Manchester Health and Genetics Survey

Report Prepared by

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Introduction

This report contains information about both the frequency of responses, and the average level of certain responses. In so doing, four common descriptive statistics are reported: n-sizes, means, standard deviations (SD), and ranges.

"N" refers to the number of individuals responding in the affirmative to a given question. For example, the table describing the causes of death reported for Manchester Terriers within this survey includes 24 instances of "death by trauma" (N=24). Wherever appropriate, these n-sizes are reported as a percentage of the total number of responses, to give the reader an idea of the event's representation within the sample.

A mean is simply the "average" response. Mathematically, it is computed as the sum of all responses, divided by the number of responses. By itself, however, a mean gives incomplete (and potentially misleading) information about the sample. When trying to understand where the true "centre" of a sample's distribution lies, it is important to compute estimates of the variability in the sample. Two methods are presented herein that address this point – ranges and standard deviations. The range is the distance between the smallest and largest values in the sample. This is useful descriptively, but is usually presented with a statistic termed "standard deviation". Conceptually, a standard deviation is the average distance between individual data-points in a sample. The larger a standard deviation, the more "variability" there is within the responses. Standard deviations are useful adjuncts to means in describing a population, and can give an idea as to how close a sample's responses are to the reported mean.

Sample Demographics

Form of Involvement		
	N	**%**
Breeder	60/86	69.8%
Owner	82/86	95.3%
Conformation	69/86	80.2%
Obedience	32/86	37.2%
Agility	20/86	23.3%
Rescue	22/86	25.6%
Handler	35/86	40.7%
Length of Involvement		
	N	**%**
1-5 years	22/86	25.6%
6-10 years	24/86	27.9%
11-15 years	12/86	14.0%
Over 15 years	28/86	32.6%

Number of Manchester Terriers Owned						
	1960-1989			1990-present		
	Range	Mean	SD	Range	Mean	SD
Males	0-10	1.03	2.16	0-35	3.90	5.81
Females	0-21	1.95	4.23	0-40	4.98	6.25

	Range	Mean	SD
Percentage Neutered	0-100	37.53%	36.80%

Cleft Palate		
	N	%
0 Dogs	68/77	88.3
1 Dog	7/77	9.1
2 Dogs	1/77	1.3
4 Dogs	1/9	1.3
Non-standard Coloring		
	N	%
No	76/77	98.7
Yes (dull black tone)	1/77	1.3
Most Frequently Used Breeding Type		
	N	%
Outcross	20/55	36.4%
Linebreed	35/55	63.6%
Intervariety Breeding		
	N	%
No	53/62	85.5
Yes	9/62	14.5

Other birth deformities reported:

- long-haired curly coat (correct coloring)
- skin not covering skull
- abnormal umbilical
- underdeveloped liver
- incomplete heart valve development
- monorchid
- enlarged heart
- half an ear missing
- overshot bite
- undershot bite
- undescended testicle
- hermaphrodite
- club foot
- hydrocephalus
- missing rib
- one eye missing
- crooked tail
- missing teeth
- missing tail
- hole in stomach
- rear leg deformity
- ear not erect

Reported Cause of Death (with Mean Age of Death)

1960-1989			1990-present		
Mean Age	**Description**	**N**	**Mean Age**	**Description**	**N**
1.00	Distemper	1	----*	Abnormality in umbilical area	1
8.00	Enlarged heart	1	----*	Accidental	1
1.00	Heart failure	1	8.00	Back injury	1
14.00	Heartworm	1	10.00	Blind due to PRA	1
0.50	Immune deficiency	1	0.50	Blue green algea ingestion	1
2.00	Killed by animal	2	12.00	Bowel trouble due to liver	1
2.00	Killed by car	3	12.59	Cancer	11
17.00	Old age	4	1.97	Cardiomyopathy	4
0.25	Parvo	1	8.00	Choking	1
9.00	Seizures	2	----*	Cleft palate	1
			1.00	Died while being neutered	1
			14.00	Drowned	1
			3.00	Euthanasized	1
			----*	Fading puppy syndrome	1
			----*	Failure to thrive	1
			4.50	Fire	9
			7.00	Froze to death outside	1
			13.80	Heart failure	5
			1.00	Hepatic Microvascular Dysplasia	1
			1.00	Hole in belly	1
			0.25	Immune deficiency	1
			5.00	Infection from absessed tooth	1
			12.00	Injuries	1
			9.89	Kidney failure	9
			7.21	Killed by animal	9
			5.67	Killed by car	3
			7.00	Lymphoma	1
			8.00	Lyopharangtis	1
			1.00	Neutering	1
			14.54	Old age	13
			11.00	Organ damage	1
			----*	Premature Birth	3
			8.00	Seizure	2
			9.00	Skin infection	1
			11.00	Stroke	1
			9.00	Tumor	1
			3.56	Unknown	5
			3.00	Veris	1
			0.25	Worms	1

