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AMSCOPE

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Pyometra

by Deborah Dennis, DVM

Mustard & Pepper

THE NEWSLETTER OF THE DANDIE DINMONT TERRIER CLUB OF AMERICA

#219 Winter 2020

X-rays show a large, distended uterus, especially if the cervix is closed. Ultrasound examination is an excellent way to determine pyometra as well as to rule out pregnancy.

The disease starts with CEH, endometrial (lining of the uterus) hyperplasia (over-development) with cystic dilation of the endometrial glands. These glands produce nutrient rich fluid which accumulates in the uterus. The infection is usually caused by a bacteria called E.coli coming from fecal contamination, rather than the bacteria that normally occur in the reproductive tract. Certain E.coli strains can actually bind to the cells lining the

Pyometra is one of the most dreaded diseases of intact (un-spayed) female dogs. It is a chronic disease of the uterus but is dependent on the presence of a persistent corpus luteum on an ovary. Left untreated, it is always fatal. With treatment the mortality rate is 4%. Metritis is a completely different process of acute bacterial infection of the uterus, usually immediately following whelping and is also usually fatal if untreated. The normal healthy uterus is as thick as an index finger.

A pyometra uterus is distended like a large sausage full of pus. It affects 25% of intact bitches by 10 years of age and occurs within three months after a heat cycle. Any sick, intact female dog should be evaluated for this condition. The breeds that are most commonly affected include the Bernese Mountain Dog, Rottweiler, Rough Collie, Golden Retriever, Irish Terrier, Miniature Schnauzer, and St. Bernard.

The age is usually over seven but ranges from four months to 16 years. Previous pregnancy uterus, but this only occurs when the uterus is under the influence of progesterone. Progesterone is a hormone produced by the corpus luteum, a structure that develops on the ovary after eggs are released (ovulation) during

the heat cycle. If these same bacteria are introduced to the tissues without the presence of progesterone, then the infection does not occur. Irritation of the uterine lining can cause CEH and often results in subclinical (no notice has some protective effects as pyometra is more likely to occur in bitches that have never been pregnant. Surprisingly, false pregnancy has no statistical impact on the development of pyometra.

Symptoms include excessive thirst, excessive urination, loss of appetite, lethargy, vomiting, sometimes fever and sometimes a discharge from the vulva. The presence of a fever is not consistent. Physical exam findings may include pale mucous membranes, dehydration, depression, uterine enlargement on abdominal palpation, vulvar discharge and even abnormal heart rhythm. If the cervix is open there is vulvar discharge and if it is closed there may be no discharge. Closed pyometras are often more severe due to endotoxins (poisons produced by bacteria) and sepsis (bacterial infection released into the blood stream). Blood tests reveal either a very high WBC (white blood cell count) from the infection or a very low WBC from sepsis. Elevations of kidney and liver values may occur secondary to the release of toxins into the bloodstream. The RBC (red blood cell count) is often low (anemia), and the urine can be very dilute and may have symptoms) decreases in fertility that may precede pyometra. The steroid hormone, megestrol acetate, is no longer used for contraception because it can induce this disease process.

Treatment for pyometra must include aggressive supportive care, appropriate for the condition of the bitch, followed by either ovariohysterectomy (OHE/spay) or medical treatment with prostaglandins under veterinary supervision. If the bitch is very ill and has surgery, she may die from anesthesia complications, shock, blood loss, uterine rupture, sepsis, etc. With medical treatment she can still die from sepsis, shock, dehydration, ruptured uterus resulting in peritonitis (infection of the abdominal cavity), etc. Euthanasia should be considered if she is unlikely to survive or if finances are limited. Both surgery and medical treatment are expensive and require close monitoring, possibly including intensive care at an emergency or specialty facility.

