Confidential health survey of the Hungarian Wirehaired Vizsla Association

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Part 2: Health and husbandry

Confidential health survey of Hungarian Wirehaired Vizsla: Health and husbandry

Introduction

The Hungarian Wirehaired Vizsla (HWV) is thought to have originated in Hungary in the 1930s when German Wirehaired Pointers were crossed with Hungarian Vizslas to produce a hardier breed, more suited to work in water and rough conditions (Hungarian Wirehaired Vizsla Association, 2008). Although currently considerably less numerous than the smooth-coated Hungarian Vizsla, the popularity of the Hungarian Wirehaired Vizsla is increasing, and from 2011 Challenge Certificates will be awarded to the breed.

As part of the Purebred Dog Health Survey, data were collected on 102 live Hungarian Wirehaired Vizsla and 15 deaths. There was a 40% response rate to the survey among owners of the breed who belong to the Hungarian Wirehaired Vizsla Association. Of the 102 live Hungarian Wirehaired Vizsla on whom health information was provided 63% were reported to be healthy, with the remaining 37% having at least one reported health condition. The four most common categories of disease in the Hungarian Wirehaired Vizsla were aural (affecting 7% of all live HWV), dermatologic (7%), immune-mediated (6%) and ocular (6%). There is often a high degree of overlap in the aetiology of these four categories of disease – that is to say that there is often an immune-mediated (such as allergic) component to aural, dermatologic and ocular disease, and dermatologic disease often also manifests as aural and/or ocular disease. The fifth most commonly reported category of disease in the Hungarian Wirehaired Vizsla was neurological (5%).

This survey was conceived in collaboration with the Hungarian Wirehaired Vizsla Association (HWVA), to look in more depth at conditions in the breed which were highlighted in the 2004 Purebred Dog Health Survey. Questions were asked specifically about conditions in the 5 categories of disease which were most frequently reported in 2004.

Methods

The survey forms were created using a questionnaire design package (Cardiff TELEform®). The questions were developed and refined specifically for the breed over several months and there were numerous iterations of the questionnaire before the final version was created.

Survey packs were sent out to members of the HWVA and other known owners/breeders of Hungarian Wirehaired Vizslas in the UK from May to December 2009. The survey pack contained:

1. Main survey form, 1 per live Hungarian Wirehaired Vizsla.
2. Mortality form, 1 per 4 Hungarian Wirehaired Vizslas which had died.
3. Owner & vet details form.
4. Covering letter with tear-off slip to request additional forms.
5. Glossary of some possible conditions and definitions.
6. Self-addressed postage-paid reply envelope.

Owners of HWVs who were not members of the HWVA were able to contact the Animal Health Trust (AHT) to take part in the survey with their HWVs. Reminder cards were sent out at the beginning of August 2009.

This report relates to the main survey form, which owners were asked to complete for each live Hungarian Wirehaired Vizsla they owned or housed on their property at the time of the survey. The form was split into 7 sections: general information, aural (ear) conditions, dermatologic (skin) conditions, immune-mediated conditions, neurological (nervous system) conditions, ocular (eye) conditions and comments. Owners were asked to be as specific as possible when reporting details of disease conditions and we suggested contacting their veterinary surgeon if they had difficulty remembering.

Returned questionnaires were scanned and verified using specialised information capture software (Cardiff TELEform®). The scanned and verified data were exported into an Access® (Microsoft) database for checking and recoding and from there were exported to an Excel® (Microsoft) spreadsheet for analysis.

For those closed-ended questions that had a list of possibly responses that the respondents chose one or more choices from, the results are reported as frequency (N) of responses reported as is appropriate for categorical variables. Where descriptive statistics are used to report the ‘average’ and ‘range’ of values for questions with continuous responses such as age at neutering, we have reported mean (arithmetic average), standard deviation, minimum and maximum for approximately normally distributed results and median (minimum – maximum) for skewed results. The median value is the value where 50% of the values are above it and 50% are below it, and it is a better representation of the ‘average’ when the data are skewed. This occurs when the majority of responses are clustered closer to one end of the range and there are a few outlying responses at the other end of the range and this pulls the mean value towards

these outliers (extreme values); the median is less dependent on extreme values. With a symmetrical (normal) distribution of responses, the median would be the same as the mean.

The survey results are presented for the 46 questions in 6 sections. Owners' comments in section G are not reported here, although they have been noted. For some of the tables, N refers to the number of responses recorded and the numbers in one column will add up to more than the total number of respondents who answered the question when multiple responses were allowed. In these situations, the total % of responses will also add up to more than 100% and are not reported. Where N is the number of Hungarian Wirehaired Vizslas, the totals will add up to 240.

Results

Response rate

Survey packs were sent out to 281 Hungarian Wirehaired Vizsla owners and there were 159 responses, for an overall response rate of 57%, which was significantly higher than the 40% (54/136) response rate achieved in 2004 (Fisher's exact P<0.0001). Eight respondents indicated that they did not currently own a Hungarian Wirehaired Vizsla and 4 forms were returned as undeliverable. Forms were completed by 147 owners for 240 live Hungarian Wirehaired Vizslas.

Section A: General information

Q6. What sex is this Hungarian Wirehaired Vizsla?

Nearly two thirds (145, 60%) of the Hungarian Wirehaired Vizslas were female and 40% were male (95).

Q7. Is this Hungarian Wirehaired Vizsla neutered? (spayed or castrated)

A total of 189 Hungarian Wirehaired Vizslas were intact and 51 had been neutered; a slightly greater proportion of females (25%) had been neutered than males (16%), but this difference was not statistically significant (Fisher's exact P=0.06).

Gender	Intact	Neutered	Total
Female	109	36	145 (60.4%)
Male	80	15	95 (39.6%)
Total	189 (78.8%)	51 (21.2%)	240 (100%)

Q8. How old was this Hungarian Wirehaired Vizsla at neutering?

The age at neutering was provided for all 51 Hungarian Wirehaired Vizslas which had been neutered. Median age (age by which 50% had been neutered) at neutering was 2 years (6 months – 10 years). The modal age (most frequently reported age) at neutering was 1 year. For females, the median age was 2 years (6 months – 10 years); for males, the median age was 1 year 7 months (9 months – 7 year 1 month).

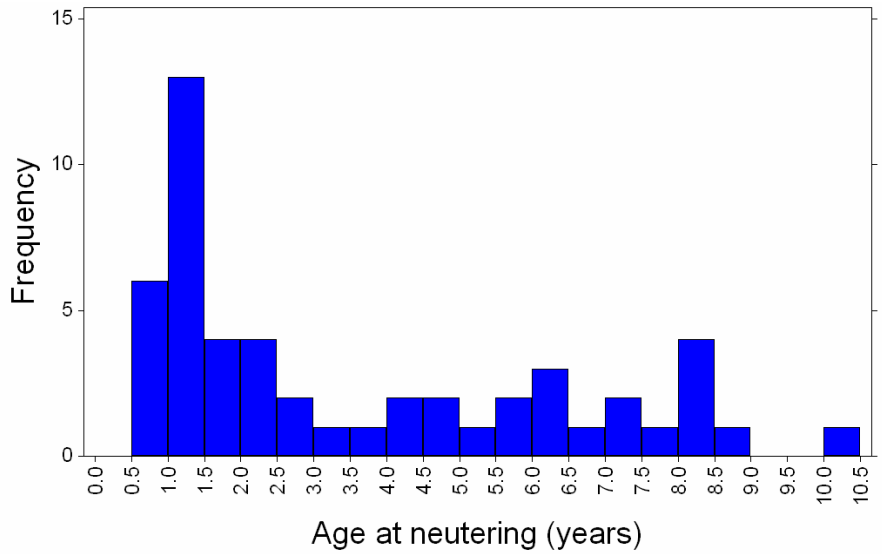


Figure 1: Histogram showing frequency (number of HWVs) of age at neutering (in years) for 51 Hungarian Wirehaired Vizslas which had been neutered.

