed.” In addition to preventing pregnancy, it is often more convenient to own a spayed dog, and there are many health benefits that the procedure can provide as well. On the other hand, there may be downsides to having your dog spayed, including some health risks. Spay surgery removes certain hormonal influences, and therefore affects behaviors as well. This sheet will provide you with relevant information as you decide if and when to have your puppy spayed. Of course, your veterinarian is happy to discuss these issues with you as well.

It is often more convenient to own a spayed female dog. When dogs go through heat cycles, they release pheromones that attract male dogs. This means that on average for a few weeks twice each year, intact (meaning unneutered) male dogs would be drawn to your unspayed dog on walks, in the yard, or wherever she may go. Just before the female goes into heat, her vulva becomes engorged and she begins to drip a bloody fluid. For indoor dogs, this can be messy.

HEALTH EFFECTS OF OHE

Spaying has been shown to increase average life expectancy by 26%. It can reduce the risk of many types of cancer. Of course, ovarian and uterine cancer will not occur after a spay surgery because these organs have been removed. Additionally, dogs spayed when young have a dramatically reduced risk of mammary (breast cancer, a very common cancer in non-spayed dogs) and vaginal tumors. Other health benefits to spaying include prevention of several hormone-dependent diseases, including pyometra and metritis (uterine infections), ovarian cysts, and pregnancy complications. Pyometra is a very common disorder in non-spayed female dogs that occurs after a heat cycle in which the dog does not become pregnant. The uterus fills with purulent material (pus), and the dog becomes extremely ill. This often requires a spay surgery on an emergency basis to save the life of the affected dog.

Excluding the small risk of anesthetic or surgical complications at the time of a routine spay, there are other potential minor health risks to consider. Spay surgery does not decrease the risk of all cancer types. In fact, in at least some studies spayed dogs might have a slightly increased risk of bladder cancer, lymphoma, mast cell tumors, hemangiosarcoma, and osteosarcoma as compared to other dogs. Additionally, if the spay surgery is performed before the dog is fully grown, bone and joint growth can be impacted, potentially predisposing large breed dogs to orthopedic diseases like hip dysplasia, elbow dysplasia, and cranial cruciate ligament rupture. Finally, spayed dogs are more likely than non-spayed dogs to develop urinary incontinence (urine dribbling) at some point in life. Urinary incontinence can begin many years after the spay surgery (average 3 to 5 years), and might include dribbling when excited/ nervous, or leaving puddles of urine after sleeping. Although some degree of incontinence is reported in up to 20% of spayed dogs (and is more likely in large dogs), the condition usually responds very well to medications.

Ovariohysterectomy has effects on behavior. Certainly, spayed dogs do not demonstrate the behaviors associated with the heat cycle, including trying to attract a mate. Spayed dogs may be less likely to roam and may be less aggressive. However, some breeds have shown an increase in problematic behavior issues when spayed before 6 months of age. If your puppy is aggressive or fearful, you should discuss this with your veterinarian to identify possible causes and ways of addressing the issue.

BEST AGE FOR SURGERY

The best age to perform a spay depends on several factors, including the adult size of your dog and your lifestyle. Many animal shelters choose to spay puppies before they are adopted, and the surgery can be done safely as early as 6 weeks of age. For your pup, you may choose to wait until later, such as when the series of puppy vaccinations is complete at about 4 months of age. Most female puppies experience their first heat cycle at around 6 months of age, but they are not full grown until after that age. While the average age for a dog to be considered adult is about 1 year, small breed dogs finish growing sooner and giant breed dogs finish growing a bit later than one year. If you prefer not to have the mess of a heat cycle, and for maximum benefit in reducing the risk of mammary cancer, you may want to have the surgery done before the first heat or 6 months of age. On the other hand, if you have a large breed dog, you may want to wait until she is closer to full adult size near a year of age to minimize the risk of bone and joint issues later on. There may be other considerations too. For example, if your dog has a small, hidden vulva, your veterinarian might suggest allowing one heat cycle.

THE SURGERY AND AFTERCARE

Spays are a routine procedure and are the most common abdominal surgery performed by veterinarians. However, there are potential complications with any surgical procedure, including anesthetic reactions, bleeding, infection, or the incision coming open (dehiscence). For ovariohysterectomy, the overall complication rate is estimated to be 20%, although the vast majority of these complications are very minor (such as skin irritation at the suture site). Spay-specific complications include ovarian remnant syndrome and ureteral trauma. Ovarian remnant syndrome occurs when all of an ovary is not removed, resulting in continued heat cycles and the risk of pyometra in the very small uterine stump left after the surgery. Trauma or damage to the ureters is a rare but serious complication at the time of the surgery. The ureters are the tubes that carry urine from the kidneys to the bladder. Because they are very small and located very close to the uterus, they can be accidentally damaged during surgery. The vast majority of dogs do extremely well after surgery with no complications. Younger animals tend to have fewer complications compared to older animals, and the surgery is easier to perform when a dog is not in heat.

A spay is usually performed through an incision in the middle of the abdomen (belly). The ovaries (which produce hormones and eggs) and uterus (which incubates puppies during pregnancy) are tied off and removed. Alternatively, this procedure can be performed laparoscopically, where a camera and small incisions in the abdomen are used to remove the ovaries (laparoscopic ovariectomy) or the ovaries and the uterus (laparoscopically assisted ovariohysterectomy). Patients tend to be more comfortable after laparoscopic procedures. Hysterectomy (removal of the uterus only) is not routinely performed due to the risk of stump pyometra. Once the surgery is complete, the abdominal muscles and skin are closed with sutures (stitches) or surgical staples, and the dog is allowed to wake up from anesthesia. The dog will spend at least several hours, or even one night, at the clinic before going home.

Once home, your puppy will need to be crate rested for 2 weeks – this means she should go outside for short walks to go to the bathroom then come back in and rest. She should wear an E-collar (cone) at all times to prevent her from licking her incision. You will need to be sure the incision stays clean and dry until it heals. In some cases, she will need to return in two weeks to have the sutures removed, while in other cases the kind of sutures used dissolve on their own.