Retriever Believer

FROM THE DATA RETRIEVER

NOVEMBER 1992

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-> Christmas Party / Silent Auction

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-> October Board Mtg. Highlights

-> Articles on Von Willebrand's & Thyroid Diseases

-> Rescue News Update

Hello again!
We've put a lot of things in this month's newsletter that we hope you will find interesting. I've included some articles on vWD and thyroid diseases after our wonderful turn out for the eye & blood clinic. Thanks to Sharon Edwards & crew for another wonderful job.

Be sure to note the change of the board meeting and remember they are open to everyone.

Next month we will have information about the annual dinner after the Sammamish KC Show on Jan. 16th
Until next month --

Brenda, Lance, & Katie

NOVEMBER BOARD/'93 SHOW MEETING

WILL BE NOVEMBER 14, 1992
AT DON & BARBARA IRONSIDE'S
AFTER THE LABS SHOW AT BELL VERNON
Directions elsewhere in the Newsletter.

The Labrador Sourcebook

The LRCSC Labrador Sourcebook was revised in 1990 to include a more updated look at the many aspects of the Labrador. Still included, are the wonderful items that were found in the original printing in 1976, especially the Labrador coat color inheritance chart that is so helpful and easy to read.

cost
$6.00 each
$50.00 for 10

An excellent gift for your puppy buyers. An excellent source of information for everyone involved with Labs. No Library is complete without it if you own a Labrador.

