



DOG Watch

Expert information on medicine, behavior and health from a world leader in veterinary medicine

Vol. 21, No. 6 ♦ June 2017

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IN THE NEWS ...

FDA OKs First Generic for Canine Heartworm

The Federal Drug Administration has approved the first generic drug to treat heartworm disease in dogs. Diroban (melarsomine dihydrochloride) from Zoetis is administered by injection into back muscles. It's used to treat dogs infected with *Dirofilaria immitis* — the cause of heartworm disease.

Another maker of canine heartworm medicine had recently experienced supply shortages. Diroban can be used to treat dogs with different stages of symptoms, such as respiratory problems. Side effects may include pain and swelling or tenderness at the injection site.

Heartworm disease is caused by a thread-like parasitic worm that lives in the heart, lungs and associated blood vessels of an infected animal. In dogs, the disease results in heart failure, severe lung disease and other organ damage. The disease is spread through a mosquito bite. It can't be transmitted directly from one dog to another. Affected dogs may cough, gag and experience decreased activity and appetite, fever and vomiting. ♦

The Enduring Enigma of Small Dogs

They're loving, ideal for urban life and generally live longer but have health problems unique to them

SPECIAL REPORT

Small dogs have been bred for generations as loving companions alongside their owners. They're typically less than 20 pounds, cuddly and full of mischief just like their larger brethren. And to judge by one national measure, they're growing in popularity.

In an analysis of medical records of 2.5 millions dogs at its 925 locations, Banfield Pet Hospital, which logs



Speculation is that large dogs have an exaggerated growth period, resulting in more rapid aging.

breed identification according to owners' descriptions, found small dogs now account for 45 percent of the dogs it sees. Specific increases over the past decade include Chihuahuas, 35 percent; Shih Tzus, 39 percent; Maltese, 87 percent; and Yorkshire Terriers, 95 percent.

Banfield acknowledges the increase may reflect the fact its hospitals tend to be in metropolitan areas and attract owners

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Where's the Worm in Ringworm?

Mostly in textbooks — it's a highly contagious fungal infection that's transmitted between people and animals

When is a worm not a worm? When it's a fungus. Despite the misnomer, ringworm is a common fungus that derives its name from a red, itchy, ring-shaped skin rash. Ringworm, which is found in the hair and nails, is contagious and easily transmitted between humans and animals, including our dogs and cats.

There is no effective preventive. In dogs, about 70 percent of ringworm cases are caused by *Microsporum canis*, 20 percent by *M. gypseum* and 10 percent by *Trichophyton mentagrophytes*. Puppies, seniors, farm dogs and dogs with compromised immune systems are most at risk.

"Dermatophytosis, the medical name, is caused by a variety of organism, some of which prefer humans and some animals. Given the right circumstances, a dermatophyte from an animal can infect a person and vice versa. Outdoor dermatophytes, termed geophilic, can also infect an animal or human," says dermatologist William H. Miller, VMD, a medical director of the Companion Animal Hospital at Cornell.

Hardy Spores. Dermatophytes thrive in warm, humid climates, but *M. canis*, *M. gypseum* and *T. mentagrophytes* occur around the globe. The fungus lives on animals,

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SHORT TAKES

Top 10 Reasons for Calls to Animal Poison Control

1. Human prescriptions and over-the-counter medications led the ASPCA Animal Poison Control Center's top 10 potential toxins last year. Human prescriptions, the No. 1 reason for calls, accounted for 30,708 calls, or 17 percent, of the total 180,639 cases, the center says in announcing the findings. They reflect the drugs' use among people — antidepressants and medicine for heart disease and attention deficit hyperactivity disorder.

2. Over-the-counter medicine was only slightly behind, less than 1 point, at 16.7 percent. "This category is exceptionally large, encompassing nearly 7,000 products, and ibuprofen is still the No. 1 medication the APCC receives calls about," the center says. Ibuprofen, a non-steroidal anti-inflammatory drug for pain control, is marketed as Advil and other products. "Pets metabolize and eliminate these drugs differently than humans do," the center cautions. "Because of the difference in elimination, even small amounts can cause significant medical problems in dogs, including gastrointestinal ulcers and kidney failure." Pet parents should always maintain the utmost care when handling and storing these and other potentially poisonous products around pets.

