## English Setter Health Survey 2022 OVERALL HEALTH SUMMARY

The top five categories of diagnosis for health conditions reported in the survey were 'ear' (50.0\%), 'skin and/or coat' (32.5\%), 'digestive' (27.2\%), 'muscle, bone or joint' (11.8\%), and 'reproductive' (8.0\%).

Table 1: Top five categories of diagnosis for health conditions reported in the survey

| Body system |  |  |  |
| :--- | :--- | :--- | :--- |
| Ear | Number affected | Total dogs | Prevalence |
| Skin and/or Coat | 395 | 990 | $50.0 \%$ |
| Digestive | 262 | 1,058 | $32.5 \%$ |
| Muscle, Bone or Joint | 111 | 964 | $27.2 \%$ |
| Reproductive | 75 | 943 | $11.8 \%$ |

The most frequently reported specific conditions were recurrent ear infections (145 cases), excessive ear wax ( 130 cases), otitis externa ( 121 cases), infrequent ear infections (116 cases), lipoma ( 96 cases), environmental allergies ( 93 cases), colitis ( 91 cases), dermatitis ( 88 cases), otitis media (79 cases), and chronic diarrhoea (78 cases).

Table 2: Top ten specific health conditions reported in the survey

| Specific condition | Number affected |
| :--- | :---: |
| Recurrent ear infections | 145 |
| Excessive ear wax | 130 |
| Otitis externa | 121 |
| Infrequent ear infections | 116 |
| Lipoma | 96 |
| Allergies (environmental) | 93 |
| Colitis | 91 |
| Dermatitis | 98 |
| Otitis media | 96 |
| Chronic diarrhoea | 79 |

## English Setter Health Survey 2021/22

The English Setter Health Survey ran from November 2021 to April 2022. After removing all unusable responses (for example, respondents did not consent to the English Setter Health Committee and The Kennel Club using the data for research purposes) a total of 1,112 individual responses remained.

Of the 1,112 English Setters this represented, the median age was five years. Figure 1 shows a full breakdown of the dogs' ages in years.


Figure 1: Age of the dogs included in the survey
When asked the sex of their dog, out of 1,112 dogs, 557 ( $50.1 \%$ ) were male and 555 ( $49.9 \%$ ) were female. When asked the neutered status of their dog, out of 1,112 dogs, 652 ( $58.6 \%$ ) were entire and 458 ( $41.2 \%$ ) were neutered. Results are shown in Table 3.

Table 3: Sex and neutered status of the dogs included in the survey

| Sex | Neutered Status |  |  | Total |
| :--- | ---: | ---: | ---: | ---: |
|  | Entire | Neutered | Not known |  |
| Male | $354(63.6 \%)$ | $201(36.1 \%)$ | $2(0.4 \%)$ | 557 |
| Female | $298(53.7 \%)$ | $257(46.3 \%)$ | $0(0.0 \%)$ | 555 |
| Total | $\mathbf{6 5 2}$ | $\mathbf{4 5 8}$ | $\mathbf{2}$ | $\mathbf{1 , 1 1 2}$ |

Of all the dogs included in the survey, the most common colour was orange belton (37.1\%, 412 of 1,112). A full breakdown of responses by colour are shown in Figure 2.


Figure 2: Colour of English Setters included in the survey, as reported by their owners
Figure 3 shows where the owners got their English Setter from, with the majority being from a breeder $(77.5 \%, 855$ of 1,103$)$.


Figure 3: Where the English Setters included in the survey were from, as reported in the survey
Of 1,103 dogs, 973 ( $89.3 \%$ ) were Kennel Club (KC) registered and 117 (10.7\%) were not KC registered. Of the KC registered dogs, 949 ( $97.5 \%$ ) were born in the UK and $24(2.5 \%)$ were imported.

## Lifestyle

Owners were asked to select the types of food that they feed their English Setter. The most frequently selected food type was grain-free kibble ( $22.7 \%, 481$ of 2,115 ), followed by tinned meat ( $18.9 \%$ ) and then cooked meat ( $14.2 \%$ ). A full breakdown of the selected food types are shown in Figure 4.