* Missing data

Diseases and/or Genetic Disorders Estimated to be Most Prevalent

1960-1989			1990-present		
Most Prevalent Disease and/or Genetic Disorder					
	N	**%**		**N**	**%**
VWD	8	34.8	VWD	21	37.5
Legges Perthes	3	13	Cardiomyopathy	13	23.2
Temperament	2	8.7	Legges Perthes	9	16.1
Epilepsy	2	8.7	Cancer	3	5.4
Cardiomyopathy	2	8.7	Epilepsy	2	3.6
Monorchids	1	4.3	PRA	2	3.6
Mange	1	4.3	Temperament	1	1.8
Kidney Disease	1	4.3	Kidney Disease	1	1.8
Immune Deficiency	1	4.3	Thyroid	1	1.8
Heartworm	1	4.3	Cleft Palate	1	1.8
Hearing Disorders	1	4.3	Dermatological	1	1.8
			Demodex	1	1.8
Second Most Prevalent Disease and/or Genetic Disorder					
	N	**%**		**N**	**%**
Legges Perthes	4	22.2	Legges Perthes	10	22.2
Cardiomyopathy	4	22.2	Cardiomyopathy	9	20.0
VWD	2	11.1	VWD	7	15.6
Epilepsy	2	11.1	Thyroid	6	13.3
Immune Deficiency	1	5.6	Dermatological	2	4.4
Mange	1	5.6	Luxating Patella	2	4.4
Sensitivity to Anaesthesia	1	5.6	Immune Deficiency	1	2.2
Safety Measures	1	5.6	Hearing Disorders	1	2.2
			Mange	1	2.2
			Kidney Disease	1	2.2
			PRA	1	2.2
			Stress	1	2.2
			Neuromuscular Disorders	1	2.2
Third Most Prevalent Disease and/or Genetic Disorder					
	N	**%**		**N**	**%**
Legges Perthes	11	47.8	VWD	12	31.6
Cardiomyopathy	2	8.7	Cardiomyopathy	5	13.2
Thyroid	2	8.7	Legges Perthes	4	10.5
VWD	1	4.3	Epilepsy	3	7.9
Mange	1	4.3	Thyroid	3	7.9
Kidney Disease	1	4.3	Cancer	2	5.3
Neuromuscular Disorders	1	4.3	Safety Measures	1	2.6
Inadequate Vet Care	1	4.3	Luxating Patella	1	2.6
Poor Breeding Practices	1	4.3	Poor Breeding Practices	1	2.6
Bad Teeth	1	4.3	Major Organ Failure	1	2.6
			Vision Disorders	1	2.6
			Disk Disease	1	2.6

Breeding Statistics

	Successful				Unsuccessful			
	N	Range	Mean	SD	N	Range	Mean	SD
Natural Breeding	17	0-56	11.47	16.28	48	0-19	1.10	2.96
Fresh Semen	17	0-0	0.00	0.00	48	0-3	0.13	0.49
Chilled Semen	17	0-1	0.06	0.24	48	0-0	0.00	0.00
Frozen Semen	17	0-0	0.00	0.00	48	0-2	0.06	0.32

Health Testing Practices

X-ray for Legges Perthes			
	N	%	Age Descriptives
Always	3/58	5.2	N = 31
Sometimes	16/58	27.6	Range = 0-2
Never	39/58	67.2	Mean = 0.49, SD = 0.60

CERF Eyes			
	N	%	Age Descriptives
Always	10/57	17.5	N = 19
Sometimes	14/57	24.6	Range = 0-2
Never	33/57	57.9	Mean = 1.22, SD = 0.59

VWD		
	N	%
Always	25/59	42.4
Unless from clear parents	21/59	35.6
Sometimes	6/59	10.2
Never	7/59	11.9
VWD Testing Method		
	N	%
Blood Assay	12/54	22.2
DNA	42.54	77.8

