



AMSCOPE

Newsletter of the AMERICAN MINIATURE SCHNAUZER CLUB
Member of the American Kennel Club

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Hello AMSC fellow members:

As most of you know, it has been tough trying to find majors in Texas and beyond. We have a fantastic opportunity for you to join the Texas Cluster of Shows where we have 3 weekends with four to five day shows in the Month of July starting with Dallas, San Antonio, and Houston. See judge selections in the attached file for the 4 days of shows in Dallas, as well as San Antonio and Houston. **The Lone Star Miniature Schnauzer Specialty will be a designated specialty within the North Texas Terrier Club show held on Thursday, July 7, 2016. Market Hall is a great indoor facility with several advantages including air conditioned facilities, ample parking, plenty of grooming (reserved and non reserved). Location is close proximity to many hotels and restaurants in Dallas.**

**We hope many of you that joined us 2015 and past shows will return to Texas this Summer. If you have any questions or travel inquiries, please feel free to contact us. Warmest Regards!
Terry Hamer, President LSMSC**

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The deadline for the September issue is August 16.

PLEASE send in the enclosed ballot!

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What Blood Tests Does Your Dog Need?

Julia Henriques

Do you find your dog's blood tests confusing? Do you wonder how useful the tests are?

Do you really need to do all the ones your vet recommends?

The charges can add up and you might want to prioritize where you spend your money.

And that can be nerve-wracking because you worry about missing something important that could give you a better view into your dog's health.

We Asked An Expert

Holistic veterinarian Randy Kidd DVM PhD told us he's a bit of a maverick on this topic. But he holds a PhD in Clinical Pathology so he knows what he's talking about when it comes to blood tests!

We're going to share with you his recommendations for the tests you might need at different stages of your dog's life.

But first, Dr Kidd shared with us his philosophy about blood testing in general.

In making decisions about your dog's blood tests, what you want to get out of them is important, so there are a few questions to ask yourself.

What Do You Want To Know?

We all want the very best for our pets. But do you want a definitive diagnosis or are you willing to live with a little ambiguity?

Are you a "wellness" person – using nutrition and supplements for preventive health – or a "treatment" person, waiting to take action until something goes wrong?

What Are Your Concerns?

Is there something you're afraid might happen to your dog that blood tests could reassure you about or confirm for you?

(This is a question that comes up a lot in

vaccination decisions and titer testing too: are you afraid your dog will be harmed by the vaccine, or are you more afraid your dog will get a disease like parvo or distemper?)

Is your dog's breed predisposed to specific health issues? For example, if your dog's BUN (Blood Urea Nitrogen) results are high, that might be a sign of kidney disease ... or it might just mean your dog was dehydrated when the test was done, because BUN rises with dehydration.

Good food also raises BUN because nitrogen in the protein sources elevates the blood chemistry. So dogs fed a raw meat diet will often have higher BUN.

Disease Biomarkers

Ideally lab results would be biomarkers of disease, but sometimes they don't give the right answers either.

For example, in human medicine, we now know that cholesterol levels and PSA tests aren't necessarily the biomarkers we thought them to be for heart and prostate disease.

Even known biomarkers can deliver misleading results.

In one human study, serious runners (people who ran 5 to 10 miles a day) had their blood chemistries checked for heart disease biomarkers. And they all came back with elevated results suggesting heart disease. But it turned out the results were high due to micro-tears in their leg muscles from running, and didn't mean they were at risk for heart disease at all!

So again, blood results are just part of the overall picture.

Dr Kidd's Lab Test Recommendations

Here's Dr Kidd's recommendation for an ideal "platinum level" lifetime wellness blood chemistry monitoring program:

cont'd p. 2, col 2.. **BLOOD TESTS**

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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***LOCAL CLUBS...**please be sure to include all information when sending Specialty tear sheets for inclusion in AMSCOPE e.g. Judges, dates, entry, obedience.

***LOCAL CLUBS...PLEASE** send a copy of your newsletter to the following members of the Local Club Bulleting Committee.

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BLOOD TESTS...p. 1

At Age Two Or Three
Sometime shortly after your dog reaches adulthood, run a regular chemistry panel, such as a SMAC-20, which provides 20 different blood chemistries.

This test is a great tool to use as a part of the dog's permanent record. You can refer back to it and compare with it chemistry panels taken later in life. Use it to identify your dog's health trends and catch any changes.

