

Breed Specific Wellness Blog

Breed specific wellness:

Client education has long been a passion of ours. There is so much information we can give to clients to support them as pet owners! As you may know, a great deal of the illness we see in dogs is breed related. All breeds of dogs have genetic susceptibility to particular medical and behavioral problems, and 40-50% of purebred dogs have actual genetic defects that will probably affect their health at one time or another. The average purebred dog is also a carrier of 4-6 genetic diseases that the dog doesn't actually have but could pass along to its offspring. If a breeder mates two dogs that each carry a recessive gene for a genetic problem, 25% of their offspring will have that problem and 50% will be carriers like their parents.

Breed specific wellness is not brand new but it is certainly getting exciting. Our own Dr. Boss is a pioneer in this area and her educational materials for clients regarding disease risks for different breeds have been published. Many of the dogs we see are mixed breed rescues, and we generally have no information on their parentage. Breed specific wellness can be applied to mixed breeds though, after finding out what different breeds are present. (To do this, we use the Wisdom panel DNA test, <http://www.wisdompanel.com/>.)

Even without this testing we can make generalizations about disease risks based on a dog's size and appearance. For example, most tiny dogs are going to be prone to periodontal disease, bladder stones, a heart condition called mitral valve insufficiency, and bad knees. Large dogs would be more prone to hip dysplasia, tumors of the spleen, bloat and ACL ligament tears in their knees.

As veterinarians, we should be taking these breed and size susceptibilities into account when diagnosing and treating disease. We also should be educating our clients about these issues. You need to know what to watch for, how to avoid problems when possible, and what treatments are available should your dog develop a problem. This is especially true if you want to breed your pet.

For example, Wheaten terriers are prone to glomerulonephropathy. A simple urine protein test done every year can catch this disease in the early stages, when it is the most treatable. Dogs prone to hip dysplasia can have x-rays taken when they are young so they can start on glucosamine supplements or have corrective surgery early on. Cocker spaniel owners should be taught how to clean their dog's ears.

You can view or print information about over 50 breeds on our Breed Risk page in our pet library, <http://www.bestfriendsvet.com/html/wisdompanel.htm> Another useful site with breed specific information is www.upei.ca/~cidd/intro.htm. This site is just a glimpse, and has not been updated since 2004, so it has likely already been superseded by the rapid explosion of genetic testing capabilities that is currently underway. There is a

great deal of research going on nowadays into the genetics of dogs in general, as well as their breed-specific illnesses. A colleague in Arizona has developed quite a nice list of conditions specific to certain breeds that might be useful as well,

<http://www.hillsidepets.com/index.php/pet-care-pages/66-canine-breed-wellness>

This is how we currently apply breed specific wellness:

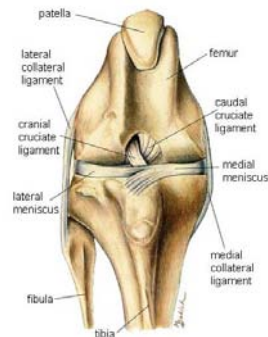
1) Breed specific dentistry

We have always spent 2 or 3 times as long discussing dental disease with smaller dog owners than with larger dog owners. Smaller dogs have more dental health issues, so we need to be much more proactive in preventing disease and tooth loss. **Greyhounds** have a known genetic predisposition to severe periodontal disease. Brachycephalic (short nosed) breeds have a much higher incidence of missing teeth and crowded teeth, as well as periodontitis. Knowing about dental disease prevention and care at an early age could prevent much in the way of severe damage to the teeth and associated tissues. For more information on dental care, go to: <http://www.bestfriendsvet.com/html/teethcleaning.htm>



2) Breed specific nutritional supplements

Sometimes a nutritional supplement, such as glucosamine, is more important for a whole group of breeds, including active sporting breeds or large and giant breeds such as **Labradors, Golden Retrievers, German Shepherd Dogs, St Bernards, Great Danes and Newfoundlands**. They need the benefit of high quality joint supplements (especially glucosamine) as well as appropriate levels of EPA & DHA (fish oils), more so than other breeds, to help combat the higher risk of anterior cruciate ligament (ACL) injury. To learn more, see: <http://www.bestfriendsvet.com/html/nutrition.htm>