Figure 4: Types of food given to the English Setters included in the survey
Owners were asked to select the types of meat that they feed their English Setter. The most frequently selected meat was chicken ( $17.8 \%, 683$ of 3,834 ), followed by fish ( $14.2 \%$ ) and then beef (14.1\%). A full breakdown of the selected meat types are shown in Figure 5.


Figure 5: Types of meat given to the English Setters included in the survey

When asked if their dog had any known dietary allergies, out of 1,110 dogs, 238 (21.4\%) did have known dietary allergies. Figure 6 shows the dietary allergies reported in the survey, the most frequently reported being 'chicken' (21.5\%, 90 of 419), followed by 'other' (20.0\%) and then 'wheat' (15.3\%).


Figure 6: Known dietary allergies, as reported in the survey
The most common answers to "other" for known dietary allergies not already listed in the survey were: rice ( $n=12$ ), potatoes ( $n=6$ ), and possibly chicken ( $n=6$ ).
Figure 7 shows where the English Setters included in the survey were housed during the day and during the night, as reported by their owners. The majority being housed indoors during both the day $(54.7 \%, 588$ of 1,075$)$ and the night $(95.5 \%, 1,027$ of 1,075$)$.


Figure 7: Housing during the day and during the night, as reported in the survey

Figure 8 shows what type of bedding material the English Setters included in the survey usually sleep on, as reported by their owners. The most frequently reported bedding material was synthetic fibre ( $58.2 \%, 762$ of 1,310 ).


Figure 8: Usual bedding material, as reported in the survey
Figure 9 shows what cleaning materials are used to clean the areas where the English Setters spend most of their time, as reported by their owners. The most frequently reported cleaning material was a vacuum cleaner (33.3\%, 876 of 2,627 ).


Figure 9: Usual cleaning material, as reported in the survey

When asked if their dog had any known environmental allergies, out of 1,111 dogs, 220 (19.8\%) did have known environmental allergies. Figure 10 shows the environmental allergies reported in the survey, the most frequently reported being 'grass' $(29.6 \%, 100$ of $338)$, followed by 'other' (24.0\%) and then 'pollen' (21.6\%).


Figure 10: Known environmental allergies for the English Setters included in the survey, as reported by their owners

The most common answers to "other" for known environmental allergies not already listed in the survey were: storage mites/ house mites/ grain mites/ forage mites/ dust mites ( $\mathrm{n}=12$ ), seasonal allergies ( $n=6$ ), and tree pollen ( $n=6$ ).

## Health

The survey investigated the number of dogs affected by specific conditions within different categories: ‘Cancer’, ‘Digestive’, 'Ear’, 'Eye’, ‘Heart’, 'Hormonal’, ‘Kidney and/or Bladder’, 'Muscle, Bone or Joint', 'Reproductive', and 'Skin and/or Coat'. Within each of these categories, the respondents were given a choice of specific conditions, the choices of "not known" and "other" were also given.


Figure 11: Overall summary of health conditions by body system/category reported in the survey
The data collected for Table 4 represents the total number of conditions selected by respondents about their dog. One dog might be affected by more than one condition (e.g., one dog may be affected by both food and environmental allergies) therefore the data often shows more conditions reported per category than number of affected dogs in that category.

The total number of specific conditions reported in this survey was 1,962 . Out of the 1,962 specific conditions reported $33.3 \%$ were for 'Ear', $23.8 \%$ were for 'Skin and/or Coat, $19.8 \%$ were for 'Digestive', $6.3 \%$ were for 'Muscle, Bone and/or Joint', and $4.6 \%$ were for 'Reproductive'. The results for each category are given in Table 4.

