

© THIS JUST IN

Stem Cells for Blindness Study offers a lot of hope

William Beltran and Gustavo Aguirre are University of Pennsylvania researchers known for working with gene therapies to help restore vision in dogs like Briards with genetic retinal deficiencies. In a new study, working with researchers from human medicine, they took stem cells of human photoreceptor cells grown in a culture and put them into the retinas of the recipient dogs with retinal disease. Immunosuppressive medications were needed to prevent rejection (since these were human cells). Incredibly, the cells survived and formed connections with some of the existing cells.

Seven normal dogs and three with inherited retinal diseases were involved in this initial test, which also used a new surgical approach to place the cells back by the retina. Canine eye anatomy is suitable for working on human treatments as well as canine ones, and many inherited eye diseases in dogs are very similar to conditions in people.

Much more work will need to be done, but this is an exciting example of how canine and human medical advances can work together and benefit both. ■

Ripolles Garcia, A., et al "Systemic immunosuppression promotes survival and integration of subretinally implanted human ESC-derived photoreceptor precursors in dogs." Open Access, July 28, 2022

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Drool Is Not Just an Icky Mess

It can be a slimy window to your dog's health

Drool is a product of your dog's salivary glands, which are located around and under his jaw. It is a thick liquid that helps lubricate going food down the esophagus and into the stomach. Unlike human saliva, it does not contain amylase, which is an enzyme that starts the digestion process. Canine drool is slightly alkaline, which helps to prevent tooth cavities in dogs.

It's also somewhat antibacterial, but it can spread bacteria that are normally found in your dogs' mouth, too. Saliva helps to keep the tissues of the mouth moist, which aids in taste and smell. Evaporating saliva can help to cool a panting dog.

Can there be too much saliva? Maybe. Some dog breeds—Newfoundlands, Bloodhounds, and Bassets—are somewhat "drool factories." Dogs with loose lips are known for sharing their slobber with friends and family.

When to Worry

Normal drool is clear and flows, and it should not be dripping from your dog's mouth. Causes for concern are blood in the drool and a thick, sticky drool. If there is blood, try to examine your dog's mouth. He may have a bad tooth or a cut on his tongue. A foreign body lodged across the roof of his mouth could have irritated tissues and cause bleeding. Oral cancers may bleed.

Situational drool can be from wanting that tasty treat (think Pavlov's dogs) or nausea, including car sickness. Vomiting, for any reason, is often preceded by excessive drooling. Nervous, anxious dogs may drool due to their mental state.

If your dog has gotten into a caustic, potentially toxic item such as chewing on some poisonous plants, your first clue may be excessive salivation to try to soothe the irritated tissues in his mouth and on his tongue. The same is true for puppies who chew on cords and get electrical burns.

Normally, dogs swallow most of their saliva. If your dog has a blockage in his



Some dogs are "drool factories."

mouth, caused by a foreign body or a growth, much of the saliva may pool and drain out.

What to Do

If your dog is hypersalivating and you don't know why, it's time for a thorough oral exam by your veterinarian. If your dog is anxious or in pain, sedation may be required. The whole mouth needs to be carefully checked, including under the tongue. If nothing is readily apparent, radiographs, aka x-rays, especially of any suspect teeth, may be next.

Treatment for excessive salivation depends on the cause. For dogs with nausea such as carsickness, remedies like Dramamine may work. Cerenia works for nausea, including motion sickness. Bad teeth need to be removed. Burns or caustic injuries need to heal.

Foreign bodies will need to be removed and this might require sedation or general anesthesia. Any oral growths will need to be removed and biopsied to determine if further treatment is needed.

Bottom Line

If you've chosen a breed who shares saliva with you, at least you know he's healthy and happy. Frankly, some saliva or drool is a good thing, but if it changes in look or volume, it's definitely time to sleuth out the reason. ■

Smell and Sight Work Together in Dogs

A blind dog may find his favorite digs through scent

Philippa J. Johnson, BVSc, assistant professor, section of diagnostic imaging at Cornell University's College of Veterinary Medicine, recently published a research paper tying in vision and smell senses anatomically and physiologically in dogs. In general, blind dogs, especially if the dog was born blind or gradually lost sight, are extremely well adapted to their environment. A blind dog can run out to fetch a toy or hustle to his favorite tree for a pee break. This is felt to be due to "brain maps," but scent could be a big part of this too.