And if there are any abnormalities in your young dog, there would be a decent chance of keeping them from becoming worse as your dog ages.

Along with the chemistry panel, your vet would likely do a complete physical exam, a CBC (Complete Blood Count), urinalysis and thyroid panel, as well as any other test that might be indicated for your breed or individual dog.

The normal chemistry panel should be the one that the most convenient veterinary diagnostic laboratory uses as their normal panel.

Even if your veterinarian has an in-house lab, ask her to draw the samples and send them to a veterinary reference lab.

There are two reasons for this:
In-house labs are, for many reasons, notoriously inaccurate
Human diagnostic labs may not have established normal values for animals, and they may use techniques that give inaccurate values in animals
Around Age Seven
When your dog starts to hit middle age (about 7 or 8 years old for most breeds, when many vets will already consider dogs "seniors"), consider getting annual physical exams, a chemistry panel (with appropriate add-ons), CBC, and urinalysis.

Make sure your veterinarian compares these results to your dog's young adult values. She should be able to spot any ongoing trends that could be helped with additional holistic support.

Dr Kidd says that this level of monitoring would make him feel very comfortable making treatment decisions for almost any emergency. However, he suggests getting a more current panel, CBC and urinalysis before any a major non-emergency procedure.

Organ Specific Tests
There are also tests designed to evaluate specific organs or organ systems.

Liver Panel Example
Alanine Aminotransferase (ALT), Aspartate Aminotransferase (AST), Alkaline Phosphatase (ALP), Gamma Glutamyl Transferase (GGT), Bilirubin (total and direct), Total Protein, Albumin, Globulin, A:G ratio, and Cholesterol.

Pancreas Panel Example
Glucose, amylase, lipase, cholesterol and triglyceride

Muscle and Bone Panel Example
Calcium and phosphorous (bone); Creatine Kinase (CK or CPK) and Aspartate Aminotransferase (AST) muscle damage, trauma, or inflammation. Electrolytes.

Kidney Panel Example
(Urinalysis), Blood Urea Nitrogen (BUN), Creatinine

Thyroid Panel Example
Total T4, Free T4, Total T3, Free T3, Canine Thyroglobulin
Usually the above panels are run in combination with a complete physical, a CBC, and a urinalysis.

(NOTE: You can support your dog's liver naturally at home! Check out how to do it: Preventing Liver Disease In Dogs)

Lab Tests Aren't The Only Way To Assess Health

Dr Kidd views lab tests as one of several "team members" monitoring your dog's health.

In his practice he's also used chiropractic, massage therapy, acupuncture and shamanism to help him assess each animal's health picture.

As he became more and more confident with his holistic procedures and protocols, he relied more and more on these testing methods outside of conventional veterinary medicine.

And in Dr Kidd's view, the most important test that you can do is just you, the owner – the person who knows your dog best of all – simply observing your dog!

About the Author Julia Henriques
Julia Henriques is Managing Editor of Dogs Naturally Magazine. A former international banker, she lives in Chicago with her partner Marc and two rescue Samoyeds. She volunteers on the board of Playing Again Sams (Wisconsin Samoyed Rescue).

Why Do Some Dogs Get Cancer More Than Others? Story at-a-glance

Golden Retrievers in the U.S. have a high rate of cancer compared to many other breeds

The high rate of cancer in Golden Retrievers is a relatively recent development. In the late 1980s, the breed wasn't considered as having a high rate of cancer. But by the late 1990s, cancer was taking the lives of about 60 percent of U.S. Golden Retrievers. The Morris Animal Foundation Golden Retriever Lifetime Study is currently underway, and will track 3,000 enrolled dogs throughout their lives with input from owners and veterinarians

Through the study, researchers hope to identify potentially modifiable risk factors that may account for the high incidence of cancer and other diseases in Golden Retrievers and other dogs as well

To help prevent cancer in your own dog, keep him at a healthy weight, feed an anti-inflammatory diet, reduce his exposure to toxins, and refuse unnecessary vaccinations

5 Ways to Reduce Your Dog's Cancer Risk

- Don't allow your dog to become overweight. Studies show that restricting the amount of calories an animal eats prevents and/or delays the progression of tumor development across species, including canines.