Table 4: Overall summary of health conditions by body system/category reported in the survey

| Body system | Number of dogs affected/ <br> Total number of dogs | Prevalence | Number of specific <br> conditions reported |
| :--- | ---: | ---: | ---: |
| Ear | $495 / 990$ | $50.0 \%$ | 653 |
| Skin and/or Coat | $344 / 1,058$ | $32.5 \%$ | 467 |
| Digestive | $262 / 964$ | $27.2 \%$ | 389 |
| Muscle, Bone or Joint | $111 / 943$ | $11.8 \%$ | 123 |
| Reproductive | $75 / 938$ | $8.0 \%$ | 91 |
| Eye | $61 / 947$ | $6.4 \%$ | 67 |
| Cancer | $44 / 951$ | $4.6 \%$ | 54 |
| Kidney and/or Bladder | $43 / 944$ | $4.6 \%$ | 56 |
| Hormonal | $31 / 954$ | $3.2 \%$ | 39 |
| Heart | $22 / 944$ | $2.3 \%$ | 23 |

## Ear Conditions

When asked if their dog has ever suffered from an ear condition(s), out of the 990 responses, 495 (50.0\%) answered "Yes" and 495 (50.0\%) answered "No". In this study sample, orange belton English Setters were significantly more likely to be affected by ear conditions ( $\mathrm{OR}=1.54,95 \% \mathrm{Cl} 0.21-11.10, \mathrm{p}<0.01$ ), as well as neutered dogs across coat colours ( $O R=1.78,95 \% \mathrm{Cl} 1.38-2.30, \mathrm{p}<0.001$ ). Please also be aware that whilst statistical analyses certainly indicate increased odds in the areas analysed, it should be noted that the odds ratio values from this survey are relatively low.

The median age that affected dogs started to experience the clinical signs associated with their ear condition(s) was two years of age (min: less than one year, max: 12 years). In this study sample, older dogs (over five years old) were significantly more likely to be affected by ear conditions than younger dogs (under five years old) ( $O R=1.45,95 \% \mathrm{CI} 1.12-1.89$, $\mathrm{p}<0.01$ ).

The total number of individual ear conditions reported was 653. Of these, the most commonly reported condition was recurrent ear infections, which affected $22.2 \%$ of the study sample (145 of 653). This was followed by excessive ear wax (19.9\%), otitis externa (18.5\%), infrequent ear infections (17.8\%), and otitis media (12.1\%). Table 5 shows the total number and percentage of dogs affected by each reported ear condition in descending order.

Table 5: Number and percentage of English Setters affected by each specific ear condition, as reported in the survey

| Specific condition | Number affected | Percentage |
| :--- | ---: | ---: |
| Recurrent ear infections | 145 | $22.2 \%$ |
| Excessive ear wax | 130 | $19.9 \%$ |
| Otitis externa | 121 | $18.5 \%$ |
| Infrequent ear infections | 116 | $17.8 \%$ |
| Otitis media | 79 | $12.1 \%$ |
| Not known | 35 | $5.4 \%$ |
| Other | 27 | $4.1 \%$ |
| TOTAL | $\mathbf{6 5 3}$ |  |

The most common answers to "other" for ear conditions not already listed in the survey were: deafness ( $n=7$ ), ear mites ( $n=5$ ), unspecified ear problems ( $n=4$ ), and frequent ear cleaning required ( $n=2$ ).

## Skin and/or Coat Conditions

When asked if their dog has ever suffered from a skin and/or coat condition(s), out of the 1,058 responses, 344 ( $32.5 \%$ ) answered "Yes" and 714 ( $67.5 \%$ ) answered "No". In this study sample, neutered dogs were significantly more likely to be affected by skin and/or coat conditions ( $\mathrm{OR}=1.60,95 \% \mathrm{Cl} 1.23-2.08, \mathrm{p}<0.001$ ).

The median age that affected dogs started to experience the clinical signs associated with their skin and/or coat condition(s) was three years of age (min: less than one year, max: 13
years). In this study sample, older dogs (over five years old) were significantly more likely to be affected by skin and/or coat conditions than younger dogs (under five years old) ( $\mathrm{OR}=$ $3.75,95 \% \mathrm{Cl} 2.80-5.03, \mathrm{p}<0.001$ ).

