

II. RESULTS –PBGV HEALTH SURVEY

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GENERAL BREEDER/OWNER INFORMATION:

There were 250 respondents in the survey, of these, 64 were breeders and 186 were owners. The survey consisted of 640 dogs owned by the respondents. The Mean number of PBGVs residing with the respondents on January 1, 2000 was 2.38, with a Standard deviation of 2.54. A majority of the respondents (92.8%) acquired their first PBGV from breeders, 5.6% acquired from previous owners, 1.2% from shelters, and 0.4% each from rescue and other sources. 71.4% of the respondents were members of the PBGV Club of America. 64% of the Breeders reportedly always maintained contact with puppy buyers, while 29% maintained contact sometimes, and 1.5% rarely. 85.4% of the owners maintained contact with the persons from whom they purchased their pups. 92.4% of the respondents reported being registered with the American Kennel Club, 10% with Canadian Club, 4.4% with U.K Kennel Club, and 4% with United Kennel Club. 60.4% of the respondents participated in at least one Health open registry . Eighty-eight percent of the respondents were willing to participate in future surveys.

Table 1: Activities participated in with PBGV, N=250

	Percentage
Companion/pet	74.4
Conformation	51.0
Obedience	28.0
Agility	14.8
Pet-assisted therapy	8.0
Tracking	6.0

** Participants chose more than one field; therefore, the total may not add to 100%

Table 2: Participation in Open Health Registries, N=161

	Percentage
CERF eyes	26.8
OFA hips	26.0
OFA elbows	8.4
OFA/Patellar examination	2.4
Penn Hips	2.0
OFA/thyroid	2.0
GDC/eyes	1.2

** Some Participants mentioned that they participated in open registries, but did not specify; therefore, does not add to 100%.

Breeding Information:

Of the 640 dogs in the survey, 22.8% were Male, 33.1% Female, and 20.8% and 23.3% were neutered and spayed respectively. 84% of the respondents spayed their bitches; the mean age of spaying was 6.38 years, with S.D 1.02 years. 70.5% reportedly neutered their dogs and the mean age of neutering was 7.45 years, with S.D 1.86 years. 90.7% of the breeders, reported regular heat cycles in bitches. The average number of months between heat cycles was 7.6 months.

Table 3: PBGV Breeding information, N=61 breeders

	Mean	S.D	Median
# of litters bred	4.52	5.60	2
# of pups	20.81	26.92	10
Average size of litter	4.51	1.22	5
Size of largest litter	6.87	2.17	7
Size of smallest litter	2.85	1.65	2

Table 4: Breeding practices of the breeders N=61

	Mean	S.D
Age of breeding bitch for first time (years)	2.4	0.82
Age of breeding bitch for last time (years)	5.9	1.17
Age of breeding stud for first time (years)	1.8	0.44
Age of breeding stud for last time (years)	8.5	1.90

Table 5: Breeding characteristics of Bitches, N=361

	Mean	S.D
Age of first heat (months)	9.8	2.44
Earliest age of first heat (months)	8.0	2.93
Latest age of first heat (months)	13.5	4.47
Frequency of seasons in a year	2.0	1.34

Table 6: Litter survey, Litter status in the survey, N=870 Pups

	Percentage
Male pups	50.8
Female pups	49.2
Pups born without birth defects	87.5
Pups born with birth defects	12.5
Pups stillborn	2.98
Pups died between 0-12 weeks of age	3.90

HEALTH INFORMATION:

In the survey, the average time of onset of the first disease in the dog was 28.49 months, with standard deviation of 36.89. The average lifetime of the dogs was 12.7 years, with a standard deviation of 3.88 years.

Table 7: Frequency of Health Screening N=250. (%)

	Once	Annually	Every few years	Never
Vet physical	0.8	91.5	5.6	2.0
Ophthalmologist	17.2	14.4	13.2	55.2
Hip radiologist	33.6	0.4	3.6	62.4
Elbow radiologist	15.6	1.2	0.0	83.2
Patellar luxation exams	15.2	3.2	3.2	78.4
Thyroid	14.4	9.6	11.2	64.4

Table 8: Diseases considered by survey participants to be of greatest concern to the breed N=250

	Percentage
NPS (neck pain syndrome)	25.6
Epilepsy	18.8
Eye problems (Glaucoma, lens luxation, and general infections, PPM)	16.4
Thyroid problems (hypo and hyperthyroidism)	8.8
Immune system problems (Drug reactions, vaccine reactions, auto immune diseases)	6.0
Allergies	5.6
Ear infections	4

** Other diseases the respondents mentioned of concern are: Aseptic meningitis, cardiac murmur, hip dysplasia.

***Note:** We asked respondents to list the top five diseases or conditions **they believed** to be of most concern to the breed. The above table represents that list. The next table shows the actual diseases and conditions as reported in the survey. As you can see, both lists are very similar.*

DISEASES OBSERVED:**Table 9: Table includes diseases with an observed count of greater than 10 N=640**

Disease	Count	Percentage
Persistent pupillary membranes	57	8.90
Recurrent ear infections	56	8.75
Hypothyroidism	26	4.06
Neck pain syndrome	24	3.75
Epilepsy	21	3.28
Warts	20	3.12
Thunderstorm phobia	20	3.12
Atopic dermatitis	20	3.12
Undershot	19	2.96
Caesarian	18	2.81
Cataract	17	2.65
Food allergy	17	2.65
Arthritis	17	2.65
Aseptic meningitis	15	2.34
Chronic bladder infections	14	2.18
Vaccine reaction	14	2.18
Hip dysplasia	14	2.18
Separation anxiety	14	2.18
Lateral patellar luxation	13	2.03
Pyometria	11	1.71
Fearfulness	11	1.71
Aggression to dogs	10	1.56

Of the 640 dogs in the study, 58.4% (n=374) of the dogs reported at least one disease and 41.6% (n=266) of the dogs were disease free.

