

## 2003 ABGA Puppy Mortality Survey

### Final Results

Topics	ABGA	NBGA	USA Totals	England	Foreign	Grand Totals
# of Surveys Received	41	23	64	13	20	97
# of Litters Reported	281	90	371	132	257	760
# of Puppies Born	989	374	1363	463	972	2798
# of Puppies Born Naturally	552 56%	262 70%	814 60%	345 75%	832 86%	1991 71%
# of Puppies Born C-Section	437 44%	112 30%	549 40%	118 25%	140 14%	807 29%
# of Puppies Born Dead	122 12%	46 12%	168 12%	32 7%	82 8%	282 10%
# of Cleft Palates	43 4%	19 5%	62 5%	19 4%	54 6%	135 5%
# of Screw Tails	36 4%	6 2%	42 3%	1 <1%	2 <1%	45 2%
# of Conjoined Toes	59 6%	11 3%	70 5%	4 <1%	11 <1%	85 3%
# of Hydrocephalia	21 2%	2 <1%	23 2%	4 <1%	3 <1%	30 1%
# of Stenotic Nares	30 3%	7 2%	37 3%	1 <1%	4 <1%	42 2%
# of Total Dead Puppies	253 26%	100 27%	353 26%	65 14%	216 22%	634 23%
# of Total Live Puppies	736 74%	274 73%	1010 74%	398 86%	756 78%	2164 77%
# of Litters Born Naturally	141 50%	55 61%	196 53%	87 66%	208 81%	491 65%
# of Litters Born Natural/C-Section	23 8%	10 11%	33 9%	21 16%	19 8%	73 10%

# Report of a Health Survey Conducted by the American Brussels Griffon Association

On July 12, 2004 the American Brussels Griffon Association of (ABGA) sent 346 health surveys to its membership. Surveys were received by a non-member in an effort to protect the anonymity of the responders. The first return was received on July 16 and responses were tabulated until November 1. The BGCA sent out several postcard reminders during the interim, to increase the response.

**The Respondents** - 129 responses were received, for a response rate of approximately 37%.

70 of the respondents listed “Companion” as their primary interest in the breed and 31% listed “Breeder”. 49 respondents exhibit their dogs. 15 respondents show their dogs in obedience and 5 participate in other activities, usually agility.

Respondents came from at least 37 states and Canada. The majority of these were from Texas, California and Illinois.

## Time in Breed (In years)

# of Years	Frequency	Percentage	# of Years	Frequency	Percentage
1 - 5	34	28.8%	11 - 15	20	16.9%
6 - 10	33	28.0%	> 15	32	27.1%

**The Dogs** - Information was received on 795 dogs. *\*Some totals do not reflect 795 due to missing information on survey forms.*

## Sex of Dogs

Sex	Frequency	Percent
Female	447	56.7%
Male	342	43.3%
Total	789*	100%

As is common in most parent clubs, females outnumbered males in this survey. Almost 57% of the dogs were females, and 43% males.  
*\*Note sex was not specified for 6 dogs on forms.*

## Coat Color

Color	Frequency	Percentage
Red	513	65.5%
Black	112	14.3%
Belge	109	13.9%
Blk & Tan	45	5.7%
Other	4	0.5%
Total	784*	100%

The majority of dogs in the survey were red with rough coats. Almost 2/3 of the dogs (65.7%) were red. The next most popular color was black. A similar number of dogs were Belge. Black & Tan and other colored coats were noted in only a small percentage of the dogs (6.4%)

## Coat Texture

Coat	Frequency	Percentage
Rough	608	77.9%
Smooth	169	21.7%
Wire	3	0.4%
Total	100	100%

Almost 80% of Grifs are rough coated (78.2%). Over 20% are smooth and less than 1/2 of a percent are wire-coated.

## Birth Year of All Dogs in Study - By Sex

The oldest dogs entered into the study were born in 1981, however, the oldest living dog was born in 1988. Living dogs, therefore, ranged in age from less than 6 months to over 16 years of age.