On sale at every club event!
or
Contact Winnie Limbourne
35445 Red Rover Mine Rd.
Acton, Ca. 93510
805-269-5252
~~~~

1993 Slate of Officers and Board Members

The Nominating Committee has proposed the following slate for the 1993 Board:

Officers

President	Joni Willing
Vice-President	Sharon Edwards
Secretary	Barbara Ironside
Treasurer	Katie Mearns

Board

Leslie Douglas Fred Drennan

Georgia Gooch Lance Manus

Evelyn Smith

Additional nominations will be taken at the December 5th Christmas Party and the election of the board will be at the Annual Dinner following the Sammamish KC Show January 16th.

OFFICERS

President — Joni Willing
3602 122nd St N.W.
Gig Harbor, Wa 98332
206-858-7445

Vice President — Sharon Edwards
5474 S. Wilkinson Rd.
Langley, Wa 98260
206 321-6578

Secretary — Barbara Ironside
4117 143rd Ave.S.E.
Snohomish, Wa 98290
206 334-1076

Treasurer — Brenda Manus
26907 Border Way N.E.
Kingston, Wa 98346
206 297-4637

DIRECTORS

Leslie Douglas	206 334-2544
John Doherty	206 862-9184
Evelyn Smith	206 569-2686
Mary Jane Sarbaugh	206 321-6537
Chris Widger	206 788-4110

CHAIRPERSONS

Field Chris Widger	206 788-4110
Co-Chair Nina Mann	206 483-5947
Show Barbara Ironside	206 334-1076
Membership Nina Mann	206 483-5947
Obedience Evelyn Smith	206 569-2686
LRC Area Rep Nina Mann	206 483-5947
RDOW Area Rep Sharon Hilton	206 334-0303
Newsletter Brenda Manus	206 297-4637
Katie Mearns	206 483-0677

The Puget Sound Labrador Retriever Association is a non-profit organization dedicated to promoting the Labrador Retriever as an all -around dog. It is our belief that a show dog that will not retrieve is not a true labrador, that there is no reason why a hunting dog should not conform to the breed standard and that both should be well-mannered family members. to these ends we hold AKC sanctioned Specialty Shows and Obedience Trails, Fun Matches, Hunting Tests, Working Certificate Test, sponsor educational seminars or clinics, publish a newsletter and urge all our members to breed only dogs that will be sound in both type and temperament and contribute to the improvement of the breed.

We encourage all our members to show their dogs and work them in the field and in obedience to develop their full potential and work toward the club's All-Around Labrador Award.

Membership is open to anyone interested in Labrador Retrievers whether that person owns one dog, none, or many.

Annual dues are $15.00 for a voting membership, $20.00 for a family membership with two votes. Junior members, listed separately and receiving their own newsletter are $7.50.

The Retriever Believer is published monthly by the Puget Sound Labrador Retriever Association in the interest of providing information and promoting the Labrador Retriever. Non-member subscription rates are $10.00 per year. Contributions in the form of articles, letters, or money are always welcome. It is our goal to provide an open forum where members can present their views to the club. If you have an article or would like to write a letter that might benefit the club, please submit it for publication. The Retriever Believer will publish Brags and Litter Listings free of charge for members, non-member cost is $5.00 per submission. After October 1, 1992 all litter listings must comply with the PSLRA Code of Ethics. Advertising is available at $10.00 per half-page and $20.00 per full page. Deadline for submission is the 20th of each month. Publishing an article or advertisement does not constitute endorsement or agreement by the PSLRA. All submissions should be sent to the Editors, Brenda & Lance Manus, 26907 Border Way NE, Kingston, WA 98346. Phone (206) 297 - 4637.

MERRY CHRISTMAS

Come join the fun at

PSLRA's 1992 Christmas Party

December 5, 1992 Beginning at 5pm

This year Chris & Gail Widger have offered their home as our location.

It will be a potluck so please bring a main dish & either an appetizer, salad, or dessert.

Also remember to bring an item for our Silent Auction. It always provides some "friendly" competition.

In addition, we will kick-off our

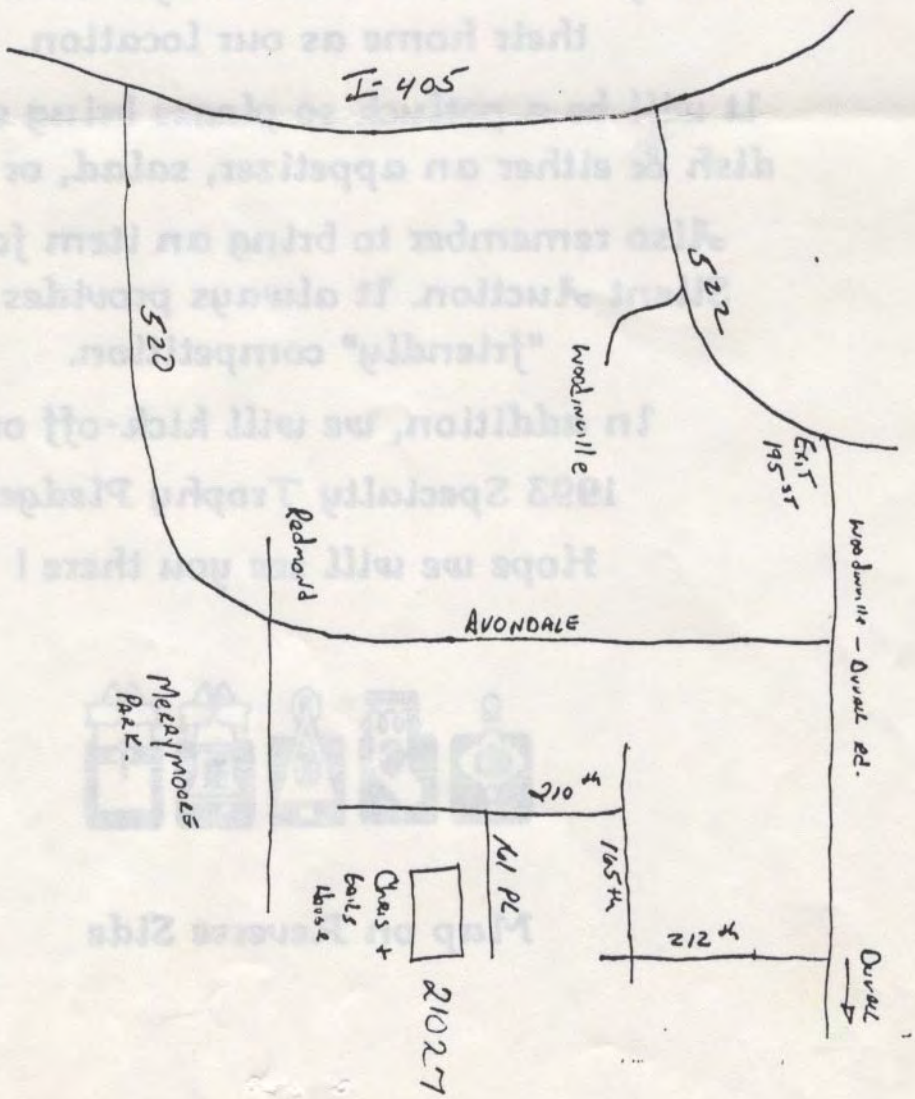
1993 Specialty Trophy Pledges

Hope we will see you there !

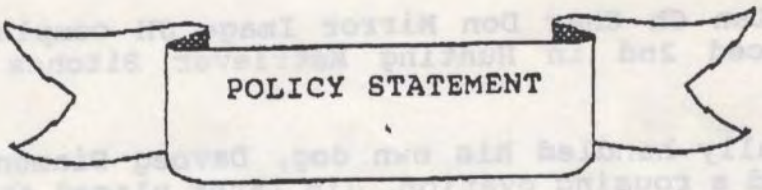
Map on Reverse Side

Calendar of Events

Nov 1	Mt. Baker Kennel Club Lynden - (R & R)	Closes Oct 14
Nov 14	Bell Vernon Kennel Club Monroe - (R & R)	Closes Oct 28
Nov 15	Whidbey Island Kennel Club Monroe - (Loraine Russell)	Closes Oct 28
Nov 27/28/29	Pilgrim Cluster Spokane - (Onofrio & Brown)	Closes Nov 11
Dec 5	PSLRA Christmas Party & Silent Auction Woodinville - (The Widger's) 21027 N.E. 161st Place (206) 788-4110	
Dec 12	Portland Kennel Club, Inc. Portland - (Ace Mathews)	Closes Nov 24
Jan 3	Tacoma Kennel Club Tacoma Dome - (R & R)	Closes Dec 16
Jan 16	Sammamish Kennel Club Puyallup - (Brown)	Closes Dec 23
Jan 16	PSLRA Annual Dinner ** More in Next Month's Newsletter **	
Jan 17	Puyallup Valley Dog Fanciers Puyallup - (R & R)	Closes Dec 30

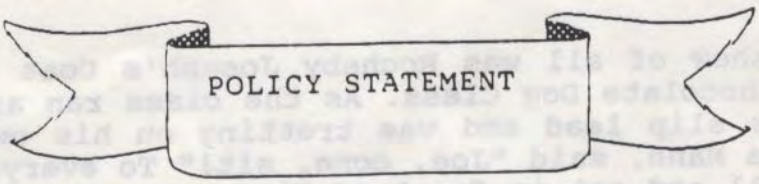


THE AMERICAN KENNEL CLUB



Dog Auctions

The American Kennel Club strongly opposes disposing of puppies or livestock of any kind by offering them as prizes or giveaways in auctions, raffles, contests or promotional events. Many animals acquired in this manner end up in shelters after the novelty of ownership has worn off. The acquisition of a dog should be an informed and educated decision on the part of the owner-to-be, not the result of a game.



"Dangerous Dog" Control Legislation

The American Kennel Club fully supports the adoption of reasonable, enforceable, non discriminatory laws to govern the ownership of dogs. AKC believes that dog owners should be responsible for their dogs and that laws should impose appropriate penalties on irresponsible owners and establish a well-defined procedure for dealing with dogs proven to be dangerous which includes, if necessary, the destruction of such animals. Such legislation should not single out specific breeds or phenotypic classes of dogs.

PSLRA MEMBERS FLY AND DRIVE TO WISCONSIN

On October 8th - 11th Labrador Lovers from across the U.S. and Canada converged on Waukesha, Wisconsin for the National Specialty Show and Obedience Trial. PSLRA members were there in good numbers and we definitely made our presence known. Here are some of the highlights.

Els Crisafulli (our Alaskan member) and her Am Can Ch Quailwood Double D's Ginger CD TD, made a big splash in obedience by finishing her CDX and along the way taking home the awards for Highest Scoring Champion of Record, Highest Scoring Dog With A Working Certificate, and Highest Scoring Dog With A Tracking Title.

Marilyn Parker's Can Ch Char Don Mirror Image JH completed her first leg toward a CD, placed 2nd in Hunting Retriever Bitches and 3rd in Open Chocolate Bitches.

John Doherty actually handled his own dog, Davoeg Diamond Jim, in Veteran Sweeps and received a rousing ovation. Jim later placed 4th in Veteran Dogs.

Sharon Hilton and Can Ch Fawnhaven First Lite of Dawn WC took 2nd in Open Chocolate Bitches.

The Gains' Northwood Gainspride's Bond was 1st in American Bred Dogs.

Ellen Sparks' Westdale's James Dylan was 3rd in Bred By Dogs.

Cedarwoods Meisha, bred by the Sullivans, was 2nd in Novice Bitches. Diann also placed 2nd in Brace with Cedarwoods Master Gunner and Cedarwood Silk of Manasota.

Ch Sailin' Cajun's Cassanova CD, coowned by Barb Shaw, placed 3rd in Veteran Sweeps and 1st in Veteran Dogs, handled by her owner, Susan Huntzinger.

Don & Barb Ironside's Cedarwood Gunner O'Fawnhaven WC placed 4th in 12-15 months Sweeps.