Q9. How old is this Hungarian Wirehaired Vizsla?

The median age of the live Hungarian Wirehaired Vizslas was 3 years (minimum 4 months – maximum 13 years and 5 months).

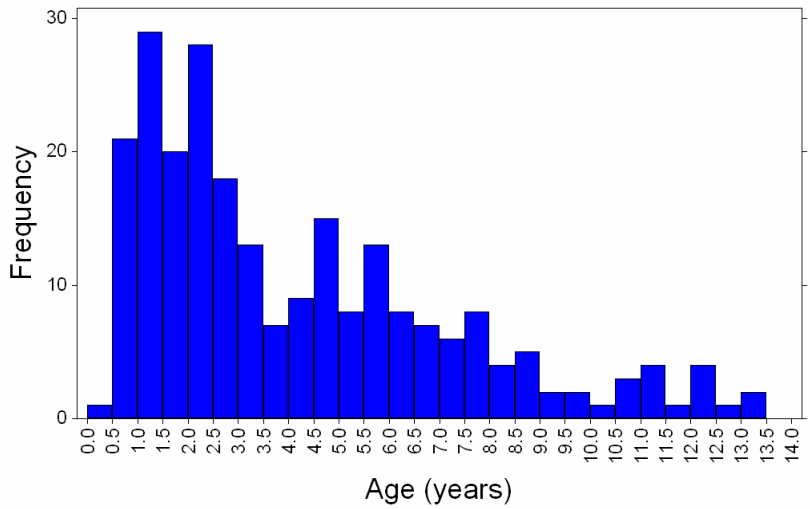


Figure 2: Histogram showing frequency (number of HWVs) of age (in years) for the 240 live Hungarian Wirehaired Vizslas.

Q9c. How long have you owned this HWV?

Data regarding how long the HWV had been owned were available for 225 Hungarian Wirehaired Vizslas. The median time was 2 years 10 months (2 months – 13 years and 3 months).

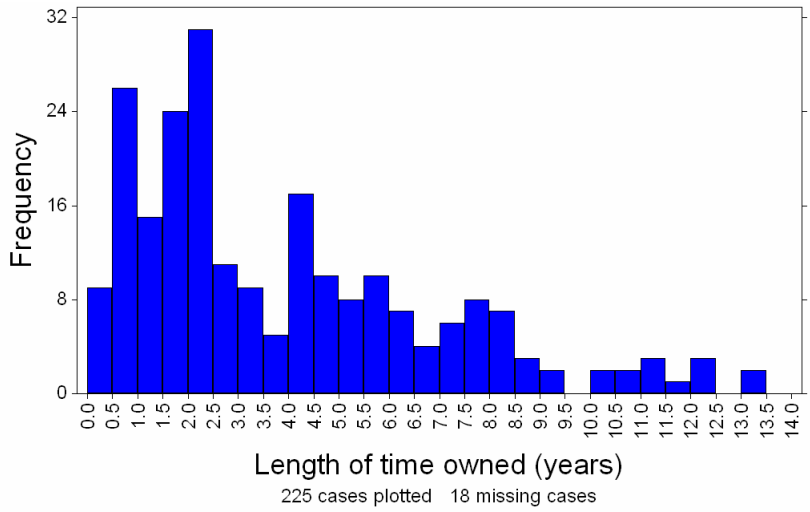


Figure 3: Histogram showing frequency (number of HWVs) of length of ownership (in years) for the 225 live Hungarian Wirehaired Vizslas with this reported.

Q10. Where was this HWV born?

Seven Hungarian Wirehaired Vizslas were reported to have been born in Hungary and 4 in The Netherlands, all others had been born in the UK.

Q11. Where does this HWV live now?

One Hungarian Wirehaired Vizsla was reported to be living in Australia, 1 in the USA and 1 in Ireland but all others resided in the UK. These were owned by members of the HWVA who had moved with their dogs from the UK to these countries.

Q12. Is this HWV involved in the following activities? (please mark all that apply)

As multiple responses were allowed for this question, the most frequent combinations are shown below followed by the percentage of Hungarian Wirehaired Vizslas with each activity reported. The majority of HWVs were considered to be pets.

Activities	N	%
Pet	42	17.5
Breeding, showing and pet	20	8.3
Showing and pet	18	7.5
Working and pet	17	7.1
Swimming and pet	15	6.3
Breeding, showing, working and pet	11	4.6
Other combinations	117	48.8
Total responses for 240 dogs	240	100

Activity	N	% of HWVs with activity reported
Pet	202	84.2
Showing	112	46.7
Working	97	40.4
Breeding	81	33.8
Swimming	65	27.1
Agility	23	9.6
Obedience	8	3.3
Pets as Therapy	3	1.3
KC Good Citizens Scheme	3	1.3
Cani-X	1	0.4
Falconry	1	0.4
Fell walking	1	0.4
Running	1	0.4
Total responses for 240 dogs	598	

Q13. Where does this HWV spend the majority of its time?

This question was intended to be single answer only. However, many owners marked more than one category and wrote additional comments. In order to deal with the multiple and "other" answers provided, the answers were recoded into new categories. The majority of Hungarian Wirehaired Vizslas were kept inside with free access throughout the house.

Time spent	N	%
Inside free	115	47.9
Inside and outside	48	20.0
Inside confined to a room	23	9.6
Inside downstairs only	18	7.5
Inside the house in a kennel/crate	14	5.8
Outside other (unspecified)	9	3.8
Outside in a run	8	3.3
Outside in the garden with no access to house	2	0.8
Other place (unspecified)	2	0.8
Inside free, crated when alone	1	0.4
Total	240	100

Q14. What type of bedding do you use?

A wide variety of types of bedding were reported, with only two HWV reportedly given no bedding and 10 responses to this question were not provided.

Type of bedding	N	%
Veterinary bedding (eg Profleece, Vetbed)	84	35.0
Blankets	32	13.3
Soft dog bed	27	11.3
Vet bed + Tuffie	24	10.0
Plastic dog bed with soft bedding inside	16	6.7
Tuffie waterproof dog bed	15	6.3
Blank	10	4.2
Duvet	8	3.3
Wooden bed with soft bedding inside	4	1.7
Bean bag type bed	3	1.3
Kennel Mate	3	1.3
Shredded paper	3	1.3
Carpet	3	1.3
Easibed (woodchips)	2	0.8
None	2	0.8
Wooden bunk	1	0.4
Various	1	0.4
Veterinary bedding + straw	1	0.4
Cow mats	1	0.4
Grand Total	240	100

Q15. At what age did you stop feeding puppy food?

The age at which the owner stopped feeding the HWV puppy food was provided for 172 Hungarian Wirehaired Vizslas. The median age was 10 months (2 months – 18 months), but interestingly the distribution is bimodal – that is to say that there are 2 "peaks", with the majority of pups either stopping puppy food at 6 months or at 1 year. The question was left blank by 37 owners. Of the remaining Hungarian Wirehaired Vizslas, 20 were still being fed puppy food (all but 2 of whom were less than 1 year old, the remaining 2 were both 1 year and 2 months old), 8 had not been owned by the current owner when they were young and 3 owners couldn't remember.