4/1/05

## ABGA HEALTH SURVEY RESULTS

INTERPRETATION : MARK GRIGALUNAS – ABGA HEALTH COMMITTEE

The final statistics of the ABGA Health Survey have been published in the ABGA Bulletin, the NBGC Sprout and has been posted on the ABGA Web-site.

For those of us that can read statistics and interpret them ... the facts speak for themselves.

For those of us that need further interpretation .... There are some interesting facts presented to us.

The following information is strictly my own personal interpretation of the facts and does not represent those opinions of the Board of Directors of the ABGA.

As you all know, I have had a personal problem with Cataracts and Progressive Retinal Atrophy within my line of breeding, and have since halted any additional litters.

Although the official Health Survey reports that our #1 problem is Patella Luxation, I would like to take a more detailed observation ...

110 dogs were reported with eye problems = 14% of all dogs

- 52 dogs reported with Cataracts (non-conclusive as to how many were “Juvenile”)
- 5 dogs reported with Progressive Retinal Atrophy – these were my own dogs (all dogs reported with Cataracts should be tested for PRA – expensive and rarely done)
- 53 dogs reported “other” eye problems

If we take this total as “Eye Problems” then this becomes the #1 problem with our breed over Patella Luxation ... for a total of 110 dogs reported with eye problems verses 59 dogs with “Patella” luxation.

Although Patella Luxation is a major problem that we should be aware of, the problem is rarely debilitating and can be surgically corrected. Most dogs with this problem live a long and Healthy life. Reputable breeders could easily eliminate this problem from our gene pool.

A dog with Cataracts, and going blind, may be surgically corrected, but more than likely, is also compounded with Progressive Retinal Atrophy which is irreversible. For those that reported “Cataracts” ... it is difficult to determine how many respondents actually continued with the expensive diagnosis for PRA – which is called PRC – and requires a mild sedation of the dog.

In my opinion, “Eye Problems” is the #1 problem in our breed, and until we are all willing to talk about it openly .... The solutions will be far away.

## Year of Birth for All Dogs - By Sex

Year	Males	Females	Total	Year	Males	Females	Total
1981	1	1	2	1993	10	10	20
1982	0	2	2	1994	10	22	32
1983	1	3	4	1995	15	16	31
1984	1	0	1	1996	10	14	24
1985	1	5	6	1997	12	27	39
1986	3	6	9	1998	17	34	51
1987	7	4	11	1999	23	41	64
1988	7	5	12	2000	41	40	81
1989	8	4	12	2001	28	44	72
1990	6	5	11	2002	48	58	106
1991	9	13	22	2003	57	60	121
1992	10	12	22	2004	11	12	23
				<b>TOTAL</b>	<b>336</b>	<b>438</b>	<b>774*</b>

\* note that this total does not reflect the 795 reported because some forms were incomplete

## The Diseases

Members noted that **437** of **795** dogs, or **55%** were **healthy**. The **358 non-healthy** dogs had a total of **591 illnesses**. Brussels Griffon have a variety of diseases, but at a low incidence. **Patellar luxation** is the most common problem reported. **Fifty-six** (56) of the total of 795 dogs had patellar luxation, for a breed incidence of **7 per 100** dogs in the survey (7%).

In the following table, many diseases /illnesses that were seen 5 times or less were grouped into a larger category, "Reproductive - other", "Eye - other", etc.. These are listed after the single illnesses below a double line in the table. An appendix at the end of this document lists all diseases and how they were grouped.