Fewer calories cause the cells of the body to block tumor growth, whereas too many calories can lead to obesity, and obesity is closely linked to increased cancer risk in humans. There is a connection between too much glucose, increased insulin sensitivity, inflammation, and oxidative stress – all factors in obesity – and cancer.

It's important to remember that fat doesn't just sit on your pet's body harmlessly. It produces inflammation that can promote tumor development.

- Feed an anti-inflammatory diet. Anything that creates or promotes inflammation in the body increases the risk for cancer. Current research suggests cancer is actually a chronic inflammatory disease, fueled by carbohydrates. The inflammatory process creates an environment in which abnormal cells proliferate.

Cancer cells require the glucose in carbohydrates to grow and multiply, so you

want to eliminate that cancer energy source. Carbs to remove from your pet's diet include processed grains, fruits with fructose, and starchy vegetables like potatoes. Keep in mind that all dry pet food contains some form of starch. It may be grain-free, but it can't be starch-free because it's not possible to manufacture kibble without using some type of starch. Cancer cells generally can't use dietary fats for energy, so high amounts of good quality fats are nutritionally beneficial for dogs fighting cancer, along with a reduced amount of protein and no carbs. I recently learned that dogs fighting cancer can do a better job addressing this sugar-crazed disease if their protein intake is limited for 120 days, more on that later!

Another major contributor to inflammatory conditions is a diet too high in omega-6 fatty acids and too low in omega-3s. Omega-6s increase inflammation while the omega-3s do the reverse. Processed pet food is typically loaded with omega-6 fatty acids and deficient in omega-3s.

A healthy diet for your pet – one that is anti-inflammatory and anti-cancer – consists of real, whole foods, preferably raw. It should include high-quality protein, including muscle meat, organs and bone. It should also include high amounts of animal fat, high levels of EPA and DHA (omega-3 fatty acids), and a few fresh cut, low glycemic veggies.

This species-appropriate diet is high in moisture content and contains no grains or starches. I also recommend making sure the diet is balanced following the ancestral diet recommendations, which have much more rigorous standards (higher amounts of minerals and vitamins) than our current dietary recommendations for pets (AAFCO).

A few beneficial supplements like probiotics, medicinal mushrooms, digestive enzymes, and super green foods can also be very beneficial to enhance immune function.

- Reduce or eliminate your dog's exposure to toxins. These include chemical pesticides like flea and tick preventives, lawn chemicals (weed killers, herbicides, etc.), tobacco smoke, flame retardants, and household cleaners (detergents, soaps, cleansers, dryer sheets, room deodorizers).

Because we live in a toxic world and avoiding all chemical exposure is nearly impossible, I also suggest offering a periodic detoxification protocol to your pet.

- Allow your dog to remain intact (not neutered or spayed), at least until the age of 18 months to two years. Studies have linked spaying and neutering to increasing cancer rates in dogs. Even better, investigate alternative ways to sterilize your pet without upsetting his or her important hormone balance.

- Refuse unnecessary vaccinations. Vaccine protocols should be tailored to minimize risk and maximize protection, taking into account the breed, background, nutritional status and overall vitality of the dog.

The protocol I follow with healthy puppies is to provide a single parvo and distemper vaccine at or before 12 weeks, and a second set after 14 weeks. I then titer (ask your vet to run titers at a lab that uses the IFA method) two weeks after the last set and if the dog has been successfully immunized, he is protected for life.

I do not use or recommend combination vaccines (five to seven viruses in one injection), which is the standard yearly booster at many veterinary practices. In my experience, this practice is completely unnecessary and immunologically risky.

Bouquets & Biscuits

* **CH Carbor Mac and Cheese**, Krafty, got his title in three weekends. He finished out of the Puppy Class at the Genesee Valley KC show. He is bred and owned by Carla Borrelli.



"We're watching you!"

NEW APPLICANTS

Heather Orr

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Heather has been involved with Miniature Schnauzers for 37 years. She has owned approximately 30 dogs over the years. She is a breeder and has had 20 litters from stud dogs and 9 litters from bitches over the past five years. Heather attends about 15 – 25 shows a year and concentrates on conformation. She is a member of the Canadian Kennel Club – Ontario and the Miniature Schnauzer Club of Canada and the Rideau Terrier Club – Ottawa and has served as their past Secretary and present Vice President. Heather is retired and widowed for the past five years. She would like to help others to get started in the sport.