The total number of individual skin and/or coat conditions reported was 467 . Of these, the most commonly reported condition was lipoma, which affected $20.6 \%$ of the study sample (96 of 467). This was followed by environmental allergies (19.9\%), dermatitis (18.8\%), dietary allergies (8.1\%) and skin cysts (6.9\%). Table 6 shows the total number and percentage of dogs affected by each reported skin and/or coat condition in descending order.

Table 6: Number and percentage of English Setters affected by each specific skin and/or coat condition, as reported in the survey

| Specific condition | Number affected | Percentage |
| :--- | ---: | ---: |
| Lipoma | 96 | $20.6 \%$ |
| Allergies (environmental) | 93 | $19.9 \%$ |
| Dermatitis | 88 | $18.8 \%$ |
| Allergies (dietary) | 38 | $8.1 \%$ |
| Skin cysts | 32 | $6.9 \%$ |
| Allergies - unknown | 25 | $5.4 \%$ |
| Histiocytoma | 21 | $4.5 \%$ |
| Other | 20 | $4.3 \%$ |
| Not known | 17 | $3.6 \%$ |
| Pyotraumatic dermatitis | 17 | $3.6 \%$ |
| Alopecia | 14 | $3.0 \%$ |
| Pyoderma | 4 | $0.9 \%$ |
| Demodectic/sarcoptic mange | 2 | $0.4 \%$ |
| TOTAL | 467 |  |

The most common answers to "other" for skin and/ or coat conditions not already listed in the survey were: toe irritation/infection between toes ( $n=3$ ) and unspecified growth ( $n=2$ ).

Figure 12 shows the clinical signs seen in the affected dogs, as reported by their owners.
The most frequently reported clinical sign was 'itching/chewing' (31.1\%, 220 of 708), followed by 'lumps/bumps' (22.3\%) and then 'redness' (18.6\%).


Figure 12: Clinical signs, as reported by their owners
When asked about the frequency of their dog's clinical signs, out of 457 responses, 211 ( $46.2 \%$ ) owners answered 'continuous', 161 (35.2\%) answered 'intermittent', and 85 (18.6\%) answered 'one-off'.

Figure 13 shows the method of diagnosis for their dog's skin and/or coat condition(s), the most frequently reported being visual diagnosis by veterinary surgeon (45.0\%, 270 of 600).


Figure 13: Method of diagnosis for skin and/or coat conditions, as reported in the survey

When asked what treatment(s) improved the severity of the condition, the most frequently reported treatment was prescriptive medication - temporary ( $28.9 \%, 114$ of 394 ). A full breakdown of results are shown in Figure 14.


Figure 14: Treatments for skin and/or coat conditions, as reported in the survey

## Digestive Conditions

When asked if their dog has ever suffered from a digestive condition(s), out of the 964 responses, 262 (27.2\%) answered "Yes" and 702 ( $72.8 \%$ ) answered "No". In this study sample, neutered dogs were significantly more likely to be affected by digestive conditions ( $\mathrm{OR}=1.75,95 \% \mathrm{Cl} 1.31-2.33, \mathrm{p}<0.001$ ).

The median age that affected dogs started to experience the clinical signs associated with their digestive condition(s) was two years of age (min: less than one year, max: over 15 years). In this study sample, older dogs (over five years old) were significantly more likely to be affected by digestive conditions than younger dogs (under five years old) ( $O R=1.48$, $95 \%$ Cl 1.10-2.00, p<0.001).

The total number of individual digestive conditions reported was 389. Of these, the most commonly reported condition was colitis, which affected $23.4 \%$ of the study sample ( 91 of 389). This was followed by chronic diarrhoea (20.1\%), food allergies/ intolerance (12.6\%), gastroenteritis ( $10.3 \%$ ), and other ( $8.5 \%$ ). Table 7 shows the total number and percentage of dogs affected by each reported digestive condition in descending order.