In the study, 23 healthy dogs had magnetic resonance imaging (MRI) and diffusion tensor imaging, an advanced neuroimaging technique, to look at and map out neural pathways in the brain and spinal cord. In humans, the olfactory bulb connects to parts of the brain that handle emotions and memories, which is why the smell of certain foods can transport you right back to your grandmother's kitchen. Dogs have those connections as well, but in addition, have connections to the occipital lobe of the brain (think vision) and the spinal cord.

These findings will lead to more research, next looking at cats and horses. The study suggests that it is possible that humans may have similar but more vestigial connections in their brains. Teasing that out could lead to help for people with vision losses by tapping into their olfactory pathways. For now, learning more about animal brain physiology is a start. ■

Andrews, E.F., et al. "Extensive Connections of the Canine Olfactory Pathway Revealed by Tractography and Dissection" *Journal of Neuroscience* 11 July 2022, JN-RM-2355-21; DOI: 10.1523/JNEUROSCI.2355-21.2022

Study Looks at a Canine Transmissible Cancer

This venereal tumor "transplants" living cells

A new study has found that male dogs are four to five times more likely than female dogs to be infected with the oro-nasal form of canine transmissible venereal tumor. Researchers think this is because of behavior differences between the sexes: male dogs spend more time sniffing and licking female dogs' genitalia than vice versa.

Canine transmissible venereal tumor (CTVT) is an unusual cancer as it is infectious and can spread between dogs when they come into contact. The living cancer cells physically "transplant" themselves from one animal to the other.

CTVT commonly affects dogs' genitals and is usually transmitted during mating. But sometimes the cancer can affect other areas like the nose, mouth, and skin.

In the study, the researchers reviewed a database of almost 2,000 cases of CTVT from around the globe and found that only 32 CTVT tumors affected the nose or mouth. Of these, 27 cases were in male dogs.

"We found that a very significant proportion of the nose or mouth tumors of canine transmissible cancer were in male dogs," said Dr. Andrea Strakova in the University of Cambridge's Department of Veterinary Medicine, lead author. "We think this is because male dogs may have a preference for sniffing or licking the female genitalia, compared to vice versa. The female genital tumors may also be more accessible for sniffing and licking, compared to the male genital tumors," she says.

CTVT first arose several thousand years ago from the cells of one individual dog; remarkably, the cancer survived beyond the death of this original dog by spreading to new dogs. This transmissible cancer is now found in dog populations worldwide and is the oldest and most prolific cancer lineage known in nature.

The most common symptoms of the oro-nasal form of the cancer are sneezing, snoring, difficulty breathing, nasal deformation, or bloody and other discharge from the nose or mouth. Genital cases of CTVT occur in roughly equal numbers of male and female dogs.

Transmissible cancers are also found in Tasmanian Devils and in marine bivalves like mussels and clams. The researchers say that studying this unusual long-lived cancer could be helpful in understanding how human cancers work. ■

Andrea Strakova, A., et al. "Sex disparity in oronasal presentations of canine transmissible venereal tumor." *Veterinary Record*, 2022; DOI: 10.1002/vetr.1794. *Science Daily*.

Cornell DogWatch

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DogWatch is an independent newsletter
produced in collaboration with Cornell
University College of Veterinary Medicine



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For information on pet health, visit the Cornell
University College of Veterinary Medicine,
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Subscriptions: \$39 per year (U.S.) • \$49 per
year (Canada). For subscription and customer
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DogWatch® (ISSN: 1098-2639) is
published monthly for \$39 per
year by Belvoir Media Group, LLC,
535 Connecticut Ave., Norwalk,
CT 06854-1713. Robert Englander,
Chairman and CEO; Timothy H.
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The Wellness Exam Choice

It's cost-effective to keep well-visit appointments

You and your veterinarian both want to ensure the health and longevity of your dog, and regular wellness exams are an essential part of achieving that goal. Your veterinarian may note problems long before they are apparent to you, giving you and your dog the best chance for a successful outcome.

An Industry in Crisis

Another compelling reason to keep those regularly scheduled wellness exams is the veterinary industry itself. Starting around the same time as the pandemic, the number of practicing veterinarians and licensed veterinary technicians became unable to keep up with the exploding demand for veterinary services. People are waiting 12 hours to have their dog seen for an emergency, or being turned away repeatedly by hospitals that are “at capacity” and unable to accept another patient that day. It’s a problem that’s making it more important to ensure your dogs are in good standing with your veterinary hospital so that you can get help when your dog needs it.

“The shortage of veterinarians has unfortunately negatively affected my practice,” says Dr. Allison Blakey, owner of Upstate Animal Clinic in Cazenovia, N.Y. “We have been trying unsuccessfully for two years to hire an associate veterinarian as well as a full-time licensed technician. This has led us

to stop taking new clients so that we may continue to offer our current clients the level of service they expect, while also seeing our patients in a timely fashion.”