3) Ideal weight



Certain breeds are overrepresented when it comes to obesity. Obesity-prone dogs like **Beagles, Labradors, Golden Retrievers, Dalmatians and Pugs** would outnumber all others in an overweight dog contest. What a great thing to see that coming and take steps to prevent it! Knowing how much to feed and how to judge if your pet is getting too chubby are important. Some dogs of these breeds should go on a diet food as soon as they reach adulthood and stop needing puppy food. To learn more, see: <http://www.bestfriendsvet.com/pdf/weightcontroldogs2pgs.pdf>

4) Tick related disease in Labradors & Golden Retrievers

Information presented at the Wisconsin Veterinary Medical Association (WVMA) conference in October of 2009 indicates that both **Golden Retrievers and Labradors** are more prone to tick borne diseases, both Anaplasmosis and the fatal complication of Lyme nephritis, than other breeds. Knowing that these breeds are at increased risk will allow us to emphasize that and hopefully get more specific protection in place via vaccination or optimal tick prevention.

5) Breed and lifestyle specific vaccination

Also at the WVMA conference, Dr. Richard Ford, a world renowned vaccination expert, acknowledged that certain breeds, especially **Dachshunds**, are more likely to have allergic reactions to vaccines because of their size and possible underling genetic predisposition. We will be taking steps, such as separating vaccines and only administering one at a time or eliminating certain vaccines, to avoid complications. The same might not be necessary for a Labrador puppy. As stated above, for a Labrador or Golden Retriever puppy coming to our practice, a Lyme vaccination discussion is going to be more important than for another breed, based on emerging evidence.

Another example of the usefulness of knowing which breeds are prone to which diseases is when considering the purchase of a new dog. We might sit down with a client for a pre-purchase puppy consultation to discuss the pros and cons of breeds the client is interested in. Say we are discussing Boxers vs. English Pointers. Boxers have higher risks of cancer and heart disease than other breeds. We would use a referenced list of medical conditions to substantiate our discussion. The outcome might be that the owner, having just lost a family member to cancer, decides she just doesn't want to take that additional risk and chooses the pointer, despite the great behavioral traits and fun look that boxer dogs have.

Interested in testing your mixed breed or rescue, to see what he or she is made of?

There are several DNA tests currently on the market, including both a saliva test owners can use at home and blood testing for professional use. The Wisdom professional panel test is a blood test available through veterinarians for about \$150. It tests for over 200 breeds, (vs. only about 40 for the saliva test) and has recently added a breed specific condition report and even a predicted adult weight.

The test should be considered for any non-pure-bred dog to determine breed specific health risks. One caution is that phenotype (the outward appearance) does not always allow us to guess a dog's heritage or ancestry accurately from visual appearance. Dr. Boss's dog Izzie (pictured here), for example, looks like a cross between a beagle and a German shorthaired pointer. Her DNA test,



however, showed she has beagle, bloodhound and malamute Grandparents. See lots of great results on the Wisdom “Doggie DNA” Facebook fan page. To learn more, go to: <http://www.wisdompanel.com/>

To illustrate, here is how it might play out in our clinic: A client brings in a rescue that appears to be part cocker spaniel. We take a small blood sample and a DNA test is performed and we get the results back in about 3 weeks. The results show that indeed the pet is 50% cocker spaniel. We know that **Cocker Spaniels** are prone to glaucoma, bladder stones, ear infections and allergies, as well as heart and kidney disease. We want to do all we can to prevent those diseases or detect them before they cause problems if possible.

Because we know cockers are at risk, we take ocular pressures with our Tonopen to screen for glaucoma. We find that at least for now everything is OK, but we set up a schedule of annual rechecks to make sure we keep monitoring for it. For the possibility of allergies and ear infections we advise the addition of anti-inflammatory doses of EPA (the key anti-inflammatory ingredient in fish oil) to her diet and discuss how to detect allergies. We'll get an annual urine sample to screen for kidney disease and bladder stone detection, and we will add heart screening as she gets older.

Wellness has always been the backbone of Best Friends Veterinary Center. Annual blood work and laboratory testing, dentistry, ideal weight, treating osteoarthritis, prevention of tick carried diseases and vaccinations have always been our core wellness steps in all breeds. This means we can tailor a health care program to the exact needs of each patient. Together, we can prevent and treat many of the common diseases we see in dogs every day.