

## Survey

**Participation In the Open Health Registry (Please copy and e-mail back to the editor. grfitz@bellsouth.net Thank you!!)**

- Have you participated? \_\_\_ (If yes, answer #2; if no, skip to #3)
2. What format did you use? (erase incorrect answers) HARD COPY ON-LINE BOTH
3. Reasons you have not participated – Put X by all that apply  
Time—  
Co-owner will not agree—  
Breeder will not agree—  
Dog is healthy—  
Didn't know about registry—  
Other (describe)—
4. What changes could be made that would make it more likely for you to enter your dog(s) in the registry?
5. Suggestions/comments.

### **Use of Open Registry.**

1. Have you purchased a registry book and/or CD? —
2. If you haven't purchased the registry, have you seen someone else's? —
3. If you have purchased or seen the registry book(s), what suggestions do you have for changes in presentation that will help you use the information?
4. Did you know that the registry is copyrighted and registered with the USA Library of Congress? —
5. Cost of book purchase – the year 3 loose leaf book price (copying and mailing) is \$44 for participants and \$48 for non-participants. Do you think the price of purchase is: (erase incorrect answers)  
TOO HIGH TOO LOW JUST RIGHT
6. How much would you be willing to pay for a printed copy? \$
7. How much would you be willing to pay for a digital copy on CD? \$
8. If the registry were available on-line would you be inclined to utilize it? (erase incorrect answers)  
LOTS AVERAGE LITTLE NONE
9. What would you be willing to pay as an annual subscription fee to use the service on-line? \$
10. Other comments/suggestions

# L I G H T I N G T H E W A Y



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Foundation for  
Health*

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### **Reflections Elsa Sell**

**Time Flies By.** Since last newsletter, BeaCon's fourth year open health registry has finished. We'll have a vendor table at the national specialty, we're exploring ways for the open registry to be available to more people, and this issue we've begun interviews with breeders who support open health registries. Everyone, please fill in and return the enclosed survey on the open registry if you didn't already do so on-line – especially those who haven't yet participated in the registry.

**It is now 9 years since I began volunteering to work for the health of Bearded Collies. What has changed in dog health during that time? Here's a small sample.**

**The AKC Canine Health Foundation (AKC CHF)** started in 1995; it has administered over \$12,000,000 in research funds to many institutions on behalf of solving health problems of purebred dogs. This year's annual

budget is expected to be around \$2M. There are both genetic and non-genetic research topics. One non-genetic project is on medical surveillance of dogs deployed on 9/11 in the World Trade Center and the Pentagon; another is on temperament and emotional reactivity and is supported by Canine Companions for Independence.

Cooperative efforts among breed groups have enhanced many projects. Currently, tests are available for 21 genetic diseases. This link gives the disease name, breeds involved, and lab(s) doing the tests: <http://www.akcchf.org/research/genetic.htm>. An important lesson learned is that a genetic disease may be inherited differently in different breeds. Thus, when a DNA marker is found for a disease in one breed, each other breed with that disease must be studied to determine if the marker is the same or different.

Presently, AKC CHF is funding 77 research projects in over 32 different institutions. I encourage readers to learn about these projects and gain a greater appreciation of how research is improving health for purebred dogs, their owners, and breeders. ([www.ackchf.org/research](http://www.ackchf.org/research)).

**Another major event was the effort to learn more about Addison's disease in Bearded Collies.** The main research project involving Bearded Collies has been the study at UC Davis on Addison's inheritance and DNA markers. The project began in 1998 at the University of Oregon and, continues at UC Davis with Dr. Anita Oberbauer. Other breeds involved are Portuguese Water Dogs, Westies, Leonbergers, Standard Poodles, and Great

Danes. There will be a question and answer review session on the project at the national specialty in Colorado. Several breeders will relate their experience of having bred an Addisonian Bearded Collie and informal discussion will follow. There is no charge for this seminar and everyone is welcome.

**Finally, BeaCon became an entity in 1999** as a non-profit foundation in the USA with its missions devoted to improving health for Bearded Collies.

**On a personal level,** our family was transplanted from Tucson via Taos to Georgia where we now are grass and cattle farmers. I've had two total knee replacements (the last this summer) with complete relief of pain and ability to walk and do things impossible for the past 12 years. Two dogs achieved their UD's after the move to Georgia. Two dogs have continued their herding lessons and trialing. Two dogs passed on from nasal cancer; one of these was diagnosed by autopsy and the other, by biopsy 6 weeks before death. Two dogs have had hip dysplasia diagnosed (one unilateral; one bilateral). Two dogs have had hypothyroidism. So, from my very limited individual experience, I cannot confirm that freedom from health problems is a given in Beardies.

Consequently, although farming consumes more and more time, I remain committed to working on health in Bearded Collies. I make the time to do so by way of BeaCon. My challenge to each reader - what have you done so far and what can you do in the future for the health of Bearded Collies?



### A BEACON ON WANDA RINGNESS

by Chris Walkowicz

Wanda Ringness has been a Beardie fan since 1986. Currently, she has five Beards in her house, but over the years Wanda's housed and loved nine. Into spending as much time as possible with her dogs, she participates in conformation, obedience, and herding and, like many others, Wanda has discovered how very good Beardies are at pet therapy.

Sadly, Wanda's Beardies haven't been without problems. Her first bitch died at the age of five from seizures. Wanda spayed this dog's daughter and made sure the rest of the litter was altered as well. She bit the bullet and started from scratch with a bitch from another line. She believes an Open Health Registry is necessary because "if we don't participate and be open about the health of our Beardies, our breed will be in for much heartache in the future."