Wellness Schedules

The timing of wellness visits depends on your dog’s life stage and general health.

For puppies, monthly exams are recommended for monitoring growth, nutritional status, tooth alignment/development, and for catching any health problems that develop. Training and behavioral issues will be addressed, and any necessary vaccines will be given at appropriate intervals.

Dogs 1 to 6 years of age only need an annual exam and vaccinations, if they are healthy without any medical issues.

The current recommendation for healthy dogs 7 years of age and older is to have a wellness exam twice a year. Time moves more quickly in older pets, bringing a higher likelihood of medical problems that may not be apparent to you. Your veterinarian may find dental problems, ocular disease, kidney issues, abdominal masses, and tumors before they become problems.

Wellness Screening Tests

It’s a good idea to have a blood chemistry screen and complete blood count done on your healthy young dog to serve as a baseline for his future tests. For many dogs, this is accomplished with bloodwork at spay/neuter or at the time of his annual heartworm/tick blood test and fecal exam. The fecal exam is important because of the zoonotic risk intestinal parasites pose for humans and because of recently emerging intestinal parasite resistance to monthly heartworm/parasite preventatives.

If your senior dog is on a chronic medication, doing a blood chemistry twice a year is generally recommended. Other diagnostic tests, like thyroid hormone, urinalysis, urine culture, blood pressure check, X-rays, and ultrasound are considered on a case-by-case basis.

Regular wellness exams are an essential part of achieving the goal of a long and healthy life. Following your veterinarian’s advice will have you and your dog enjoying many extra years together. ■

A Lot Goes Into a Wellness Exam

The exam could find brewing diseases to be controlled before they’re trouble

Veterinarians are trained to do a thorough, comprehensive, systematic exam of your pet. Here is a brief summary of what they are doing/looking for while examining your dog:

Body Condition Score (BCS):

Underweight, overweight, or healthy weight

Muscle Condition Score (MCS):

Especially important in senior pets, a measure of general health, strength, and vitality

Eyes (with a light source):

Vision, infection, inflammation, eyelid abnormalities, dry eye syndrome, tumors

Ears (with an otoscope):

Infection, tumors/polyps

Mouth:

Tooth health, gum health, infection, tumors, mucous membranes color (pink=normal, pale=anemia, yellow=jaundice, blue/gray=hypoxia), hydration status

Throat:

Collapsing trachea

Peripheral lymph nodes:

Cancer, infection

Skin:

Coat quality (nutrition, endocrine disorders), infection, parasites, lumps and bumps, hydration status

Abdomen:

Discomfort, fluid, organ enlargement, tumors, bladder pain

Rectal exam:

Tumors, polyps, anal gland impaction/tumor, prostate

Genitalia:

Abnormal discharge, tumors

Heart/pulses:

Heart rate, heart murmurs, arrhythmias, pulse strength and synchronicity

Lungs:

Respiratory rate, normal breath sounds throughout; harsh or wheezy, quiet areas (fluid or tumor)

Temperature:

Not generally necessary to check during a well visit



Documentation of your dog's health status and yearly changes can be extremely valuable if later in his life something seems to be odd.

Dreaded Dental Disease

If your dog is over 3, he likely has periodontal disease

Periodontal disease is one of the most common health issues in veterinary medicine. Even if your dog's teeth look pearly white and clean, studies show that 80% to 90% of dogs over the age of 3 have some component of periodontal disease. It's worse in smaller breeds, and the incidence increases with age. Unfortunately, periodontal disease is usually not recognized until it is at an advanced stage. Early diagnosis is often difficult because there are usually no outward signs of a problem, and the main culprit responsible for it cannot be visualized by you or your veterinarian during a routine visual inspection.

What is this main culprit in dental disease? Plaque. Especially underneath the gums. That unsightly golden brown tartar that accumulates on your dog's teeth over time? Yes, it's ugly, and yes, it harbors bacteria and odor, but it is not the main player in periodontal disease.

It's actually kind of just along for the ride. Plaque, not tartar, is enemy No. 1 in the war against periodontal disease and tooth loss.

Plaque, which is an invisible bacterial slime or biofilm, is laid down by bacteria on the surface of the tooth, above and below the gum line. But worse than causing tartar, plaque causes inflammation of the gums (gingivitis), creates deep gaps between the tooth and gum (periodontal pockets), and damages periodontal tissues beneath the gums (periodontitis), all of which eventually results in tooth loss, with a lot of unnecessary pain and discomfort along the way.

