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Justine has more than 18 years of experience in the veterinary industry and is a board-certified emergency critical care veterinary specialist and toxicologist as well as the CEO and founder of Vetgirl. She is also a founding member of IDEXX's Pet Health Network team.

[Dr. Justine Lee](#) advocates on behalf of female dogs and cats everywhere: make sure you spay your pet sooner than later to avoid some scary complications. For more from Dr. Lee, find her on [Facebook!](#)

Most veterinarians advocate spaying and neutering for several reasons:

- To help reduce pet overpopulation
- To help prevent certain types of cancer (like breast or prostate cancer)
- To help reduce certain unwanted behavioral issues (like aggression, dominance, sexual characteristics like humping, etc.)

While these are all excellent reasons for spaying and neutering, as an emergency specialist, I have my own additional bias on why I want owners to do it. I'm a big advocate of spaying or neutering your pet early in life because at some point, you'll likely end up doing it due to medical reasons... and often times, on an emergency basis (which is much more expensive!).

The biggest, most life-threatening reason why you want to spay and neuter? **Pyometra**.

Pyometra, which is a severe infection of the uterus, can be fatal to dogs and cats when untreated. In intact animals (those that aren't spayed yet), the chronic effect of sex hormones can result in overstimulation of certain cells within the uterus called cystic endometrial hyperplasia (CEH). CEH can then progress in a severe *E. coli* infection and pus infection within the uterus. Typically, CEH occurs several weeks after a heat cycle, followed by a life-threatening pyometra shortly thereafter.

There are two types of pyometra infections: what we term "open" or "closed." These terms refer to whether

or not the cervix is open - in other words - draining out pus if it's an "open" pyometra. If it's a "closed" pyometra, it means you can't actually see the pus drip out - all the pus is hidden away in the uterus instead.

"Open" pyometras are easier to diagnosis due to foul, malodorous, bloody green discharge from your pet's vulva. "Closed" pyometras can be harder to diagnose, as the signs aren't as obvious to pet owners. As a result, "closed" pyometras are more life-threatening as they are under-recognized. As pets often hide their signs until they are very severe, pet owners may not realize their pet has a life-threatening infection in their uterus. Without treatment (which is almost always surgically treated with an emergency ovariectomy), the uterus can rupture, resulting in a severe bacterial infection in both the abdomen and in the blood stream.

So, if you have an intact female pet, make sure to keep any eye out for the following clinical signs (especially if it's several weeks after your pet's last heat cycle):

- Not wanting to eat
- Generalized malaise/lethargy/depression
- Excessive thirst or urination
- A bloated abdomen
- Vomiting
- A weird odor coming from the hind end of your pet
- Pus dripping from the vulva
- Constant licking of the vulva
- Signs of shock (e.g., an elevated heart rate, collapse)
- Fever

As a veterinarian, how do we diagnose a pyometra? The diagnosis is typically based on the following:

- Blood work revealing evidence of dehydration or a severe infection (a low blood sugar and high white blood cell count)
- X-rays
- Abdominal ultrasound

Once diagnosed, treatment must be initiated immediately. While some textbooks will occasionally advocate medical management, I never recommend this - after all, the problem will just re-occur at the next

heat cycle. Medical management includes giving medications that disrupt the hormone balance, temporarily resolving the problem. However, this typically can only be done with an “open” pyometra.

Ideally, surgical removal of the pus-filled uterus is necessary. In other words, an emergency, middle-of-the-night spay, which often can run you several thousands of dollars. While it might seem unfair to have to pay so much for an emergency spay, the procedure is much more complicated than a traditional ovariohysterectomy and the anesthetic risks are much higher. That’s because the uterus is much larger, more likely to rupture, and more difficult to remove. Finally, hospitalization post-operatively is longer as it typically requires aggressive IV fluids, intravenous antibiotics, pain medications, and monitoring (like blood pressure, blood sugar, and heart monitoring).

The cheaper option: spay before your pet’s first heat. Seriously. You’ll end up saving money in the long run, while minimizing the health risks to your pet. Help prevent accidental breedings, pet overpopulation, and medical problems all at the same time.

If you have any questions or concerns, you should always visit or call your veterinarian – they are your best resource to ensure the health and well-being of your pets.