In the April 2017 issue of *CatWatch* on "Keeping Medicine Safe and Effective," Lisa Penny, director of pharmacy and a registered pharmacist at Cornell University College of Veterinary Medicine, recommended owners label their medicine and their pets' to avoid accidental ingestion.

Other common potential poisons that made the list:

3. Food: Dogs, who tend to ingest human foods more often than cats, can get into serious trouble eating onions, garlic, grapes, raisins and alcohol, the center says. Food moved up a spot on center's list—mostly because of concerns about xylitol, a sweetener in many sugar-free products.



Dogs' natural curiosity and some medication's pleasant taste will tempt them, but putting pill bottles in a nightstand or secure cabinet will discourage foragers.

4. Veterinary products: Over-the-counter supplements for joints and prescription pain medications made up a large portion of these cases, particularly because many are designed to be tasty. Unfortunately, the center says, "This means that pets may be tempted to eat the entire container."

5. Household items: Products like glue and cleaning supplies are the subject of tens of thousands of poison cases each year at the center.

6. Chocolate: Dogs love chocolate in brownies and candy bars and anywhere else they can find it. The center receives an average of 39 calls about chocolate every day. The darker the chocolate, the more dangerous it can be.

7. Insecticides: The number of cases has decreased recently, but that doesn't mean they're safe, the center says. "If label directions are not followed, these products can be very dangerous to pets."

8. Rodenticides: Rat and mice poisons can be as toxic to pets as they are to pests they're designed to kill.

9. Plants: Be sure to understand the toxicity of plants before putting them in or around your house — indoors, outdoors and in bouquets.

10. Garden and lawn products: Among them are herbicides and fungicides, which accounted for 2.6 percent of the center's cases in 2016. Many pets find fertilizers irresistible, so it's important to store these out of their reach, and supervise them outside.

If you suspect your pet has ingested a toxin, please contact his veterinarian or the ASPCA Animal Poison Control Center's 24-hour hotline at (888) 426-4435. A \$65-fee may be applied. ♦

'Yappy Ankle Biters?' I Beg Your Pardon

Some small dogs may be fearful because they're 6 inches tall, 'living in a world of scary giants'

Small dogs have a reputation as yappy, aggressive ankle biters. Certainly, they bark but in most cases it's from fear and sometimes it's communication with other dogs, says behaviorist Katherine A. Houpt, VMD, Ph.D., ACVB, emeritus professor at Cornell.

The most effective stimulation for barking is another dog's barking. "I had a Westie, and every night he would go out in the yard and bark," she says. "Then a neighbor's dog would bark. Then my dog would bark. This continued for about 20 minutes. Then my Westie became deaf. He would go outside and bark but he couldn't hear anything so he came back inside."

Mapping Fear. Dr. Houpt refers to a new study "Genetic Mapping of Canine Fear and Aggression" by Isain Zapata, James A. Serpell and Carlos E. Alvarez, published in *BMC Genomics* in August 2016. "In looking at the genes



Chihuahuas scored on the second tier of avid barkers and excitable breeds.

associated with aggression in dogs, it seems they were almost exclusively in toy breeds, not larger dogs. We have selected [bred] against aggression in bigger dogs, yet we seem to tolerate it in little dogs."

Some small dogs may be fearful simply because of their size, "living in a world of scary giants," Dr. Houpt says. "For example, some small dogs are more afraid of men than women because men are generally bigger and have deeper voices."

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BREEDING AFFECTS LONGEVITY BUT SO DO ENVIRONMENT, EXERCISE AND CARE

When considering a small dog for a companion, size is one factor, but so are energy levels and health history. All dogs need exercise and mental stimulation for optimum health.