Perhaps the best show of all was Rocheby Joseph's Coat JH, on his way to winning the Open Chocolate Dog Class. As the class ran around the ring, he slipped out of his slip lead and was trotting on his own. Quick thinking owner/handler, Nina Mann, said "Joe, come, sit!" To everyone's delight, Joe did a perfect recall and sat in front of Nina, who reapplied the slip lead. Everyone roared, including the judge. As she awarded Joe First Place, the judge commented that Joe may have been a bad boy but he was an easy winner. Joe seems to be making a habit of showing off at Nationals. We have the whole thing on video. Maybe we'll have a showing at the Christmas party.

The classes were all large (the total entry was 889) and many more members' dogs made the cut in their class. I hope I didn't forget any members whose dogs placed. If I did, please forgive me.

PSLRA donated Northwest Smoked Salmon to the genetic eye disease research raffle. Our donation was a big hit.

A great time was had by all. A National is a very special happening. It takes years of hard work by a lot of dedicated club members. The Winnebago LRC did a fantastic job. PSLRA members have their work cut out for them for the next two years. 1994 will be here before you know it. Lets all pitch in and volunteer to help plan our 1994 National. We need everyone! Call Nina today!

Submitted by Barbara Ironside

FIRST ALL-AROUND LABRADOR FOR 1993

AM/CAN CH CHELON'S IRISH MIST CD WC

- Paddy is our first all-around labrador for 1993. Just too late for 1992, but is the first on the list for 1993. She is owned by Terry & Walli Roarke and was bred by Cheryl Ostenson.

Congratulations Paddy !!

NEWS FROM LRC

At the National Specialty in Wisconsin, there was an informal meeting of Area Rep's who were there. Among topics discussed was the length of time it takes for membership applications to be processed and why. The process will be explained and published in the next LRC newsletter and at that time I will submit it for publication in our newsletter. The end result is that you should count on four months going by before your application is accepted. Be sure you send in your letters WITH your applications - it may take longer if the Secretary has to wait for your sponsors to send him the letters.

Marianne Foote also told us that LRC had beeen pushing AKC to add a step to the hunting tests. They would like to see an in-between test - in between JR and SR, possibly consisting of dogs running steady on doubles but not doing blinds or honoring. In approaching AKC, a near fatal error of tact was made (none of them ran NAHRA tests) in that this in-between step was referred to as an Intermediate step. So far the proposal has been shot down by AKC, but LRC requests that any clubs that are interested run this test for fun and give them some feedback. I can see problems in adding an informal test to our formal AKC HRT, problems of grounds and manpower, but it might be fun to run a WC and a "Graduate" Junior Hunting test.

Nina Mann
LRC Area Rep

SUPPORT
THE LABRADOR RESCUE PROGRAM

The entertainement books are to support financially the Labrador Rescue Program. The money helps paying for spay/neuter dogs being rescued, food, medical care and foster home programs, transport, etc...
The books are available NOW. They make a great gift for Christmas and offer a lot of advantages.
The Seattle book is $40.00; The South Puget Sound book is $35.00 and The North Puget Sound book is $30.00.

Contact Katie Mearns at 483 0677 (evenings)

Thank you

NEWS FROM THE FIELD

Well I learned to things with last months newsletter -- It never pays to hurry when you are typing, and lock yourself in a room and all dogs and people out. I must apologize to a select group of people, these people & their dogs were accidentally skipped over by me when I was re-typing the list of qualifiers in our September JH.

They certainly deserve our congratulations!!

Can CH Sunnydaze English Leather, CD WC JH
bred by Linda Squires

Am / Can CH Chelon's Irish Mist, CD WC
owned by Walli & Terry Roarke
bred by Cheryl Ostenson

Blackthorn's Skye's The Limit
bred by Barb Shaw

Mallard Lake Nightrider
owned by Tim & Leslie Douglas

Mercedes in Overdrive
owned by Marilyn Parker

UPCOMING FIELD EVENTS IN 1993

Keep these events in mind for incentive when training this winter.

APRIL -- 5-SERIES
MAY -- JH / SH / MH
SEPTEMBER -- JH / SH / MH

STILL MORE "SPECIAL" NEWS

Also overlooked in the last newsletter but certainly just as important were the 1st place Obedience winners at the August '92 Specialty.

NOVICE B -

Sunnydaze English Leather
bred / owned by Linda Squires

OPEN A -

Toast's Sailin Proud
owned by Mary Beth Lamb

OPEN B -

Dudheimer's Mister Goodbear UD
owned by Bob & Christi Duzdik

UTILITY A -

Tahoma Magenta Kiri CDX
owned by Fred Drennan

UTILITY B -

Dudheimer's Mister Goodbear UD
owned by Bob & Christi Duzdik

VETERANS -

Unsinkable Muddy Magnolia CDX JH
owned by Marilyn Parker

???DID YOU KNOW ???

That in the Fall LQ, our own Dudheimer's Mister Goodbear UD owned by Bob & Christi Duzdik, is ranked #4 in Obedience Open Rankings by System I. Bear took HIT & High Combined at the PSLRA Specialty. Both Bear & Christi are working hard toward his OTCH. Congrats ! We're proud of you!

Also, Hoflin Publishing Co. has nominated one of Diann Sullivan's LQ articles for awards through the Dog Writers Association of America.

MAILBAG NEWS

W E L C O M E ! ! !
NEW MEMBERS

Stephanie Harris
19628 S.E. 206th
Maple Valley, WA 98038
(206) 432-0184

Judy E. Anderson
P.O. Box 175
Mountlake Terrace, WA 98043
(206) 774-7393

! ! ! BRAGS ! ! !

Haileta "Joni" Willing &
Lance & Brenda Manus - BreLan Labradors

Bon Di Molly Be Good "Molly"
(Justes B Laird Duckbuster x Bon Di Solo Energy) -
10/11 - Olympia DF - WB

Bob & Christi Dudzik

Dudheimer's Mister Goodbear, UD "Bear"
09/19 - Gig Harbor KC - tied for 1st in Open B with a score of 198. This gave him 4 more OTCH points (now has 8 total) & Highest Scoring Lab in the trial.
10/24 - Lower Mainland Dog Fanciers (B.C.) - tied for 3rd in Novice B with a score of 196 1/2, which earned Bear the first leg of his Canadian CD & Highest Scoring Labrador in Novice.
10/25 - Lower Mainland Dog Fanciers (B.C.) - tied for 4th in Novice B with a score of 197 1/2, which earned Bear the second leg of his Canadian CD.

Katie & Robert Mearns

McCoy's Intrepide Sailor CD WCA "Sailor"
10/04 - PSLRA WC - earned the new title of WCA
10/24 & 10/25 - Sailor earned two legs toward his Canadian CD.

Terry & Walli Roarke
Interlochen Farm

Interlochen First Sea Lord "Louie"
(AM/CAN CH Governor Woody's Best AM/CAN CD WC x CH Chelon Margaret Thatcher JH WC)
Owner / Breeder
09/02 - Clackamas KC - WD BOS
09/11 - Yakima Valley KC - WD BOB
09/18 - Gallatin Dog Club - WD BOB
09/26 - Inland Empire - WD BOS
09/27 - Richland KC - WD BOB

AM/CAN CH Chelon's Irish Mist CD WC "Paddy"
09/19 - RCLRC - earned her WC title
09/26 - PSLRA HT - earned her 2nd wing toward her JH
Breeder - Cheryl Ostenson

Marilyn Parker

Mercedes In Overdrive
09/26 - PSLRA HT - earned her 3rd straight wing toward her JH.

Char-Don's Mirror Image, JH
10/09 - LRC, Inc. National, Waukesha County, Wisconsin - took 3rd in Open Chocolate Bitches, 2nd in Hunting Bitches, & earned her 1st leg on her CD!

Linda Squires
Sunnydaze Labradors

Can CH Sunnydaze English Leather, CD WC JH "Chap"
09/26 - PSLRA HT - Chap earned his final wing toward his JH

Diann & Gary Sullivan
Cedarwood Labradors

Mt. Cheam KC, B.C.

Cedarwood Sierra Pride ("Gander's" Sister)
09/25 - WB (2pts.)
09/26 - WB, BOB, & Group 3 (7pts.)
This was her first weekend in Canada.

Cedarwoods Repeat Performance
09/25 - WD, & BOW

Cedarwoods Meisha
LRC Natl. - 2nd in Novice Bitches

"Gander" & "Silky"
LRC Natl. - 2nd in the Brace Class