Table 7: Number and percentage of English Setters affected by each specific digestive condition, as reported in the survey

| Specific condition | Number affected | Percentage |
| :--- | ---: | ---: |
| Colitis | 91 | $23.4 \%$ |
| Chronic diarrhoea | 78 | $20.1 \%$ |
| Food allergies/intolerance | 49 | $12.6 \%$ |
| Gastroenteritis | 40 | $10.3 \%$ |
| Other | 33 | $8.5 \%$ |
| Not known | 20 | $5.1 \%$ |
| Impacted anal glands | 17 | $4.4 \%$ |
| Pancreatitis - confirmed by veterinary diagnosis | 17 | $4.4 \%$ |
| Flatulence | 11 | $2.8 \%$ |
| Regurgitation | 11 | $2.8 \%$ |
| Inflammatory bowel disease (IBD) | 10 | $2.6 \%$ |
| Chronic vomiting | 6 | $1.5 \%$ |
| Pancreatitis - symptomatic test | 3 | $0.8 \%$ |
| Constipation | 2 | $0.5 \%$ |
| Gastric dilatation volvulus (GDV)/bloat | 1 | $0.3 \%$ |
| TOTAL | 389 |  |

The most common answers to "other" for digestive conditions not already listed in the survey were: general digestive problem/ gastric discomfort ( $n=6$ ), diarrhoea ( $n=5$ ), loose stools ( $n=4$ ), and haemorrhagic diarrhoea ( $n=4$ ).

## Muscle, Bone or Joint Conditions

When asked if their dog has ever suffered from a muscle, bone or joint condition(s), out of the 943 responses, 111 (11.8\%) answered "Yes" and 832 ( $88.2 \%$ ) answered "No". In this study sample, neutered dogs were significantly more likely to be affected by muscle, bone or joint conditions ( $\mathrm{OR}=3.88,95 \% \mathrm{Cl} 2.53-2.93, \mathrm{p}<0.001$ ).

The median age that affected dogs started to experience the clinical signs associated with their muscle, bone or joint condition(s) was six years of age (min: less than one year, max: 13 years). In this study sample, older dogs (over five years old) were significantly more likely to be affected by muscle, bone or joint conditions than younger dogs (under five years old) ( $O R=10.45,95 \% \mathrm{Cl} 5.51$ - 19.82, $\mathrm{p}<0.001$ ).

The total number of individual muscle, bone or joint conditions reported was 123. Of these, the most commonly reported condition was arthritis, which affected $37.4 \%$ of the study sample ( 46 of 123). This was followed by other ( $22.0 \%$ ), hip dysplasia ( $13.0 \%$ ), fractured bone ( $8.1 \%$ ), and not known ( $6.5 \%$ ). Table 8 shows the total number and percentage of dogs affected by each reported muscle, bone or joint condition in descending order.

Table 8: Number and percentage of English Setters affected by each specific muscle, bone or joint condition, as reported in the survey

| Specific condition | Number affected | Percentage |
| :--- | ---: | ---: |
| Arthritis | 46 | $37.4 \%$ |
| Other | 27 | $22.0 \%$ |
| Hip dysplasia | 16 | $13.0 \%$ |
| Fractured bone | 10 | $8.1 \%$ |
| Not known | 8 | $6.5 \%$ |
| Chronic lameness | 7 | $5.7 \%$ |
| OCD of the shoulder | 3 | $2.4 \%$ |
| Patellar luxation | 3 | $2.4 \%$ |
| Cranial cruciate ligament rupture (CCLR) | 1 | $0.8 \%$ |
| Elbow dysplasia | 1 | $0.8 \%$ |
| Osteochondritis dissecans (OCD) of the elbow | 1 | $0.8 \%$ |
| TOTAL | $\mathbf{1 2 3}$ |  |

The most common answers to "other" for muscle, bone or joint conditions not already listed in the survey were: muscle atrophy/ wastage $(n=3)$, stiffness $(n=3)$, and tendinitis/ tendon inflammation ( $n=3$ ).

When asked if they were aware of a particular incident (e.g., fall or injury) that triggered their dog's muscle, bone or joint condition(s), out of the 108 responses, 30 (27.8\%) answered "Yes" and 78 (72.2\%) answered "No".