Vaccination Practices

# of Vaccinations Given by the age of 16 weeks		
	N	**%**
0	1/58	1.7
1	2/58	3.4
2	11/58	19.0
3	26/58	44.8
4	17/58	29.3
5	1/58	1.7
Frequency of Adult Boosters		
	N	**%**
Semi-annually	6/82	7.3
Annually	48/82	58.5
Other	28/82	34.1
Frequency of Rabies Vaccination		
	N	**%**
Annually	20/84	23.8
Every 2 years	8/84	9.5
Every 3 years	43/84	51.2
Other	13/84	15.5
Vaccination Prior to Breeding?		
	N	**%**
No	49/63	77.8
Yes	14/63	22.2
Vaccination for Parvo		
	N	**%**
Always	21/76	27.6
Sometimes	15/76	19.7
Never	40/76	52.6
Vaccinate Own Dogs		
	N	**%**
Always	19/83	22.9
Sometimes	29/83	28.9
Never	40/83	48.2
Vet Vaccinates		
	N	**%**
Always	44/81	54.3
Sometimes	29/81	35.8
Never	8/81	9.9
Give Heartworm Medications		
	N	**%**
Always	47/84	56.0
Sometimes	14/84	16.7
Never	23/84	27.4

Health Factors

Calculations in this section are based on a sample-size of 338 dogs in the period 1960-1989, and 1029 dogs in the period 1990 to present. Although the questionnaire did not explicitly ask for “number of dogs rated for each time period”, sample size for the period 1960-1989 was estimated to be at a level equal to 24.7% of the total reported dog ownership (based on the figures collected on page one of the survey). These sample-sizes were used only to calculate the % statistic, and do not affect the frequency ratings.

A. Hematology / Blood Disorders

	1960-1989		1990-present	
	N	**%**	**N**	**%**
Auto-immune hemolytic anemia	0	0.00%	3	0.29%
Babesia	0	0.00%	0	0.00%
Von Willebrand's disease	2	0.59%	28	2.72%
HEMATOLOGY, OTHER	0	0.00%	1	0.10%

14 owners reported at least one dog having contracted VWD during the period 1960-1989, but none reported excessive bleeding due to VWD. One owner reported having had one dog die from “bleeding out”.

“Other” Disorders

- Tick-borne canine erlichiosis.

B. Cancer / Oncology

	1960-1989		1990-present	
	N	%	N	%
Adenocarcinoma	0	0.00%	0	0.00%
Basal cell tumor	0	0.00%	3	0.29%
Chondrosarcoma	0	0.00%	1	0.10%
Epulis	0	0.00%	0	0.00%
Fibrosarcoma	0	0.00%	0	0.00%
Hemangiosarcoma	0	0.00%	0	0.00%
Leukemia	0	0.00%	0	0.00%
Lymphosarcoma	0	0.00%	4	0.39%
Malignant melanoma	0	0.00%	3	0.29%
Mammary cancer	1	0.30%	3	0.29%
Mast cell tumor	1	0.30%	1	0.10%
Osteosarcoma	0	0.00%	1	0.10%
Squamous cell carcinoma	0	0.00%	0	0.00%
Transmittable venereal tumor	0	0.00%	0	0.00%
CANCER, OTHER	0	0.00%	3	0.29%

“Other” Disorders

- Liver cancer
- Precancerous tumour
- Non-malignant mammary tumours

C. Endocrinology

	1960-1989		1990-present	
	N	**%**	**N**	**%**
Cushing's disease	1	0.30%	7	0.68%
Addison's disease	0	0.00%	6	0.58%
Diabetes mellitus	0	0.00%	1	0.10%
Hyperthyroidism	1	0.30%	5	0.49%
Hypothyroidism	8	2.37%	27	2.62%
Insulinoma	0	0.00%	1	0.10%
ENDOCRINOLOGY, OTHER	0	0.00%	0	0.00%

D. Ear

	1960-1989		1990-present	
	N	**%**	**N**	**%**
Chronic ear infections	0	0.00%	1	0.10%
Deafness	4	1.18%	15	1.46%
EAR, OTHER	0	0.00%	1	0.10%