~~~~ LITTER NOTICES ~~~~

Litter born - Aug. 31, 1992
Sire: San Juan Hershey, OFA / ACVO
Dam: Gem's Jewel Samantha OFA / ACVO
6 CF, 6CM **2 Sold**
Contact: C.J. Fair (206) 422-8578

Litter born - September 26, 1992
Sire: Blackthorn's Imminent Thunder, OFA prelim / ACVO '92
Dam: Timberline Glory Bound, OFA 27G/ ACVO '91
3 BF, 3 YF, 1 BM
Contact: Beckie Jensen (206) 829-2808

Litter born - September 29, 1992
Sire: CH Kupros Marshall, OFA 24G / ACVO
Dam: Sunnydaze Delta Dawn, OFA 24F / CERF
6 BF, 2 BM (Bc) **2 BF available**
Contact: Linda Squires (206) 398-8928

Litter born - August 16, 1992
Sire: CH ShaRay's Emmanuel WC, OFA 24G / OFEL 24 / ACVO
Dam: Somersett ShaRay Magic Minx, OFA 24G / OFEL 24 / ACVO
2 BF available
Contact: Sharon Edwards
(206) 321-6578

Litter born - October 17, 1992
Sire: CH ShaRay's Emmanuel WC, OFA 24G / OFEL 24 / ACVO
Dam: Shelby's Midnight Misty Rose, OFA 25F / ACVO
1 YM, 2 BM, 2 YF, 4 BF
Contact: Michael or Sandra Burns,
(206) 779-6574

~~~~ Please note new format for Hip & Eye codes. AKC is publishing them in the Gazette using this form. Please submit all litter notices using this format which we will also standardize on. This is the way in which they will appear on your AKC registration forms and pedigrees also.

Hips: OFA 24G: OFA, 24 months in age, good rating.

Elbows: OFEL 24: elbows certified at 24 months.

Eyes: CERF 43, C.E.R.F. registered at 43 months. (Of course if you don't send for a CERF #, nothing will appear on the registration or the pedigrees.) In that case, please continue to say ACVO and add the number of months old when last checked.

THIS INFORMATION MUST BE SUBMITTED ON LITTER NOTICES FOR LITTERS BRED AFTER - **October 1, 1992** OR WE CANNOT PUBLISH THE LITTER IN THE NEWSLETTER~~~~

** After October 1, 1992 all litter listings must comply with the PSLRA Code of Ethics. **

Please send ALL litter notices to Nina Mann, Puppy Referal Chairman, WITH copies of hip & eye clearances attached. Nina will send the litter notices on to the newsletter editors.

All calls regarding --

Litters / Puppies - should be directed to Nina Mann.

Rescue - should be directed to Mary Jane Sarbaugh or Caroline Barnes.

Brags / Newsletter - should be directed to Brenda Manus or Katie Mearns.
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DIRECTIONS TO BARB & DON IRONSIDE'S HOUSE

From Monroe

Go West on Highway 2. Take the first Snohomish Exit. Turn right at the exit ramp stop sign onto 88th.

Go to the deadend and turn left onto 131st (8/10 of a mile).

Go to the next deadend and turn right onto Three Lakes Rd (about 1.2 miles).

Proceed to the first street, Dubuque Cutoff (139th Ave) and turn left.

Proceed to the first street, 44th St, (about a mile) and turn right. (the street sign is on the left side of the street - be careful or you'll miss it).

Go 4/10 of a mile and turn left on a gravel road. There is no street sign. Look for 10 mail boxes all on one stand and a new big wooden fence, both on the left of 44th. Turn left onto the gravel road between the mail boxes and the fence. This is 143rd Ave SE.

We are the 2nd house you can see. Its a blue house with a fenced yard. You'll see our motorhome and Don's big white delivery truck. There'll be 5 Labs waiting to welcome you.

From Interstate 5

Take exit 194 in Everett. Go East on the Hewitt Ave Tressle. Stay in the right lane and proceed onto Highway 2 East.

Take the Highway 9 exit and turn left onto Hwy 9.

Take an immediate right turn onto Bunk Foss Rd. Proceed down the hill to a stop sign. Turn left onto Old Machias Rd. At the next stop sign turn left again onto Machias Rd.

Proceed about 1 mile and turn right onto Dubuque Rd. (just past the Nursery). Follow Dubuque up the hill about 1 1/2 miles.

Turn right on 139th (Dubuque Cutoff). Go just under 1/2 mile and turn left on 44th. Proceed to mail boxes and wooden fence as instructed above.

This all sounds much more complicated than it really is. Just remember to bring these directions with you and you'll be fine.

Address: 4117 143rd Ave SE, Snohomish
Telephone: 334-1076

OCTOBER BOARD MEETING HIGHLIGHTS

Our 1993 Specialty Show site will be Kent Memorial Park on Central Ave. in Kent. We still need someone to chair the equipment committee. Please call Barb Ironside to volunteer.

Field events planned for 1993 include a 5 series singles on Saturday April 10th. This will be a good warm-up for our May 8th-9th Junior, Senior, & Master Hunting Test.

We will be sponsoring an AKC Hunting Test Seminar in January or February. This seminar is a must for anyone interested in planning, judging, or participating in a Hunting Test.

1993 Entertainment Coupon Books are available from Katie Mearns. Proceeds go towards Lab Rescue.

We are updating a list of AKC approved Labrador Retriever Judges that we recommend to all breed clubs as good judges. If you have anyone you would like to see on this list, call Barbara Ironside.

The nominating committee (Nina Mann, Sharon Edwards, & Cindy King) have proposed the following members for officers and board members for 1993: President - Joni Willing, Vice Pres. - Sharon Edwards, Secretary - Barbara Ironside, Treasurer - Katie Mearns. Board Members - Leslie Douglas, Fred Drennan, Georgia Gooch, Lance Manus, & Evelyn Smith. Additional nominations will be taken at the November Board meeting. Voting will take place at the December Annual Meeting (Christmas Party).

The Christmas Party and Annual Meeting will be Saturday, December 5th at 5:00pm, at Chris & Gail Widger's house. Everyone should bring a main dish and either a salad, dessert, or appetizers. Punch and place settings will be provided. Also remember to bring an item for the silent auction.

The LRC has established a committee to revise the breed standard. We will be discussing the standard revision at the November Board meeting and preparing a letter to the LRC, expressing our position. Please plan to attend the meeting or call a board member with your comments.

The next Board meeting will be Saturday, November 14th, at Barb & Don Ironside's house in Snohomish. The time will be after Labs show at the Bell Vernon KC show in Monroe. If you don't plan to attend the show but would like to attend the meeting, call Barb for directions and time.

There will be a 1993 Specialty Show Committee meeting before the Board meeting..

Hope to see you all there!

Respectfully Submitted,

Barbara Ironside

Cornell University College of Veterinary Medicine

Animal Health Newsletter

VOLUME 10 NUMBER 8
OCTOBER 1992

A common bleeding disorder affects breeds differently

Von Willebrand's disease is considered the most common inherited bleeding disorder of dogs. The condition, which affects more than 50 breeds, results from a reduction in a protein that is vital for blood platelet (clotting cell) function. Without this protein, called von Willebrand's factor, dogs are susceptible to loss of blood through hemorrhage. Sometimes the bleeding occurs spontaneously; in other instances, it follows trauma and surgery. The usual methods of stopping hemorrhage frequently fail to work when a dog has von Willebrand's disease.

It has long been known that the prevalence of the disease is very high in Doberman Pinschers, Scottish Terriers, and Shetland Sheepdogs. Now research done at the Wadsworth Center, New York State Department of Health, Albany, has described the strikingly different ways in which the disease appears in these three breeds. Researchers under Marjory Brooks, DVM, reviewed thousands of tests for von Willebrand's factor performed from 1985 through 1988. They found significant age differences among the three breeds, with affected Scotties suffering noninduced bleeding at an earlier age than the other two breeds. More than two-thirds of the Scotties were less than a year old at the time of diagnosis. By contrast, affected Dobermans were significantly older when diagnosed with the disease (median age, four years). The study found that affected Shelties were also young (two-thirds were less than one year old), but bleeding usually was induced by surgery or trauma. Unlike Dobermans, who bled predominantly from the urogenital tract, Shelties and Scotties bled mainly from the oral or nasal cavities.

Although not proven, there is a strong suspicion that von Willebrand's disease is associated with thyroid disease in Dobermans. Dr. Brooks notes that thyroid insufficiency, which is common in Dobermans, is likely to contribute to bleeding in older dogs. The same may be true of other breeds in which there is a high prevalence of both von Willebrand's disease and thyroid disease.

Avoiding an emergency

When a dog suspected of having von Willebrand's disease is a candidate for surgery, it is urgent that the dog be tested to see if the disease is present. Diagnosis is done by measurement of the concentration of von Willebrand's factor in plasma as well as other measurements. Dr. Kenneth M. Myers and associates at Washington State University report that dogs with 30 percent or less of the normal level of the factor are at risk for hemorrhage during surgery. Type of surgery also affects the risk of hemorrhage.