## Reproductive Conditions

When asked if their dog has ever suffered from a reproductive condition(s), out of the 938 responses, 75 ( $8.0 \%$ ) answered "Yes" and 863 (92.0\%) answered "No". Of the 75 dogs that had suffered from a reproductive condition(s), 26 (34.7\%) were male and 49 ( $65.3 \%$ ) were female.

Across sexes, the median age that affected dogs started to experience the clinical signs associated with their reproductive condition(s) was three years of age (min: less than one year, max: 11 years).

The total number of individual reproductive conditions reported was 91 . Of these, $30.8 \%$ were for male conditions ( 28 out of 91 ), and $69.2 \%$ were for female conditions ( 63 out of 91 ). Overall, the most commonly reported reproductive conditions across sexes were fertility problems, pseudopregnancy, and pyometra, which each affected $20.9 \%$ of the study sample (19 of 91 ). Table 9 shows the total number and percentage of dogs affected by each reported reproductive condition.

Table 9: Number and percentage of English Setters affected by each specific reproductive condition, as reported in the survey

|  | Specific condition | Number affected |
| :---: | :---: | :---: |
| Male conditions | Cryptorchidism | 15 (53.6\%) |
|  | Fertility problems | 8 (28.6\%) |
|  | Other | 4 (14.3\%) |
|  | Not known | 1 (3.6\%) |
|  | Total | 28 |
| Female conditions | Pseudopregnancy | 19 (30.2\%) |
|  | Pyometra | 19 (30.2\%) |
|  | Fertility problems | 11 (17.5) |
|  | Irregular seasons | 5 (7.9\%) |
|  | Other | 5 (7.9\%) |
|  | Mastitis | 3 (4.8\%) |
|  | Dystocia | 1 (1.6\%) |
|  | Total | 63 |
| Total |  | 91 |

The most common answers to "other" for reproductive conditions not already listed in the survey were: difficulties mating ( $n=4$ ) and retained testicles ( $n=4$ ).

## Eye Conditions

When asked if their dog has ever suffered from an eye condition(s), out of the 947 responses, 61 (6.4\%) answered "Yes" and 886 (93.6\%) answered "No".

The median age that affected dogs started to experience the clinical signs associated with their eye condition(s) was three years of age ( min : less than one year, max: 12 years).

The total number of individual eye conditions reported was 67 . Of these, the most commonly reported condition was other, which affected $46.3 \%$ of the study sample (31 of 67). This was followed by not known (20.9\%), loss of vision (9.0\%), blocked tear duct (6.0\%), and distichiasis ( $4.5 \%$ ). Table 10 shows the total number and percentage of dogs affected by each reported eye condition in descending order.

Table 10: Number and percentage of English Setters affected by each specific eye condition, as reported in the survey

| Specific condition | Number affected | Percentage |
| :--- | ---: | ---: |
| Other | 31 | $46.3 \%$ |
| Not known | 14 | $20.9 \%$ |
| Loss of vision | 6 | $9.0 \%$ |
| Blocked tear duct | 4 | $6.0 \%$ |
| Distichiasis | 3 | $4.5 \%$ |
| Cataract | 2 | $3.0 \%$ |
| Corneal ulcer | 2 | $3.0 \%$ |
| Keratoconjunctivitis sicca | 2 | $3.0 \%$ |
| Entropion | 1 | $1.5 \%$ |
| Glaucoma | 1 | $1.5 \%$ |
| Prolapsed gland | 1 | $1.5 \%$ |
| TOTAL | 67 |  |

The most common answers to "other" for eye conditions not already listed in the survey were: conjunctivitis/ eye infection ( $n=12$ ), and allergies/ pollen allergy ( $n=5$ ), eyelid mass $(n=4)$, and blindness/ reduced vision ( $n=3$ ).

## Cancerous Conditions

When asked if their dog has ever suffered from cancerous condition(s), out of the 951 responses, 44 (4.6\%) answered "Yes" and 907 (95.4\%) answered "No".

The median age that affected dogs started to experience the clinical signs associated with their cancerous condition(s) was six years of age (min: less than one year, max: 12 years).