Pint-sized pups make popular pets for golden agers, people with a less active lifestyle and those living in



Many small dogs require less exercise than larger ones, while others need a robust daily walk and romp for maximum fitness.

urban areas. Many small dogs require less exercise than larger dogs and a robust daily walk usually meets their exercise requirements. However, some breeds, for example, the Jack Russell Terrier, have extraordinarily high activity levels.

Choosing the perfect companion requires research to find the best dog for you and your lifestyle, says Jerry Klein, DVM, chief veterinary officer at the American Kennel Club. "Remember that generalizations are just that — generalizations. Not all big dogs die young, nor do all small dogs live long."

Though some longevity is predetermined genetically in breeding — it's always a good idea to ask your reputable breeder how long your puppies' parents and grandparents lived — much can be affected by the environment, Dr. Klein says, citing the food we feed, the care and attention we give, and the guidance and help we receive from the family veterinarian.

SMALL DOGS... *(continued from cover)*

with small breeds who are convenient for urban living, but that's part of the dogs' appeal.

Multiple Advantages. "There are many advantages to having one of these small dogs. I think, especially for urban lifestyle, that a small dog is a great idea. He can be paper trained, he doesn't need quite as much exercise as a hunting breed dog, and he doesn't take quite as much food," says Katherine A. Houpt, VMD, Ph.D., ACVB, emeritus professor at Cornell University College of Veterinary Medicine.

Despite their attributes, small dogs remain one of nature's enigmas: they generally live longer than large dogs but have special health problems. "The speculation is that larger-type dogs have an exaggerated growth period that results in a more rapid aging deterioration," says Jerry Klein, DVM, chief veterinary officer at the American Kennel Club. "Some larger dogs may be prone to different health issues like developmental disorders, musculoskeletal and gastrointestinal diseases, and tumors, some of which can become fatal."

The difference in small dogs is that they may be prone to disc disorders

and other ailments that can often be managed over longer period of time rather than being fatal conditions, Dr. Klein says.

Periodontal disease, retained baby teeth and dislocated kneecaps are problems particular to small breeds. Our Cornell experts explain some of the health challenges these small dogs face, their treatment, prognosis and, when possible, prevention.

Bred for Baby Faces, But Soft Tissues Stay the Same

Brachycephalic Airway Syndrome (BAS) refers to upper airway abnormalities. The dogs have a shortened, broad heads, which give their faces a pushed-in look resembling babies.

"BAS is a hereditary problem caused by selective breeding," says surgical specialist James A. Flanders, DVM, ACVS, associate professor at Cornell. "They have shortened bony features in their nose and jaws; however, the soft tissue structures within the nose and jaws — the soft palate, the nasal passages, the mucous membranes in the throat — have not been reduced in size."

The result can be respiratory distress. The soft structures crowded in

a small space obstruct the passage of air through the nose and the mouth. "The characteristic snoring noise that brachycephalic dogs make when they breathe is caused by the movement of air through these narrowed air passages. The characteristic abnormalities are stenotic (narrowed) nares, elongated soft palate, everted laryngeal sacculles, hypoplastic (narrow) trachea," Dr. Flanders says.

BAS can lead to exercise intolerance, collapse and death. "Severely affected brachycephalic puppies can develop fatal pneumonia because of airway — especially trachea — abnormalities," he says.

Signs vary from each dog and breed, and depend on the amount of airway obstruction. "Some brachycephalic breeds such as Pugs and Boston Terriers typically have minimal signs, mostly noisy breathing and occasional snoring, and these breeds rarely require surgical treatment. English Bulldogs can also have minimal signs, but some English Bulldogs can have severe airway obstruction, as can French Bulldogs," Dr. Flanders says.

Treatment: Plastic surgery may be performed to widen the nostrils of affected dogs to allow more air to enter the nasal passages, Dr. Flanders says. "We also shorten and sometimes thin the soft palate so that it does not obstruct the throat. Some dogs develop an additional obstruction to airway flow through the throat called everted sacculles — the small mucous membranes within the throat that can be pulled into the throat due to the great pressure generated when affected dogs breathe."