Dr. Meyers notes that there are several new and not fully studied methods of controlling bleeding that may prove lifesaving in some cases. The first method is with a drug that is both an antidiuretic and a vasopressor. The drug, Deamino 8-D-arginine vasopressin®, has been successful in raising the level of von Willebrand's factor in some but not all cases of the disease. Fresh plasma or fresh frozen plasma is also used to control bleeding, but the results have not been consistently favorable.

Finally, Dr. Meyers says that at Washington State University, dogs with von Willebrand's disease are treated before surgery with a compound called cryoprecipitate. Derived from thawed plasma, cryoprecipitate, when infused into the dog, delivers large amounts of active von Willebrand's factor. In the opinion of these researchers, cryoprecipitate infusions are the most effective and reliable means of controlling or preventing hemorrhage in dogs with von Willebrand's disease who must undergo surgery.

SPECIAL FEATURE

Autoimmune thyroid disease

Early testing can help in detection and treatment of a disease that affects dozens of breeds

By W. Jean Dodds, DVM

This article is intended as a follow-up to the excellent review on the thyroid gland by Dr. Edward Baker (November 1991 DW). As so many breeds of dogs suffer from familial thyroid disease (Table 1), dog breeders and owners need to make a concerted effort to screen breeding stock for evidence of thyroid dysfunction before use as stud dogs and brood bitches. This is important because their legacy carries the genetic material for the current and future decades.

The information provided here outlines an approach that I have used successfully to reduce the prevalence of clinically expressed thyroid disease within susceptible families or breeds.

Most of the confusion about the diagnosis and treatment of thyroid disease in purebred or mixed-breed dogs today stems from the expectation that affected animals must show clinical signs of inadequate thyroid hormonal production (i.e., hypothyroidism) to have this disease. The term hypothyroidism has been loosely applied to describe all stages of this disease process, whereas strictly speaking it should be reserved for the end stages, when the animal's thyroid gland is no longer capable of producing sufficient hormone(s) to sustain clinical health. At this point, the dog can express any number of the non-specific multisystem signs of thyroid dysfunction (Table 2). But let's start at the beginning.

The most common cause of canine thyroid disease is autoimmune thyroiditis (an estimated 90 percent of the cases). Thyroiditis is an immune-mediated process that develops in genetically susceptible individuals and is characterized by the presence of antithyroid antibodies in the blood or tissues. This condition usually, but not always, progresses to thyroid disease. (Other commonly used terms for the human disease are lymphocytic thyroiditis or Hashimoto's disease).

Thyroiditis is believed to start in most cases around puberty and gradually progresses through mid-life and old age to become clinically expressed hypothyroidism once the thyroid glandular reserve has been depleted. During this process, the animal or person becomes more susceptible to immune-mediated or other diseases affecting various target tissues and organs, for example, autoimmune hemolytic anemia, idiopathic thrombocytopenic purpura; von Willebrand's disease; systemic lupus erythematosus; seizure disorders; chronic infections; immunosuppressive viral infections like distemper, parvovirus and retrovirus diseases; bone marrow failure; leukemia and lymphoma; chronic active hepatitis; immune eye, joint, kidney and adrenal (Addison's) diseases; and chronic allergic and immune skin and muscle disorders. The prerequisite genetic basis for susceptibility to this disorder has been established in humans, dogs and several other species.

To better understand what happens in the transition from early thy-

Breeds predisposed to thyroid and related immune-mediated diseases

Afghan Hound	Irish Wolfhound
Airedale Terrier	Irish Setter
Akita	Keeshond
Alaskan Malamute	Kerry Blue Terrier
Australian Shepherd	Kuvasz
Basset Hound	Labrador Retriever
Beagle	Manchester Terrier
Belgian herding breeds	Masuff
Bouvier des Flandres	Miniature Schnauzer
Boxer	Newfoundland
Briard	Old English Sheepdog
Bulldog	Pembroke Welsh Corgi
Cairn Terrier	Pomeranian
Chow Chow	Poodle, especially Standard
Cocker Spaniel	Rottweiler
Collie, including Bearded	Saluki
Dachshund	Samoyed
Doberman Pinscher	Scottish Terrier
English Springer Spaniel	Shar Pei
English Setter	Shetland Sheepdog
Fox Terrier	Shih Tzu
German Shepherd	Siberian Husky
Golden Retriever	Silky Terrier
Gordon Setter	Soft-Coated Wheaten Terrier
Great Dane	Vizsla
Irish Water Spaniel	Weimaraner

Table 1. This is probably an incomplete list.

roiditis to clinical hypothyroidism, a quotation from Dr. John E. Bethune, chairman of UCLA's Department of Medicine, is helpful (Disease-A-Month, 35, 1989):

"It is important to clearly understand the changes that occur in thyroid physiology during the evolution of clinical hypothyroidism from the euthyroid state in humans. As primary thyroid gland failure develops and progresses, the free T4 [l-thyroxine] concentration falls; in response to this, TSH [thyroid-stimulating hormone] is secreted from the pituitary gland, and its concentration in the gland is stimulated, the conversion rate of T4 to T3 [triiodothyronine] within the gland increases, and sufficient extra T3 is secreted to keep the level of free T3 normal for a considerable time, even after the free T4 level has fallen below the accepted normal range. As the thyroid mass decreases with progression of the disease state, the T4 concentration will finally fall below the normal range, and signs and symptoms of hypothyroidism will begin to appear. The T3 level remains normal until very late in the development of hypothyroidism."

This explanation helps us to appreciate existing confusion and controversy within the veterinary profession as to whether or not testing or treatment is indicated for dogs failing to show so-called "typical" signs of hypothyroidism.

In fact, we have only recently begun to recognize the subtle signs of early thyroid dysfunction in dogs as the prevalence of the autoimmune form of the condition has increased within and among dog breeds. Today, some 50 breeds are genetically predisposed to develop thyroid disease (Table 1). Veterinary textbooks printed before 1990 and presumably even more recent ones are not up to date on this topic; the latest scientific and medical discoveries are only now reaching refereed publications and have therefore not appeared in textbooks.

There are four main areas of examination when diagnosing thyroid disease.

✔ Baseline thyroid profiles: A typical thyroid test measures the total serum rises. This stimulates the remaining thyroid tissue to make more T4 so that its level does not fall below the lower limit of normal. This also prevents the signs and symptoms of hypothyroidism from developing.

"This state of 'compensated' hypothyroidism may last for some time and can be detected only by the raised TSH values. As the thyroid gland is stimulated, the conversion rate of T4 to T3 [triiodothyronine] within the gland increases, and sufficient extra T3 is secreted to keep the level of free T3 normal for a considerable time, even after the free T4 level has fallen below the accepted normal range. As the thyroid mass decreases with progression of the disease state, the T4 concentration will finally fall below the normal range, and signs and symptoms of hypothyroidism will begin to appear. The T3 level remains normal until very late in the development of hypothyroidism."

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There are four main areas of examination when diagnosing thyroid disease.

✔ Baseline thyroid profiles: A typical thyroid test measures the total

CLINICAL SIGNS OF HYPOTHYROIDISM

alterations in cellular metabolism
lethargy
mental dullness
exercise intolerance
neurologic signs
(polyneuropathy, seizures)
weight gain
cold intolerance
mood swings
hyperexcitability
stunted growth
chronic infections

hematologic disorders
bleeding
bone marrow failure
low red blood cell count (anemia)
low white blood cell count
low platelet count

ocular diseases
corneal lipid deposits
corneal ulceration
uveitis
keratoconjunctivitis sicca ("dry eye")
infections of eyelid gland
(meibomian gland)

neuromuscular problems
weakness
stiffness
laryngeal paralysis
facial paralysis
"tragic" expression
knuckling or dragging feet
muscle wasting
megaesophagus
head tilt
drooping eyelids

dermatologic diseases
dry, scaly skin and dandruff
coarse, dull coat
bilaterally symmetrical hair loss
"rat tail" or "puppy coat"
hyperpigmentation
seborrhea or greasy skin
pyoderma or skin infections
myxedema
chronic offensive skin odor

cardiac abnormalities
slow heart rate (bradycardia)
cardiac arrhythmias
cardiomyopathy

gastrointestinal disorders
constipation
diarrhea
vomiting

reproductive disorders
infertility of either sex
lack of libido
testicular atrophy
hypospermia
aspermia
prolonged interestrus interval
absence of heat cycles
silent heats
pseudopregnancy
weak, dying or stillborn pups

other associated disorders
IgA deficiency
loss of smell (dysosmia)
loss of taste
glycosuria
chronic active hepatitis
adrenal endocrinopathies
pancreatic endocrinopathies
parathyroid endocrinopathies

Table 2. These signs appear during the end stages of thyroid disease.

test for total T4, total T3, free T4, cholesterol and free T3.