Heather's Sponsors are: Janet Smith and Catherine McMillan.

Eduardo Mendez

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Eduardo has been involved with Miniature Schnauzers for 6 years. He has owned approximately 3 Miniature Schnauzers over the years. He is a breeder and has had 5 litters over the past 5 years. Eduardo attends about 8 dog events per year and concentrates on conformation as well as obedience events. He is a member of the Group IV Terrier Club, Salt Lake City, Utah. Eduardo works in Administration and his special skills lie in the Computer. He is interested in helping the club with Newsletter, Rescue, Education, Membership, Ethics, and Health. **Eduardo's Sponsors are: Galen Ewer and Jane Nielsen.**

Tim Selfridge

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Tim has been involved with Miniature Schnauzers for 26 years. He has owned approximately 3 Miniature Schnauzers over the years. He is a breeder and has had 5 litters over the past 5 years. Tim attends about 8 dog events per year and concentrates on conformation events. He is a member of the Group IV Terrier Club, Salt Lake City, Utah. Tim is retired. His areas of expertise are computer skills and wood working. He would like to help the club out with Electronic Media and woodworking for trophies. **Tim's Sponsors are: Carma Ewer and Laurie Moore.**

Karen S. Hoffmann, D.V.M.

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Karen has been involved with Miniature Schnauzers for 50 years. She has owned many Miniature Schnauzers as well as Golden Retrievers, Border Collies, Belgian Tervurens, and German Shepherds. She is a breeder and has bred 7 litters from her bitches and 12 from G Ch. Earthsong Remedy for the Blues. Karen attends about 5 – 10 dog events per year and her concentrations are Conformation and Obedience events. She is a member of the Mt. Vernon Miniature Schnauzer Club. Karen is a Veterinarian. She is interested in serving the club in the areas of Newsletter, Education, Obedience, Agility, Ethics, and Health.

Karen's Sponsors are: Shawne Imler and Carol Beagle.

JoAnne Scott

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JoAnne has been involved with Miniature Schnauzers for 40 years. She has owned at least 5 Miniature Schnauzers over that time, and is not a breeder. She has participated in Agility for 14 years and Obedience for 35 years and also Rally and Barn Hunt. JoAnne attends approximately 80 dog events a year. She belongs to the Miniature Schnauzer Club of Michigan where she is on the Top Lines and Publicity committees and writes a column called "Performance Corner" for their newsletter. JoAnne is retired. She would like to help the club out with Newsletter, Awards/Trophies, Education, and Agility. Her special skills are knowledge in positive training techniques, good communication skills and excellent organizational skills.

JoAnne's Sponsors are: Beth Santure and Lynn Baitinger.

Katherine ("Kathy") Means

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Kathy has been involved with Miniature Schnauzers for 2 ½ years. She owns 3 Miniature Schnauzers. She is a breeder and has bred and whelped 3 litters. Kathy has participated in Conformation for 2 years. She has attended and participated in many conformation events. She belongs

to Southern Oregon Terrier Association and Portland Miniature Schnauzer Club. Kathy is a Registered Nurse. She would like to help the club out with Public Awareness, Education and Health.

Kathy's Sponsors are: Lynda Berar and Laurie Moore.

Cindy Bankston

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Cindy has been involved with Miniature Schnauzers for 27 years. She has owned 3 Miniature Schnauzers over the that time and presently has 2. Cindy is not a breeder. Cindy participates in Agility (9 years), Obedience/Rally (9 years), Earth Dog and Barn Hunt (4 years), as well as participating in Canine Freestyle and Tracking Classes and Workshops. She attends 25 – 30 dog events per year, and at least 2 weekends a month. Cindy belongs to South Oregon Terrier Association, Columbia Agility Team, Portland, Or., (Awards Chair, CPE Championships) and Performance Schnauzers Yahoo Group since 2007. She works as a Non – Profit Department Manager. Cindy would like to help the club out with Newsletter, Legislative Issues, Rescue, Public Awareness, Awards/Trophies, Education, Obedience, Agility and Health. Cindy's special skills are in event planning and coordinating, writing and editing skills, and advocating with legislators on various issues.