Prognosis: Surgery greatly helps many dogs, yet many will still have residual noise. "The goal is to improve their ability to breathe and exercise," Dr. Flanders says. "They won't ever become racing Greyhounds!"

Possible prevention: "Keep brachycephalic dogs slim," he

AFFECTED BREEDS

Brachycephalic breeds will sound as though they're snoring when they breathe because of air moving through narrowed air passages. Among the breeds are:

- ◆ Bulldogs
- ◆ Boxers
- ◆ Boston Terriers
- ◆ Bull Mastiffs
- ◆ Chinese Pugs
- ◆ Lhasa Apsos
- ◆ Pekingese
- ◆ Shih Tzus



"Some brachycephalic breeds, such as Pugs and Boston Terriers, (right), typically have minimal signs, mostly noisy breathing and occasional snoring, and these breeds rarely require surgical treatment," says surgical specialist James A. Flanders, DVM, ACVS.



The exact cause of dislocated kneecaps hasn't been determined but relates to muscle imbalance and abnormal hip conformation, says Rory J. Todhunter, BVSc, Ph.D., ACVS, professor of surgery. "It's been postulated to be an autosomal recessive trait — two copies of an abnormal gene must be present for a condition to occur."

says. "The extra fat can cause them to breathe harder, and extra fat in the neck can add to the obstruction on the throat and trachea. Don't exercise brachycephalic dogs in the heat."

Patellar luxation: A Hop and a Skip

Dislocated kneecaps are a common malady in small dogs. The kneecap can luxate to the inside (medial) more often in small dogs or to the outside (lateral), a condition more common to large dogs, says Rory J. Todhunter, BVSc, Ph.D., ACVS, professor of surgery at Cornell.

"No one knows the exact cause, but it relates to muscle imbalance and abnormal hip conformation. It's been postulated to be an autosomal recessive trait — two copies of an abnormal gene must be present for a condition to occur. I bet it's complex — multigenic," he says. The condition can result from injury just as in people.

Signs include skipping, carrying the affected leg up, intermittent to continuous limping and carrying the hind legs off the ground, with the weight on the front legs.

Treatment: "Challenges are the same for large dogs and include recurrence and lameness due to arthritis, and can occur

with the rupture of the cranial cruciate ligament — the stabilizer inside the knee joint," says Dr. Todhunter.

Prognosis: Good for less severe cases but only fair for more serious ones, which may require surgically cutting bone to repair the disorder as well as aggressive soft tissue repair.

Possible prevention: Muscle strengthening through rehabilitation and exercise may be helpful. Better is to not interbreed dogs with the disorder.

A Mutation Can Cause Rear Limb Paralysis

Intervertebral Disc Disease (IVDD) is a spinal cord disease causing back pain, rear limb paralysis and the inability to walk or feel the back legs. The intervertebral disc is a jelly-doughnut like structure that acts as a cushion between spinal vertebrae.

"IVDD occurs due to conformation," Dr. Todhunter says. "A classic example is the Dachshund with short legs and long body, which is at least partly due to a mutation. It results in the degeneration of the intervertebral disc — especially the nucleus pulposus, the soft hydrated center of the disc — the jelly part of the doughnut. Mechanical overload, especially obesity, then adds insult to the genetic predisposition."

All small breeds are predisposed to IVDD, and Cocker Spaniels and large dogs can also develop it. "IVDD is a very serious condition and clinical signs include back pain, difficulty walking, wobbly gait, weakness and paralysis and loss of innervation to all sites below the problem," says Dr. Todhunter. "It can occur in the neck and

back but most common is the junction of the chest and abdomen."

Treatment: Surgical decompression if the dog is down. Loss of sensation and and motor function may be permanent.

Prognosis: Good if decompressed early. Poor if deep pain is not present and especially if a patient is deep pain negative for more than a few hours or days. It can take a long time to recover, and the dog may not regain full motor control.

Possible prevention: Fitness and ideal body weight to reduce mechanical load across the spine.