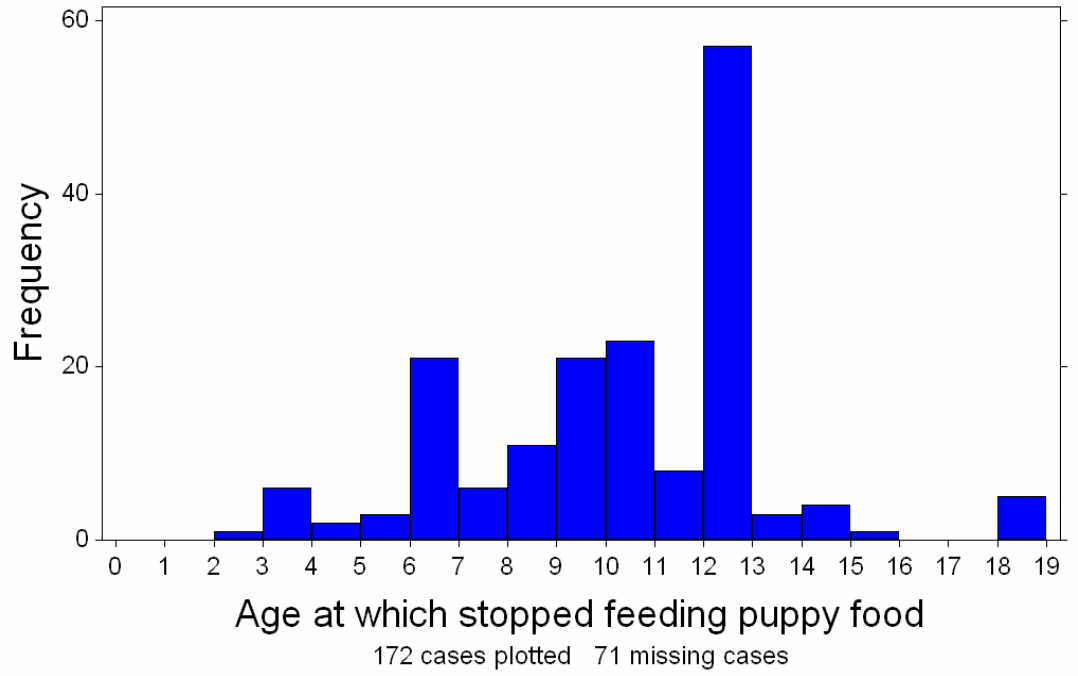


Figure 4: Histogram showing frequency (number of HWVs) of age at which the owner stopped feeding puppy food (in months) for the 166 live Hungarian Wirehaired Vizslas with this reported

Q16. What kind of food do you currently feed this HWV?

A total of 95% of HWVs were reported to be fed dry food, either alone or in combination with other types of food. At least 19% (46/240) were being fed restricted-component dry foods, based on a single protein source.

Type of food fed	N	%
Dry dog food	118	49.2
Dry + wet dog food + home prepared food + table scraps + raw meat	22	9.2
Dry + wet dog food	20	8.3
Dry + other type of food	11	4.6
Dry + raw meat	11	4.6
Dry + table scraps	10	4.2
Dry + wet dog food + table scraps	10	4.2
Dry + table scraps + raw meat	6	2.5
Raw meat	5	2.1
Dry + wet dog food + other type of food	3	1.3
Dry + home prepared food	2	0.8
Dry + table scraps + other type of food	2	0.8
Dry + wet dog food + home prepared food + table scraps	2	0.8
Dry + wet dog food + table scraps + raw meat	2	0.8
Wet dog food	2	0.8
Blank	1	0.4
Dry + home prepared food + table scraps + raw meat	1	0.8
Dry + home prepared food + raw meat	1	0.4
Dry + home prepared food + raw meat + other type of food	1	0.4
Dry + home prepared food + table scraps	1	0.4
Dry + home prepared food + table scraps + other type of food	1	0.4
Dry + table scraps + raw meat + other type of food	1	0.4
Dry + wet dog food + other type of food	1	0.4
Dry + wet dog food + home prepared food	1	0.4
Dry + wet dog food + home prepared food + other type of food	1	0.4
Dry + wet dog food + raw meat	1	0.4
Home prepared food + raw meat	1	0.4
Raw meat + other type of food	1	0.4
Wet dog food + other type of food	1	0.4
Total	240	100

Type of food	N	% of HWVs with this reported
Dry	228	95
Wet (tins/pouches)	66	27.5
Table scraps	58	24.2
Home-prepared	34	14.2
Raw meat	53	22.1
Other[1]	23	9.6
Total number of responses for 240 HWVs	457	

[1] Other: Vegetables 6, fruit & veg 1, tripe 4, treats 3, porridge 2, home-cooked meat and vegetables 2, fish/tuna fish 2, BARF 1, deer offal 1, venison rice pudding & suet 1, raw spinach fish oil & keepers mix herbs 1

Brand of dry food fed	N	%
Challenge	28	12.3
Various	25	11.0
Arden Grange	24	10.6
Burn's	15	6.6
Blank	13	5.7
James Wellbeloved	12	5.3
Royal Canin	11	4.8
Chudley's Working Crunch	9	3.9
Purina Beta	8	3.5
Skinner's	8	3.5
Autarky	6	2.6
Baker's Complete	6	2.6
Wainwright's	6	2.6
Pedigree	4	1.7
Breeder Working	3	1.3
Hill's Nature's Best	3	1.3
Hill's Science Diet	3	1.3
Shop's own brand	3	1.3
Breeder Pack	2	0.9
Chappie	2	0.9
Cobby dog	2	0.9
CSJ	2	0.9
Dr John	2	0.9
Eukanuba	2	0.9
Hill's Prescription Diet	2	0.9
James Wellbeloved or Challenge	2	0.9
Nutro	2	0.9
Pedigree Chum	2	0.9
Royal Canin or James Wellbeloved	2	0.9
Burgess Super Greyhound	1	0.4
Chudley's Original	1	0.4
Diamond	1	0.4
Dodson & Horrell sensitive	1	0.4
James Wellbeloved or Burn's	1	0.4
James Wellbeloved or Wainwright’s	1	0.4
James Wellbeloved or Eukanuba	1	0.4
Joe & Jack's	1	0.4
Jolly's	1	0.4
Purina H/A	1	0.4
Purina Omega Tasty	1	0.4
Purina Puppy	1	0.4
Royal Canin or Burn's	1	0.4
Royal Canin Sensitivity	1	0.4
Skatt's	1	0.4
Skinner's or Royal Canin	1	0.4
Spiller's Field and Trial	1	0.4
Supa-dog	1	0.4

Wafcol	1	0.4
Wagg	1	0.4
Total responses for 228 dogs	228	100

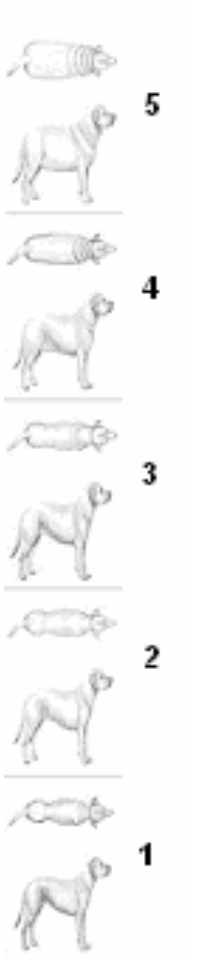
Brand wet food	N	%
Various	25	37.9
Pedigree Chum	11	16.7
Butcher's	6	9.1
Nature Diet	6	9.1
Blank	5	7.6
Winalot	4	6.1
Chappie	2	3.0
Royal Canin Low Fat	2	3.0
Shop's own brand	2	3.0
Burn's	1	1.5
Nature's Harvest	1	1.5
Pedigree Chum or Butcher's	1	1.5
Total responses for 66 dogs	66	100

Q17. How frequently do you feed this HWV?

The majority of Hungarian Wirehaired Vizslas were reported to be fed twice a day.