"Attempting to brush the teeth of a patient with pre-existing inflammation may add to discomfort which would then make the patient less cooperative in the future," says Eric Davis, DVM, Cornell Class of 1979 and owner of Animal Dental Specialists of Upstate New York in Fayetteville.

Prevention

Your efforts in trying to prevent gum disease will go a long way toward keeping your dog healthy, comfortable, and alive for as long as possible. A study titled "Risk Factors Associated with Lifespan in Pet Dogs Evaluated in Primary Care Hospitals," published in the *Journal of the American Animal Hospital Association* in 2019, looked at the records of 2,369,978 dogs. In addition to the widely known facts that smaller dogs live longer than bigger dogs and spayed/neutered dogs live longer than intact dogs, they found that dogs greater than 2 years of age undergoing frequent professional dental cleanings lived longer than those that did not.

"Successful prevention of periodontal disease requires three components: the owner, who must receive proper training

and equipment advice by the DVM; a cooperative patient, using a slow and methodical training program with positive reinforcement; and annual professional oral evaluation and treatment under general anesthesia," says Dr. Davis.

Preventing periodontal disease is important for your dog's overall health, as it has been linked to liver and heart disease. It prevents unnecessary pain and maintains good quality of life. Periodontal disease is painful, even if your dog doesn't seem to show signs that he is in pain. Even without pain, there's still a link to your dog's overall health.

What signs of pain might a dog with periodontal disease show? Pawing or rubbing at the mouth, drooling, decreased appetite, taking longer to finish meals, change in eating habits (carrying food away from the bowl and dropping it on the floor before eating it), mouth odor, bleeding from the mouth, reluctance to chew favorite chew toys, aggressive behavior, or withdrawal from the family are all possibilities. Again, if you notice any of these things, your dog's disease is already advanced.

The best approach to periodontal disease prevention is regular professional veterinary dental cleanings and a good daily home dental care program.

The Professional Cleaning

A lot goes into a veterinary dental cleaning. It starts with your veterinarian obtaining an accurate history, performing a full physical exam including an awake oral exam and pre-anesthetic testing (bloodwork and possibly chest X-rays and electrocardiogram). Your veterinarian will then have a thorough discussion with you regarding preliminary findings and treatment plan.

Next, your dog will be placed under general anesthesia with careful, continuous monitoring by a licensed veterinary technician throughout the procedure. An extensive visual exam is performed, and the mouth rinsed with antiseptic. Grossly evident tartar is removed, crowns are examined, gingival pockets are probed and measured, full-mouth dental x-rays are taken, and ultrasonic scaling of all tooth surfaces above and below the gum line is performed for plaque removal.

At this point, any necessary surgical procedures (like extraction of diseased teeth) are performed. Next, all remaining teeth are thoroughly



Note the tartar (golden brown staining) on this dog's teeth and the bright red irritated gums on the "Before" photo on top and then compare it to the far healthier looking mouth in the "After" photo.

polished, again above and below the gum line. A final rinse and inspection follows. Some veterinarians will apply a fluoride treatment to strengthen tooth enamel, and others also apply a dental sealant (Oravet), which is basically a waxy substance that binds to the teeth making it difficult for bacteria to stick and lay down plaque. Post-procedure oral antibiotics may be prescribed.

Your dog will recover from anesthesia with continued monitoring, while your veterinarian finishes recording procedure notes and prepares comprehensive discharge instructions for you. A follow-up exam is frequently recommended, especially if surgical procedures were performed.

Home Care

Home dental care is just as important as the professional cleaning. Studies have shown an immediate improvement in the subgingival bacterial population after a professional dental cleaning, but it doesn't last long. Within days, bacteria are back at it, laying down plaque.

The mainstay of a successful home dental program is daily tooth brushing with a veterinary paste. Human paste is not recommended as it contains detergents and fluoride. We spit all that out. Your dog swallows it. Many veterinary pastes contain enzymes that break down plaque. The paste is meant to be brushed on and left there to continue its work. Brushing once a day is important as the bacteria are busy little beavers. You want to get in there and break up what they are laying down every day to prevent it from advancing up under the gums.

The best products are those that have received the Veterinary Oral Health Council (VOHC) seal of approval. The VOHC was founded by a group of veterinary dental specialists who set rigid standards and accept only those products with valid research to support their claims.