Disease	Frequency	Percent	Disease	Frequency	Percent
Patellar Luxation	56	7.0	Progressive Retinal Atrophy	8	1.0
Cataracts (all ages)	53	6.7	Infection	7	0.9
Cataracts <= 7	28	3.5	Irregular Heat Cycles	7	0.9
Cataracts >=8	21	2.6	Kidney Disease	7	0.9
Cataracts, non-specified	4	0.05	Autoimmune Hemolytic Anemia	7	0.9
Allergies	31	3.9	Collapsed Trachea	6	0.8
Monorchid	22	2.8	Reproductive - Other	38	4.8
Heart Murmur	17	2.1	Eye - Other	29	3.6
Bladder Stones	17	2.1	Digestive - Other	22	2.8
Hip Dysplasia	15	1.9	Cardiovascular - Other	21	2.6
Seizures	17	2.9	Tumors/Cancer	20	2.5
Arthritis	12	1.5	Nervous System- Other	14	1.8
Dry Eye	12	1.5	Orthopedic - Other	14	1.8
Vitreous Degeneration	11	1.4	Genitourinary - Other	14	1.8
Intravertebral Disk Disease	10	1.3	Respiratory - Other	12	1.5
Irritable Bowel Syndrome	10	1.3	Dermatologic - Other	9	1.1
Whelping Difficulties	9	1.1	Endocrine - Other	8	1.0
Hypothyroid	9	1.1	Ear - Other	8	1.0
Pinched Nostrils	8	1.0	Immune System - Other	6	0.08
Cataracts, Juvenile	8	1.0	Dental - Other	6	0.08
Other	5	0.06	Parasitic Disease - Other	2	0.03

Congenital Anomaly -Other	5	0.06		Musculoskeletal - Other	1	0.01
Injury - Other	5	0.06		Blood - Other	1	0.01

Body System	Frequency		Body System	Frequency
Eye	113		Endocrine	17
Musculoskeletal	108		Ear	13
Reproductive	76		Dermatologic	9
Cardiovascular	38		Blood	8
Genitourinary	38		Dental	6
Immune	37		Other	5
Digestive	32		Congenital Anomaly	5
Nervous System	31		Injury	5
Respiratory	26		Infectious & Parasitic Disease	4
Tumors/Cancer	20			
			<b>TOTAL</b>	<b>591</b>

There does not appear to be any difference in the number of healthy dogs that can be attributed to the dog's sex, since the percentage of dogs in the total population and in the healthy population are, essentially, identical.

### Healthy Dogs by Sex

Sex	Healthy	Percentage	Percent of Total Population
Female	249	57.8%	56.7%
Male	182	42.2%	43.3%
<b>Total</b>	<b>431</b>	<b>100%</b>	<b>100%</b>

### Specific Health Problems *\*Note some category totals don't reflect chart totals due to missing information from survey forms.*

#### Patellar Luxation - 56 Total

Sex	Patellar Luxation	Percentage		Coat Color	Patellar Luxation	Percentage
Female	35	62.5%		Red	37	66.1
Male	21	37.5%		Belge	11	19.6
				Black	5	8.9
<b>Coat Type</b>	<b>Patellar Luxation</b>	<b>Percentage</b>		B&T	3	5.4
Rough	43	76.8				
Smooth	12	21.4				
Wire	1	1.8				

#### Age of Onset of Patellar Luxation (n = 37)

Minimum	Maximum	Average Age of Onset
10 Weeks	9 Years	2.3 Years

## Cataracts - 45 Total

More work needs to be done to determine which cataracts are “Juvenile” or inherited and which are “senile”. An article on the CERF website indicates that cataracts occurring before the age of 8 years are inherited. However, age appears to be on a continuum instead of having at least two distinct peaks, as one would suspect if cataracts is really two or more different diseases. Therefore, the following statistics consider all cataracts as one group.