"Other" Disorders

- Mites

E. Digestive System / Gastroenterology

	1960-1989		1990-present	
	N	**%**	**N**	**%**
Bilious vomiting syndrome	3	0.89%	14	1.36%
Coccidiosis	1	0.30%	27	2.62%
Colitis	1	0.30%	5	0.49%
Constipation	10	2.96%	15	1.46%
Coprophagia	13	3.85%	139	13.51%
Chronic diarrhea	1	0.30%	3	0.29%
Impacted anal glands	10	2.96%	35	3.40%
Esophageal diverticula	0	0.00%	0	0.00%
Esophageal stricture	0	0.00%	1	0.10%
Gastric dilation and volvulus	0	0.00%	2	0.19%
Giardia infection	0	0.00%	24	2.33%
Hiatal hernia	0	0.00%	1	0.10%
Inflammatory bowel disease	0	0.00%	3	0.29%
Intussusception	0	0.00%	0	0.00%
Irritable Bowel Syndrome	0	0.00%	4	0.39%
Megacolon	0	0.00%	0	0.00%
Megaesophagus	1	0.30%	4	0.39%
Obesity	3	0.89%	9	0.87%
Perineal hernia	0	0.00%	0	0.00%
Pica	0	0.00%	8	0.78%
Ulcerative colitis	0	0.00%	0	0.00%
Hemorrhagic gastroenteritis	0	0.00%	1	0.10%
Peritonitus	0	0.00%	1	0.10%
Ulcer	0	0.00%	1	0.10%
Acute pancreatitis	3	0.89%	5	0.49%
DIGESTIVE, OTHER	0	0.00%	3	0.29%

“Other” Disorders

- Anal glands need to be drained every 3 months
- Lympharangicitis

F. Heart / Cardiology

	1960-1989		1990-present	
	N	%	N	%
Arrhythmia	0	0.00%	2	0.19%
Atrial septal defect	3	0.89%	2	0.19%
Cardiac hypertrophy	0	0.00%	0	0.00%
Cardiomyopathy	3	0.89%	13	1.26%
Congestive heart failure	3	0.89%	2	0.19%
Murmur	10	2.96%	28	2.72%
Myocardial infarct	0	0.00%	3	0.29%
Valve dysfunction	0	0.00%	2	0.19%
HEART, OTHER	1	0.30%	2	0.19%

Grade of Murmur			Age at Which Murmur Developed
	N	%	Mean = 4.67
1	3/8	37.5	SD = 4.56
2	3/8	37.5	
3	1/8	12.5	
4	1/8	12.5	

Cardiomyopathy – Description of Afflicted Dogs		
Age of Affected Dog	**Sex of Affected Dog**	**Description**
10 weeks	Male	Chryptorchid
3 months	Male	Chryptorchid
4 months	Male	Normal
4 months	Male	Normal
4 months	Male	Normal
6 months	Male	Chryptorchid
7 months	Male	Chryptorchid
8 months	Male	Normal
1 year	Male	Chryptorchid
1 year	Female	Normal
3 years	Female	----*
3 years	Female	Valves stopped working
7 years	Female	----*
7 years	----*	----*

* missing data

"Other" Disorders

- Puppy dropped dead at 12 weeks – autopsy showed scar tissue around heart. He was also bilaterally chryptorchid
- Enlarged heart

G. Mouth and Teeth

	1960-1989		1990-present	
	N	**%**	**N**	**%**
Cleft palate	5	1.48%	7	0.68%
Gingivitis	14	4.14%	50	4.86%
Missing teeth	60	17.75%	189	18.37%
Overbite	3	0.89%	30	2.92%
Underbite	14	4.14%	47	4.57%
Malocclusion	1	0.30%	4	0.39%
Oral Papillomatosis	0	0.00%	1	0.10%
Salivary gland cyst	0	0.00%	2	0.19%
MOUTH, OTHER	1	0.30%	6	0.58%

Regular Dental Care?		
	N	**%**
Yes	54/69	78.3
No	15/69	21.7
Form of Dental Care		
	N	**%**
Brushing	36/49	73.5
Surgical	12/49	24.5
Dental Foods	1/49	2.0

“Other” Disorders

- Both front canines are very dark (possibly damaged)
- Swollen salivary glands
- Periodontal disease
- Growth on tongue – biopsy not back yet

H. Skin

	1960-1989		1990-present	
	N	**%**	**N**	**%**
Atopy	0	0.00%	8	0.78%
Seasonal alopecia	0	0.00%	19	1.85%
Dermatophytosis	13	3.85%	28	2.72%
Hot spots	1	0.30%	3	0.29%
Lupus erythematosis	0	0.00%	2	0.19%
Puppy strangles	0	0.00%	5	0.49%
Pyoderma	1	0.30%	3	0.29%
Sebaceous cysts	6	1.78%	10	0.97%
Spiculosis	1	0.30%	1	0.10%
Tumors of the skin	0	0.00%	4	0.39%
Warts	6	1.78%	12	1.17%
Localized demodex	1	0.30%	19	1.85%
General demodex mange	3	0.89%	7	0.68%
Puppy mange	24	7.10%	64	6.22%
Ehler's Danlos syndrome	0	0.00%	0	0.00%
Elephantitis	25	7.40%	8	0.78%
SKIN, OTHER	0	0.00%	9	0.87%

“Other” Disorders

- Fungal infection – caused patchy hair loss on ears – motheaten look
- Hair loss on back of tail & ear-tips
- Hard bumps inside of ear leather
- Dandruff
- Tips of ears dry and crack. Bits may sluff away, leaving small indentations.
- Bald chest.
- Very sparse hair on neck and chest.