Feeding frequency	N	%
Once a day	27	11.2
Twice a day	199	82.9
Three times a day	13	5.4
Food available at all times	1	0.4
Total	240	100

Q18. Please body condition score this HWV using the silhouettes of body outlines provided on the right (courtesy of Hill's Pet Foods):



Using the 5-point body condition scoring system, a score of 3 is classified as "ideal". It is interesting to note that it appears as though these Hungarian Wirehaired Vizsla owners thought that a score of 2 was normal or ideal for the breed – this may reflect the different body shape of the Hungarian Wirehaired Vizsla and the Labrador Retriever-type pictured. Unfortunately, breed- or type-specific body outlines to illustrate the 5-point body condition scoring system are not currently available.

Body Condition Score	N	%
1	73	30.4
2	132	55
3	27	11.3
4	4	1.7
5	0	0
Blank	4	1.7
Total	240	100

Q19. How many Hungarian Wirehaired Vizslas do you own including this HWV?

The median number of Hungarian Wirehaired Vizslas per owner was 1 (1-21).

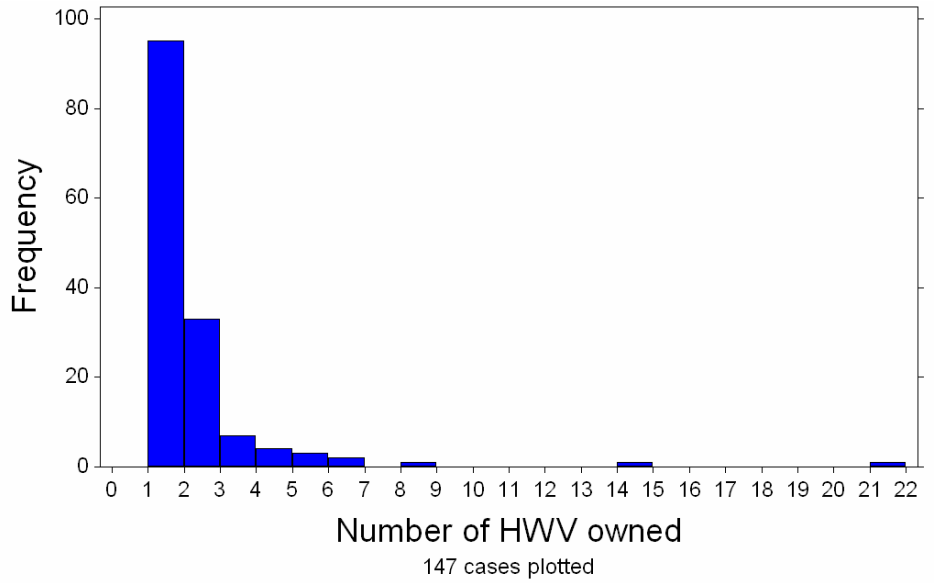


Figure 4: Histogram showing frequency of number of Hungarian Wirehaired Vizslas owned for 147 Hungarian Wirehaired Vizsla owners

Q20. How many dogs other than Hungarian Wirehaired Vizslas do you own?

The median number of other dogs owned was 1 (0-15).

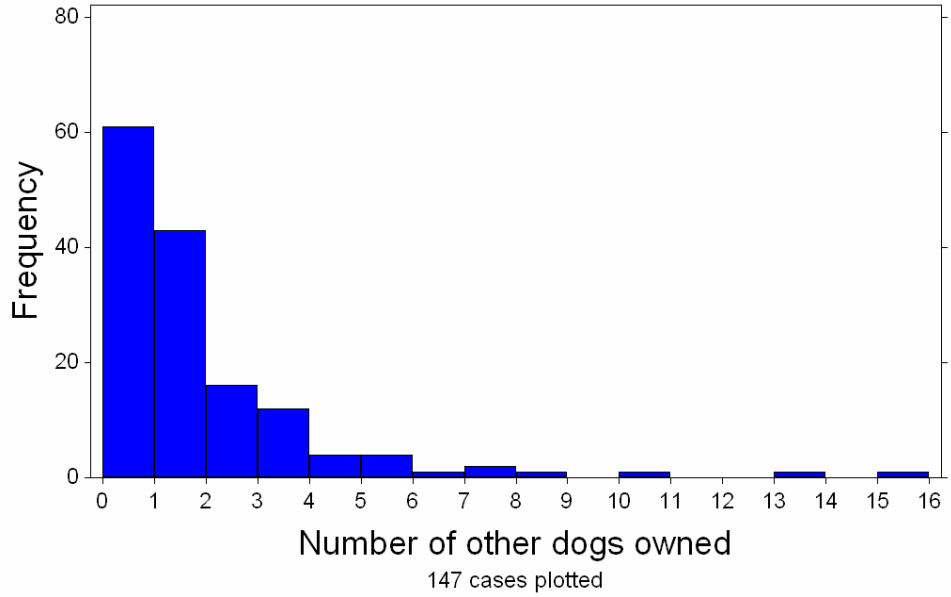


Figure 5: Histogram showing frequency of number of dogs other than Hungarian Wirehaired Vizslas owned for 147 Hungarian Wirehaired Vizsla owners

Q21. Does your household own any other pets?

Nearly half of owners reported having other pets – 67 (45.6%) had other pets, while 80 (54.4%) reported having no pets other than dogs.

Q22. What other kind of pet(s) do you own?

Cats were the most frequently reported other species of pet owned. In all cases when owners reported owning an "other kind of pet" to those suggested, the species reported did not live in the house eg horse, game birds, fish in a pond.

Species of other pet(s) owned	N	%
Cat(s)	14	20.9
Other kind of pet(s)	7	10.4
Ca(s) + other kind of pet(s)	6	9.0
Fish in a bowl or aquarium	5	7.5
Cat(s) + fish in a bowl or aquarium	3	4.5
Cat(s) + rabbit(s)	3	4.5
Guinea pig (s)	3	4.5
Caged bird(s) + fish in a bowl or aquarium + reptile(s)	2	3.0
Cat(s) + caged bird(s)	2	3.0
Cat(s) + caged bird(s) + other kind of pet(s)	2	3.0
Ferret(s) + other kind of pet(s)	2	3.0
Guinea pig(s) + other kind of pet(s)	2	3.0
Caged bird(s)	1	1.5
Caged bird(s) + reptile(s)	1	1.5
Cat(s) + ferret(s) + small rodent(s) + reptile(s) + other kind of pet(s)	1	1.5
Cat(s) + ferret(s) + other kind of pet	1	1.5
Cat(s) + fish in a bowl or aquarium + other kind of pet(s)	1	1.5
Cat(s) + Guinea pig(s) + fish in a bowl or aquarium	1	1.5
Cat(s) + rabbit(s) + caged bird(s) + small rodent(s) + fish + other type of pet(s)	1	1.5
Cat(s) + rabbit(s) + fish in a bowl or aquarium	1	1.5
Cat(s) + rabbit(s) + Guinea pig(s)	1	1.5
Cat(s) + rabbit(s) + other kind of pet(s)	1	1.5
Cat(s) + rabbit(s) + reptile(s)	1	1.5
Ferret(s)	1	1.5
Guinea pig(s) + fish in a bowl or aquarium	1	1.5
Small rodent(s)	1	1.5
Rabbit(s)	1	1.5
Reptile(s)	1	1.5
Total responses for 67 owners with other pets	67	100

Considering the answers to the above questions per dog, 99 (41%) Hungarian Wirehaired Vizslas were reported to be the only HWV in the household. Of these 99, 40 (17%) lived in a household where they were the only dog and of these 40, 23 (9.6%) lived in a household in which they were the only pet.

Section B: Aural (ear) conditions

A total of 87 (36%) Hungarian Wirehaired Vizslas were reported to have suffered one or more aural condition(s) which required veterinary treatment. The most commonly reported condition was chronic or recurrent infections, with an average age at onset of less than 1 year. In the majority of cases the severity of the condition did not vary with the time of year or whether the HWV was inside or outside. Six Hungarian Wirehaired Vizslas with ear conditions requiring veterinary treatment were reported to have dams with ear conditions, and 2 HWV were reported to have sires with ear conditions. Total ear canal ablations (TECAs) were reported to have been performed on 2 Hungarian Wirehaired Vizslas (reported as "other ear condition"), presumably as a result of chronic ear infections.