Table 10: Table showing proportion of dogs reporting number of diseases N=640

	Count	Proportion
At least one disease	374	58.4
At least two diseases	203	31.7
At least three diseases	111	17.3
At least four diseases	56	8.7
At least five diseases	25	3.9
At least six diseases	11	1.7
At least 7 diseases	9	1.4
At least 8 diseases	6	0.9
At least nine diseases	3	0.4
1 dog reported 14 diseases	1	0.1

* The groups are not mutually exclusive; therefore, percents do not add to 100.

ADDITIONAL SURVEY INFORMATION:

AKC Region of Survey Participants

21%	Division 1 (Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont)
12%	Division 2 (Delaware, New Jersey, Ohio, Pennsylvania)
12.4%	Division 3 (District of Columbia, Kentucky, Maryland, North Carolina, Tennessee, Virginia, West Virginia)
11.6%	Division 4 (Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, South)
8.4%	Division 5 (Michigan Illinois, Indiana)
4.0%	Division 6 (Iowa, Kansas, Minnesota, Missouri, Nebraska, Wisconsin)
7.6%	Division 7 (Arizona, New Mexico, Oklahoma, Texas)
6.4%	Division 8 (Colorado, Idaho, Montana, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, Wyoming)
12.8%	Division 9(California)
0.8%	Division 10 (Alaska)
0.4%	Division 11 (Hawaii)
0%	Division 12 (Puerto Rico)
2.4%	Other

Note: Participants were asked what AKC Region they lived in. This was to ensure that the respondents represented a cross-section of all regions. A comparative analysis was one and the above percentages corresponded well with the regional distribution of the membership of the PBGVCA.

DISEASES OBSERVED WITH COUNT OF LESS THAN 10

N=9 (1.406%)	vomiting, chronic
umbilical hernia	inflammatory bowel disease
false pregnancy	pancreatitis
	Other GI tract
N=8 (1.25%)	parvovirus
deafness with old age	portosystemic shunt
anal sacculitis	neurologic, specifics unknown
	overshot teeth
N=7 (1.09%)	other-urinary tract
Other bone and joint	
sebaceous cysts	N=2 (0.3%)
tick borne diseases	agression to people
retinal folds	inguinal hernia
cryptorchidism-unilateral	panosteitis
bladder stones	patellar luxation-medial
	bone and joint –specifics unknown
N=6 (0.93%)	brain tumor
heart murmur (no diagnosis)	mammary adenocarcinomas
hot spots	cancer and tumor-specifics unknown
other dermatologic	cardiovascular-other
ear mites	cardiovascular-specifics unknown
Other eye	demodictic mange
cryptorchidism-bilateral	recurrent pyoderma
	deafness at birth
N=5 (0.7%)	cushings disease
Other behavior	bloat
mast cell tumors	colitis, chronic
Other ear	drug reaction
seizures other than epilepsy	immune system-specifics unknown
Other reproductive bitches	coccidia
kennel cough	giardia
teeth missing	neosporosis
	infectious disease-other
N=4 (0.6%)	liver spleen gallbladder-other
cranial cruciate ligament rupture	liver, spleen gallbladder-specifics unknown
elbow dysplasia	meningitis-septic
Other cancers and tumors	infertility
congestive heart failure	reproductive bitches-specifics unknown
interdigital skin infection	N=1 (0.1%)
glaucoma	anasarca
lens luxation	cleft palate
Other neurologic	fading puppy syndrome
teeth-retained baby	hydrocephalus
N=3 (0.4%)	pectus excavatum
behavior-specifics unknown	stillborn puppy
autoimmune hemolytic anemia	birth defects/puppy problems other
ventricular septal defect	immune mediated thrombocytopenia
diarrhea, chronic	blood-other

blood – specifics unknown
crooked tail
fracture
intervertebral disk disease lumbar/lumbosacral
intervertebral disk disease-thorocolumbar
hemangiopericytoma
histiocytoma
lung tumor
mammary gland adenoma
osteosarcoma
endocarditis
mitral valve insufficiency
patent ductus arteriosus
tricuspid valve insufficiency
ringworm
sarcoptic mange
seborrhea sicca
dermatologic –specifics unknown
hyperthyroidism
endocrine – other
corneal dystrophy
entropion
gastritis, chronic
intestinal parasites
lupus erythematisis
immune system-other
toxoplasmosis
infectious disease- specifics unknown
gall bladder infection
gall stones
cerebrospinal demyelination
spinal muscular atrophy
dystocia
eclampsia
mastitis
spontaneous abortion or reabsorption of litter
infertility
reproductive dogs – specifics unknown
chronic cough
nasal discharge –chronic
tonsillitis
cystinuria
polycystic kidneys
pyelonephritis (kidney infection)