If the patient is stable, and the owner elects medical treatment, the prostaglandin drug PGF2alpha is given every 8-12 hours starting with a very low dose and gradually increasing

it depending on how the bitch is responding. This medication stops the progesterone effect, opens the cervix, and causes contraction of the uterus which helps drain the pus and bacteria. Side effects include cramping, pain, and vomiting which is why veterinary supervision is important. Additionally, exposure to PGF2alpha can be dangerous to people and cause miscarriage. Medical treatment may be combined with cabergoline or bromocriptine to further decrease progesterone effects and to improve the opening of the cervix.

Where transcervical endoscopy is available, the cervix and uterus can be catheterized and flushed with fluids and prostaglandin to speed drainage of the pus. Antibiotics like enrofloxacin (Baytril) or amoxicillin/clavulanic acid (Clavamox or Augmentin) are given and if there is not a substantial improvement after five days, the patient should have surgery (OHE). You may wonder about the term "stump pyometra." This is a rare condition that occurs if a small amount of uterine tissue is left behind in a spay procedure. But it could only occur if some ovarian tissue is left behind as well, to provide a source of progesterone.

Obviously, medical treatment should be reserved for valuable breeding bitches. If treatment is successful, she should be bred on her next cycle or pyometra is likely to recur. A heat cycle is likely to come sooner than expected following medical treatment. This breeding is best performed with progesterone testing to get ideal timing, using artificial insemination (AI) with fresh high quality semen from a proven dog, and the addition of antibiotics in a semen extender. Each of these steps minimize the introduction of bacteria to the uterus and improve the chances of a successful pregnancy. The pregnancy should be monitored closely with ultrasound exams. Further cycles should not be skipped, and she should be spayed once her breeding career is completed. Ideally, bitches not intended for breeding should be spayed to prevent pyometra and reduce mammary cancer. Those intended for breeding should be bred when they are young and spayed once they have the desired litters.

Unfortunately, life is not always ideal so monitor all intact bitches for both pyometra and mammary cancer then spayed as soon as it is feasible. ?

**The deadline
for the April issue is
March 8**

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LOOK

Please let me know if you make a change

* **DECALS & PINS.** You can get **AMSC decals (\$1.00)** and **replacement pins (\$7.50)** from

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Phone: 517-522-4173
sercatep@yahoo.com

Report all changes to the Roster to
treasurer@AMSC.us

Bonnie Keyes
511 River Terrace
Endicott, NY 13760
(607)742-3828

The log in information
for the Members
section is as follows:

Password is: **2020Schnauzer**

It is case sensitive.

Here's the link to the Members
Section:

<http://amsc.us/members-log-in>

Please write down or save the
User Name and Password as
there is quite a bit of pertinent
information in our Members
Section.

UPCOMING SPECIALTIES

Roving – Grays Lake, IL
June 19, 2021

Regular Classes: John P Wade
Sweeps: Linda Drost

Montgomery County
October 10, 2021

Regular Classes: Bruce Schwartz
Sweeps: Tatiana Meyers

Roving – Northern Calif Terrier Assn
April 16, 2022

Regular Classes: Marcia Feld
Sweeps: Amy Gordon

Montgomery County
October 9, 2022

Regular Classes: Bergit Coady-
Kabel
Sweeps: Cheryl Coffman

Missed Diagnoses: What to Do When You Think Your Vet Is Missing Something

By Jennifer

You know your pet best, but your veterinarian has more expertise when it comes to medicine. So what are pet parents supposed to do when they have a sneaking suspicion that their veterinarian has missed something? The answer: communication. In other words, talk to your vet!

Veterinarians are only human. As much as we hate to admit it, we can overlook things and make mistakes. Good vets understand this and are open to being questioned, but there's a right way and a wrong way to approach this conversation. Here are three recommendations for talking about the possibility of a misdiagnosis or treatment error with your vet.

Attitude Matters

If you want your veterinarian to be open to acknowledging that they could be wrong, you should be willing to concede the same thing. Perhaps the vet has made a mistake, but something else might be going on, too. Your pet's case may be especially difficult, require advanced testing, or they could be having an unusual response to treatment...the list of potential complications is almost endless. Go into the conversation with an open mind. You and your veterinarian are a team who can provide the best care for your pet when you work together.