I. Infectious Diseases

	1960-1989		1990-present	
	N	**%**	**N**	**%**
Brucellosis	0	0.00%	0	0.00%
Helicobacter	0	0.00%	1	0.10%
INFECTIOUS DISEASES, OTHER	1	0.30%	19	1.85%

"Other" Disorders

- Valley fever.
- Parvo
- Dog show crud

J. Liver Disorders

	1960-1989		1990-present	
	N	**%**	**N**	**%**
Cholangiohepatitis	0	0.00%	1	0.10%
Cholecystitis	0	0.00%	0	0.00%
Cholelithiasis	0	0.00%	1	0.10%
Cirrhosis	0	0.00%	2	0.19%
Exocrine pancreatic insufficiency	0	0.00%	0	0.00%
Amyloidosis	0	0.00%	1	0.10%
Hepatic encephalopathy	0	0.00%	0	0.00%
Chronic active hepatitis	0	0.00%	0	0.00%
Pancreatitis	1	0.30%	4	0.39%
Portosystemic shunt	0	0.00%	1	0.10%
LIVER, OTHER	0	0.00%	0	0.00%

“Other” Disorders

- Hepatic microvascular dysplasia

K. Musculoskeletal

	1960-1989		1990-present	
	N	**%**	**N**	**%**
Arthritis	3	0.89%	5	0.49%
Luxated patellas	3	0.89%	12	1.17%
Legges Perthes disease	6	1.78%	15	1.46%
Cranial cruciate ligament tear	0	0.00%	2	0.19%
Elbow dysphasia	0	0.00%	1	0.10%
Panosteitis	0	0.00%	0	0.00%
Hip dysphasia	0	0.00%	0	0.00%
Rheumatoid arthritis	0	0.00%	2	0.19%
Osteoarthritis	0	0.00%	1	0.10%
MUSCULOSKELETAL, OTHER	0	0.00%	6	0.58%

“Other” Disorders

- One female holds hind leg up when cold
- Overflexion on front legs
- Puppy growth plate damage, rear legs

L. Neurology

	1960-1989		1990-present	
	N	**%**	**N**	**%**
Meningitis	2	0.59%	0	0.00%
Degenerative myelopathy	0	0.00%	0	0.00%
Seizures	6	1.78%	10	0.97%
Tremors	1	0.30%	6	0.58%
Ataxia	0	0.00%	5	0.49%
Epilepsy	1	0.30%	3	0.29%
Hydroencephalitis	0	0.00%	1	0.10%
NEUROLOGY, OTHER	0	0.00%	2	0.19%

"Other" Disorders

- 1 male has an undiagnosed, slowly progressive, neuromuscular disorder, manifesting symptoms similar to, but not identical to, DM. He sired one litter – all pups showed some symptoms with periods of onset ranging from 6 weeks to 2 years of age.
- Vestibularitis

M. Opthalmology

	1960-1989		1990-present	
	N	**%**	**N**	**%**
Cataracts	12	3.55%	14	1.36%
Conjunctivitis	0	0.00%	9	0.87%
Ectropion	0	0.00%	3	0.29%
Entropion	0	0.00%	0	0.00%
Ingrown Eyelashes	0	0.00%	1	0.10%
Glaucoma	0	0.00%	0	0.00%
Keratoconjunctivitis sicca	0	0.00%	2	0.19%
Lens Hardening	1	0.30%	1	0.10%
Lens Luxation	0	0.00%	0	0.00%
Nightblindness	2	0.59%	7	0.68%
Progressive Retinal Atrophy	0	0.00%	3	0.29%
Prolapsed gland of the third eyelid	0	0.00%	0	0.00%
Retinal detachment	0	0.00%	0	0.00%
Ulcerated Cornea	0	0.00%	2	0.19%
OPTHALMOLOGY, OTHER	0	0.00%	3	0.29%

“Other” Disorders

- Age-related eye changes (clouding)
- Cloudy corneas
- Folliculitis

N. Respiratory

	1960-1989		1990-present	
	N	**%**	**N**	**%**
Bronchitis	0	0.00%	2	0.19%
Epistaxis	1	0.30%	0	0.00%
Laryngeal disease	0	0.00%	0	0.00%
RESPIRATORY, OTHER	0	0.00%	5	0.49%