Cindy's Sponsors are: Lynn Tamms, Cynthia Mulheron Klein, Millicent Conover, Kaye M Kirk, Marcia Dawson, Robin Ohrt, Barbara Donahue

Kerrie Rousey

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Kerrie has been involved with Miniature Schnauzers for 2 ½ years. She owns a male Miniature Schnauzer that she has competed in conformation and has finished his Championship herself. She also owns a Chinese Crested, a Bichon and a Soft Coated Wheaten Terrier. Kerrie does grooming competitions with several of her dogs and also has a Dog Grooming Business. She attends approximately 50 dog events per year. Kerrie is not a breeder. Kerrie is interested in Canine Education and Health. Kerrie is a member of the Central Florida Miniature Schnauzer Club, the Soft Coated Wheaten Club of Tampa, Fl. And National Dog Groomers of America.

Kerrie's Sponsors are: Carole Weinberger and Amy Gordon.

NEW APPLICANTS, cont'd**Mary McArdle**

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Mary has been involved with Miniature Schnauzers for 14 years. She has owned two Miniature Schnauzers, one for 14 years and one for 6 years to date. She is not a breeder. She has participated in Agility, Rally and Barn Hunt Events. Mary takes part in approximately 24 Agility Trials per year and 4 to 5 Rally Events so far this year. She has just achieved a Novice Title in Barn Hunt. She belongs to Centennial State Miniature Schnauzer Club, Denver, Co., where she held office and has been on many committees, and sponsors the CMSC Yearly Picnic. Mary also belongs to the Rocky Mountain All Terrier Club, Denver, Co. Mary is retired and would like to help the club in Performance Events: Agility, Rally and Barn Hunt. She will be a good promoter of the breed. **Mary's Sponsors are: Judith C. Hughes and Carole Alex**

Amy McGovern

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Amy has been involved with miniature schnauzers all her life, as she grew up with them...She personally has had four of her own which she obtained from the Blythewood, Ruedesheim and Aristo Kennels...Amy is not a breeder...She participates in Agility and Barn Hunt with her schnauzers...Amy does approximately 8-10 Agility Events a year, does home shows 6 times a year and participates in video trials 2-3 times a month...Amy belongs to the Canine Sports Academy, Norman, Ok and Lickety Split Agility, Oklahoma City...Amy is a Professor...She is interested in helping out the club with Newsletter, Electronic Media, Public Awareness, Awards/Trophies, Education, Agility and Health...Amy is a computer scientist and has lots of computer skills to offer...She is also a skilled photographer and has helped with the AMSC webpage including the recent "Stairway to Heaven" which appeared in the publication...**Amy's Sponsors are: Patti Henderson and Kaye Kirk**

Jackie Harris

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Jackie has been involved with Miniature Schnauzers for 45 years with pets and for 6 years in conformation and 3 years in agility and Barn Hunt. Jackie is not a breeder. Jackie attends about 20 shows and trials each year, and does agility/barn hunt classes 3 times per week. Jackie is a Corporate President/CEO. Jackie belongs to Centennial State Miniature Schnauzer Club, Denver, Co. and Rocky Mountain All Terrier Club, Denver, Co. Jackie is interested in helping us with Newsletter, Legislative Issues, Rescue, Public Awareness, Education, Membership, Agility, Ethics and Health. Jackie has great organizational skills and has sat on a few boards and chaired several committees and has fund raising activities experience.

Sponsors: Patty Ledgerwood and Carma Ewer

Rebecka Christensen

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Rebecka has been involved with Miniature Schnauzers for 8 years, in conformation and agility and starting in Barn Hunt. Rebecka is not a breeder. She and her dogs attend about 6 – 10 agility trials per year and take weekly agility classes and is working on a Grand Championship in conformation attending 1 – 2 shows per quarter. Rebecka belongs to the Gamblers Agility Club of Greater Las Vegas, Las Vegas, NV, where she was their treasurer for two years and currently is serving on their board of directors. She is a School Administrator. She is interested in helping our club with things related to agility.

Sponsors: Jeri Muntis and Julie Cooper

Yolanda Viggiano

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Yolanda has been involved with Miniature Schnauzers for 38 years, with 11 Miniature Schnauzers. She is a breeder of 4 litters on 2 bitches. She belongs to Chicago M.S. Club – 10 years – current year President. She attends 3 events/shows per year. She is retired, but does catering. She is interested in Membership Committee. Past member of AMSC.