Q23. Has this Hungarian Wirehaired Vizsla ever suffered from any ear condition which required veterinary treatment?

				Age at onset (years)		
Aural (ear) condition	Yes	No	Unsure	Median	Max	Min
Deafness	2	238	0	11.5		
Chronic or recurrent ear infections	50	189	1	0.75	7.0	0.17
Pseudomonas infection	11	221	8	1.25	5.58	0.5
Ear infection once	12	228	0	0.67	5.33	0.17
Excessive wax production	12	228	0	1.0	6.0	0.58
Ear mites	3	237	0			
Malassezia infection	2	238	0	0.42		
E. coli infection	1	239	0	2.33		
Aural haematoma	1	239	0	5.0		
Total conditions reported for 87 HWVs	183		9			

Q24. Does the severity of the ear condition vary with the time of year?

Seasonal severity variation	N	%
No difference	60	69.0
Blank	8	9.2
Worse summer	8	9.2
Worse spring	3	3.4
Worse spring and summer	2	2.3
Worse winter	2	2.3
Don't know	1	1.1
Worse autumn	1	1.1
Worse spring and autumn	1	1.1
Worse summer and autumn	1	1.1
Total responses for 87 HWV	87	100

Q25. Does the severity of the ear condition vary if the HWV is inside or outside?

Location severity variation	N	%
No difference	73	83.9
Blank	8	9.2
Worse inside	4	4.6
Worse outside	2	2.3
Total responses for 87 HWV	87	100

Q26. Did this HWV's dam have an ear condition?

Did dam have ear condition	N	%
Don't know	127	52.9
No	88	36.7
Blank	14	5.8
Yes[1]	11	4.6
Total	240	100

[1] 4 not specified, 1 polyp, 1 "sore ears", 1 infection caused by swimming, 1 pseudomonas infection, 1 otitis externa (minor & infrequent), 1 "ear canal allergy", 1 required TECA

Q27. Did this HWV's sire have an ear condition?

Did sire have ear condition	N	%
Don't know	165	68.8
No	54	22.5
Blank	14	5.8
Yes[1]	7	2.9
Total	240	100

[1] 2 excessive wax production, 2 pseudomonas infection, 2 otitis externa (minor & infrequent)

Section C: Dermatologic (skin) conditions

A total of 69 (29%) Hungarian Wirehaired Vizslas were reported to have suffered one or more dermatologic condition(s) which required veterinary treatment. A total of 37 (15%) Hungarian Wirehaired Vizslas were reported to have atopy/allergies (answers "yes" or "unsure"). Of this group, 17 (46%) had also experienced bacterial skin infections (2 also experiencing fungal skin infections), 10 (27%) had frequent hot spots (6 "yes" and 4 "unsure") and 3 (8%) were reported to have alopecia. Three atopic Hungarian Wirehaired Vizslas were reported to have other skin conditions – 1 had sebaceous adenitis, 1 had multiple melanomas and 1 had a histiocytoma on a front leg.

In the majority of cases the severity of the condition did not vary with the time of year or whether the HWV was inside or outside, although this picture was slightly different for the HWV which were reported to have atopy/allergies (answers "yes" or "not sure"). In this group, 68% (25/37) were reported to show a seasonal variation in the severity of symptoms, while just 32% (12/37) showed no difference. A total of 18.9% (7/37) of Hungarian Wirehaired Vizslas reported to have atopy/allergies (answers "yes" or "not sure") were reported to have more severe symptoms when outside. Ten Hungarian Wirehaired Vizslas with skin conditions requiring veterinary treatment were reported to have dams with skin conditions. No sires were reported to have had skin conditions.

Q28. Has this Hungarian Wirehaired Vizsla ever suffered from any dermatological condition which required veterinary treatment?

				Age at onset (years)		
Dermatologic (skin) condition	Yes	No	Unsure	Median	Max	Min
Interdigital cysts	2	237	1	2.0	3.0	1.0
Sebaceous cysts	7	233	0	4.08	10.0	0.83
Atopy/allergies	31	203	6	1.08	6.42	0.25
Bacterial infections	23	217	0	1.75	7.0	0.25
Fungal infections	5	235	0	1.17	10.83	0.83
Frequent hot spots	8	227	5	1.67	4.5	0.33
Alopecia	7	233	0	4.33	12.0	1.5
Lip fold dermatitis	2	238	0	2.58		
Skin tumours[1]	5	235	0	4.33	9.0	0.42
Other skin condition[2]	12	228	0			
Total conditions reported for 69 HWVs	102		12			

[1] 2 histiocytomas, 2 multiple melanomas, 1 multiple mast cell tumours

[2] 3 chews/licks feet a lot, 1 cyst on tail, 1 flea allergic dermatitis, 1 focal adnexal dysplasia, 1 juvenile pyoderma, 1 ringworm, 1 sebaceous adenitis, 1 urticaria, 1 red spots on testicles, 1 rash all over associated with severe E. coli infection

Q29. Does the severity of the skin condition vary with the time of the year?

Seasonal severity variation	N	%
No difference	34	49.3
Worse in summer	14	20.3
Worse in spring	7	10.1
Not applicable	4	5.8
Worse in spring and summer	4	5.8
Worse in summer and autumn	2	2.9
Worse in winter	1	1.4
Worse in autumn	1	1.4
Worse in autumn, winter and spring	1	1.4
Blank	1	1.4
Total	69	100

Seasonal severity variation for HWV with atopy/allergies	Total	%
No diff	12	32.4
Worse summer	12	32.4
Worse spring	5	13.5
Worse spring & summer	3	8.1
worse summer & autumn	2	5.4
Worse autumn	1	2.7
Worse autumn, winter & spring	1	2.7
Worse in spring & summer	1	2.7
Total for 37 HWV	37	100

Q30. Does the severity of the skin condition vary if the HWV is inside or outside?

Location severity variation	N	%
No difference	56	81.2
Worse outside	8	11.6
Not applicable	4	5.8
Blank	1	1.4
Total	69	100

Q31. Did this HWV's dam have a skin condition?

Did dam have skin condition	N	%
Don't know	116	48.3
No	92	38.3
Blank	15	6.3
Yes[1]	17	7.1
Total	240	100

[1] 5 seasonal flank alopecia, 3 dust/house mite allergy, 2 sebaceous cysts, 2 eyelid melanoma, 1 frequent hot spots, 1 rash/hot spots on abdomen, 1 itchy skin, 1 foot chewer, 1 hair loss following pregnancy

Q27. Did this HWV's sire have a skin condition?

Did sire have skin condition	N	%
Don't know	152	63.3
No	73	30.4
Blank	15	6.3
Yes	0	0
Total	240	100

Section D: Immune-mediated conditions

A total of 17 (7%) Hungarian Wirehaired Vizslas were reported to have suffered from an immune-mediated condition which required veterinary treatment, and the most commonly reported condition was food allergy/intolerance. Six of the Hungarian Wirehaired Vizslas for whom the answer to food allergy/intolerance was "yes" and the 3 "unsure"s were also reported to suffer from atopy/allergies. One Hungarian Wirehaired Vizsla with an immune-mediated condition was reported to have a sire with an immune-mediated condition. The dam of 4 HWV was reported to have had an immune-mediated condition but none of these offspring had developed an immune-mediated condition.

Q33. Has this Hungarian Wirehaired Vizsla ever suffered from any immune-mediated condition which required veterinary treatment?