“Other” Disorders

- Recurrent kennel cough
- Tonsillitis, chronic
- Tracheal spasms

O. Reproduction

	1960-1989		1990-present	
	N	**%**	**N**	**%**
Abortion, spontaneous	1	0.30%	1	0.10%
Cryptorchidism	0	0.00%	6	0.58%
Dystocia	2	0.59%	4	0.39%
Eclampsia	0	0.00%	0	0.00%
False pregnancy	12	3.55%	95	9.23%
Herpes	0	0.00%	6	0.58%
Hermaphroditism	0	0.00%	2	0.19%
Infertility, male	0	0.00%	14	1.36%
Infertility, female	1	0.30%	2	0.19%
Mastitis	2	0.59%	6	0.58%
Monorchidism	11	3.25%	33	3.21%
Pyometria	3	0.89%	5	0.49%
Rear dewclaws	0	0.00%	24	2.33%
Blue/White at birth then normal	0	0.00%	0	0.00%
White at birth then problems	0	0.00%	0	0.00%
Black at birth then white	0	0.00%	1	0.10%
Umbilical hernia	8	2.37%	18	1.75%
Uterine prolapse	0	0.00%	0	0.00%
Inguinal hernia	0	0.00%	0	0.00%
REPRODUCTION, OTHER	0	0.00%	7	0.68%

“Other” Disorders

- C-section due to misaligned or misrepresentation of a puppy which blocked passage of birth canal.
- Small pelvis
- Born with small white chest spots. 1 died suddently @ 2 weeks of age. Other 2 are very healthy.

P. Kidney / Urinary

	1960-1989		1990-present	
	N	**%**	**N**	**%**
Amyloidosis	6	1.78%	7	0.68%
Oxalate Stones	6	1.78%	8	0.78%
Struvite Stones	0	0.00%	0	0.00%
Cystine Stones	0	0.00%	0	0.00%
Incontinence	3	0.89%	3	0.29%
Polycystic kidneys	0	0.00%	0	0.00%
Prostate infection	0	0.00%	0	0.00%
Prostate tumor	0	0.00%	0	0.00%
Chronic renal failure	2	0.59%	3	0.29%
KIDNEY, OTHER	0	0.00%	1	0.10%

“Other” Disorders

- Renal failure due to e. coli infection

Q. Toxicity

	1960-1989		1990-present	
	N	**%**	**N**	**%**
Ivermectin toxicity	0	0.00%	3	0.29%
Filabrotics toxicity	0	0.00%	0	0.00%
Program sensitivity	0	0.00%	0	0.00%
Frontline sensitivity	0	0.00%	0	0.00%
Advantage sensitivity	0	0.00%	2	0.19%
Vaccination allergy	1	0.30%	13	1.26%
Food allergy	0	0.00%	12	1.17%
TOXICITY, OTHER	0	0.00%	16	1.55%

"Other" Disorders

- Allergies
  - Yard spray for weeds
  - Febreeze
  - Bio-spot
  - Wheat
  - Something in the garden
- Vaccine reactions
  - Fort Dodge RabVac
  - Fort Dodge LymeVac
  - Leptospirosis
  - Rabies
  - Bordatella

R. Temperament Problems

	1960-1989		1990-present	
	N	**%**	**N**	**%**
Aggressiveness	8	2.37%	38	3.69%
Excessive Shyness	4	1.18%	38	3.69%
Fearfulness	1	0.30%	25	2.43%
Fear biting	1	0.30%	11	1.07%
Submissive urinating	3	0.89%	19	1.85%
TEMPERAMENT, OTHER	1	0.30%	2	0.19%

"Other" Disorders

- Hyperactivity

Dog Foods / Feeding Methods

	N		N
Annamaet	1	Nutram	1
Avo	1	Nutrience	1
Back to Basics	1	Nutro	7
Best in Show	1	Pedigree	11
Beta	1	PHD	1
Bil-Jac	5	Pinnacle	2
Blackwood	1	Pro Plan	8
California Natural	1	Purina	10
Canidae	7	QC	1
Canine Caviar	1	Royal Canin	1
Eukanuba	9	Sensible Choice	2
Exceed	2	Show Coat	1
Febo	1	Solid Gold	7
Hill's Science Diet	6	Spillers	1
Iams	9	Summit	1
Innova	5	Cooked Poultry	4
Kibbles and Bits	1	BARF	8
Kirtland (Costco)	1	NRG	1
Natural Balance	2	Raw Meat	9
Natural Life	1	Cooked Meat (unspecified)	3
Nature's Recipe	2	Vegetables/Fruit	6
Neura	1	Dairy	2
Noble	1	Eggs	2