The How-To

If possible, start brushing your dog's teeth after all the adult teeth have emerged. Start with just saying something you'll say every time, like "teeth time." Begin by simply running your finger along the outside of the lips once and give a reward (treat or toy). Once your dog is looking forward to this, run your finger along the gums and reward. Once your dog thinks this is

great, put the paste on your finger. Let him smell and taste it, then run it along the gums and reward. Once your dog is good with this, gently add the brush. Once your dog will let you do some brushing action with paste along the outsides of all the teeth, you both have graduated.

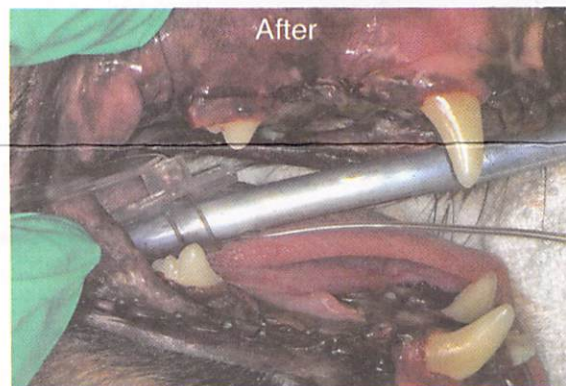
In addition to daily brushing, your veterinarian may recommend a prescription plaque/tartar control diet, and weekly application at home of Oravet, that waxy tooth sealant mentioned above.

Bottom Line

Successful prevention requires both regular professional veterinary cleanings under general anesthesia as recommended and daily brushing by you.

Advanced periodontal disease that results in tooth extraction is a shame because it was likely preventable. In addition, it probably caused a lot of unnecessary pain and discomfort along the way.

"Genetics, age, diet, concurrent health issues, and oral hygiene are examples of patient factors that influence oral health," says Dr. Davis. "If the



Note that diseased teeth located behind the canine teeth (before photo) were removed during the surgery (after).

stars correctly align, some patients reach old age without significant oral inflammation, but that is rarely the case. Tooth loss subsequent to periodontitis is a survival strategy for the body. Once the tooth is lost, inflammation resolves and healing can take place." ■

Debunking Dental Myths (aka Excuses)

"My groomer brushes my dog's teeth." OK. That's once every four to six weeks or so? That's like spitting in the ocean.

"My wife is a dental hygienist, and she scales the dog's teeth." Remember, it's plaque, not tartar, that's enemy No. 1.

"My dog has a heart murmur, so he can't go under anesthesia." Your dog's heart murmur is all the more reason to keep his mouth healthy and clean. Granted, he will require some extra due diligence to make sure the benefit of the procedure outweighs the risk for him. The gold standard of care would include referral to a veterinary cardiologist for a cardiac consultation with echocardiogram before the dental procedure. The cardiologist will give your veterinarian a thumbs up or thumbs down, along with recommendations to make the procedure as safe as possible.

"My dog is too old to go under anesthesia." Well, he may be old, but he's still alive. And possibly in pain that will worsen for the rest of his life if you don't do something. It's certainly best if you had any treatment recommended by your veterinarian years ago, but there's no sense waiting on advanced periodontal disease. It's not going to go away. It is going to keep getting worse. The biggest anesthetic risks for dental patients are low blood pressure and low body temperature, as the procedure takes time. Remember, though, dedicated licensed veterinary technicians continuously monitor your dog.

Get That Dog on a Treadmill

This tool can benefit healthy, obese, and injured dogs

It can be difficult to give an active dog enough exercise, especially in the winter. Cold, slick conditions set up humans and canines alike for discomfort and injuries. One potential solution to this dilemma is working your dog on a treadmill.

“Visiting a skilled veterinarian or sports medicine specialist is recommended to determine if your dog is a good candidate for this type of exercise. Such a veterinarian will also help establish protocols to safely follow,” says Christopher W. Frye, DVM, chief of sports medicine and rehabilitation at Cornell University’s College of Veterinary Medicine.

Things to Consider

Safety is paramount when introducing your dog to a treadmill and continuing work. “In general, the patient may need to be conditioned to the device through positive reinforcement and partly motivated through these techniques,” says Dr. Frye. “An appropriately fitted harness is recommended as well as one to two people comfortable with providing any necessary support, motivation, and helping to ensure safety. Furthermore, dogs may need rest between sessions (days off) or during a session (interval training). An experienced professional is recommended to initially assess the patient and provide these recommendations.

“The treadmill should be an appropriate length for the patient and the speed in which they are moving. We use animal-specific treadmills with safety side rails to help our patients track in a straight line,” says Dr. Frye. Large dogs have much longer strides than humans when you consider the full reach from the front leg extended forward to the rear leg extended back. For this reason, human treadmills are not long enough for many dogs to move naturally. For a dog, the treadmill should be 1.5 to two times body length.