Anatomy's Role in Dental and Oral Health

Periodontal disease is an equal opportunity disease affecting most dogs, but small dogs seem to be more prone to severe periodontitis, says Kevin Ng, BSc, BVMS, a resident in dentistry and oral surgery at Cornell. "This appears to be partly due to their having tooth crowding due to their small skull size."



Small dogs seem to be more prone to severe periodontitis, says Kevin Ng, BSc, BVMS, a resident in dentistry and oral surgery. "This appears to be partly due to their having tooth crowding due to their small skull size."

Spaces between the teeth are then more prone to plaque accumulation that are harder to keep clean through normal chewing or dental home care. Other factors include breed, genetics, the bacteria involved and level of dental home care, Dr. Ng says.

Small teeth means it takes less bone destruction before the teeth become untreatable, and it's also what helps periodontal disease progress faster, Dr. Ng

says. "If secondary nasal infection and pathological mandibular fractures are involved, then treatment will have to be more extensive. Periodontal treatment may have to be performed more frequently in small dogs."

Bacteria and their byproducts in dental plaque stimulate an inflammatory immune response seen as gingivitis, or inflammation of the gums. "While gingivitis is reversible," Dr. Ng says, "if left untreated, it frequently leads to the gradual destruction of the soft tissues and bone that support the tooth, or peri-

odontitis. Unlike gingivitis, periodontitis is irreversible."

Bad breath and inflammation are the first signs. "In advanced cases, bleeding and/or receding gums, pus, loose teeth and facial swelling may be noticed," he says.

As with many conditions, the longer periodontal disease is left untreated, the greater the risk of developing severe consequences. Inflammation and infection of teeth in the upper jaw may spread to the nose in severe cases. One of the most devastating consequences of periodontal disease is pathological mandibular fracture.

"In these cases, the bone of the lower jaw is so severely affected that it may break as a result of light trauma or normal chewing behavior," Dr. Ng says.

Possible prevention: Control by removing plaque and calculus from the teeth. Additional treatments include root-planing, periodontal surgery and medications. In the most advanced cases, extraction of the teeth is frequently the only option, says Dr. Ng. "Prevention is definitely better than cure. Daily tooth brushing is the gold standard, and if performed properly, is the most effective choice." ♦

HEALTH

RINGWORM... (continued from the cover)

domestic or wildlife, directly or in their environment — in living areas, bedding, on combs and brushes. The spores can remain viable in the environment for more than a year. The environment may be a boarding kennel, dog park, day care, groomer and garden. The fungus can attack healthy skin but skin that has been shaved, scraped or scratched is more vulnerable.

The fungus is transmitted by contact with an infected animal or person, or infected hair or skin scale in the environment, says Dr. Miller. In dogs, the classical signs of ringworm are lesions with hair loss (alopecia) around the face, head or tail, which may or may not itch. Skin will have inflamed, dry, gray scaly patches. In mild cases, no symptoms may be noticeable.

"In our haired animals, the fungus invades and weakens the hair," Dr. Miller says. "These weakened hairs break off and that forms the hairless area. Some of the adjacent hairs will become infected, and they will eventually break off expanding the area of hair loss. Depending on which genus and/or species of fungus is involved, the exposed skin can become very inflamed and/or scaly. The fungus may infect the claws making them brittle and rough."

If you suspect your dog has ringworm, he will need a physical examination and testing. The vet will likely use a combination of microscopic examination of plucked hairs or skin scrapings, fungal culture or examination under an ultraviolet light called a Wood's lamp. Some species, such as *M. canis*, fluoresce apple green under the lamp but can be negative in an infected animal.

Test All Your Pets. If you have more than one pet, be sure to have all of them tested. Separation or isolation of the infected pet is recommended, but it's often difficult with other pets and children.

For healthy dogs and puppies, ringworm is self-limiting and usually infections resolve within a few months. However, treatment will speed recovery, prevent the lesions from spreading and decrease the risk of transmission to other pets or people.