That said, don't be afraid of offending your veterinarian. Any doctor who can't handle questions from an owner who obviously has their pet's best interests at heart isn't worth worrying about (or returning to).

Be Prepared

Your veterinarian is going to want to know what it is about your pet's situation that makes you think that they have missed something. Come prepared with a list of symptoms that worry you. Maybe something has changed or you've remembered something since the last time you spoke. Be sure to bring that up. Admit that you have consulted Dr. Google (We know you have. We do it too when it comes to our own health.) and bring up any conditions that you are specifically concerned about.

Don't expect all of your questions to be answered on the phone. There is a very good chance that your vet will need to examine your pet and perhaps even run some new tests. A pet's condition can change rapidly, so what might not have been evident initially could be readily apparent at a recheck.

Go with Your Gut

If after all of this you are still worried about your pet's care, it's time for a second opinion. Ask your veterinarian if they think a referral to a specialist is in order, or if you'd rather not have that conversation, you can schedule an appointment for a second opinion yourself. Just make sure that you provide a complete copy of all your pet's medical records so the new veterinarian is up-to-date on the testing and treatment that has already taken place.

If your pet's symptoms are vague and relatively mild, you can make an appointment with a general practitioner. Ask around or look at online reviews to find a veterinarian who seems to be a good fit. If, however, your pet's condition is more serious, getting the services of a specialist would be best. The website Vetspecialists.com includes listings for specialists who are board-certified in surgery, internal medicine, cardiology, neurology, and oncology. Other types of specialists can be found through these links:

- American Veterinary Dental College
- American College of Veterinary Dermatology
- American College of Veterinary Ophthalmologists
- American College of Veterinary Nutrition
- American College of Veterinary Behaviorists
- American College of Veterinary Sports Medicine and Rehabilitation
- Society for Theriogenology (Reproduction)
- American College of Veterinary Emergency and Critical Care

A misdiagnosis can have serious consequences. Don't delay in getting your pets the care they need.

Let Them Lie: Dog Sleeping Positions Explained

You've probably envied your dog for his uncanny ability to fall asleep anywhere, anytime, in seemingly any position! Here are five dog sleeping positions and what they say about your pet.

Taking Flight

Dogs sprawling out on their tummies with all four legs stretched out are usually staying ready to jump out of sleep and into action. When puppies seem to run out of energy mid-training session, this is often their sleeping position of choice.

Sweet Surrender

Sleeping on his back with paws in the air helps your pup to cool off. In addition to watching him, you can rely on temperature alerts on your phone from the LINK AKC Smart Collar to know if your pup's getting a bit too warm. Since it's hard for him get up quickly and his tender underside is exposed, this sleeping position usually indicates blissful, submissive comfort.

Macaroni Noodle

Sleeping curled up is the Sweet Surrender reversal. Dogs assume this position to conserve heat and protect vital organs, but it doesn't necessarily indicate anxiety. Canines often sleep in this position in the wild, so for them, it's going au naturel.

Game of Bones

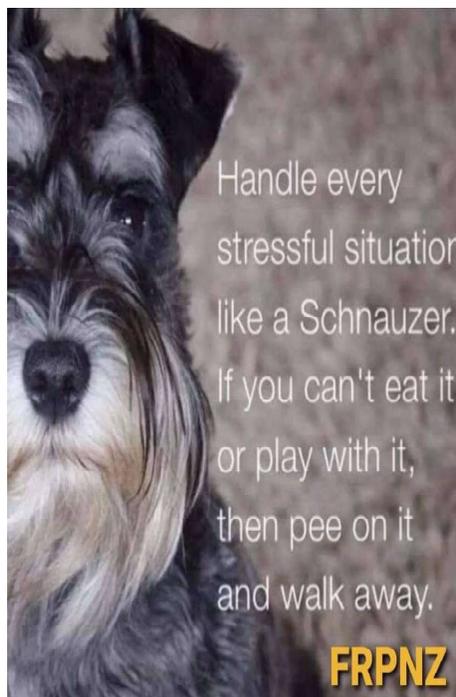
Dogs sleeping on chairs with their heads elevated like they're lounging on a throne enjoy a protective and comfortable vantage point. This dog sleeping position indicates your regal Beagle is a guardian at heart, or he just really loves your upholstery.