Marsha Rae South

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Marsha has been involved with Miniature Schnauzers for 10 years, in Agility and Obedience. She attends 10 – 12 shows per year, and also seminars when available. She belongs to the Helena Montana Kennel Club, Helena, MT., where she chairs obedience run throughs. Marsha is retired. She is interested in helping our club with activities involving obedience. She and her dogs train a minimum of 3 times per week, and has attended the Mini Palooza in St. Louis (2016). She is good with Public Relations.

Sponsors: Dianne Armstrong and Lynn Tamms

Oh...How I love to travel in the motor home!



How to Access the MEMBERS ONLY section of the AMSC website

Click the Members tab in the top right hand section of the website

Username is: AMSC#1
Password is: Schnauzer2015
Type carefully - case sensitive!

Once in you will have access to AMSCestry and many other items of interest to our members!

Both Dogs and People Score a 'Win' When You Do This

By Dr. Becker

Not long ago, researchers at Cornell University wrapped up the largest genetic study of dogs ever undertaken by performing genetic mapping of 4,200 dogs, including purebreds, mixed breeds, and village dogs.¹

The study examined 180,000 genetic markers that can help link specific inherited diseases with the genes responsible for them.

According to the Cornell Chronicle, the study is "... [A] big step toward efficiently mapping genes responsible for complex diseases in dogs, most of which are very similar in humans, thereby accelerating our understanding of human genetic diseases.

By identifying important genes and proteins in dogs for diseases and traits, researchers may then test those homologous genes in humans."²

Interestingly, there are over 350 diseases that affect both dogs and humans, and there are also similarities in the pathways and genes that cause those diseases.

The research team identified areas on the canine genome associated with hip and elbow dysplasia, idiopathic epilepsy (seizures with no known cause), lymphoma, mast cell tumors, and granulomatous colitis (Crohn's disease).

Adam Boyko, Ph.D. of Cornell University's College of Veterinary Medicine and lead author of the study believes the more we understand about the genetic basis of canine diseases, the more successful we can be in keeping purebred dog populations genetically healthy.

"Once you have these loci [DNA segments] identified, the future goal is to develop genetic tests so that breeders can test the dogs before they breed them and then make decisions to help create healthier populations," says Jessica Hayward, Ph.D., a postdoctoral researcher at Cornell and study co-author.³

The good news for those of us with pets prone to genetic "breed flaws" is the emerging field of nutrigenomics that is proving that what we feed our pets has the power to suppress or unlock DNA.

This means even if your dog tests positive for genetic disease markers, it doesn't mean he'll automatically express all his negative genetic potential, which is comforting.

As owners, by positively modulating our pet's environment — through excellent food choices, reducing chemical exposure and stressors, and focusing on physical fitness — we can dramatically reduce negative gene expression.

Are Genetics Also Shaping Your Dog's Behavior?

According to Elinor K. Karlsson, Ph.D., an assistant professor at the University of Massachusetts Medical School (UMMS), a dog's personality is shaped by both his life experiences, and also thousands of years of evolution.

"Have you ever known a dog who would retrieve the same ball over and over again, for hours on end?" asks Karlsson, writing for the Conversation. "Or just wouldn't stay out of the water? Or wasn't interested in balls, or water, or but just wanted to follow her nose?"⁴

Karlsson believes these canine traits are the result of hundreds of generations of artificial selection by humans:

"By favoring useful behaviors when breeding dogs," she says, "we made the genetic changes responsible more common in their gene pool."⁵

Interested in Getting Involved in Doggy DNA Research?

To understand how specific genes control the behavior and health of dogs, much more information is needed. That's why Karlsson and her colleagues have launched a citizen science research project called Darwin's Dogs.

For Darwin's Dogs, Karlsson is asking dog guardians to record their own observations of their pet's behavior and personality, and collect doggy DNA at home using mouth swabs provided by Darwin's Dogs.

Karlsson and her team developed several short surveys to gather pet owner information about their dog's diet, behavior, personality, and more.

The Darwin's Dogs project is open to all dogs — purebreds and mixed breeds. The research team will use new DNA sequencing technology and analysis tools to collect genetic information from each dog. The goal is to conduct large-scale studies to facilitate rapid identification of important genes and

genetic variants.

Karlsson plans to combine the genetic data from many dogs and look for changes in DNA that relate to particular behaviors. "It won't be easy to match up DNA with an obsession with tennis balls, for instance," says Karlsson. "Behavior is a complex trait that relies on many genes."