She not only talks the talk, but walks the walk. Wanda has bred seven litters since 1989. Her fifth litter contained three Addisonian pups. All were spayed and neutered. She has not bred the one she kept.

Wanda belongs to the BCCC and the CKC as well as the BCCA and chats about Beardies on lists. She also par-

ticipates in Rescue. She knows the importance of helping as two of her Beardie pups landed in shelters when the owners neglected to contact her. She helped to re-home them and has kept another "rebound" boy when he returned home. She is the contact for several shelters.

Beardie owners who have problems with their dogs are welcome to contact Wanda (by e-mail, phone or snail mail) for advice and commiseration. Over the years, I have lost contact with four of our puppy people (due to their not letting us know they had moved); other than that, the majority of our puppies receive birthday cards and in turn, their owners keep in touch." She heard from one owner who had traveled all over Canada with her dog for nearly 15 years until he recently crossed the bridge.

Wanda says, "Without a doubt, Addison's Disease and breeders who don't acknowledge they have produced it" is the greatest danger to the breed today. "Having said that, it really doesn't matter what the disease is, it must be acknowledged by breeders! Openness!

"I pray that I will live to see the day that the genetic marker for Addison's disease is found. Also to have the feeling that I can contact any other breeder when trying to plan future breedings, have a frank discussion and end the conversation feeling that I am in the 'know' regarding the history of that particular line and sally forth, armed with info that can only help in my breeding program! What an absolute feeling of joy I would have with that! I truly believe that anyone who is owned by a Bearded Collie feels and knows

we are so privileged to be part of this truly wonderful breed...they are simply put, 'the best!.' And it is our duty to do all in our power to safeguard their health so that we can once again proudly say 'yes, indeed, the Bearded Collie is a very healthy breed!'"

Wanda's buyers are lucky owners indeed!

### **Bearded Collie Study UC Davis**

By Gordon Fitzgerald

At the University of California, Davis campus, they are conducting a genetic study trying to find the genetic markers and mode of inheritance for Addison's disease. They are doing this for Beardies, Leonbergers, Standard Poodles, Portuguese Water Dogs, Great Danes and West Highland White Terriers. Addison's disease is a genetic autoimmune disease that affects both humans and dogs. Because enough DNA samples and pedigrees were received for Standard Poodles, and those dogs comprised enough families for accurate statistical analysis, it is now known that the mode of inheritance in that breed is autosomal recessive. Having that information allowed the first effort to identify DNA markers to begin with Standard Poodles.

Although a large number of DNA samples have been submitted by Bearded owners and breeders, there is still a big need for more samples, particularly of complete families (2-3 generations, all littermates and relatives) in which there is one or more affected Addisonian dog. BeaCon has been trying to encourage Bearded people into getting their DNA sampling kits in and increase our participation. With enough samples

from enough complete families, it is anticipated that the mode of inheritance for Addison's in Bearded Collies will be determined with certainty.

The researchers specifically asked if we had any contact with Bearded people in Europe and stated that they would like an increased sampling of European Beardies. We have some participation from the UK (it could be more!), but almost nothing from mainland Europe. Any of our Bearded friends in Europe or other countries, who would like to participate, please do so. They especially would like samples from families. The more samples they get, the easier to identify the gene which causes the disease. Eventually it is expected that breeders can do a test to reduce the risk of producing future Addisonian Beardies.

If you would like to participate, all that is required is that you obtain a kit and swab your Bearded's inside cheek. Each kit contains 3 swabs. You answer a few questions about health, make a photocopy of the pedigree and mail it all back in a pre-addressed, postage paid (for USA) envelope. If you wish my help to get your kits, all I ask is that you send me your home post address and the number of dogs, including puppies, you have. I will get that many kits sent out to you. Each kit contains 3 swabs that you rub inside the dog's cheek. You answer a few questions (which would be all the same for the puppies in a litter) make a photo copy of the pedigree and mail it all back in an pre-addressed, postage paid envelope. The whole thing takes less than 2 minutes.

Please contact me if I can help you.

My address is:  
Gordon Fitzgerald  
142 Glenhill Drive  
Houma, LA 70363

My e-mail address is:  
grfitz@bellsouth.net

If you wish to order your own kits, the web site address is:  
<http://cgap.ucdavis.edu/addison's.htm>

We encourage breeders to obtain DNA from pups in new litters at 6-8 weeks of age and before they are placed in their new homes. Whether swabbing the cheek of a pup or an adult, the whole process takes less than 2 minutes. **PLEASE, PLEASE, PLEASE** do this for the future of Bearded Collies!

Thank you for your participation!

### **CHOCOLATE POISONING**

**Jo Tucker**

Christmas is coming and the..... dog may steal the chocolate baubles decorating the tree. Well, he loves it and a bit of chocolate won't hurt him - or will it?

Every year, animal poison control centres throughout the world receive many calls regarding the poisoning of dogs due to chocolate ingestion. An increase of calls, as might be expected, are received at Thanksgiving, Christmas and Easter time. The majority of these calls concern dogs suffering from the ill effects of their chocolate indulgence. Fortunately, most dogs survive but there are some fatalities.

Chocolate is made from roasted seeds

of the plant *theobroma cacao*. The principle toxic ingredient of chocolate is theobromine. The content of cocoa solids in chocolate vary between 30-70%, so the quality of the chocolate is relevant to the potential toxicity.