“The treadmill should be able to move slow enough for the patient. Exercise should be controlled and at a walk or trot,” says Dr. Frye.

Exercising on a treadmill is not the same as walking or running on land, and it may be more challenging for your dog

than you might expect. “It should be noted that a treadmill moves under the feet of the participant, forcing the limbs backward and behind the body in stance phase,” says Dr. Frye.

“This is the opposite of typical land movement when the limbs are voluntarily moved in the swing phase forward and then the body follows suit by rolling forward over the limbs during stance phase,” says Dr. Frye. “For this reason, treadmill exercise does not perfectly mimic land walking. Some benefits are that it will help pull the hind limbs into extension during a walk so patients with hip dysplasia and limited extension may benefit; however, there tend to be increased braking forces and the potential for exacerbated foot scuffing in some patients. Whenever we choose treadmill, all these factors and others are taken into account to determine if it will benefit the patient.”

Treadmill Work for Healthy Dogs

“Treadmills may be used as an option in patients and/or family members that are unable to easily or safely walk outside in the winter for exercise,” says Dr. Frye. “We also use them in dogs that are quite fit and would be challenging for their human counterpart to physically exercise them to the extent of taxing this fitness. Examples of this type of dog are working or sporting breeds including field trial dogs, police dogs, search and rescue, and tracking. Patients that

require increased hindlimb or forelimb strengthening may benefit from a treadmill with incline/decline functions to help shift weight to the front or back of the patient for increased strengthening.”

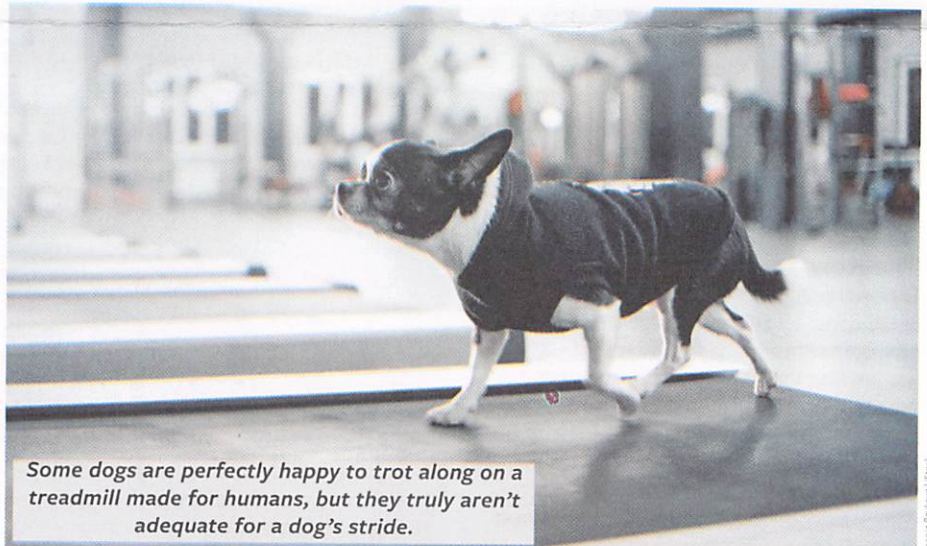
If your dog fits one of these profiles, start your treadmill journey with a rehab specialist. This veterinarian can help you introduce your dog to the treadmill in a controlled setting and can guide you on the best exercise plan for your dog. As you and your dog get more comfortable, you may be able to purchase a dog treadmill and use it at home (they cost in the range of \$400 to \$600).

Recovery and Rehab

Treadmill work can play a role in the recovery and rehabilitation for a variety of orthopedic and neurological disorders. “We tend to incorporate treadmill exercise for a number of reasons in various patients,” says Dr. Frye. “For patients suffering from neurological disease, the consistent speed and timing of the treadmill allow us to focus on reestablishing a straight gait patterning by stimulating spinal cord central pattern generators as part of reflex arcs for a chosen optimal pace. This differs from typical walking in which our canine patients like to weave and ‘stop and smell the roses.’

“These patients also benefit from the sensory feedback of placing their feet and moving their joints as well as strengthening and endurance work. Many compromised patients require body weight support when using land treadmills and active assistance in

(continues bottom of next page)



Some dogs are perfectly happy to trot along on a treadmill made for humans, but they truly aren't adequate for a dog's stride.

Armed By Steve / iStock

Mud Puppy Got You Down?