Sex	# with Cataracts	Percentage		Coat Color	# with Cataracts	Percentage
Female	24	53.3		Red	31	68.9
Male	21	46.7		Belge	9	20.0
				Black	4	8.9
Coat Type	# with Cataracts	Percentage		B&T	1	2.2
Rough	35	79.5				
Smooth	9	20.5				

### Age of Onset of Cataracts (n=49)

Minimum	Maximum	Average Age of Onset
1 year	13.5 years	7.0 years

## Allergies - 31 Total

Sex	# with Allergies	Percentage		Coat Color	# with Allergies	Percentage
Female	15	48.4		Red	17	54.8
Male	16	51.6		Belge	6	19.4
				Black	5	16.1
Coat Type	# with Allergies	Percentage		B&T	2	6.5
Rough	27	87.1		Other	1	3.2
Smooth	4	12.9				

### Age of Onset of Allergies (n = 27)

Minimum	Maximum	Average Age of Onset
8 months	14 years	3.6 years

## Monorchid - 22 Total

Sex	# of Monorchid	Percentage		ColorCoat	# of Monorchid	Percentage
Female	0	0		Red	16	72.7
Male	22	100		Belge	6	27.3
				Black	0	0
Coat Type	# of Monorchid	Percentage		B&T	0	0
Rough	16	72.7				
Smooth	5	22.7				
Wire	1	4.5				

## Heart Murmur - 17 Total

Sex	# Heart Murmur	Percentage		Coat Color	# Heart Murmur	Percentage
Female	8	47.1		Red	11	64.7
Male	9	53.9		Belge	3	17.6
				Black	0	0
Coat Type	# Heart Murmur	Percentage		B&T	2	11.8
Rough	15	88.2		Other	1	5.9
Smooth	2	11.8				

### Age of Onset of Heart Murmurs (n=17)

Minimum	Maximum	Average Age of Onset
4 months	14 years	5.0 years

## Bladder Stones - 16 Total

Sex	# Bladder Stones	Percentage		Coat Color	# Bladder Stones	Percentage
Female	2	12.5		Red	12	75
Male	14	87.5		Belge	2	12.5
				Black	2	12.5
Coat Type	# Bladder Stones	Percentage		B&T	0	0
Rough	15	93.8				
Smooth	1	6.3				

### Age of Onset of Bladder Stones (n=16)

Minimum	Maximum	Average Age of Onset
1 year	12 years	5.4 years

## Hip Dysplasia - 15 Total

Sex	# Hip Dysplasia	Percentage		Coat Color	# Hip Dysplasia	Percentage
Female	10	66.7		Red	10	66.7
Male	5	33.3		Belge	4	26.7
				Black	0	0
Coat Type	# Hip Dysplasia	Percentage		B&T	1	6.7
Rough	11	78.6				
Smooth	3	21.4				

### Age of Onset of Hip Dysplasia (n=11)

Minimum	Maximum	Average Age of Onset
4 months	9 years	2.6 years

## Information on Deceased Dogs

Ninety Seven (97) dogs were reported to have died. The age of death ranged from 0 to 17 years of age. The average age of death was 10.5 years. This included five deaths before the age of 6 months. When age of death was looked at by sex, there were some surprises. Forty two (42) males died (43%). The age of death ranged from 0.1 years to 11.5 years. The average age of death for males was 6.3 years. On the other hand, 55 females died (approx 57%). Their ages of death ranged from 11.5 years to 17 years. The average age of death was 13.9 years.

### Average Age of Death by Sex of reported deceased dogs

Sex	Number	Percentage	Min. Age	Max. Age	Avg Age of Death
Female	55	56.7%	11.5	17	13.9
Male	42	43.3%	0.1	11.5	6.3
<b>Total</b>	<b>97</b>	<b>100%</b>	<b>0.1</b>	<b>17</b>	<b>10.5</b>

### Coat Type & Color of Deceased Dogs

Color	Frequency	Percentage	Coat	Frequency	Percentage
Red	71	73.2%	Rough	80	83.3%
Black	14	14.4%	Smooth	16	16.7%
Belge	11	11.3%	<b>Total</b>	<b>96</b>	<b>100%</b>
Blk & Tan	1	1.0%			
Other	0	0%			
<b>Total</b>	<b>97</b>	<b>100%</b>			