The absorption of theobromine in dogs is much slower than in humans, therefore dogs do not have the ability to metabolise and expel this poison from the body before toxicity occurs. Although symptoms may appear after 2 hours of ingestion, in some dogs it may take as long as 24 hours, and the effects can last as long as 72 hours. After it is absorbed, theobromine is metabolised by the liver and removed from the body through the urine. However, not all the theobromine is removed from the body and will be re-circulated through the liver until all traces are removed. This may cause a delay in the appearance of clinical signs.

According to records, fatal doses of theobromine have been in the wide range of 90-500mg per kg of body weight - a lot of chocolate! The table lists the approximate theobromine content for different types of chocolate or products containing cocoa, and is a rough guide of the amount that would have to be consumed by a 20kg dog to cause intoxication. This calculation is based on the treatment threshold of 20mg of theobromine per kilogram of body weight, currently recommended by the Veterinary Poisons Information Service, London

It can be seen on the chart that white chocolate is the least poisonous because it is made from cocoa butter (which is safe for dogs) and not from cacao beans. The theobromine content

in white chocolate is extremely low in comparison to plain/dark chocolate. For a 20kg dog to have adverse reactions it would have to consume approximately 44 kilograms of white chocolate - some feast!!! However, for the same dog to be at risk of poisoning from rich/dark chocolate, he would only have to consume 5 - 90grams (less than an average bar), which is not inconceivable, or only 14 - 30grams of cocoa shell mulches (used in the garden). Doggie chocolate drops are fine for your dog as they do not contain theobromine, but rich chocolate cake isn't. Unsweetened baking chocolate, used to make cakes, has a very high content of theobromine.

**Initial clinical signs of chocolate poisoning are:**

- Vomiting - with or without blood - usually resembling coffee grounds or chocolate
- Abdominal tenderness
- Excessive thirst/urination
- Hyperthermia

**The dog may be excitable or restless, and show signs of:**

- Ataxia - staggering gait or loss of power in movement
- Heart rhythm abnormalities
- Fast pulse
- Excessive salivation

**Effects of severe poisoning are:**

- Muscle rigidity
- Increased rate of breathing
- Blue or purple discoloration of tongue, lips and gums
- Diarrhoea
- Urinary incontinence
- Blood in urine
- High temperature
- Body tremors
- Seizure

If you suspect your dog has eaten excessive amounts of chocolate or mulches, don't wait for clinical signs to show. If the dog is presented to the vet within 2 hours of ingestion, emetics (to induce sickness) and adsorbents, such as activated charcoal, will probably be administered and the prognosis will be more favourable. The longer your dog is left untreated, the higher degree of toxicity. It is likely that repeated doses of activated charcoal will be given every 2-3 hours (until the charcoal appears in the dog's faeces) to disrupt the theobromine cycling through the body.

The vet may consider intravenous fluid therapy or other treatment to counteract life threatening clinical signs, but management of chocolate poisoning (as with many other poisons) is usually a

case of observation/support and TLC.

The prognosis for even potentially serious cases of chocolate poisoning is usually good if attended to promptly. Fatal cases are very rare, and very often as a result of the dog raiding the cocoa-bean mulches used in the garden and not through the dog having a chocolate feast. Unfortunately, it is not always obvious to the owner that their dog has been eating the mulches, and many cases of theobromine poisoning may go unreported or are incorrectly diagnosed.

Personal experience: One Easter when the children were teenagers, I deliberately shut my son's bedroom door to keep Lucy (our greedy beardedie) away from his Easter eggs. When I returned from shopping, I panicked when I couldn't find her. Eventually I went into my son's room and there she was surrounded by crunched up foil wrappings and cardboard. I had actually shut her **IN** the bedroom and she had consumed about ten Cadbury's creme eggs and a large Milk Tray Easter egg, that my son had received from his girlfriend. Apart from her 'passing' what looked like melted chocolate for 24 hours afterwards, she was fine, but I'm so glad it wasn't rich, dark chocolate - the story might have been very different.

**In the US**

**The ASPCA Animal Poison Control # is 888 426 4435—\$50 consultation fee. National Animal Poison Control Center—900 680 0000 (fee \$20 for the first five minutes and then \$2.95 per minute thereafter) or 800 548 2423 (for a flat rate of \$30 per case).**

Product or source	Theobromine content per gram of product	Equivalent quantity of product delivering 20mg/kg to a 20kg dog
White chocolate	0.009mg	44 kilograms
Drinking chocolate	0.5mg	800 grams
Milk chocolate	1.5 - 2.2mg	180 - 268 grams
Plain/dark chocolate	4.5 - 16mg	5 - 90 grams
Cocoa powder	5.3 - 26mg	16- 76 grams
Cocoa beans	11 - 43mg	10 - 36 grams
Cocoa shell mulches	14 - 30mg	14 - 30 grams

**Japan**  
**Osaka—Emergency: 0990-50-2499**  
**Tsukuba—Emergency: 0990-52-9899**  
**(9:00 a.m. - 5:00 p.m.)**  
**Holland**  
**National Vergiftigingen Informatie**  
**Centrum Tel: 030 - 250 85 61**  
**Australia**  
**Poison Control—13 1126**

**The Pros and Cons of Early Spays and Neuters**  
**By Linda Aronson DVM**

While we are all aware of the large numbers of dogs that wind up in shelters every year, and the unwanted puppies too, for whom spaying and neutering as soon as possible is desirable to prevent further unwanted animals being born, other health issues come into play when we are considering purebred Beardedies placed in loving and responsible homes as pets. While there has been relatively little research done on this subject, and much of what there is has been based on following up pups adopted from shelters, here are some things to consider when it comes time to consider spaying or neutering your puppy, or advising the owners of the puppies you have bred. No surgery, it must be remembered, is without its risks.