Serial Snuggler

Nothing beats giving in to rainy day drowsiness and curling up with your pup, and that feeling being mutual. Dogs that insist on spooning are showing their affection just like a human might, so enjoy naptime with a dog that's totally chill.

Regardless of the position in which your pooch gets their z's, remember dogs have dreams just like we do. Yipping and twitching may be a sign she's getting spectacular sleep, but if your dog seems lethargic throughout the day, consult your vet to rule out injuries or sleep disorders.

PLEASE
If you have a new
phone number or
email address...let
us know...
cborr@aol.com
and
maplewynd@gmail.com
PLEASE



*It came to me
that every time I lose a dog,
they take a piece of my heart
with them.*

*And every new dog that
comes into my life gifts me
with a piece of their heart.
If I live long enough all the
components of my heart will
be dog,
and I will become as gener-
ous and loving as they are.*

ANONYMOUS

NEW APPLICANTS

Mary E Falls
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608-356-6642

CLASSICGIANTSCHNAUZERS@gmail.com
www.CLASSICGIANTSCHNAUZERS.COM

Mary recently purchased a show puppy from Alice Gough and is interested in joining AMSC because of the impressive information that came in her registration packet. She has read and agrees to comply with the Breed Standard and Code of Ethics. She has been a breeder of Miniature Schnauzers and Giant Schnauzers for many years. She is a member of The Giant Schnauzer Club of America of which she has held various positions including Breed Columnist for AKC Gazette. Her first Minis were purchased from Penlan and Gough in 1968. Special skills are she is able to write and communicate well. She is interested in well bred dogs, showing and enjoying others who are like minded. Her occupation is Nurse Practitioner with a Doctorate.

Sponsors: Marilyn Lande, Alice Gough

Suzanne Daulton
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Sued2855@gmail.com
931-218-8297

Suzanne wants to become a member because she loves the breed and wants to see responsible breeders and owners give them the best life they deserve. She has read and agrees to comply with the Code of Ethics and the Breed Standard. She owns three AKC registered Min. Schnauzers, one rescue, one from Hardinhaus and one from Thomas & Linda Wilkinson. Suzanne is not a breeder. She participates in Agility, Obedience, Rally, Therapy and Trick dog and usually attends 10 events per year. Dog clubs: Pet Partners, President, Jumpstart Standard Schnauzers, Clarksville KC, Hope AACR. She is retired and a trained instructor for Pet Partners Therapy Dog Organization. Activities of interest are Rally, Obedience, Agility and Therapy.

Sponsors: Marie Murphy, Marian Harding

Why Do Some Animals Seem to Have a Sixth Sense?

Analysis by [Dr. Karen Shaw Becker](#)

A Symbiotic Relationship With Magnetotactic Bacteria

While it's been known for about 50 years that animals can sense magnetic fields, the magnetic-sensing organ or apparatus remains largely a mystery. It's a "sense without a receptor," the researchers noted in *Philosophical Transactions of the Royal Society B*.³ They proposed that a symbiotic relationship with MTB could be behind animals' seemingly supernatural magnetic sense.

Study author Robert Fitak, an assistant professor in UCF's Department of Biology, used a large genetic database of microbes to look for MTB in animal samples. "The presence of these MTB had been largely overlooked, or 'lost in the mud' amongst the massive scale of these datasets," he said in a news release.⁴

Upon inspection, however, the bacteria turned up regularly in a number of species, from penguins and bats to logger-head sea turtles and [Atlantic right whales](#). What's more, certain species seemed to have similar MTB as others.

Logger-head sea turtles had similar MTBs as penguins while brown bats and Atlantic right whales were similar in their MTB profiles, which were dominated by the genera *Magnetospirillum* and *Magnetococcus*.