Supplements / Additives

	N		N
3V	1	Lecithin	1
Acidolphalus	1	Linatone	1
Apple Cider Vinegar	1	Marine / fish oils	6
Arctic Vigor oil	1	Missing Link	3
Avo Booster	1	Multi-vitamin	7
BeaPhar Senior Cal Food Supplement	1	NuPro	4
Bee Pollen	2	NuVet	2
Brewer's Yeast	7	Omega 3-6	2
Calcium	3	Pet-Tab	6
Cell Advance	1	Prednisone	1
Comfort Supplement	1	Probiotics	2
Connective Tissue Support	1	Prozyme	6
Derm Caps	2	Raspberry Leaves	1
Dog Blam	1	Safflower Oil	1
Evening Primrose Oil	1	Scorbate	1
Fatty Acids	1	Sea Meal	6
Filariluto (for heartworm)	1	Soloxine	1
Flaxseed	7	Stress-dex	1
Garlic	2	Vitamin B complex	4
Glucosamine	4	Vitamin C	6
Herbal Supplement for Coat Development	1	Vitamin E	7
Kelp	13	Wheat Germ Oil	2

Open Ended Comments

- It seems there has been more and more puppies born with hearing problems lately
- Lympharangicitis
- I know of some MT's that have seizures. They seem to be hearing induced. After the seizure, the dogs go into "hypoglycemic shock". All of the dogs that I am reporting on are young dogs, 6 mos. – 4 years + (1) 9 y/o & (1) 10 y/o. Many are puppies that I sold, and don't always hear about their problems.
- We have had one dog whose head muscles are atrophying or receding
- Though an allergy test was never performed, my guess was that of an inhalant allergy because of the seasonal occurrence. The symptom was itchy skin, mainly on the back. The sensitivity occurred between the ages of 1 & 4, but I'm assuming an eventual tolerance to the allergan, as we haven't experienced this problem for the past 2 years.
- One of the females I own, currently alive, was treated at Tufts University small animal hospital for the inability to completely close both eyes and enlarged lymph nodes. I was told that myositis had caused the muscle above the eyes to be destroyed. In addition the muscle below the eyes on both sides of the face, towards the back of the jaw were also destroyed. I was told that what caused this was most likely inherited and that she shouldn't be bred.
- Have one female with genetic tail abnormality. Tail was joined to spine in 2 places, and corkscrewed. Tail was amputated.
- 4 dogs in this sample. 2 dogs completely healthy (3 and 7 years old). 1 dog with heart murmur (6 years old). 1 dog has all the other health issues (9 year old bitch).
- TMT was born 2/2/96. This past June, she was diagnosed with Valley fever. She is, or seems to be, slowly recovering. The fever attacked her cervical vertebrae and discs. She is taking prednisone and diflucan – the diflucan for at least 4 months, probably a year, possibly longer. Today (9 September), she had a setback, and is on increased prednisone again. Normal weight is 10.5 lbs. She went down to 9 lbs and then on prednisone up to 13.5 lbs. She is fat! Her breeder says that when we can stop the prednisone, she'll regain her figure fast. I hope so! I don't know where this fits into the questionnaire, but hope it's helpful – and hope that nobody gets that fungus. There is quite a bit of info on the web about Valley Fever in dogs and in humans. It is not contagious. By the way, had a CT scan, which helped identify the source of her problems, along with numerous blood tests.
- One thing that I have not experienced myself, but that I have heard is a concern of other breeders of Manchester terriers is sensitivity to anaesthetic. One former breeder I knew in the past lost one or two of her dogs to this problem when they were spayed or neutered.
- I have had missing incisors on at least half of the puppies I have bred. 1 and a couple had 2 missing on the bottom (5 or 4 incisors present).
- 1 dog which had what my vet called "cage rage" very mad at being in a cage. Two months of a mild sedative ended the episodes. This dog was mad in a cage, even if I was sitting next to it. 1 female was very difficult to housebreak, and same dog has huge aversion to getting wet or getting feet wet.
- Overall, my experience with this breed has been very positive. Death in newborns and congenital problems are present though the percentage seems low. It can be difficult to get these dogs to bond with people if they are not VERY well socialized. Trainability also suffers in that case. A very nice breed affected by a small gene pool. Would like to see more inter-variety breeding.