Pro early spaying:

When spayed before the first heat, the incidence of mammary cancer during the bitches lifetime is 0.5%; that compares to an 8% chance if spayed after the first heat and a 26% chance after the second heat. (These figures were taken from a pro spay web site of the Nebraska Veterinary Medical Association, in the author's experience the actual incidence of mammary cancer in .

intact bearded bitches is far lower than these figures indicate.) There is little reduction in risk of mammary cancer if the bitch is spayed after 2 years. It may prevent the mammary cancer spreading, however. You'll never have to worry about a bitch in season and males calling. (However, most bearded bitches are fastidious about keeping clean, and with luck your neighborhood does not support a large population of intact, free-roaming, male dogs.) The bitch won't get pyometra, although the risk of uterine infection increases in older bitches, it may occur in young bitches

#### Pro delaying spaying

Bitches that are spayed before their first season have an increased risk of recurrent urinary tract infections and vaginitis. This is because they retain the immature vulva of a young puppy, an "innie" if you like, that folds in causing urine and other debris to collect and provides a breeding ground for bacteria. This is happening in a lot of bitches, and often requires surgical correction at a later date - this isn't "routine" surgery either.

You'll avoid delayed closure of the epiphyses (growth plates) of the long bones. The dog resembles the breed type. Early spay or neuter dogs tend to be gangly. While I know of no research on the subject, it strikes me that these bones are probably not as strong as in dogs which have been spayed after the closure of the growth plates. If you plan an active life for your dog, and especially if you plan to do agility, herd, flyball, obedience, tracking or other performance sports this is definitely something to consider.

#### Castration

The same applies to dogs as to bitches when it comes to closure of the growth plates being delayed by early neutering. Male dogs don't get mammary cancer - unlike human males. Intact male dogs are more inclined to mark, in and outdoors, and they may be more aggressive, but that is an individual thing, and a well-bred bearded should not be aggressive. The biggest concerns for dogs really come later in life, and virtually all start to get some prostatic enlargement by the time they reach 10 years of age and this can turn to prostate cancer or just cause problems with urination and defecation as they get older. They can also get testicular cancer, usually later in life rather than in their prime like humans. One exception is the male with the retained testicle, these have a relatively high incidence of testicular cancer and age of onset is generally earlier but a lot later than 18 months, which is about the time I would recommend castration of the pet bearded.

Two papers appeared in the February 1st issue of the Journal of the AVMA comparing cats and dogs spayed and neutered before and after 5.5 months of age. In cats the only health and behavioral downsides to early neutering were increased shyness and hiding. On the plus side there was a reduction in males of abscesses (probably the result of fewer cat fights), aggression towards vets, sexual behaviors and urine spraying, and in both sexes the incidence of asthma, gingivitis and hyperactivity were decreased. It was noted that there was delay in closure of the long bones but this did not seem to increase the incidence of fractures. In cats early

gonadectomy seems to be a good thing. In dogs the story was different.

It was found that the earlier a dog was spayed on a continuum the greater the risk of cystitis and urinary incontinence. Other problems associated with spaying or neutering before 5.5 months were an increased incidence of hip dysplasia, noise phobia and sexual behaviors. There was however a decrease in obesity, separation anxiety, escaping behaviors, inappropriate elimination when frightened and relinquishment for any reason. Now we need to look at the population. These were shelter dogs, so the early spay neutered dogs were probably adopted as young puppies and so would be less likely to exhibit the separation anxiety, escape and fear behaviors of older dogs that may have had multiple relocations or might have been the reason for relinquishment. The study for some reason did not look at the incidence of fractures in the dogs only the cats. We are also talking about pediatric spay neuters here, whereas the earlier discussion was looking at the difference between spaying and castrating around 6 months compared to waiting until they were a year or more. Still, the support for delaying spaying with regard to urinary incontinence and cystitis was strong, and the increased incidence of hip dysplasia in the early spay/neuter group is another cause for concern. Given the high reported incidence of noise phobia in beardedies that finding may also be of some significance.

#### Surgical Skill & Risk of Incontinence

Surgical skill can affect the outcome of the immediate spay. In some cases enough ovarian tissue remains that a bitch may actually have heat cycles

(this is not that uncommon and may necessitate a second surgery). I suspect it may be something else that makes most spayed bitches attractive - low grade urinary tract infections and vaginitis or impacted anal glands - to other dogs. Post spay incontinence is generally not related to surgical skill. The fact that it is most often responsive to hormonal therapy - diethylstilbestrol - suggests it is caused by loss of female hormones. Early and late spays can both result in post spay incontinence, the risk of which increases with the bitch's age (regardless of when she was spayed), but the earlier a bitch is spayed the more likely it is that she will later become incontinent. Surgical skill does not affect closure of the epiphyses (growth plates) or vaginal hypoplasia (immature vulva). Dogs are individuals and epiphyses close at different ages, so some dogs that are castrated and spayed young may not be noticeably taller than intact animals. Premature closure may result from heredity or injury.