Topical applications such as anti-fungal creams or ointments can be applied in mild cases with few lesions, says Dr. Miller. Anti-fungal shampoos



A Chihuahua's inflamed, scaly skin is typical of a severe case of ringworm.

or dips may be recommended. Use only vet-recommended products to avoid aggravating the condition. Oral anti-fungal medications may be added to the regimen. Follow directions exactly and don't stop treatment unless the veterinarian advises you. "If large areas are involved or the animal has an underlying metabolic disease, then systemic medications are used in conjunction with the topicals," Dr. Miller says.

Clipping the hair before treatment has been recommended but this practice is controversial. While it removes the infected hairs and may make it easier for the topical drugs to penetrate the skin, it may also traumatize

A WARNING ON CLEANING PRODUCTS

Since ringworm lives on skin and hair follicles, a significant part of treatment is thoroughly cleaning your dog's environment and removing dead hairs. Fungal spores can live on furniture, bedding, grooming tools and clothing for up to 18 months or longer. Daily vacuuming of carpet, furniture or areas in your home that your dog comes in contact with is recommended. Dispose of vacuum bags in outside trash bins. Wash surfaces with a strong cleaning agent specifically designed for this use.

Be careful of outdated information. In years past chlorine bleach diluted 1:10 (¼ cup in 1 gallon of water) was recommended. Today, the bleach concentration is higher and a 1:10 dilution can be too strong. Do not mix cleaning products. The treatment plan usually takes six weeks to be effective and your dog will still be contagious.

the skin and spread the infection. The clipped hair must be carefully wrapped and disposed of outside the home. All grooming tools will harbor spores and must be heated or chemically sterilized before reuse.

"The devil is in the details," Dr. Miller says. "Which animal, what

fungus, how extensive are the lesions. I tell owners they are in it for a minimum of 45 days and it often takes longer to resolve the infection. While we await those culture results, which can take up to 30 days before the culture is declared negative, the animal is continued on treatment."

Environmental decontamination (vacuuming, cleaning, etc.) is necessary to prevent reinfection of the patient or infection of people or other pets in the house.

Those at Risk. It takes more than casual contact to become infected. "Good hand hygiene typically blocks the transfer from the pet to the person, but if the dog is hugged, then the infected spores can get under the person's clothing," Dr. Miller says. "Individuals with pre-existing skin disease or metabolic or immunologic disorders may be at an increased risk and should be very careful around an animal with known or suspected ringworm."

Ringworm is treatable, curable and not life-threatening, but the young, the elderly and those with weakened health, both people and pets, are most vulnerable. Once you know the signs, you can help prevent the spread of the fungus and keep your household healthy. ❖

SPECIAL REPORT

SMALL DOGS... (continued from page 3)

Some worried owners of toy breeds will pick up their dog if they seem

afraid. "This does two things," Dr. Houpt says. "One, the dog feels more confident both because he is being held

and because is now 5 foot 5 inches instead of 6 inches tall, and two, if someone gets too close to the owner, the dog may try to bite them because a big face appears before them

"Many dogs put their ears down because they don't like to be petted. That's just exaggerated for the tiny dogs because the threat of a human hand is much larger. Plus, all dogs don't like direct staring by strangers."

Owners need to take responsibility to make sure their little dog is well behaved and try to eliminate the things that scare it, Dr. Houpt says. "If you have a little dog, train him as if he were a big dog so that you have control over him."

In the end, she believes that toy dogs are worth the effort of treating their health problems and managing their behavioral ones. The reason? "They are easily portable, generally low maintenance and so easily cuddled on the couch and bed." ❖

BORN TO BE BIG BARKERS — EXCITABLE, TOO

The Canine Behavioral Assessment and Research Questionnaire, an evaluation of dogs' temperament from the University of Pennsylvania, included excessive barking, excitability and high activity in surveying veterinarians and obedience judges.

Among the barkers: Beagles, Fox Terriers, Miniature Schnauzers, Cairn Terriers and Yorkshire Terriers. with Chihuahuas in the second tier. The most excitable dogs include Fox Terriers, Miniature Schnauzers, Silkies, Yorkies, Scotties and again Chihuahuas as second.