The total number of individual cancerous conditions reported was 54 . Of these, the most commonly reported conditions were mast cell tumour and other, which each affected $18.5 \%$ of the study sample (10 of 67). This was followed by mammary tumour ( $14.8 \%$ ), brain tumour ( $9.3 \%$ ), and testicular tumour ( $9.3 \%$ ). Table 11 shows the total number and percentage of dogs affected by each reported cancerous condition in descending order.

Table 11: Number and percentage of English Setters affected by each specific cancerous condition, as reported in the survey

| Specific condition | Number affected | Percentage |
| :--- | ---: | ---: |
| Mast cell tumour | 10 | $18.5 \%$ |
| Other | 10 | $18.5 \%$ |
| Mammary tumour | 8 | $14.8 \%$ |
| Brain tumour | 5 | $9.3 \%$ |
| Testicular tumour | 5 | $9.3 \%$ |
| Lymphoma | 3 | $5.6 \%$ |
| Melanoma | 3 | $5.6 \%$ |
| Not known | 3 | $5.6 \%$ |
| Liver tumour | 2 | $3.7 \%$ |
| Splenic tumour | 2 | $3.7 \%$ |
| Vascular/ blood tumour | 2 | $3.7 \%$ |
| Anal sac tumour | 1 | $1.9 \%$ |
| TOTAL | $\mathbf{5 4}$ |  |

The most common answer to "other" for cancerous conditions not already listed in the survey was: anal growth/cancer ( $n=2$ ).

## Kidney and/or Bladder Conditions

When asked if their dog has ever suffered from a kidney and/or bladder condition(s), out of the 944 responses, 43 ( $4.6 \%$ ) answered "Yes" and 901 (95.4\%) answered "No".

The median age that affected dogs started to experience the clinical signs associated with their kidney and/or bladder condition(s) was four years of age (min: less than one year, max: 13 years).

The total number of individual kidney and/or bladder conditions reported was 56 . Of these, the most commonly reported condition was urinary tract infection, which affected $35.7 \%$ of the study sample (20 of 56). This was followed by not known (17.9\%), kidney failure (14.3\%), urolithiasis (10.7\%), and urinary incontinence (8.9\%). Table 12 shows the total number and percentage of dogs affected by each reported kidney and/or bladder condition in descending order.

Table 12: Number and percentage of English Setters affected by each specific kidney and/or bladder condition, as reported in the survey

| Specific condition | Number affected | Percentage |
| :--- | ---: | ---: |
| Urinary tract infection | 20 | $35.7 \%$ |
| Not known | 10 | $17.9 \%$ |
| Kidney failure | 8 | $14.3 \%$ |
| Urolithiasis | 6 | $10.7 \%$ |
| Urinary incontinence | 5 | $8.9 \%$ |
| Cystinuria | 3 | $5.4 \%$ |
| Hyperuricosuria | 2 | $3.6 \%$ |
| Amyloidosis | 1 | $1.8 \%$ |
| Other | 1 | $1.8 \%$ |
| TOTAL | $\mathbf{5 6}$ |  |

The only answer to "other" for kidney and/or bladder conditions not already listed in the survey was: leishmaniasis ( $n=1$ ).

## Hormonal Conditions

Owners were initially asked if their dog has ever suffered from hypothyroidism. Out of the 954 responses, 21 (2.2\%) answered "Yes" and 933 (97.8\%) answered "No".

The median age that affected dogs started to experience the clinical signs associated with hypothyroidism was six years of age (min: two years, max: 13 years). When looking at hypothyroidism specifically, older dogs (over five years old) were significantly more likely to be affected than younger dogs (under five years old) ( $\mathrm{OR}=17.83,95 \% \mathrm{Cl} 2.37-134.17$, p<0.001).

Figure 15 shows the clinical signs seen in the affected dogs, as reported by their owners. The most frequently reported clinical sign was 'lethargy' ( $26.2 \%, 17$ of 65 ), followed by 'weight gain' (16.9\%) and then 'dull coat' (15.4\%).