Reptiles and birds, meanwhile, had an MTB makeup that was "drastically different" from that found in the brown bats and Atlantic right whales. Not only do the findings suggest MTBs are found in many animals' microbiomes, it also seems that similar animal species may have similar MTB assemblages.⁵

Where Are Magnetotactic Bacteria Found in Animals?

There's still a lot to be learned about MTB, and their potential role in magnetic

sensitivity is still very much a hypothesis. As such, it's not known where, exactly, the bacteria exist in animals, but it's possible they're located in nervous tissue such as the eyes or brain.⁶

In birds, the magnetic field activates cryptochrome 1a in the retina. Cryptochrome 1a is a light-sensitive molecule; the equivalent molecule in mammals is cryptochrome 1. Dogs, along with other dog-like carnivores like wolves, bears, foxes and badgers, have cryptochrome 1 in their retinas, and researchers suspect it may be used in the perception of magnetic fields.⁷

According to the featured study, magnetoreception in birds has been associated not only with the visual system but also with the trigeminal nerve, which runs from the beak to the brain. Thus, the researchers suggested "... symbiotic MTB reside within the lacrimal glands, which are neurologically associated with the trigeminal nerve, and are secreted into the host's eyes. The MTB movement is then perceived by the host."⁸

If MTBs are, in fact, responsible for magnetic-sensing in animals, the benefits to the animal are clear — it helps them with navigation and orientation, assisting the search for food, habitat and mates, as well as other potential benefits that are as yet undiscovered. What's the symbiotic benefit to the bacteria? By helping animals with navigation and orientation it supports their hosts' survival.⁹

Additional support for the MTB-magnetoreception connection comes from 2020 research published in *bioRxiv*, which found that antibiotics, which kill bacteria, interfered with orientation in a migrating passerine.^{10,11}

Fitak and colleagues have more research planned to uncover more clues about MTBs in animals. "I'm working with the co-authors and local UCF researchers to develop a genetic test for these bacteria, and we plan to subsequently screen various animals and specific tissues, such as in sea turtles, fish, spiny lobsters and birds," he said.¹²

Even Dogs May Rely on Magnetic Fields

It's becoming clearer that magnetic sensitivity is widespread in the animal world, and even pet [dogs may rely on magnetism](#). Researchers came to this conclusion after measuring the direction of the body axis in 70 dogs while they urinated or defecated.

Over a two-year period, it became clear that dogs typically preferred to do their business with their body aligned along the North–South axis,¹³ but this only held true when magnetic field conditions were calm.

When they became unstable, "this directional behavior was abolished," according to the study, proving magnetic sensitivity in dogs. Dogs may even be able to "[see](#)" [magnetic fields](#), similar to the way birds use their magnetic sense during migration,¹⁴ and may use a magnetic compass to orient themselves and take shortcuts when navigating unfamiliar terrain.¹⁵

As research into magnetic sensitivity grows, it's possible that humans may one day unlock the ability to navigate or even deliver drugs using magnetism. It also helps reveal how man-made structures like power lines, or drugs like antibiotics, may be interfering with magnetic-sensitive species.

Study author Yoni Vortman told *The Brussels Times*, "We are now in the middle of experimenting with several species of birds, testing whether antibiotics will affect their magnetic sense."¹⁶

How Do Wildfires and Smoke Affect Dogs?

by [AKC Staff](#)

With wildfires ravaging regions of the Western U.S., both humans and pets are at risk of being displaced and inhaling dangerous amounts of smoke. Remember — if you feel the effects of smoke, your pets probably do, too. And if you ever [have to evacuate your home](#), your pets should always go with you.

If you're in an area impacted by wildfires or smoke, don't panic. Here's how to prepare for an emergency, protect your pup from dangerous air quality, and evacuate safely.

What To Do With Your Pets When the Air Is Smoky

During wildfires, the air quality is often dangerous and hazardous to breathe. Some studies estimate that breathing the smoke-filled air is equivalent to smoking more than eight cigarettes a day — and that's for a human! Brachycephalic breeds (such as [Pugs](#) and [Bulldogs](#)), puppies, and senior dogs may be especially at risk of inhaling too much smoke.