- In all the dogs have been very healthy. There have been very few problems until old age (15+ years). I know of 2 dogs that have developed heart murmurs at approximately 5 years of age.
- My brood bitch suffers from some kind of ataxia that has not been discovered by spinal, milagian, or MRI – all were negative.
- I have a 13-year-old TMT and a 12-year-old SMT (my breeding) that still run agility (veterans).
- If more than 1 male, they “mark” (urinate) inside.
- I have only two Manchesters, they are 1 & 3, and have had no problems as of this date.
- I am thankful that I selected this breed. So far I have had no serious health problems. All litters were born healthy. The only problem noted was 2 pups with missing teeth. I do have several females that do not get along. I attribute this to the fact that they are bitches and exhibiting some traits inherent in their homes and competitive behaviour for progenation. I have whelped 22 pups, kept 3. My report concerns the dogs I have kept. I do not have any reports of problems from pup owners.
- Unfortunately, I was not able to fully test the moth, son, and daughter (from her first litter) on their hearing. However, the 2 daughters I have from the second litter are both hard of hearing (have been tested by the BAER method). Subsequent conversations have provided me with information of at least 5 other Manchesters with a similar problem. My oldest male (passed away before I could test) seemed to have an esophagus narrowing/swallowing problem. He was also ataxic in the rear, some patella slippage but not x-rayed, and had some type of neuro issue – not as steady in gait, carriage, and he would also shake. Oldest bitch (passed away) – highly allergic as a younger animal to any type of insect bite; outgrew. Also had folliculitis and while improved with age still had to treat periodically. And this bitch was also extremely noise and touch sensitive. Wheat allergy in one of her daughters from her first litter – eyes swell shut completely. Also colitis and heart murmur. The colitis could be the result of her eating so many items that caused problems, i.e. persimmons, nuts, etc.). The heart murmur has remained the same for nearly 3 years; vet believes it could have been the result of her having had a few severe infections and young surgeries.
- I no longer vaccinate when a dog is over 9 years of age.
- Overall, I have had no unhealthy factors that were or are continuing in my program. No stillborn, and only 3 deaths before age of 3 days.
- All in all, with a small number of dogs, this breed is extremely healthy.
- I have had three puppies live to the age of 2 weeks and then die. All never put any weight on and was supplement fed. I have had puppies born with a small white spot on chest. Most puppies white spot was gone by 6 weeks of age. The ones that remain had some white hairs left. I have never had white skin under the white spots.
- 2 affected VWD – 1m & 1f – neither bleed anymore than usual and when I had the female tested “affected” by DNA – I had her spayed & the vet said there was actually less bleeding than some other dogs he’d spayed. I have only bred for 5 years so far, so I have been lucky with all my terrier’s healthy, plus I’m careful when I breed.
- Behaviour seems to improve as dog ages!
- My SMT tended to be dog aggressive. With extensive socialization and proper training, this aggression is under control
- I have owned, shown and lived with many breeds over the last 35 years. This Manchester is by far the healthiest thru her first 5.5 years. She is shown regularly – 2 years conformation ring, 2 years obedience ring, and shows no stress-related illnesses or symptoms. Good luck in keeping this wonderful breed healthy.
- I feel the breed is not generally as brave as I expected of a terrier breed. They can become fearful if not very well socialized, indicating instability of temperament. Also I

believe structure is not attended to as well as could be by breeders. Heads seem too important. Not many breeders give PRA much thought but I have been told it is in the breed and it can be a devastating situation for a breed. PRA exams should be done more.

- Not sure its relevant but I have found some lines have extreme temperaments – either aggressive or very submissive. Both of these extremes are traced back to one dog used excessively in inbreeding situations. I am not sure one can blame environment totally. The pedigree is linking more of these dogs and the problem as more come forward to seek help in training.
- I had a bitch with seasonal baldness that turned into a year round problem. Neck, tail, rear legs, elbows, ears. A T4 thyroid test was normal. When we ran more extensive thyroid tests, the problem was revealed. The T4 alone was not indicative of the problem. One dog had chronic anal gland impaction which eventually required their removal. Pancreatitis has been successfully controlled by a change of diet to low fat. Ag Factors are worthless. A carrier can score in the clear range. It's DNA or the dog isn't used for breeding – no exceptions.
- We're sorry the information we put down is so brief, but our 2 year old Manchester has been very healthy, except as noted in "H" – skin.
- I only have the one dog and got her just this year. Other than loose patellas that may be luxating, I have had no other health problems to date.