Cholesterol should be measured from the same blood sample as the thyroid tests. In dogs with thyroid dysfunction the higher the cholesterol level, the lower the level of free T4. Owners can obtain a printout listing all the test results for their dogs, as well as the "K" value, which is a linear constant between free T4 and cholesterol.

Those K values more than +1 (and preferably more than -5) are considered to be normal. Less than -4 indicates an animal with primary thyroid disease, even if there are no overt symptoms. Values between -4 and -1 indicate either early thyroid disease or a non-thyroidal illness, which depresses thyroid levels. Thyroid deficiency even at early subclinical stages can cause irreversible damage in the body. This more sensitive test is valuable because problems can be detected before damage has become so severe that clear, visible symptoms are present.

For a dog displaying symptoms of autoimmune disease, the K value can be helpful to indicate whether the dog has low, normal or high thyroid function, and if the autoimmune problems are likely to be responsive to thyroid hormone supplementation. If test results are normal, and the dog is nevertheless ill, do other diagnostic tests such as those for antithyroid antibodies (antithyroglobulin, anti-T4 and anti-T3 autoantibodies).

Michigan State University has recently introduced antithyroid hormone antibody (anti-T4 and anti-T3) testing as part of its complete thyroid panel. This is an important step toward more effective thyroid testing and results of nearly 16,000 samples screened to date indicate a substantially higher prevalence than previously reported. Contact the Endocrinology Section, Animal Health Diagnostic Laboratory, P.O. Box 30076, Lansing, MI 48909; (517) 353-0621.

✔ Thyroid-stimulating hormone response test: The thyroid profiling outlined above differs from the TSH response test often used to diagnose the *clinical* stages of hypothyroidism. This test measures thyroid reserve by assessing the ability of the thyroid gland to release T4 hormone upon stimulation with an injection of TSH. It is estimated that from 50 percent to 70 percent of thyroid follicular tissue has to be destroyed or damaged before hormonal reserves are depleted to the extent that overt hypothyroidism occurs. Thus, in the early stages of progressive thyroid disease (thyroiditis), the TSH response is usually normal and would be misleading—a false negative diagnosis. For this reason, we do not rely on finding a positive (abnormal) TSH response test to diagnose thyroiditis.

✔ Antithyroglobulin antibody (ATA) test: Thyroglobulin is a glycoprotein found in thyroid gland follicles. The metabolites of thyroid hormone, T3 and T4, are incorporated in the primary structure of thyroglobulin. Thyroglobulin is antigenic and specific antibodies can form that are directed against several sites on the molecule. In humans, the presence of ATA is most often associated with Hashimoto's thyroiditis, the immune-mediated inflammation of the thyroid gland that progressively destroys functional thyroid tissue. The outcome of this process is hypothyroidism, and lifelong treatment with thyroid hormone is required. Hashimoto's thyroiditis is common; cases tend to cluster among families and certain ethnic groups. In humans, dogs and other affected species, biopsy of the thyroid gland shows characteristic changes of lymphocytic infiltration and immunologic destruction.

We have only recently begun to recognize the subtle signs of early thyroid dysfunction in dogs.

Assays that measure ATA have been adapted for dogs. In two independent studies about 50 percent to 80 percent of the clinically hypothyroid dogs tested had significant levels of ATA. Positive ATA titers were also found in some dogs with non-thyroidal endocrine disease, and in some euthyroid relatives of hypothyroid dogs. At present, the prevalence of ATA in the various breeds affected with hypothyroidism, the value of ATA as a predictor of impending thyroid failure or a marker of familial hypothyroidism, and the relation of ATA to other immune-mediated disorders has not been determined. Preliminary studies of several affected dog families show promise in supporting the usefulness of ATA as predictive of subsequent hypothyroidism (e.g., Great Danes, Doberman Pinschers, Old English Sheepdogs and Shetland Sheepdogs). The quantitative ATA test is offered by the veterinary college at the University of Florida in Gainesville and as a research test by several groups, including Michigan State University.

✔ Genetic screening for thyroid disease: These thyroid panels and antibody tests can also be used for genetic screening of apparently healthy animals to evaluate their fitness for breeding. A bitch with antithyroid antibodies in her blood may pass these along to her puppies in her colostral milk. Also, any dog having circulating antithyroid antibodies can eventually develop clinical symptoms of thyroid or other autoimmune diseases. Therefore, thyroid screening can be very important for potential breeding stock.

Thyroid testing for genetic screening purposes is less likely to be meaningful before puberty. Screening is initiated, therefore, once healthy dogs and bitches have reached sexual maturity (between 10 and 14 months in males and during the first anestrus period for females following their maiden heat).

Anestrus is a time when the female sexual cycle is quiescent, thereby removing any influence of sex hormones on baseline thyroid function. This period generally begins 12 weeks from the onset of the previous heat and lasts one month or longer. The interpretation of results from baseline thyroid profiles in intact females is more reliable when they are tested in anestrus. Testing for health screening is performed at 12 to 16 weeks following the onset of the previous heat. In fact, genetic screening of intact females for other parameters such as von Willebrand's disease or wellness, health and reproductive checkups should also be scheduled in anestrus females.

Once the initial thyroid profile is obtained, dogs and bitches should be rechecked on an annual basis to assess their health. Annual results permit comparisons that should reveal early evidence of developing thyroid disease or dysfunction. This also allows for early treatment where indicated to abort the development or advancement of clinical signs associated with hypothyroidism.

Healthy young dogs (younger than 15 to 18 months) should have thyroid baseline levels for all parameters in the upper half of the adult normal ranges. In fact, for optimum thyroid function in screening breeding stock, levels should be at least at the midpoint of the laboratory normal ranges. Lower levels may well be indicative of the early stages of thyroiditis among relatives of dog families known to have thyroid disease.

The new information summarized here has changed our approach to treatment and control of thyroid disease. In addition to providing thyroid supplementation for dogs

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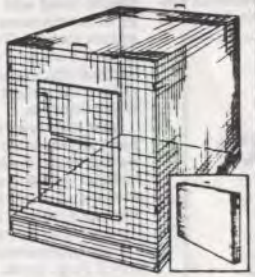

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showing the typical signs of thyroid disease, we now know that treatment of dogs showing the early stages of thyroiditis (based on the testing described above) is necessary to correct the underlying thyroid imbalance, reduce the risk of developing other related immune-mediated disorders and to prevent the process of thyroiditis from progressing to depletion and exhaustion of the thyroid gland.

The treatment of choice because of its wide safety margin and efficacy is T4 hormone (l-thyroxine or levothyroxine). The most commonly used brand names are Soloxine® (Daniels) and Synthroid (Flint). We recommend either of these over generics, especially for the smaller breeds. Use of T3 hormone (triiodothyronine) is not recommended for initial use because toxicity can more easily develop with this product—T3 is the intracellular hormone whereas most of T4 must be first converted to T3 before it achieves its metabolic effect. In some cases where the animal's body cannot properly convert T4 to T3, the dog will need both T4 and T3 therapy to correct the problem. For this purpose, the general rule of thumb is to give from two-thirds to a full dose of T4 and a one-third dosage of T3 (i.e., 0.1 mg of T4 per 10 to 20 pounds *plus* 1 ugm per pound of T3 twice daily). However, *no dog should be treated with these thyroid hormonal preparations without having proper veterinary testing, medical examination and follow-up.*

Thyroid hormones should always be given *twice* daily to effect the best response. Until recently, veterinarians have been advised to give treatment either once or twice daily because data on this point were unclear. We now know that the half-life of T4 in the dog is about 10 to 12 hours (much shorter than in humans); for T3, it's only six to eight hours. Thus, about half of the hormone is metabolized and excreted from the body within 12 hours. Furthermore, twice-daily dosing aids in controlling thyroiditis because it shuts off pituitary production of TSH by negative feedback in concert with the half-life of the hormone. In other words, the dog's own thyroid follicular cells become quiescent and are less likely to stimulate production of the antithyroid antibodies responsible for the disease. (Obviously these are simplistic explanations of the complex metabolic, immunologic and biochemical events involved).