Complex traits can be the result of tens or even hundreds of different genetic changes, and in addition, a dog's environment plays a major role and adds to the complexity.

To be successful, Darwin's Dogs needs lots of canine companions participating in the research project. Karlsson and her team hope to enroll 5,000 dogs initially. The more dogs they can involve, the more complex biological puzzles they can work to solve. According to Karlsson:

"This is a huge effort, but could offer huge rewards. By figuring out how a genetic change leads to a change in behavior, we can decipher neural pathways involved in psychiatric and neurological diseases shared between people and dogs. We already know these include not just anxiety, but also PTSD, OCD, autism spectrum disorders, phobias, narcolepsia, epilepsy, dementia and Alzheimer's disease."⁶

Karlsson and her colleagues are investigating both canine behaviors and diseases. Their theory is that by locating the genetic changes that led to complex behaviors (e.g., retrieving) and perhaps even personality characteristics, such as playfulness, they can learn more about how brains work.

How to Participate in Darwin's Dogs

The way the process works is that each participating dog guardian fills out a survey. After doing so, he or she will receive an easy-to-use kit to collect a small amount of their dog's saliva to be used for DNA analysis. There's no cost to the dog owner, and the researchers share any information they find. If you want to learn more and/or enroll your own dog in the Darwin's Dogs citizen science research project, you can do so here. <http://darwinsdogs.org/>

What Is Leptospirosis And Should You Be Concerned?

5 Fun Ways to Exercise with your Dog

What is Leptospirosis and how does it affect dogs?

AKC's Chief Veterinary Officer Dr. Jerry Klein gives the need-to-know information.

Leptospirosis is a disease that affects dogs, as well as many other kinds of animals. The organism that causes leptospirosis is a spirochete bacteria and is found throughout the world. There are a very large number of *Leptospira*; about 230 of them have been identified.

In the United States, Leptospirosis is in the environment because it is carried in rats, wildlife, as well as domestic livestock. More cases are seen in late summer and fall and often after heavy rainfalls. *Leptospira* is known to exist in standing water, dampness, and mud. Winter conditions tend to lower the risk because *Leptospira* do not tolerate freezing temperatures.

Pets can become infected through contact with urine of infected animals such as raccoons, skunks, rats, feral cats, dogs, and other animals. Often, dogs contract the disease by swimming in stagnant water or drinking contaminated water in puddles.

SHOULD DOG OWNERS BE CONCERNED ABOUT LEPTOSPIROSIS?

Not all dogs that are exposed to Leptospirosis become visibly ill. In a 2007 study, 25 percent of unvaccinated healthy dogs had antibodies to Leptospirosis. This indicated to researchers that they had been previously exposed to Leptospirosis without their owners noticing a problem.

When Leptospirosis does cause disease in dogs, it tends to be most severe in unvaccinated dogs that are younger than 6 months of age. It takes about 4-12 days after exposure for a dog to start to feel ill.

Signs of illness vary, but usually include lethargy, poor appetite, fever, vomiting, increased thirst or urine production. Jaundice may also be seen. Blood tests will show changes in kidney values or liver and kidney values.

Diagnosis is made through blood and urine tests that look specifically for Leptospirosis. Antibiotics are typically used to treat Leptospirosis; not only can they treat the active infection, but also may prevent dogs from becoming carriers of the organism.

HOW CAN DOG OWNERS PREVENT

LEPTOSPIROSIS?

Prevention is best accomplished by stopping your dog's access to contaminated water. Also, try to sanitize your dog's environment by eliminating food and garbage to reduce the attraction of rats, raccoons, or feral cats.

Leptospirosis is a zoonotic disease. In other words, it is contagious to humans. The most likely way humans contract Leptospirosis is via exposure to dog or rat urine. However, any bodily fluid, including vomit and saliva, can transmit the disease. If your dog is infected with Leptospirosis, it is very important to observe proper hygiene even after he has recovered (wearing protective gloves when cleaning up after your dog, preventing face licking, etc.)

Vaccination for leptospirosis is an option to consider if your dog is at high risk of contracting the disease. The American Animal Hospital Association considers Leptospirosis a "non-core" vaccine for dogs. That is, they do not recommend it unless there is a good chance your dog will be exposed to Leptospirosis. The efficacy of the vaccine is variable: short lasting or limited. There have been reports of reactions to the vaccine that vary from minor to severe.