Figure 15: Clinical signs, as reported by their owners

Figure 16 shows the method of diagnosis for their dog's hypothyroidism, the most frequently reported being blood test ( $66.7 \%$, 22 of 33 ).


Figure 16: Method of diagnosis for hypothyroidism, as reported in the survey
When asked what treatment(s) improved the severity of the condition, the most frequently reported treatment was prescriptive medication - lifelong (76.0\%, 19 of 25). A full breakdown of results are shown in Figure 17.


Figure 17: Treatments for hypothyroidism, as reported in the survey
The top prescriptive medications reported in the survey were: thyforon $(n=5)$, canitroid ( $n=2$ ), thyroxine ( $n=1$ ), and leventa ( $n=1$ ).

When asked if their dog has ever suffered from any other hormonal condition(s), out of the 953 responses, 10 (1.0\%) answered "Yes" and 943 (99.0\%) answered "No".

The median age that affected dogs started to experience the clinical signs associated with their hormonal condition(s) was four years of age (min: less than one year, max: nine years).

The total number of individual hormonal conditions (including cases of hypothyroidism) reported was 39 . Of these, the most commonly reported condition was hypothyroidism, which affected $53.8 \%$ of the study sample ( 21 of 39 ). This was followed by hyperadrenocorticism (20.5\%), diabetes (12.8\%), and other (7.7\%). Table 13 shows the total number and percentage of dogs affected by each reported hormonal condition in descending order.

Table 13: Number and percentage of English Setters affected by each specific hormonal condition, as reported in the survey

| Specific condition | Number affected | Percentage |
| :--- | ---: | ---: |
| Hypothyroidism | 21 | $53.8 \%$ |
| Hyperadrenocorticism (Cushing's disease) | 8 | $20.5 \%$ |
| Diabetes | 5 | $12.8 \%$ |
| Other | 3 | $7.7 \%$ |
| Hypoadrenocorticism (Addison's disease) | 1 | $2.6 \%$ |
| Not known | 1 | $2.6 \%$ |
| TOTAL | 39 |  |

The answers to "other" for hormonal conditions not already listed in the survey were: underactive thyroid ( $n=1$ ), secondary to long term use of steroids ( $n=1$ ), and borderline Cushing's disease ( $n=1$ ).

## Heart Conditions

When asked if their dog has ever suffered from a heart condition(s), out of the 944 responses, 22 (2.3\%) answered "Yes" and 922 (97.7\%) answered "No".

The median age that affected dogs started to experience the clinical signs associated with their heart condition(s) was five years of age (min: less than one year, max: 10 years).

The total number of individual heart conditions reported was 23 . Of these, the most commonly reported condition was heart murmur, which affected $47.8 \%$ of the study sample (11 of 23). This was followed by other (17.4\%), dilated cardiomyopathy (13.0\%), not known (13.0\%), and irregular heart rate and/or rhythm (8.7\%). Table 14 shows the total number and percentage of dogs affected by each reported heart condition in descending order.

Table 14: Number and percentage of English Setters affected by each specific heart condition, as reported in the survey

| Specific condition | Number affected | Percentage |
| :--- | ---: | ---: |
| Heart murmur | 11 | $47.8 \%$ |
| Other | 4 | $17.4 \%$ |
| Dilated cardiomyopathy (DCM) | 3 | $13.0 \%$ |
| Not known | 3 | $13.0 \%$ |
| Irregular heart rate and/or rhythm | 2 | $8.7 \%$ |
| TOTAL | $\mathbf{2 3}$ |  |

The most common answer to "other" for heart conditions not already listed in the survey was: heartworm ( $n=3$ ).

## Additional conditions not listed in survey

The respondents were provided with the opportunity to note any conditions not already covered by the previous questions. The conditions listed for more than one dog by category were:

- Seven reports of deafness
- Four reports of epilepsy/ seizures/ fits
- Four reports of leishmania
- Three reports of kennel cough
- Three reports of umbilical hernia
- Two reports of a sting allergy
- Two reports of epulis/ gum growth
- Two reports of fractured/ broken leg
- Two reports of weight problems