Contrary to some popular wisdom, treatment with thyroid hormone does not destroy or suppress the potential of the gland to respond on its own once treatment is stopped for whatever reason. The latest veterinary research shows that it takes the thyroid gland at least 30 days to recover its full hormonal potential once therapy is withdrawn. Therefore, if an animal has been medicated and the diagnosis is unclear, treatment should be withdrawn (if it's clinically safe to do so) for 30 days before the animal is retested with the complete type of thyroid profile described above.

Follow-up testing after initiating treatment is usually performed after four to eight weeks of therapy. The sample should be taken four to six hours after the morning dosage; optimum results will show thyroid values in the upper third of normal ranges at that peak time of absorption. Dosage can then be adjusted accordingly if needed. Dogs on long-term therapy with thyroid hormones should be monitored with complete panels (not just T4, as you need to be sure the dog's body is properly converting the T4 medication to T3) every six to 12 months.

Additional reading: Dodds, W.J. "1990 Update on Autoimmune Disorders of Purebred Dogs." *Pure-Bred Dogs/American Kennel Gazette*, Vol. 107, No. 7 (July), 86-94, 1990.

The author is president of HEMOPET, Santa Monica, CA, and director of the Comparative Hematology Laboratory, New York State Department of Health. ■

USDAA announces agility event dates

The United States Dog Agility Association has announced this year's schedule of individual championships for the Pedigree® Grand Prix of Dog Agility℠ tournament.

More than 800 dogs are expected to compete in the 20 USDAA® regional tournaments, to be held February through June.

Dogs and their handlers will race against the clock to negotiate an obstacle course of tires, tunnels, hurdles and high jumps. The winners are the teams that complete the course with the fewest faults and have the fastest times.

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Top competitors who compile 10 or fewer fault points over two rounds of competition in any regional event will advance to the national semifinals and finals in Houston on September 11-13. The first-place winners from each regional event will receive paid transportation to Houston.

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SPECIAL FEATURE

Thyroid can alter behavior

Bizarre behavioral changes? Check your dog for hypothyroidism

By W. Jean Dodds, DVM

Abnormal behavior in dogs can have a variety of medical causes; it also can reflect underlying problems of a psychological nature. Your veterinarian follows a systematic diagnostic approach in searching for medical causes when a pet exhibits unusual or unacceptable behavior. As summarized by Landsberg (*Canadian Veterinary Journal*, 31:225-227, 1990), this includes:

(1.) a complete patient history;

(2.) clinical examination and a neurological work-up;

(3.) routine laboratory testing of complete blood count, blood biochemistry and thyroid profiles, urinalysis, fecal exam and X-ray;

(4.) additional specific laboratory tests as indicated (e.g., other hormonal tests, bile acids, blood ammonia, glucose tolerance immunologic assays and tests for toxins, fungi and other infections);

(5.) examination of cerebral spinal fluid; and

(6.) more specialized neurological examinations such as an electroencephalography and computerized axial tomography scan.

Diagnostic steps (1.) through (3.) are usually completed first; additional tests such as steps (4.) through (6.) are performed if indicated. If these test results prove to be negative, a veterinary behavior consultant or qualified pet behavior therapist should evaluate the dog.

Inheritance has been shown to play an important part in the behavior of both animals and humans; Plomin recently reviewed its role (*Science*, 248:183-188, 1990). The genetic influence on behavioral disorders rarely accounts for more than half of the phenotypic expression of behavioral differences. Each of the multiple genes involved has a small effect on behavior. Newer techniques in molecular biology should permit the identification of the genetic DNA marker sequences responsible for behavioral variation.

However, behavior is the most complex phenotype because it not only reflects the functioning of the whole organism, but it is dynamic and changes in response to environmental influences. With respect to animal behavior, applied behavioral genetics first was studied several thousand years ago because animals were bred and selected for their behavior as much as their conformation. The results can be attested to by the dramatic differences in behavior and physique among various dog breeds. Today these breeds have a great range of genetic and behavioral variability.

In recent years, many investigators have noted the sudden onset of behavioral changes in dogs around the time of puberty. Most of the dogs have been purebreds or crossbreds with an apparent predilection for certain breeds (e.g., Golden Retrievers, Shetland Sheepdogs, German Shepherds, Cocker Spaniels, Akitas, Doberman Pinschers and Rottweilers). Many of these dogs also had begun to show the seasonal effects of allergies to inhalants and ectoparasites such as fleas, followed by the onset of skin and coat disorders, including pyoderma, allergic dermatitis, alopecia and intense itching.

A typical history starts out with a quiet, well-mannered and sweet-natured puppy. The dog is outgoing, has attended puppy training classes to prepare for obedience, working or show events, and comes from a reputable breeder whose kennel has no history of behavioral problems.

However, at the onset of puberty, which varies from several months to a year in age, sudden major changes in personality are observed. Typical signs may include incessant barking, nervousness, schizoid behavior, fear in the presence of strangers, hyperventilation, undue sweating, occasional disorientation and failure to be attentive. These can progress to sudden unprovoked aggressiveness in unfamiliar situations with other animals and with people, especially children.

The owners may attribute the problems to the sex hormonal changes accompanying puberty or just the uncertainties of adolescent development. Often these animals are neutered, which appears to alleviate the behavioral problems, specifically the aggression, for varying lengths of time. For a significant proportion of these animals, however, neutering does not alter the symptoms and they intensify progressively to the point that the adult can be described as flaky, unable to handle any kind of stress, frantically circling, hyperventilating and not able to settle down. Animals used for field work and tracking often fail to follow the scent, whereas those in obedience training may lose the scent articles. Their powers of concentration are often very short and so dogs that were training very successfully at obedi-

ence appear to lag behind in a disinterested fashion. With all of these changes in behavior, the problem of most concern is unwarranted aggression. When large breeds are affected it poses a significant hazard to family members, friends and strangers.

In some cases affected animals do not show aggression but become very shy and fearful to the point that they are social outcasts and do not make acceptable house pets. These animals clearly are not suitable for show, obedience or working purposes. Some of these dogs will show extremely submissive behavior, roll over and urinate upon being approached.

The third group of dogs showing aberrant behavior consists of those that experience seizure or seizurelike disorders beginning in puberty and continuing to midlife. These are dogs that appear perfectly healthy outwardly and have normal hair coats and energy, but suddenly experience seizures for no apparent reason. The seizures are often spaced several weeks to months apart, and occasionally they appear in a brief epileptiform cluster. In some cases the animals become aggressive and attack those ar[illegible] them shortly before or after [illegible]ig one of these seizure epi[illegible]

T[illegible]mber of dogs showing vario[illegible]s of abnormal behavior in th[illegible]three classical modes (aggressio[illegible] extreme shyness or seizurelike activity) has been increasing over the last decade. Veterinary colleagues have remarked that in recent years some young dogs have become completely unacceptable because of bizarre, sudden behavioral changes. Consequently, we began to examine these animals by using the stepwise diagnostic approach outlined previously. The importance of performing complete laboratory profiles on the blood and urine, with specific emphasis on thyroid hormonal function, was stressed.

