**What are spays and neuters and how are they performed?**

Spays and neuters are surgical procedures in which reproductive organs are removed so that animals can’t reproduce (meaning that they can’t become pregnant or get another animal pregnant). A spay is the name for this surgery in female animals. When an animal is spayed, a small incision is made in the abdominal wall, just below the belly button. The ovaries (and usually the uterus as well) are removed, and the incision is then closed with two layers of stitches under the skin that will dissolve and be absorbed by the body over time. The skin is generally also closed with absorbable stitches and/or skin glue.

In male animals, a neuter is performed, in which the testicles are removed from the scrotum (the skin that holds the testicles). This prevents the production of sperm. In male dogs, an incision is made in the skin at the base of the penis, on or very near the scrotum. The incision is closed with stitches under the skin that will dissolve and be absorbed by the body over time, and the skin is generally also closed with absorbable stitches and/or skin glue. Male cats have a very small incision made in the skin of the scrotum which is not sealed but instead will close on its own with time.

In both males and females, removal of the reproductive organs also eliminates the production or reproductive hormones, so that heat cycles and the drive to mate are also eliminated.

Before surgery, the areas around where the incisions will be made are shaved and cleaned with antiseptic to reduce the risk of infection. Surgeons wear sterile gloves and use sterilized instruments to perform the procedures.

Spays and neuters are done under general anesthesia, with your pet fully asleep and either intubated (with a breathing tube in his or her throat) or with a face mask. Before receiving general anesthesia, your pet is given a shot of medication to make him sleepy and to help prevent pain. Under general anesthesia, patients are unable to feel pain and do not move.

Your pet will receive a small, green tattoo near the surgical incision site. The tattoo will ensure that anyone examining your animal will know s/he has been spayed or neutered.

**What are the risks?**

Anesthesia decreases vital signs such as breathing rate, heart rate, body temperature, and blood pressure. Patients are watched carefully while under anesthesia, their oxygen level and heart rate are monitored with a machine, and they are kept warm during and after surgery using heating blankets. Spay and neuter surgeries are generally short (2 minutes for a cat neuter, up to 30 minutes for a large dog spay), minimizing the time that the animal needs to be under anesthesia. While the risk of anesthetic death is extremely low in healthy dogs and cats, in rare cases, complications of anesthesia can arise and result in brain damage or death.
Spay/neuter surgeons monitor carefully for bleeding during surgery and promptly address it if it occurs. In rare cases, unexpected bleeding after surgery can be life-threatening.

Healthy young animals have the lowest risks and are very unlikely to have any serious complications. However, it can be much harder to keep young active animals quiet after surgery, so they are more likely to have minor post-surgical complications.

Older animals, those in heat or pregnant, or especially those with additional health issues have a higher risk and are more likely to have complications. If you have any concerns about your pet’s health or if she is on medication for a medical condition, please let the veterinary staff know ahead of time so your animal can be treated appropriately.

Some of the most common minor post-surgical complications include inflammation or infection of the incision, opening of the skin incision, swelling under the skin at the incision site caused by fluid, and bleeding from the incision. These complications can be caused or made worse by the pet licking or chewing the skin at the incision or by not keeping the pet quiet as directed after surgery.

**What’s the recovery like?**

For most cats, we use a reversible anesthetic injection so they recover very quickly. Usually within 10 to 20 minutes they are awake enough to walk around. Dogs take a little longer, from 15 to 30 minutes. The longer surgeries often have somewhat longer wake-up times. Patients are fully awake but may still be a bit groggy by the time they are discharged.

**Is the surgery painful?**

Just as with people, animals feel pain and surgery does cause pain. They do not feel pain while under anesthesia during surgery, but there can be discomfort after surgery. All animals are given pain medication before surgery starts and then as needed after surgery. The goal is to keep pets as comfortable as possible.

**What if I have additional questions or concerns?**

If your pet has medical concerns that may increase their anesthesia or surgery risk, please let us know that prior to your surgery appointment so that we can be prepared to treat your pet appropriately. At the time of surgery check-in, you will have an opportunity to speak with PIN’s veterinary support staff. Your pet will be examined by PIN’s veterinarian prior to surgery. If you have additional questions, a consultation with our veterinarian can be arranged after the exam but prior to anesthesia and surgery.