Here's what to do if you experience poor air quality due to smoke:

- Keep your pets inside as much as possible, with your windows shut
- If your dog needs to go to the bathroom, only let them out for short periods of time
- Avoid long walks and activities outdoors
- Watch for signs of smoke inhalation (see below)

There are many ways to [keep your pets busy and active while indoors!](#)

Signs Your Pet May Have Inhaled Too Much Smoke

[Call your veterinarian](#) right away if your dog exhibits any of the following symptoms:

- Coughing
- Trouble breathing
- Wheezing or loud breathing
- Fatigue or disorientation
- Reduced appetite
- Reduced thirst
- Red eyes, excessive tearing or blinking, or pawing at eyes (indicate cornea trauma)

Do Facemasks Protect Dogs Against Smoke?

While most people have gotten used to [wearing facemasks](#) to combat COVID-19, they can also be a tool for protecting humans against poor air quality. However, no evidence has been seen that masks protect against carbon monoxide, carbon dioxide, and cyanide, which are some of the most dangerous aspects of smoke inhalation. Not enough research has been done to support any effectiveness on masks to protect animals. The best plan is to keep both you and your animals indoors as much as possible.

Preparing Your Pets For Fire Evacuation

It's important to remember that your pets are a part of your family, so if you have to evacuate, your animals should go with you. This is why you should have an [evacuation plan](#) ready before you even think you may need it.

Make sure your dog is [microchipped](#). A microchip allows veterinarians and shelter workers to scan your pet and access your contact information. It could be essential to being reunited with your dog if you get separated. Keep your dog's microchip registration up to date with your most recent phone number and address. But don't forget the low-tech option too. Your dog should be wearing a collar with up-to-date identification tags. Finally, have copies of all your dog's important documents. Consider including:

- Vaccination certificates and most recent [heartworm test](#) results.
- Information about any health concerns, medications, or behavior problems.
- Contact information for your veterinarian.
- Identification information including proof of ownership and a current photo of you with your dog in case your dog gets lost.

Pack a Fire Evacuation Kit

A [pet disaster preparedness kit](#) should include everything your dog will need in an emergency evacuation. Consider your dog's basic needs, safety, and any medical issues. Keep it in an easy-to-carry waterproof container and store it

where you can easily get to it. Your dog's go-bag should include items such as:

- Bottled drinking water (during an emergency, tap water can be contaminated).
- Food in waterproof containers or cans. (Choose pop-top tins or pack a can opener.) Bring enough for at least two weeks.
- [Food and water bowls](#).
- Prescription medications and other required health supplies such as [tick medication](#) and [heartworm preventative](#).
- [A dog first aid kit](#).
- [Poop bags](#) and other clean-up supplies.
- Familiar items like toys, bedding, and blankets to comfort your dog.
- Stress-relieving items like an [anxiety vest](#) or [calming sprays](#) if your dog is prone to anxiety.

How to Evacuate With a Dog

Always bring your pets with you when evacuating your home. Pack your pet's emergency kit and documents and make sure you have a pet-friendly place to stay. Whether you're staying with family, at a shelter, or a [pet-friendly hotel](#), there are several options for traveling with your pets.

In the unfortunate event that you are separated from your pet or lose your pet, contact [AKC Reunite](#). Above all, stay vigilant, stay indoors if you can, and call your veterinarian if you notice any changes in your dog.

The Portland MSC
will be holding its
Designated Specialty with the
Southern Oregon Terrier Association
on July 16 2021
at Bandon High School in
Bandon, Oregon
Judge is Philip Freilich
Sweepstakes Judge is Laura
Reeves



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FOR YOUR CONVENIENCE: The following information is given to help conduct AMSC business more efficiently. Please remember that the Secretary and the AMSCOPE editor should **BOTH** be notified of address changes, club officers and specialty results.

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