### Common Diseases of Deceased Dogs

Disease	Frequency	Percent	Disease	Frequency	Percent
<b>Cardiovascular - Other</b>	16	10.2	<b>Reproductive - Other</b>	8	5.1
<b>Eye - Other</b>	12	7.6	<b>Seizures</b>	8	5.1
<b>Tumors/Cancer</b>	11	7.0	<b>Cataracts &gt;= Age 8</b>	7	4.5
<b>Reproductive - Other</b>	9	5.7	<b>Kidney Disease</b>	7	4.5
<b>Digestive System - Other</b>	8	5.1	<b>Patellar Luxation</b>	6	3.8

### Year of Birth of Deceased Dogs - By Sex

Year	Males	Females	Total	Year	Males	Females	Total
1981	1	1	2	1993	0	2	2
1982	0	2	2	1994	2	3	5
1983	1	3	4	1995	0	2	2
1984	1	0	1	1996	1	2	3
1985	1	5	6	1997	0	2	2
1986	3	6	9	1998	0	1	1
1987	7	4	11	1999	0	1	1
1988	5	5	10	2000	0	3	3
1989	7	3	10	2001	1	1	2
1990	3	2	5	2002	2	0	2
1991	3	4	7	2003	1	1	2
1992	2	1	3				
				<b>Total</b>	<b>41</b>	<b>54</b>	<b>95</b>

### Error Checking

The chairman of the ABGA Health Committee conducted a check of the entered data for accuracy. In total, he checked 72 surveys (56%). This resulted in a check of the data recorded on 399 dogs (50.2%). Eleven (11) errors were identified. Six errors were data that had not been entered. Three (3) errors recorded the age, coat color, or coat type incorrectly. One error separated one dog and its diseases into two dogs. One error had already been corrected, as it was an easily identifiable coding error. All errors were corrected.

# of Litters Born C-Section	117 42%	25 28%	142 38%	24 18%	30 11%	196 25%
Average Cost of C-Section	\$576	\$492	\$534	\$432	\$520	\$505
Average # of puppies per litter	3.5	4.2	3.7	3.5	3.8	3.8
Average # of live puppies per litter	2.6	3.1	2.7	3	2.9	2.9
Average # of dead puppies per litter	0.9	1.1	1	0.5	0.9	0.9
# of Surveys sent verses / received	141 / 41	193 / 23	334 / 64	123 / 13	79 / 20	536 / 97
Total Percentages Surveys Received	29%	12%	19%	11%	25%	18%

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#### Mission

In 2003 the ABGA conducted a "Puppy Mortality Survey" in order to assess the difficult whelping practices of the Brussels Griffon and to quantify birth defects which are common in all breeds.  
Methodology

The survey was mailed to 536 people, which included 334 ABGA and NBGC members and 202 English and Foreign breeders. (Foreign consists of Australia, Austria, the Czech Republic, Finland, France, the Netherlands, New Zealand, Norway and Sweden) The surveys were returned to Mark Grigalunas and the information was accumulated. Details of the results of the survey are attached.  
General Points of Interest

- #1. Out of 536 surveys sent, 97 were received for an average 18% response rate. The majority of the surveys received came from ABGA members for a total of 41 for a 29% response rate. (30% - 50% is considered to be a good response rate)
- #2. The "ABGA" reported the highest c-section rate at 50% verses the low of "Foreign" at 19%. This may or may not reflect an issue of convenience or an issue of health. In general, foreign dogs are known to be of a larger size and easier whelpers..
- #3. There was an even average of 76% live puppies born per litter across all categories.
- #4. The average size of a Brussels Griffon litter is 3.8 puppies with 2.9 live puppies.
- #5. Cleft palates were the largest birth defect reported at 5%. The least was hydrocephalic at 1%. Breeders may wish to continue investigating ways to lower the amount of cleft palates.
- #6. The average cost of a c-section is \$505 with a low of \$200 and a high of \$1500 being reported.
- #7. Based on the surveys statistics, a US Brussels Griffon breeder can expect 47% of their litters to be born involving a c-section with 4 puppies being born and with 3 puppies surviving.