				Age at onset (years)		
Immune-mediated conditions	Yes	No	Unsure	Median	Max	Min
Food allergy/intolerance	9	228	3	1.42	3.0	0.0
Immune-mediated haemolytic anaemia	2	238	0	6.5	10.0	3.08
Other[1]	5	235	0	2.0	8.58	0.25
Total conditions reported for 17 HWVs	16		3			

[1] 1 thrombocytopaenia, 1 masticatory muscle myositis (after difficult spay), 1 lymphangiectasia, 1 nails fell out and haven't grown back, 1 diarrhoea after any change in diet

Q34. Did this HWV's dam have an immune-mediated condition?

Did dam have immune-mediated condition	N	%
Don't know	112	46.7
No	97	40.4
Blank	27	11.3
Yes[1]	4	1.7
Total	240	100

[1] 4 masticatory muscle myositis (same dam)

Q35. Did this HWV's sire have an immune-mediated condition?

Did sire have immune-mediated condition	N	%
Don't know	137	57.1
No	75	31.3
Blank	27	11.3
Yes[1]	1	0.4
Total	240	100

[1] food intolerance

Section C: Neurological conditions

A total of 11 (5%) Hungarian Wirehaired Vizslas were reported to be affected by a neurological condition, and the condition was epilepsy/seizures. Three Hungarian Wirehaired Vizslas with epilepsy/seizures were reported to have dams with epilepsy/seizures and 1 HWV with epilepsy/seizures was reported to have a sire with the same condition.

Q36. Has this Hungarian Wirehaired Vizsla ever suffered from any neurological condition which required veterinary treatment?

				Age at onset (years)		
Neurological condition	Yes	No	Unsure	Median	Max	Min
Epilepsy/seizures	10	229	1	4.0	8.83	1.5
Total conditions reported for 11 HWVs	10		1			

Q37. Did this HWV's dam have a neurological condition?

Did dam have neurological condition	N	%
No	111	46.3
Don't know	101	42.1
Blank	25	10.4
Yes[1]	3	1.7
Total	240	100

[1] 3 epilepsy/seizures (same dam)

Q38. Did this HWV's sire have a neurological condition?

Did sire have neurological condition	N	%
Don't know	126	52.5
No	88	36.7
Blank	25	10.4
Yes[1]	1	0.4
Total	240	100

[1] epilepsy/seizures

Section F: Ocular conditions

A total of 24 (10%) Hungarian Wirehaired Vizslas were reported to have suffered one or more ocular condition(s) which required veterinary treatment, and the most commonly reported condition was conjunctivitis. Three cases of conjunctivitis and 1 case of recurrent eye infections were reported in Hungarian Wirehaired Vizslas with atopy. In the majority of cases the severity of the condition did not vary with the time of year or whether the HWV was inside or outside. One Hungarian Wirehaired Vizsla with an eye condition requiring veterinary treatment was reported to have a dam with an eye condition. No sires were reported to have had an eye condition requiring veterinary treatment.

Q39. Has this HWV ever suffered from any ocular condition which required veterinary treatment?

				Age at onset (years)		
Ocular (eye) condition	Yes	No	Unsure	Median	Max	Min
Ectropion	1	239	0	0.0		
Entropion	6	234	0	0.42	0.75	0.25
Conjunctivitis	10	229	1	1.17	10.5	0.33
Persistent or recurrent eye infections	3	236	1	3.0		
Other eye condition[1]	12	228	0	1.0	6.0	0.58
Total conditions reported for 24 HWVs	32		2			

[1] 1 skin sore/red round eyes, 1 ocular foreign body, 1 ocular discharge, 1 very sensitive eyes, 1 bloodshot eye, 1 corneal ulcers

Q40. Does the severity of the eye condition vary with the time of the year?

Seasonal severity variation	N	%
No difference	21	87.5
Blank	3	12.5
Total	24	100

Q41. Does the severity of the eye condition vary if the HWV is inside or outside?

Location severity variation	N	%
No difference	19	79.2
Blank	3	12.5
Worse outside	2	8.3
Total	24	100

Q42. Did this HWV's dam have an eye condition?

Did dam have eye condition	N	%
Don't know	110	45.8
No	107	44.6
Blank	20	8.3
Yes[1]	3	1.3
Total	240	100

[1] 3 occasional conjunctivitis (same dam)

Q43. Did this HWV's sire have an eye condition?

Did sire have eye condition	N	%
Don't know	142	59.2
No	78	32.5
Blank	20	8.3
Yes	0	0
Total	240	100

Q44. Which health problem do you consider to be most serious in your Hungarian Wirehaired Vizsla?

The top 5 responses to this question are listed below. While the majority of owners did not name a specific condition, the conditions that were mentioned as being among the most serious affecting the individual Hungarian Wirehaired Vizsla included skin and ear conditions, and only 64% (7/11) of owners of epileptic HWV considered this the most serious condition in their dog.

Condition	N	%
None	101	42.1
Blank	44	18.3
Skin conditions	26	10.8
Ear conditions	24	10.0
Epilepsy/seizures	7	2.9

For a full list of all the responses to this question please refer to the appendix.

Q45. Which health problem do you perceive to be the most serious in Hungarian Wirehaired Vizslas?

The 5 conditions considered to be the most serious in the Hungarian Wirehaired Vizsla as a breed are shown below.

Condition	N	%
Epilepsy	21	14.3
Skin conditions	17	11.6
Ear problems	13	8.8
Atopy/allergies	11	7.5
Hip dysplasia	7	4.8

For a full list of responses to this question please refer to the appendix.

Q46. Did you complete a questionnaire for the 2004 KC/BSAVA Scientific Committee Purebred Dog Health Survey about this Hungarian Wirehaired Vizsla?

The majority of HWV who had not been included in the 2004 survey have been born since that date.

Purebred dog health survey	N	%
Yes	32	13.3
No	180	75.0
Blank	16	6.7
Don't know	12	5.0
Total	240	100

Considering all the disease conditions reported in each category, the ten most commonly reported conditions and their prevalences are shown in the table and figure below.

Table F1: Top 10 health conditions reported for 240 Hungarian Wirehaired Vizslas, in order of prevalence.

Condition			95% CIs	
	N	%	lower	upper
Chronic or recurrent ear infections	50	20.8	16.0	26.6
Atopy/allergies	31	12.9	9.0	18.0
Bacterial skin infections	23	9.6	6.3	14.2
Ear infection once	12	5.0	2.7	8.8
Excessive ear wax production	12	5.0	2.7	8.8
Pseudomonas ear infection	11	4.6	2.4	8.3
Seizures/epilepsy	10	4.2	2.1	7.8
Conjunctivitis	10	4.2	2.1	7.8
Food allergy/intolerance	9	3.8	1.8	7.2
Frequent hot spots	8	3.3	1.6	6.7