#### My recommendations:

In the shelter situation I advocate early spay neuter. For dogs going to responsible homes where the owner will monitor their dog to avoid unwanted pregnancies I would recommend delaying surgery until the bitch has had a season. If you are interested in a performance career for your beardedie, but want to have surgery as early as possible

**"Greatness is not in where we stand, but in what direction we are moving. We must sail sometimes with the wind and sometimes against it -- but sail we must, and not drift, nor lie at anchor." Oliver Wendell Holme**

ble, you can X-ray the long bones in the legs and make sure they have finished growing before the surgery. This will take place sometime between 12 and 24 months. You could also check with your breeder, and if appropriate dogs are entered, the BeaCon open health registry to see what the incidence of mammary cancer is in your bitch's line, in order to determine whether or not this should be a major consideration. In general, I have seen few cases in beardies.

### Spotlight on Cheryl Poliak By Chris Walkowicz

Cheryl, who has been with BeaCon since its inception, became a Board member of BeaCon because there was no group or organization actively and pro-actively pursuing health issues of Beardies. "BeaCon, through the open health registry, the web page and Elsa's tireless work has raised so much awareness on the importance of educating ourselves and also the importance of doing something about our health problems. Hiding problems and saying that 'someone else is going to do it' is wrong" says Cheryl.

She feels the Open Registry is important because "the more we know about the health issues of our Beardies, the more we can learn and hopefully solve some health problems." She feels the number one problem concerning Beardies is that of autoimmune diseases. Beadie owners are welcome to contact her concerning health problems, preferably by e-mail (cpoliak@hotmail.com).

Cheryl supports her Nonesuch Beardies (numbering 10, plus visitors) by working in a busy-to-the-max veterinary clinic. Although she doesn't have a medical background, she has a BS in Biology,

with Zoology emphasis, along with a teaching degree. She says she's had dogs her entire life, with Beardies ruling the home roost for the past 16 plus years. Cheryl also co-owns and shows Boston Terriers, Briards, and a Nova Scotia Duck Tolling Retriever, although only Beardies reside at Nonesuch.

Cheryl grew up with Bostons, competing in conformation and agility with the Bostons and mostly conformation with the Toller and Briards. The Boston and the Toller live with her parents. As a breeder, she believes not only in producing healthy Beardies, but well-rounded ones. She participates in conformation, obedience, agility, herding and pet therapy with her lucky Beardies. In addition, the Nonesuch menagerie boasts five cats, lots of Muscovy ducks – plus she cares for four horses! She says she has no hobbies other than dogs due to a lack of time.

One busy lady, Cheryl is not only a member of the BCCA, but has been President, VP, Board member, show chair, trainer in obedience and conformation, Public Ed Chair and sundry other things for Oshkosh Kennel Club. As a long-time Chicagoland BCC member, she's currently Secretary and has been a Board member, newsletter editor, show chair, etc., etc. Because of her limited time, she drops into BCL and BDL occasionally when she has time.

She also helps with rescues, serving as a foster home for homeless Beardies and helping to drive Beardies to a connection, as well as actual rescues from shelters or poor environments.

### New and of Interest in Veterinary Medicine

By Linda Aronson DVM

1) Idexx has a new and very accurate snap test (one your vet can run in 8 minutes during an office visit) for *Giardia*. Given the prevalence of this condition and how difficult it was to diagnose it even 10 years ago, I would recommend asking this to be run (pressure your vet to get the tests in if they don't already have them) at your next visit or the next time your dog gets diarrhea. Humans are also susceptible to this protozoal infection.

The fecal test is an ELISA test, and has 95% sensitivity and 99.3% specificity when compared with Immunofluorescent assay and 96.2% and 100% compared to reference lab ELISA tests (these are impressive figures).

2) Colorado State veterinarians are close to developing snap tests for titrating antibody levels for four feline infectious diseases commonly included in vaccines. They are also working on expanded snap tests for titrating for more canine infectious diseases.

3) A letter to a veterinary magazine put out this challenge from a vet in Newton, Massachusetts, in his 46 years in practice he has never seen a confirmed case of infectious canine hepatitis, and he wondered if the disease still exists. Johnny Hoskins – a well-known veterinary consultant - said he's not seen a confirmed case in 15 years, and the search is now on to see if other practitioners are still seeing the disease. This may be why some Beardies have low titers for the disease.

4) If you are traveling and want to know what the risk of ticks is in the area you are going to, or if you wonder if this will be a good or bad year in your area, Virbac has a web site to predict onset and severity. Just type in the zip code of interest (sorry only in the US at present but one of the developers is Spanish) at <http://www.tickalert.com/> The site also includes information on how to prevent tick bites and what to do if they occur.

5) Ticks are one means *Babesia* is transmitted. It has now been shown that it can also be transmitted by bites from infected dogs. Pitbulls have been found to have a high rate of infection. *Babesia* causes an immune mediated hemolytic anemia and /or liver disease among other things.

6) In response to the AVMA and AAHA's new core recommendations for canine vaccination, Merial has introduced a new three way vaccine (Recombitek C3) which just immunizes against the three core diseases recommended in these guidelines, distemper, parvovirus and adenovirus-2.

Fort Dodge has introduced Duramune Adult, which also vaccinates against the three core diseases and is the first USDA-licensed vaccine with three-year virus-challenge data for these diseases.

**"Excellence is never an accident; it is always the result of high intention, sincere effort, intelligent direction, skillful execution and the vision to see obstacles as opportunities."**  
**Unknown**

## Natural isn't always better:

### Flea Control

Natural remedies are still generally considered safer than the commercially available products, although there has been a lot of publicity about such things as the liver and neurological toxicity resulting from the use of oil of pennyroyal, which still shows up in many natural preparations and has proven fatal to a large number of pets.

Generally the internal products - garlic, brewer's yeast are relatively safe in moderation, although brewer's yeast has been linked to an increase in ear and skin infections. However, there is little indication that they are effective.