You don't have to sacrifice your carpets to a dirty dog

Along with the cooler weather comes more precipitation and, with that, mud. Many dog lovers know the mixed mirth and dread brought on by a joyful canine covered from nose to tail in dirt and grime. It's not that difficult to avoid or resolve muddy-dog mayhem, if you just plan ahead.

Wipe Paws

Obviously, you'll want to keep a towel by the door to wipe your dog's paws after off-road adventures. Even a quick wipe will remove a fair amount of debris, making your pup's paws much cleaner before she runs through the house. You can have a bowl or small tub with clean water for a quick paw dunk, too.



"Boy! Was that ever FUN! Wait until we tell Mom what we did!!"

If you have a dog door, put down a series of rugs or bathmats to catch mud and dirt as she comes in the house. Thicker rugs often work a little better than ones with a tight weave. And make sure to opt for machine washable.

Cover Up

Consider making frequently used pathways that no longer grow protective grass into sidewalks or patios. Adding a porch can help to alleviate mud pits by doors, or you can add a slate patio. Applying a layer of gravel over muddy areas is another option.

To maintain greenery even in the chronic mud zones, research a hardy grass and then block off that area after planting. Don't allow your dog in that area until the grass has grown in and covered the area.

When mud season sneaks up on you, you might need a faster solution. Sawdust and straw are not the most attractive, but they are available at local farm stores. Spread a thick layer over the muddy patches of your lawn to keep your dogs clean, although a longhaired wet dog will tote in pieces of shavings or straw.

Let It Dry

No matter how proactive you are, dogs get muddy. Often the simplest solution is to just wait until the mud dries and then brush it off. Much of the dried mud will fall off on its own.

Leave your dog in a dry area, such as a covered porch, covered kennel run, or

her crate, to rest while she dries off. Once she is dry, brush any remaining mud out of her hair.

Dogs with long, soft hair are more prone to matting, so you might not be able to get away with this method for those guys. Instead, rinse the mud off as soon as possible, and follow up with a thorough grooming once the hair has dried so that you can catch any tangles early.

Bath Time

A bath isn't usually necessary for a simple case of muddy dog, but a good rinse with a hose might be in order. Hosing your dog off outside will minimize mess in the house. While your pup may not enjoy cold water from the hose, a quick rinse won't hurt her, and you can reward her with a snuggle in a towel afterward.

No outdoor hose? A showerhead with a hose will work too (and even gives you warm water). If your dog is small, wrap her in a towel and carry her to the bathtub to minimize muddy pawprints through the house. If you have a large dog, plan your route to be either the most direct or to avoid as much wall-to-wall carpeting as possible. If you can, put down some towels (beach towels are great) or machine-washable rugs for your dog to walk on to save the carpets.

Sweep, Don't Mop

While mopping might be needed in some instances, waiting until muddy paw prints dry and sweeping up the dirt is often quicker and less hassle. If you do decide to mop, make sure to rinse the mop head frequently so that you aren't just spreading muddy water around the room.

Vacuum

It is often easier to clean a muddy carpet once it has dried. Let the muddy paw prints completely dry, then vacuum up the dry dirt and dust. This usually gets most of the debris out of your carpet, and then you have a smaller stain to tackle with carpet cleaner or a damp cloth.

Wet vacs also can be useful for muddy carpets, but be sure to read the instructions on your machine carefully. Some models can tackle mud and dirt, but others can't.

If you have a more delicate wet vac, start by letting the mud dry and vacuuming up as much as possible. Then run the wet vac over the carpet to resolve any remaining mess. ■

(treadmills, from previous page)

placing their limbs," says Dr. Frye. "It should be noted that we most often use water therapy with underwater treadmills, as many of our patients benefit from the buoyancy of the water during early rehabilitation or the resistance of the water during endurance and strength training. We use the land treadmill more when the patient cannot enter the water (after surgery, with infections, and for dogs that don't tolerate water)."

Getting Started

If you think your dog could benefit from treadmill work, contact a rehab specialist for a consult. Whether your dog has a complex mobility issue or simply needs to blow off some steam, this is a great way to try out a treadmill and determine if it is a good fit and how to proceed to meet your goals. "Treadmill exercise could be counterproductive or dangerous depending on the health status and willingness of the patient to cooperate," says Dr. Frye.

Expect the first few sessions to be slow with a lot of stops. Your dog will first need to learn how to get on and off the stationary treadmill safely, then the practitioner will start moving the belt a little as you both encourage your dog to walk. With patience and positive reinforcement, most dogs figure out the game and come to enjoy their workouts. ■

Aussie Attitude Problems

Positive training is always the best choice

Q We have an 18-month-old Australian Shepherd (an “Aussie”) who has bad anxiety and aggression issues. We have talked with several trainers we thought we’d like, and some wanted to use aggressive training methods with him.