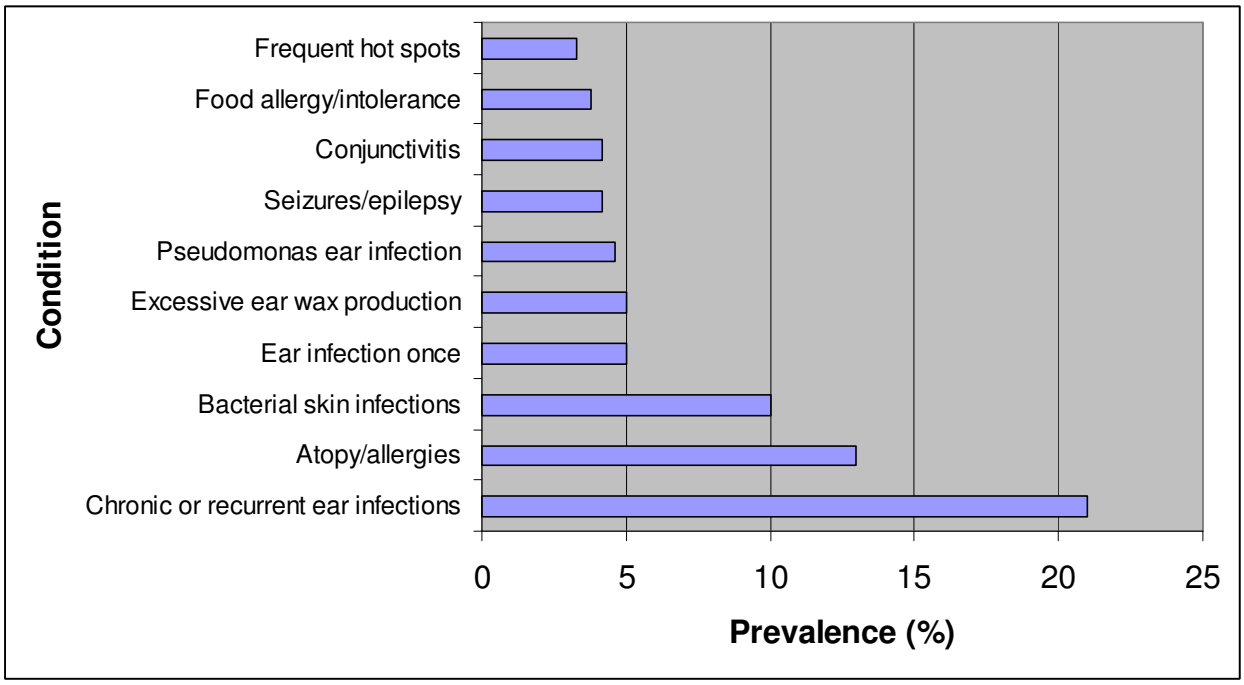


Figure F1: Prevalences of the 10 most frequently reported conditions in 240 Hungarian Wirehaired Vizslas.

Discussion

These results are similar to those of the 2004 survey of morbidity in the Hungarian Wirehaired Vizsla, as far as the most commonly reported conditions although the response rate for this confidential survey was significantly higher than that achieved in the 2004 anonymous survey (Table D1) (The Kennel Club, 2006). The lack of overlap between the 95% confidence intervals for the prevalence of aural and dermatological conditions in the 2004 survey and this survey suggest that these conditions may be becoming more prevalent.

Table D1: Comparison of these results with previous survey:

Reported results		2004 Purebred Dog Health Survey	2009 Confidential health survey of the HWVA
Response rate		40%	57.0%
Number of live HWVs		102	240
Median age		2.92	3.0
Top 5 conditions by organ system/category			
	1	Aural (7%; 95% CIs 3-14%)	Aural (36%; 95% CIs 30-43%)
	2	Dermatological (7%; 95% CIs 3-14%)	Dermatological (29%; 95% CIs 23-35%)
	3	Immune-mediated (6%; 95% CIs 2-13%)	Ocular (10%; 95% CIs 7-15%)
	4	Ocular (6%; 95% CIs 2-13%)	Immune-mediated (7%; 95% CIs 4-11%)
	5	Neurological (5%; 95% CIs 2-12%)	Neurological (5%; 95% CIs 2-8%)

Atopy (also called atopic dermatitis) has been defined as “a genetically-predisposed inflammatory and pruritic [itchy] allergic skin disease with characteristic clinical features associated with IgE antibodies most commonly directed to environmental allergens” (Halliwell, 2006). It has been shown experimentally in dogs that the capacity to produce high levels of IgE in response to various allergens is a genetic trait inherited in a dominant manner (de Weck and others, 1997). That is to say that if one or both of the parents possess the high IgE response gene, all of their offspring will also possess this gene. However, not all dogs possessing the high IgE response gene will go on to develop atopy. Although the predisposition to develop atopy is inherited, it is probably polygenic and not linked to one single gene (Shaw and others, 2004). Once this skin condition develops, dogs tend to have clinical signs of the disease requiring treatment on an intermittent or constant basis for the rest of their lives (Rosser, 1999). Many breeds appear to be predisposed to atopy, including the Hungarian Vizsla (Tarpataki and others, 2006) and the results of the present survey suggest that the Hungarian Wirehaired Vizsla may also be predisposed to atopy.

Considering the clinical picture in the Hungarian Vizsla, a breed which was a forebear of the Hungarian Wirehaired Vizsla, clinical signs of atopy start to appear between 6 and 12 months of age in most cases, and the most common signs are otitis externa, conjunctivitis (both secondary complications) and facial erythema (redness) (Tarpataki and others, 2006). However, the pattern of lesions varies from case to case, and sometimes atopy can present as just one sign such as persistent foot-licking or chewing (Rosser, 1999). Seasonality of clinical signs of atopy is reported to occur in 32-75% of cases, but often the seasonality disappears with time (Griffin & DeBoer, 2001). In the current survey, seasonality of clinical signs was reported in 68% of Hungarian Wirehaired Vizslas with atopy. Atopic dogs frequently develop secondary bacterial or fungal infections that may be a consequence of self-induced or spontaneous skin lesions (Griffin & De Boer, 2001), and the majority of cases of these conditions in the current survey occurred in atopic Hungarian Wirehaired Vizslas. A recent paper showed that atopy had a considerable negative influence on the health-related quality of life (HRQoL) of affected dogs and the quality of life (QoL) of many owners of such dogs (Linek & Favrot, 2010). The QoL of atopic dogs' owners was affected in many ways, including feelings of sadness when thinking of their dog's disease, and more practical aspects such as the time taken by, difficulty of administration and cost of the various treatments required (Linek & Favrot, 2010).

A recent review suggested that food allergy is the third most commonly occurring skin allergy in dogs after flea-allergy and atopy, and that gastrointestinal symptoms of food allergy are less frequently seen than dermatological symptoms (Verlinden and others, 2006). While true food allergy is believed to occur, it is thought that food intolerance may be more common than food allergy and this can occur for a variety of reasons. The term "food sensitivity" is used when the precise pathogenetic mechanism of the reaction is unknown (Scott and others, 2001). A substantial number of dogs presenting with suspected atopy will prove to have food sensitivities so trying an elimination diet is recommended for any dog as a first line of treatment (Chesney, 2002), especially as the clinical signs of atopy and dermatologic signs of food sensitivity are often indistinguishable (Favrot and others, 2010). However, it is of course possible for food sensitivity and atopy to occur in the same individual. That 19% of the Hungarian Wirehaired Vizslas in the current survey were being fed restricted-component dry foods based on a single protein source, such as may be used in the management of food sensitivity, may indicate that the actual prevalence of food sensitivity in this breed is higher than the 4% estimated.

Otitis externa is defined as inflammation of the external ear canal. The ear canal is a specialised area of skin and therefore otitis externa is often a clinical sign of skin disease. The estimated prevalence of otitis externa in all breeds in the 2004 Purebred Dog Health Survey was 18.9% (679/36006). Combining the reports of chronic or recurrent ear infections with those of a single ear infection, the estimated prevalence of otitis externa is 25.8% (62/240) in the Hungarian Wirehaired Vizsla in the current survey. The development of otitis externa involves primary, predisposing and perpetuating causes (August, 1988). Primary causes are those which directly cause inflammation of

the external ear canal, such as foreign bodies (eg grass seeds), parasites (eg ear mites) and allergic diseases. It has been suggested that atopy is the most common cause of recurrent otitis externa (Carlotti, 1991). Predisposing factors increase the risk of developing otitis externa and include things that increase moisture and decrease moisture within the ear canal, such as swimming and ear conformation (with pendulous, hairy ears being particularly at risk) (Angus and others, 2002). It is clear that several predisposing factors are present in the Hungarian Wirehaired Vizsla. They have hairy, pendulous ears and love to swim – 27% (65/240) of HWVs in the current survey were reported to go swimming and several owners reported that ear infections or excessive wax production occurred shortly after swimming. Perpetuating causes are those that cause the disease to continue once established and include bacteria, fungi and pathological changes that occur within the ear (Carlotti, 1991). In severe cases with repeated recurrence, otitis externa (and media) can become unresponsive to medical management and in such cases total ear canal ablation and lateral bulla osteotomy (TECA/LBO) surgery is often performed to alleviate chronic pain and discomfort (Angus and others, 2002). Two Hungarian Wirehaired Vizslas in the current survey were reported to have had this surgical procedure performed.