Greater problems arise from the use of topically applied products. Essential oils applied to the skin can cause contact dermatitis and allergic reactions; oral application increases the risk of toxicity. Some contain salicylates (aspirin like substances) and should not be used on cats. Eucalyptus, pennyroyal, wormwood, camphor, fennel, hyssop, sage, savin, tansy, thuja, rosemary and pine oils can all induce epileptic seizures. This risk is higher in young animals and those prone to seizures, but can happen in any animal.

Neem sprays are effective (they can reduce flea populations to zero and have residual reduction for up to 19 days) and less toxic, but recent research in animals has shown dose-related impairment of thyroid function and hepatotoxicity, and in children oral ingestion has been reported to lead to toxic encephalopathy. Dogs and other animals may of course lick topical sprays from their coats.

Environmental flea-control applications of diatomaceous earth, pyrethrins and boric acid may also be dangerous. Inhalation of dust from diatomaceous earth can cause irritation of skin and the respiratory system and ultimately cause contact dermatitis (and asthma in people). Boric acid can be fatal causing an acute gastroenteritis with diarrhea, vomiting, possible dehydration and lethargy. Subsequent concentration in brain and liver can result in agitation, seizures and coma. Boric acid readily penetrates damaged skin, and is completely and rapidly absorbed orally. If absorbed through the skin a rash is usually seen, and two or three days later the skin sloughs off.

Be aware anything you use can be toxic, follow directions and use only as needed. It is always wise to contact poison control even if you don't want to discuss the use of a natural product with your vet, they may be a more reliable source of information as it is virtually impossible for vets to keep up their knowledge on everything.

Remember that fleas can drown, and also that most of a flea's life is spent off your dog and in its environment. Some commercial products which you may want to consider would include: 1. Insect growth regulators - the two that work on fleas are methoprene (Precor) and nylar (Archer products) - work for at least 3 months, actually more like 7 months after a single spraying, and appear safe to use indoors; they prevent fleas from growing up, so they never reach the biting stage. 2. Capstar, nitenpyram, is a tablet, and a single dose kills all the fleas on a dog almost instantly. Once it clears the body that is it, there's no

residual flea killing, but it is very effective if you have been to a place where there are fleas, and are taking your dog back to its normal flea free environment, or for dogs that are heavily infested with fleas, to get the problem under control while you address the environmental problems.

### Cushing's Disease

Cushing's is a term adopted from human medicine for an over abundance of adrenal hormones actually the glucocorticoid hormones like cortisol. There are three potential causes: primary hyperadrenocorticism due to a secreting adrenal gland tumor, secondary hyperadrenocorticism due to excessive stimulation of the adrenal gland by the anterior pituitary gland in the brain and usually the result of a tumor there, and iatrogenic hyperadrenocorticism due to too much steroid being prescribed - prednisone, dexamethasone, etc.

The signs include increased urination, thirst and appetite; hair loss; hyperpigmentation; redistribution of fat so the belly becomes pendulous and the muscles waste away from the back and top of the head; weakness; loss of energy; fragile capillaries leading to internal bleeding; impotence/sterility.

For primary hyperadrenocorticism the preferred treatment is surgical removal of the tumor.

For secondary hyperadrenocorticism radiation may slow the growth of the pituitary tumor but often fails to control the hormonal upset. Four drugs may be used. Most often mitotane (Lysodren) is given to progressively kill off the

adrenal gland. The part of the gland producing mineralocorticoids (aldosterone) the hormones that regulate sodium:potassium balance and which are lacking in hypoadrenocorticism (Addison's) tends to resist the drug, so it affects the glucocorticoid producing region preferentially. Problems associated with its use result when too much adrenal tissue is killed. The most common adverse effects are the result of too rapid a decrease in serum cortisol and lethargy, ataxia, weakness, anorexia, vomiting and/or diarrhea occur in about 25% of patients. These are usually mild and resolve with judicious administration of glucocorticoids. About 2 to 5% have permanent hypoadrenocorticism. While initially effective in 85-90% of dogs, about half will relapse within a year, however, these usually respond to an inductive and maintenance dose.

Trilostane is used throughout Europe and Asia, but is not manufactured in the US at this time. If your vet writes for and receives FDA permission you can order the drug from abroad for treatment in the US. Trilostane competitively blocks production of corticosteroids, mineralocorticoids and sex hormones. Effects are dose dependent and largely reversible. It is well tolerated - may cause mild lethargy and decreased appetite for a few days - it occasionally produces hypoadrenocorticism but this is resolved by reducing the dose. It is effective in resolving or reducing signs of Cushing's in the majority of dogs, dermatological signs tend to be most resistant to resolution.

**"Attitude is a little thing that makes a big difference."  
Unknown**

Ketoconazole is an antifungal agent. It is expensive to use and so is usually saved to treat dogs that have not responded to mitotane. It blocks steroid production. It may cause gastrointestinal upset and liver toxicity. Efficacy is probably <25%, but this may be because it is mostly used in resistant cases.

Selegiline (Anipryl) produces irreversible increases in central dopamine levels. Dopamine has been shown to decrease ACTH (hormone from the pituitary gland that stimulates release of adrenal hormones) release from the pituitary. While very safe, the efficacy of selegiline is debatable. Owners reported improvement in up to 77% of patients, but tests for Cushing's (low dose dexamethasone suppression test) only normalized in 17% of patients in a study by the manufacturer. An independent study showed a good response in 20% of patients.