Vaccination does not always prevent infection, but it tends to make the disease much milder if infection occurs. There is the potential for vaccinated dogs that do become infected to become long term carriers of Leptospirosis. Some long-term carriers have more frequent incidence of reproductive failure and stillbirths.

As with all vaccinations, you should discuss the vaccine for leptospirosis with your veterinarian. This decision will be based on you and your dog's life style, if your community is experiencing cases of Leptospirosis, and the other pros and cons your veterinarian has experienced with the vaccine.

EMERGENCY FIRST AID FOR DOGS

Even the most responsible pet owner can't always protect their pet from a sudden accident or illness. Getting your pet immediate medical attention can be the difference between life and death. Download this e-book to learn more about what to do in an emergency situation.

PLEASE NOTE: The Lepto vaccine *can* be dangerous for certain breeds. The MS is one of those breeds.

Not only can exercising with our dogs lead to a possible happier and healthier pup, but it also contributes to positive wellness and increased happiness for the pet parent too. Studies continually show that dog owners are more likely to meet daily exercise requirements than people without pets. With Spring in full bloom, start gathering ideas for varying up your dog's exercise routine!

You're used to the normal walking around the block or heading over to the local dog park, but have you considered one of these out-of-the-box ideas?

1. Paddleboarding or Kayaking

Paddleboarding and kayaking with your pup are two great activities for the summer, especially if your dog enjoys the outdoors and loves to get in a quick swim before you set off. Just remember to bring plenty of water and treats out on the lake, ocean, or river for the both of you! And don't forget your pup's life vest.



2. Rollerblading or Cycling

Rollerblading, roller skating, and biking are great activities to test out. Larger breeds and dogs with high energy levels love running beside you as you cruise down the all-purpose trail at the park. Just be sure to take plenty of breaks for water and rest in the shade if your dog starts panting from running fast.



3. Doga (Doggie Yoga)

Doga is an activity that is becoming more and more popular all over the United States. Lots of yoga studios host "bring your dog day" events. Or local parks and beaches host classes for free on Saturday mornings during the summer. So open your laptop and start searching for events near you. It'll keep you and pup feeling refreshed, revived, and full of positive energy.



4. Playing Sports (like Soccer)

Our dogs are some of the best athletes out there! From soccer to volleyball, and all of the other sports in between, dogs love



cont'd on p.8,col 1..EXERCISE



AMSCOPE

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UPCOMING SPECIALTIES

Chicago MSC June 18, 2016
Regular Classes: Robert Hutton
Sweeps: Mrs Betty Pump
Milshore MSC (back to back) July 29,2016
Regular Classes: Mareth Kipp
Jay Richardson
Sweepstakes: Janice Wavra
Lone Star MSC July 7, 2016
Regular Classes: Sally George
Sweepstakes: Darlene Davis
Portland MSC January 18, 2017

AMSC SPECIALTIES

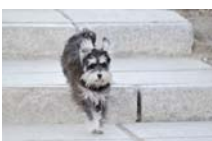
Great Western June 26,2016
Regular classes, Linda More
Sweeps-Mary Paisley
Montgomery Co. Oct.9, 2016
Regular classes: Jon Cole
Sweeps:Linda Drost
Roving Specialty-Portland Jan 21,2017
Regular classes: David Alexander
Sweeps: Bonnie Keyes
Great Western June 25, 2017
Regular Classes: Peggy Beisel McIlwaine
Sweeps: Patty Ledgerwood
Montgomery County Oct. 8, 2017
Regular Classes: Geraldine Kelly
Sweeps:Brian Bogart

EXERCISE...from p. 7

games where they get to chase around a ball or flying disk. So grab your friends and their pups and head to the local park for a fun game where everyone can get a great workout in.

5. Stair-Running

Last but not least, head to the closest high school football stadium to run sprints and stairs with your pup. Stair exercises help build great agility and endurance and they'll whip you both into shape very quickly!



If you are just starting to exercise together or are jumping back in after taking a break, be sure to start slow and not overdo it. When beginning a new activity, try it for 5-10 minutes for the first 5-8 times together. Then, you can start to add 3-5 minutes to your time once you both are doing well at that level. You want to be sure you and your best friend build up some stamina before going all out! Have fun and enjoy staying healthy together!

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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