Miniature Schnauzers were among breeds scoring high both as barkers and high-activity breeds.



Katherine A. Houpt, VMD, Ph.D., here with her West Highland White Terrier, Yuki, provided the answer on this page. Dr. Houpt is a diplomate of the American College of Veterinary Behaviorists and emeritus professor at Cornell University College of Veterinary Medicine.

Please Share Your Questions
We welcome questions of general interest on health, medicine and behavior. We regret however, that we cannot comment on specific products and prior diagnoses. Please send correspondence to:

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COMING UP ...

FEARS AND
PHOBIAS



BONE
FRACTURES



DEAFNESS IN
WHITE DOGS



SKUNK ODOR
CLEANER

True to His History, Max the Doxie Digs up the Backyard

Q I have a lively 5-year-old Doxie, who true to his ancestry, will not give up digging in the backyard. Max was a rescue who'd mostly lived outdoors, so maybe that's how he amused himself.

I don't know what his motivation is now. He gets plenty of attention and long walks. He is somewhat of a handful — an officious, bossy kind of fellow in the house you half expect to pull you over and ask to see your hall pass.

I can't watch him all the time when he's outside, but as soon as he realizes I'm out of view, he'll start digging and soon all you'll see is his rump. The yard is a battle zone. I've read about homemade digging boxes. Would that work?

A Max may dig for a number of reasons. One common reason is to escape. He may not be aware that he now has a wonderful owner who rescued him. Some dogs think the grass is always greener on the other side and Max may be one of these.

In many cases, it is not the grass that tempts the dog. It is another dog, especially a female who is in season, and if Max were intact, pursuing bitches is the one behavior that castration always cures. Another subset is because dogs want to chase the deer or squirrels or skateboarders on the other side of the fence. This is predatory behavior.

Some dogs want to escape because they are trying to find you. This is a form of separation anxiety seen in dogs left at home in their yard while the owner is away. These dogs often work as hard to get into the house from the yard as they work to escape the house. They are simply looking for the owners in the last place they saw them.

Boredom is always a possible reason for misbehavior. Max should have toys in the yard that he can use by himself such as food-dispensing balls or ropes hanging from branches if he likes to tug. In the summer, dogs appreciate a wading pool.

Max may be digging random holes in the yard rather than at the fence line. There are several reasons for that. If this happens in the summer, it may be to keep cool. If the dog digs a hole in the cool of



The usual posture of a dog who loves to dig, in this case a Westie. Dachshunds developed as hunters, with their short legs allowing them to enter burrows to find badgers and other small animals.

the morning and lies in it, he will be cooled for a long time. I doubt if Max is digging for that reason because small, smooth-coated dogs usually do not suffer from the heat the way furry dogs like Malamutes do. Dogs are den dwellers, which is why they tolerate or even enjoy crates, especially solid-sided airline crates. If you had a pile of dirt in your yard, he may excavate that for a hidey-hole, but that is less common in small dogs than in large Northern breeds.

Max might be showing predatory behavior if you have moles or voles or chipmunks in your yard. He can hear their ultrasonic calls that we cannot, and he will dig frantically to capture one.

Finally, he might be trying to bury things like a bone or a toy. You did not mention if he put anything in the holes. Homemade digging boxes may be the best treatment for Max. You can decide how much of your yard you can sacrifice. You can use a sandbox and fill it with damp sand.

For two weeks, do not leave him in the yard unattended but lead him to the box where you have buried his favorite bones or rawhides, balls or even Milk-Bones and other hard treats. You do not want him to ingest sand from a sticky treat.

Encourage him to dig, so he realizes that digging is an approved pastime. Be sure, if necessary, that you can cover areas with chicken wire where you do not want him to dig. You can fill pre-existing holes with rocks or water. Do not punish Max for digging. Some nasty people have devised cruel ways to punish digging. The milder punishments, such as repellents, usually don't work after the first or second application because the odor is less aversive than the activity is fun.

Enjoy Max indoors and out. ❖

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