Iatrogenic Cushing's is treated by tapered withdrawal of the drug. Too rapid withdrawal leads to signs of Addison's disease and should be avoided if at all possible.

### **The effect of fasting and eating on laboratory test results**

I am often asked whether blood should be collected for lab testing on a full or empty stomach. Certainly several analytes will be influenced by this, as well as by the dog's diet, medications and the way in which the sample has been handled. BUN (blood urea nitrogen) levels are elevated in dogs receiving a raw diet.

Blood, plasma, serum and urine bio-

chemical analytes can vary substantially throughout the day, and it is often recommended that the dog is fasted to minimize the variations. However, fasting can mask the effects of diet in patients with nutrient sensitive diseases.

Withholding food leads to a reduction in blood glucose and insulin secretion, while increasing glucagon secretion. If an animal is anorexic and not eating or food is withheld for more than 24 to 48 hours it starts to break down fat, leading to the production of ketones (acetone, acetoacetic acid and beta-hydroxybutyric acid). In the fasting dog this rarely leads to an increase in the acidity of blood or urine, but if it occurs in an anorexic dog diabetes mellitus and liver failure can probably be ruled out. If the dog is eating normally an increase in blood or urine acidity would be suggestive of diabetes mellitus or liver failure, but in the anorexic dog the more likely cause is the increased production of ketones (which are acids) from the breakdown of fat.

The liver becomes active in producing glycogen from stored carbohydrates to replace the glucose absent from the diet. This results in an increase in the levels of serum bilirubin as well as the liver enzymes alanine transaminase (ALT) and aspartate transaminase (AST). Clearance of sulfobromothalein (BSP) may also be delayed. Conversely, normal BUN and serum bile acids in an anorexic patient cannot rule out liver failure. BUN and serum phosphorous decrease if dietary protein consumption is reduced, and renal failure may be missed in anorexic patients; creatinine concentrations provide a better index of kidney function in these

patients.

If dietary protein levels drop so will the specific gravity of the urine – it becomes more dilute. In this case, it may be concluded that this is the result of kidney failure, while the kidneys may actually be functioning normally.

In dogs that have been fasted for 24 hours, the adrenal glands will increase output of aldosterone, increasing the resorption of sodium and excretion of potassium by the kidneys, so that blood sodium and chloride may increase, and potassium decrease. The kidneys also excrete more calcium, magnesium, uric acid and ammonia and urine becomes more alkaline.

Dogs that have been hospitalized may drink less, and they and dogs that are water deprived for whatever reason will have a more concentrated urine, with higher concentrations of excreted solutes.

Two to four hours after eating serum glucose levels rise. The levels of fat in the plasma also increase especially if the dog has eaten a fatty meal. This may even be visible in the sample, making it appear cloudy. This is called lipemia, and it increases the breakdown of red blood cells (hemolysis) in the blood sample. Hemolyzed serum alters the results for serum amylase, lipase, ALT, AST, calcium and phosphorus, while the cloudiness resulting from lipemia can interfere with levels read by spectrophotometer and flame photometer such as glucose, sodium and potassium concentrations. It also raises protein levels falsely. To minimize these effects the dog should be fasted at least 6 but no more than 12 hours be-

fore blood is drawn. If lipemia persists after fasting for 24 hours, it represents an underlying disorder of fat metabolism.

After eating protein rich meals, serum and urine concentrations of urea nitrogen, phosphorus and uric acid will increase. Kidneys filter blood faster after high protein meals. Consumption of large quantities of cooked meat elevates blood creatinine levels, as the creatine in muscle is broken down to creatinine by heating. Levels of ammonia in the plasma and urine increase after any meal, but especially if it was high in protein. Dietary fat and protein as well as acid in the duodenum after a meal increase the secretion of bile and cause the gallbladder to contract. This is the basis of the pre- and postprandial bile acid tests used to assess liver function. If a meal is primarily fat however, emptying of the stomach is delayed and the postprandial levels may appear normal in dogs with liver disease.

Food consumption causes the stomach to release hydrochloric acid, reducing plasma chloride and increasing bicarbonate levels in blood from the veins draining the stomach. Total serum bicarbonate and carbon dioxide levels rise – the so-called postprandial alkaline tide. Unless the diet contains acidifying substances, urine will also be more alkaline.

The form of metabolites and their bioavailability will also be influenced by eating and the specific diet. Diet has a major effect too on the formation of urinary crystals and their type.

**RECOMMENDATIONS:** For a regular well-dog check up the dog should

be fasted for at least 12 hours before the blood is drawn to minimize the effects on lab results. To evaluate the effect of dietary modification on a disease process, blood should be drawn 2 to 6 hours after food consumption. After eating a meal, dietary metabolites will be excreted in urine for at least 8 hours and sometimes longer. If you are reevaluating thyroid levels in a dog on thyroid medication, blood should be drawn 4 to 6 hours after the morning pill, and if you do feed, keep the meal low in fat.

## Canine SLO FAQ

By Andrea Chee

Reprinted with permission and thanks from the SLO list

(Editor's note—This FAQ reflects the opinions of the author Andrea Chee and is presented here for information only.)

Q-Where does SLO claw damage occur?

A-The damage occurs while the claw is forming at the root, although the claws usually don't shed until the damaged part emerges from the toe. As a result, damage you see now actually occurred several months ago, and the results of treatment can't be assessed for some months after it's started.

Q-How is SLO diagnosed?

A-There are three main methods of diagnosis - diagnosis by aetiology (the characteristics of the disease), diagnosis by response to treatment, and diagnosis by biopsy.