Do you think that positive or aggressive training would be better with him? He also doesn’t sleep in his crate. He sleeps on our bed, which trainers don’t seem to like. He stays in his crate while we are gone. We’ve tried drug calming remedies like Calmare and chews. And, with our veterinarian’s permission, we tried an e-collar that seems to make him more aggressive. We would appreciate your suggestions.

A Please, please use positive training. You have already discovered that an e-collar (a collar that shocks the dog when the human pushes a button) makes your dog (and most dogs) worse. Avoid aggressive trainers and “balanced” trainers who use both rewards and punishment. It is OK if he sleeps on your bed unless he growls when you turn over or bites when your partner comes to bed. If that occurs, I would give him a nice soft bed in your bedroom and not allow him on the bed. You may have to tether him to a bureau for 10 days or so until he learns the new routine.

Rescue remedies are homeopathic and work mostly as placebos. I am not sure what is in Calmare, but it does not seem to be a psychoactive medication. It depends on what kind of “chews” you used, but cannabis chews have not been shown to reduce anxiety. There are many other medications, such as sertraline, fluoxetine, trazodone, and more that can help dogs like yours. I hope there is a veterinary behaviorist in your area. Otherwise, I would be happy to speak to your veterinarian about the drugs I have found to work best for “Aussie attitude.”



The Aussie, a herding dog, is an athletic, fun breed that excels in many sporting events.

Dog Chews Hair Off

A gastrointestinal disorder may be bothering the chewer

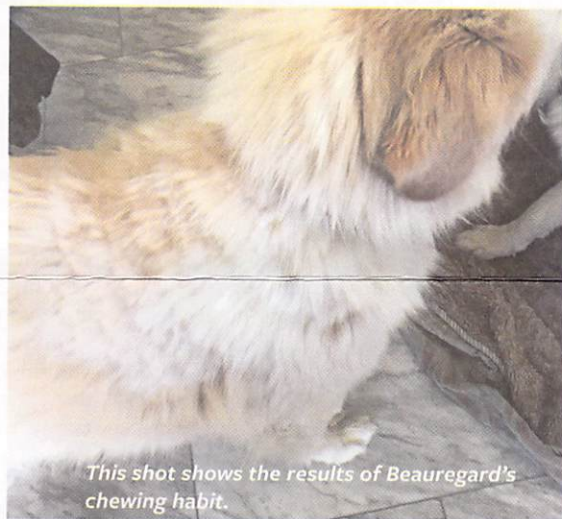
Q I have three dogs, all neutered or spayed. Two are Great Pyrenees mixes (Serafina, a 2-year-old female, and Nocona, a 3-year-old male), and Beauregard is a 2-year-old male dog that appears to be a Border Collie-Bernese Mountain Dog mix.

When Serafina was about 10 months old, just before she went into heat for the first time, Beauregard started biting the hair of the other two dogs. In the course of a half hour, he could chew off patches of hair across the shoulder or on their side. I thought it might end when the female was spayed, which

she was after her second heat, but it hasn’t. It has gotten worse. Eventually, Beau vomits up a hairball, but that is every two weeks or so. I put bandanas around the other dogs’ necks, but Beauregard just chewed around it. Then, I tried Solliquin, which helped a little but not enough to continue use. Please, can you help? What do you think is causing this? How can I get him to stop? It looks like I am shearing the white dogs with a hedge-trimmer. I have attached pictures to show what he does.

A Beauregard is an interesting dog. Unfortunately, he probably has a problem and not necessarily a behavior problem. Pica is the term for eating non-food items. It is often caused by gastrointestinal upset. Many dogs will graze on rugs or eat grass, but Beauregard is getting his fiber fix from his housemates. Solliquin (theanine, whey protein, and magnolia) is unlikely to help.

I would make an appointment for an endoscopic examination of his upper gastrointestinal tract as well as bloodwork (vitamin B may help determine if he is digesting properly). Meanwhile, you can save your other dogs’ coats by muzzling Beauregard or keeping him separate from the Pyrenees. ■



This shot shows the results of Beauregard’s chewing habit.



Do You Have a Behavior Concern?

Send your behavior questions to Cornell’s renowned behavior expert Katherine Houpt, VMD, Ph.D., shown here with Yuki, her West Highland White Terrier. Email to dogwatcheditor@cornell.edu or send by regular mail to DogWatch, 535 Connecticut Ave., Norwalk, CT 06854-1713.



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