We were surprised to find that in many of the cases studied, significant abnormalities were found in the thyroid profile. Some cases also had changes in the liver enzyme patterns, specifically with abnormal increases in pre- and post-meal bile acids and elevated gamma glutamyl transferase levels. About 10 percent of these young dogs had abnormalities of the liver profile and a few also had changes in renal function. For the majority, however, the primary abnormality was attributable to abnormal thyroid function. This thyroid dysfunction would classically express high levels of T3 (triiodothyronine) and T4 (l-thyroxine) autoantibodies with an artifactual, apparent elevation of total T3 level. It would not be uncommon to find circulating total T3 levels that read as much as 3,000 to 5,000 nanograms per deciliter. While not all of the affected animals had documented evidence of T3 and T4 autoantibodies, some of these had positive antithyroglobulin antibody tests. In either event, the diagnosis was confirmed as autoimmune thyroiditis.

The autoimmune thyroid disease present in these patients apparently is inducing some type of physiological change at the cellular level, which leads to their aberrant behavior. This supposition can be made with some assurance because treatment of thyroiditis of these dogs with appropriate doses of thyroid replacement hormone given twice daily, along with a one-month tapering course of low-dose corticosteroids, has successfully reversed the behavioral problems within four to eight weeks. Dramatic changes in behavior have been recognized in a few cases as early as after 10 days of therapy.

The number of dogs showing various types of abnormal behavior in these three classical modes (aggression, extreme shyness or seizurelike activity) has been increasing over the last decade.

By contrast, it usually take five to seven months of thyroid replacement therapy to effect complete disappearance of the circulating antithyroid antibodies. These dogs should be maintained for life on the appropriate dose of thyroid hormone, which may need to be adjusted periodically.

Another subset of affected dogs consists of those that do not have demonstrable antithyroid antibodies but have baseline thyroid profiles that are clearly abnormal. In these cases, levels of total T4, total T3, free T4 and free T3 are usually well below the lowest limits of the adult normal ranges or are in the low normal or borderline ranges. The latter situation is of particular significance in young dogs of nine to 15 months of age. When these dogs are treated with standard doses of thyroid replacement therapy (0.1 milliliter per 10 pounds of body weight, given twice daily) the clinical signs associated with abnormal behavior rapidly resolve.

To date more than 25 animals have been diagnosed as having thyroid imbalance as the major, if not exclusive, cause of their behavioral abnormalities. Some of these animals have been followed for as long as three years and are still exhibiting normal behavior. Animals on therapy have returned successfully to obedience activities, completed show championships and undertaken active field and tracking work.

Here are two case studies as examples:

In the first, a four-year-old male Akita, weighing 110 pounds, suddenly attacked his owner and bit her in the face. The dog had been owned by the same family since early puppyhood and had been a remarkably even-tempered, well-behaved and non-aggressive pet with people and other animals. After seeking the advice of two different veterinary clinicians and a major teaching hospital, the owner was about to give up in despair because no physical abnormalities could be found.

She was referred to us by an Akita rescue group, as this pattern of behavioral change has been associated with thyroid dysfunction in the breed. A complete thyroid panel, which had not been performed earlier, was suggested and the dog was found to be hypothyroid. Thyroid therapy was initiated on a twice-daily basis. The dog's exemplary temperament returned and he has not shown any unusual behavior for more than a year. An interesting additional complication of the case was a moderately severe thrombocytopenia which also resolved with low doses (5 to 10 milligrams) of alternate-day steroid therapy and thyroid medication.

In the second, a nine-month-old male Shetland Sheepdog from excellent show-quality bloodlines suddenly became frantic and fearful. Acting intermittently, as if his vision were impaired, he attacked a toddler in the owners' home. A complete physical examination was given and laboratory testing done; a routine check for T4 was borderline normal. The dog's abnormal behavior appeared to resolve, but soon reappeared.

After a second attack the dog had a complete thyroid profile done at Michigan State University's Animal Health Diagnostic Laboratory (phone (517) 353-0621). The total T4 was 44 nmol/l, total T3 was 0 nmol/l, free T4 was 2 pmol/l, free T3 was >20 pmol/l, T4 autoantibody was 18 and T3 autoantibody was 85. The referring veterinarian did not realize that the results were consistent with autoimmune thyroiditis and the dog was not treated. Two months later the dog attacked another person and a second thyroid profile was sent to the Michigan State laboratory. The second profile showed a total T4 of 29 nmol/l, total T3 of 0 nmol/l, free T4 of 25 pmol/l, free T3 of >20 pmol/l, T4 autoantibody of 48 and T3 autoantibody of 91. Consultation with our group was made at this point.

The dog had a previous history of facial demodectic mange; because corticosteroids are not recommended with demodecosis, the treatment consisted of a full therapeutic dose of T4 thyroid supplement at 0.1 milligram per 10 pounds and a one-third dose of T3 thyroid supplement at 1 microgram per pound, both given twice daily. The rationale for treating with both T4 and T3 supplements in this case was to attempt to normalize the thyroid axis as quickly as possible to avoid danger to family members. At the time of this writing the dog's behavioral aggression has subsided.

For those animals that show occasional seizure disorders, thyroid medication alone usually will suffice. Anticonvulsant medication is needed along with the thyroid therapy to control cases with more severe seizure clusters. The anticonvulsants of choice would be phenobarbital or, alternatively, sodium bromide, particularly if the patient has abnormalities of liver function.

Because many of these animals have autoimmune thyroid disease, concomitant medical management includes avoiding environmental factors that can further challenge the immune system. This means placing the animal on a hypoallergenic "natural" diet preserved with vitamins E and C (e.g., lamb- and rice-based, lower-protein kibble without added chemical preservatives); avoiding drugs such as the potentiated sulfonamide antibiotics and monthly heartworm preventives that may adversely affect the immune system in these susceptible dogs; and withholding vaccination boosters until the thyroid function is balanced properly and the behavioral abnormalities are resolved. If animals are due for annual vaccine boosters during this period, vaccine antibody titers for distemper and parvovirus can be determined.

If your otherwise healthy young or adult dog experiences sudden behavioral changes, you should consult your vet and check for an underlying thyroid imbalance as shown by:

(1.) the presence of thyroid autoantibodies;

(2.) low or borderline levels of total T4, total T3 and free T4; or

(3.) failure to triple baseline total T4 levels in response to challenge with thyroid-stimulating hormone. In our experience, the most predictive thyroid test parameters to identify these cases are (1.) and (2.), because the thyroid-stimulating hormone response test just measures thyroid reserve, which remains adequate in the early stages of thyroid disease.

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The author is president of HEMOPET in Santa Monica, CA, and director of the Comparative Hematology Laboratory, New York State Department of Health. ■

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Labs placed:

"Cujo" -- 3 year old Black Male adopted through our "Canadian Connection".

"Rambo" -- 7 year old Black Male went to a wonderful family with young children. He came to us with a fractured leg which had fortunately set itself perfectly. He's continuing to mend in his new home.

"Lucky" -- Was found along the road with a 20 lb. tow chain (really) around her neck. She was placed with a young couple who are thrilled with her as an addition to their family.

"Duke" -- 14 month old Chocolate Male was adopted by a family who will not only love him but use him for hunting. A perfect spot for a labrador who, up to that point, had been tied in a backyard.

Labs available in foster homes:

* 2-3 year old Black Male. Seems to prefer adults. Quiet & housebroken. Needs obedience training.

* 1 year old Black Male. A little insecure but loves people.

Others are always coming in !!!

SPECIAL THANKS TO:

Dorothy & Bernie Major -- Our "Canadian Connection" for finding a wonderful foster home for our dogs.

Jill Mahoney -- for her tireless & endless trips to the Kent Animal Shelter.

Sharon Edwards -- Transportation

Nina Mann -- Shelter Visits & Transportation

Don Ironside & Frolic -- Donation of Dog Food to feed fostered Dogs

Walli & Terry Roarke -- For their foster care.

Bob & Meryln Foote -- For their foster care.

We Need --

More foster homes who can devote a little time to basic training & love.

And more ideas for fund raising.

Remember -- Our profits from the sale of the Entertainment '93 Books are earmarked for the Rescue Program!

We couldn't do it without You !!

Mary Jane Sarbaugh -- (206) 221-2123
Carol Barnes -- (206) 678-3722