Diagnosis by aetiology

Someone who is familiar with SLO may well be able to make a diagnosis of SLO on sight, particularly if it follows the typical characteristics of the disorder. The possibility of fungal and bacterial infections needs to be eliminated first, as these are more common and can produce similar symptoms. Unsuccessful treatment of bacterial and fungal infections increases the likelihood that SLO is the cause.

Diagnosis by response to treatment

In many cases, where SLO is suspected, the owner or vet may decide against a biopsy and choose instead to commence treatment immediately. The treatments for SLO are quite specific, and usually if the problem responds to the treatment one can consider the diagnosis confirmed.

Diagnosis by biopsy

Diagnosis by biopsy is done by taking a sample of the root of an affected claw and examining it under a microscope. This method is easiest if the dog had affected dew claws, since a dew claw can easily be removed for study.

Until recently, taking a biopsy from a claw other than the dew claws has been a major step for most owners, as it involves amputating the distal phalanx (last bone) of the toe.

More recently there has been a new biopsy technique involving using biopsy punch to get a sample of the root. This technique is described in the file: <http://groups.yahoo.com/group/SLOdogs/files/onychobiopsy.pdf>

Q-What causes SLO and autoimmune diseases?

A-No-one knows. The most likely explanation is a complex combination of risk factors and triggers, which may even be different in every single dog. There is likely to be a genetic component, most likely caused by a spontaneous mutation. Food additives, vaccination, other infections, pollution and other possible causes have all been speculated on. Certainly, it is possible that they may be part of the combination of causes. However, there is no evidence that any one of these causes autoimmune disease.

**Food**

If it was just food, it would have been spotted long ago. There has been study after study on diet in autoimmune diseases, especially in humans, and if the cause were that simple it would already have been found. Dogs suffering from SLO have come from all sorts of different backgrounds and have been fed all manner of diets, from proprietary foods to raw diets.

**Inheritance**

It's possible that a faulty mutation can be inherited, but such mutations seem to serve only to make a dog susceptible to such diseases. It's likely that they still need the other combinations of factors to trigger the disease, as there doesn't seem to be a prevalence of SLO in specific bloodlines.

**Vaccines**

Vaccines challenge the immune system, and as such could be a trigger factor in combination with other things (just as infection also challenges the

immune system - so the same trigger effect could occur if the dog becomes ill). There is no evidence that they specifically cause SLO though, or the disease would be much more common.

**Heartworm Treatments**

There is unlikely to be a connection between heartworm preventatives and SLO, although like everything a dog comes into contact with it could combine with other things to be a trigger. While many US dogs have used heartworm preventatives prior to SLO, most (probably all) of the UK dogs have never taken such a preventative in their lives, as they don't have heartworm there. Yet there are plenty of SLO dogs in the UK.

**Neglect**

Many people, especially greyhound owners, ask if SLO could be caused by abuse or neglect. If SLO were solely down to poor diet and absence of care, I'd expect a whole lot of labradors here considering how many there are that are badly bred and end up neglected. In general, racers are well cared for, since no athlete can run at his best unless he is fully fit. Your average racer at least gets regular food, daily stimulation and contact, exercise, grooming and a dry warm place to sleep - there are a lot of pet dogs who don't get anywhere near that much.

Q-Once the nails have dropped off, can they grow back normally?

A-In most cases, if the treatment is working well, the claws can grow back normally or nearly normally. Most people have commented that the re-grown claws still look a little flaky, but they do keep growing without dropping off.

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Contributions to BeaCon and the open health registry should be mailed to:

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Don't forget, if you elect to receive your copy of the BeaCon Newsletter by e-mail, you will be entered into the drawing for some great Beardie "stuff". Just contact the editor at:

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to get your name on the list. Not only can you win a nice prize, but the postage saved can be used for health issues. Thanks!

"This is the beginning of a new day. You have been given this day to use as you will. You can waste it or use it for good. What you do today is important because you are exchanging a day of your life for it. When tomorrow comes, this day will be gone forever; in its place is something that you have left behind...let it be something good."

Unknown

"Vision is the gift to see what others only dream."

Unknown

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\$42 USA (printing on loose leaf, 3 hold punched paper; printed matter mailing + insurance). Send order to Elsa. These will be printed in groups of 10. If there are a large number of orders, you would be reimbursed according to cost to print.

Canada - contact Elsa for mailing cost.

Originals of the book are sent to Jo Tucker and Mia Sedgwick. They have generously agreed to take orders from their respective areas to reduce mailing costs.

Please contact:

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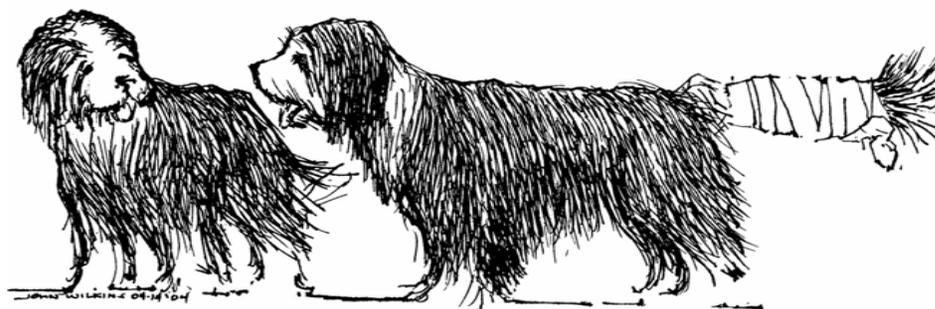
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