Idiopathic epilepsy is a condition involving chronic, recurrent seizures with no underlying pathology in the brain and no other neurological signs (Thomas, 2010). A seizure is defined as "the clinical manifestation of abnormal electrical activity in the brain (Engel, 2006). The majority of dogs with idiopathic epilepsy suffer their first seizure between 1 and 5 years of age, although they can occasionally start before 6 months or as late as 10 years of age (Thomas, 2010). A recent review reported that the prevalence of epilepsy in dogs is estimated to be between 0.5% and 5.7% (Chandler, 2006). Considering the data collected during the 2004 Purebred Dog Health Survey, the prevalence of idiopathic epilepsy for all breeds was 1.4% (487-36006). The estimated prevalence of idiopathic epilepsy in 2004 in the Hungarian Wirehaired Vizsla was 3.9% (4/102) compared with 3.3% (4/123) in the Hungarian Vizsla and 1.9% (2/107) in the German Wirehaired Pointer. In the current survey the estimated prevalence of epilepsy in the Hungarian Wirehaired Vizsla was 4.2% (10/240). Studies in dogs have shown a hereditary basis for idiopathic epilepsy in a number of breeds, including the Hungarian Vizsla (Patterson and others, 2003). After World War II the total number of Hungarian Vizslas dropped sharply, resulting in a genetic bottleneck which makes it possible that popular breeding dogs could have disseminated silent recessive traits (Patterson and others, 2003).

A Danish study reported that 60% of owners stated that having a dog with epilepsy had a negative influence on their daily life (Berendt and others, 2007). Such owners reported hurrying home from work, avoiding social events and holidays where the dog could not be brought along and sleep disturbance because of fear of seizures occurring while they slept. A UK study also reported that one-third to two-thirds of owners stated that caring for an epileptic dog had some impact on their work and daily life (Chang and others, 2006). However, hearteningly an American study reported that owners of dogs on long-term antiepileptic medication had a positive opinion of their pet's QoL and felt

that the demands of caring for an epileptic dog were not a burden and did not negatively impact on their own QoL (Lord and Podell, 1999).

The authors of a recent study of inherited defects in pedigree dogs developed an index to score severity of disorders along a single scale (Asher *et al*, 2009). Their generic illness severity index (GISID) for dogs scored disorders in terms of prognosis, treatment, complications and effect on behaviour (including eating and walking). Each of the 4 aspects was scored on a 5-point scale with 0 being the least severe and 4 being the most severe. The 4 aspects were then added together to give a minimum total score of 0 and a maximum of 16. Each disorder was scored in its mildest and most extreme forms. Using the GISID to compare some of the health conditions reported most commonly in the present survey allows some comparison of the likely impact on the individual dog of these conditions. It is interesting to note that the maximum GISIDs for food allergies and otitis externa are higher than that for idiopathic epilepsy.

Table D2. GISID scores for some commonly reported conditions in Hungarian Wirehaired Vizslas

Condition	GISID score
Atopy	2-8
Entropion	2-9
Food allergies	8-11
Hip dysplasia	5-10
Idiopathic epilepsy	4-10
Otitis externa	4-11

After Asher et al, 2009 & Summers et al, 2010

The HWVA is establishing a DNA bank to aid future research into the heritability of disease conditions in the breed, and this may prove invaluable. At present, few recommendations about breeding can be made. The current recommendation regarding epilepsy is that dogs with a first-degree relative (sibling, parent, offspring) diagnosed with idiopathic epilepsy should not be used for breeding. The fact that 4 parents with epilepsy were all reported to have produced offspring with epilepsy in the current survey would seem to support this advice. Regarding atopy/allergies, as their is a genetic component to the development of the condition, offspring of atopic Hungarian Wirehaired Vizslas are likely to be at greater risk of developing the condition than offspring of HWV without atopy/allergies. However, the extent of this increased risk cannot currently be quantified and further research is needed to enable recommendations about breeding strategies to attempt to reduce the prevalence of this condition to be made.

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Appendix

Q44. Which health problem do you consider to be most serious in your Hungarian Wirehaired Vizsla?

Serious condition HWV	N	%
None	101	42.1
Blank	44	18.3
Ear condition(s)	22	9.2
Skin condition(s)	20	8.3
Epilepsy/seizures	7	2.9
Atopy/allergies	3	1.3
Eye condition(s)	2	0.8
Mild urinary incontinence	2	0.8
A few bloat scares	1	0.4
Accidental poisoning	1	0.4
Allergy to bee stings	1	0.4
Anal glands need draining regularly	1	0.4
Arthritis	1	0.4
Bladder stones	1	0.4
Carpal valgus when a puppy	1	0.4
Dementia	1	0.4
Don't know	1	0.4
Ear condition(s), foot-chewing	1	0.4
Elbow dysplasia, pancreatitis	1	0.4
Entropion	1	0.4
Epilepsy	1	0.4
Flea allergic dermatitis	1	0.4
Heart murmur	1	0.4
Immune-mediated haemolytic anaemia	1	0.4
Irregular heart beat	1	0.4
Lip fold dermatitis	1	0.4
Lymphangiectasia	1	0.4
Maintaining weight, tooth decay	1	0.4
Masticatory muscle myositis	1	0.4
Metritis after whelping	1	0.4
No nails	1	0.4
Previous histiocytoma	1	0.4
Previous intussusception	1	0.4
Previous jejunal leiomyosarcoma with splenic metastasis	1	0.4
Previous mesenteric granulosa cell tumour	1	0.4
Previous pyometra	1	0.4
Sebaceous adenitis	1	0.4
Sensitive stomach	1	0.4
Severe E. coli infection after scavenging	1	0.4
Severe hip dysplasia	1	0.4
Skin and ear conditions	1	0.4
Skin condition and heart murmur	1	0.4

Thrombocytopaenia	1	0.4
Tumours	1	0.4
Urinary infections	1	0.4
Vaginitis	1	0.4
Weight	1	0.4
Total responses	240	100

Q46. Which health problem do you perceive to be the most serious in Hungarian Wirehaired Vizslas?

Serious breed condition	Total	%
Blank	44	29.9
Don't know	22	15.0
Epilepsy	13	8.8
None	12	8.2
Ear problems	10	6.8
Skin conditions	10	6.8
Atopy/allergies	7	4.8
Cancer	5	3.4
Hip dysplasia	3	2.0
Immune-mediated conditions	3	2.0
Allergies, immune-mediated conditions, epilepsy	2	1.4
Atopy, inflammatory bowel disease	1	0.7
Digestive problems	1	0.7
Ear problems, epilepsy, hip dysplasia	1	0.7
Epilepsy, atopy/allergies	1	0.7
Epilepsy, immune-mediated conditions	1	0.7
Epilepsy, temperament issues	1	0.7
Eye problems, skin conditions, bleeding disorder	1	0.7
GDV/bloat	1	0.7
GDV/bloat, hip dysplasia, epilepsy	1	0.7
Heart conditions	1	0.7
Hip dysplasia, skin conditions	1	0.7
Skin condition, allergies	1	0.7
Skin conditions, bleeding disorder	1	0.7
Skin conditions, ear problems	1	0.7
Skin conditions, ear problems, hip dysplasia	1	0.7
Skin conditions, epilepsy	1	0.7
Total responses from 147 owners	147	100