

Connecting Knowledge Levels of Owners with Pet Rabbit Welfare

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ABSTRACT

As rabbits become more popular pets in United States households, the concern for pet rabbit welfare has also increased. It is theorized that an uninformed owner will be unlikely to provide ideal care for their pet rabbit. We surveyed rabbit owners bringing their pet rabbit to the veterinarian regarding their knowledge of proper husbandry and their personal practices in caring for their rabbit. Owners who conducted research prior to the adoption or purchase of their rabbit were likely to have better knowledge about how to care for them. Not surprisingly, owners with better knowledge of how to care for their rabbits were likely to use this knowledge to provide their rabbits with better care. Results suggest that educating owners at the time of rabbit acquisition may improve the welfare of rabbits' in the home.

INTRODUCTION

The number of pet rabbits in homes is on the rise, with an estimated 6.2 million companion rabbits in 2.2 million households in the United States (Granis, 2002, Shepherd, 2008). Pet rabbits are also believed to be the third most common animal relinquished to shelters behind cats and dogs (Cotter, 2001). Many buy these animals because they seem like low maintenance pets, and subsequently these rabbits are often released to shelters because the owners do not want to put in the effort necessary to care for them (Cotter, 2001). In a study of shelter rabbit populations in New England, it was found that the most common reason for surrender was a lack of desire or inability to care for the rabbits (Cook and McCobb, 2012). Other common issues included having too many rabbits and housing problems (Cook and

McCobb, 2012). These reasons for relinquishment suggest some owners may lack the knowledge to properly care for their pets. Better-informed owners may be more likely to keep their rabbits.

A lack of knowledge negatively affects rabbits being bred and sold, mostly unregulated, on a large scale across the United States. Rabbits require appropriate husbandry practices in order to maintain good health and welfare. The physiological health of a rabbit depends largely on proper diet, but is also influenced by types of housing and veterinary care. Psychologically healthy rabbits need social interaction, exercise, space, and safe objects to interact with and carry out natural behaviors (Tynes, 2010). Owners must understand rabbit behavior, and how to properly address their needs. Failure to do so results both in negative welfare for the animal, and costly emergency veterinary bills. Rabbits regularly suffer from painful, preventable issues after going home with potentially irresponsible, uninformed owners (Mullan and Main, 2006). While rabbits should receive routine veterinary care, proper husbandry can greatly reduce the number of veterinary visits due to health problems (Banks et al., 2010).

Rabbits often live in spaces or enclosures that are too small (Steiger, 2006). Insufficient housing can inhibit exercise and natural locomotion, fail to provide an area for acting out natural behaviors such as nesting or hiding, and give rise to disease (Steiger, 2006; Tynes, 2010). A 2013 UK study found that there has been a significant increase in the number of rabbits that do not have daily opportunities to exercise, up from 4 percent in 2011 to 18 percent (PDSA, 2013). Though rabbits are best housed in social groups, many pet rabbits live individually (Steiger, 2006; Mullan and Main, 2006). Sixty-five percent of pet rabbits in the UK live alone, which can lead to chronic boredom (PDSA, 2013). In addition to providing proper housing and housemates, it is also important to feed a proper diet at appropriate frequency (Steiger, 2006). Inappropriate

diets for rabbits can lead to a number of health problems, including dental disease, gastrointestinal upset, and obesity. The 2013 PDSA animal well-being report found that 41 percent of rabbit owners do not feel there is enough information available to understand their pets' dietary needs. Many rabbit owners feed mixed-ration pellets and museli, which can lead to severe dental disease and obesity (PDSA, 2013; Edgar and Mullan, 2011; Mullan and Main, 2006). Fresh hay should be provided ad libitum to rabbits, yet 26% of rabbits are not fed an appropriate amount (PDSA, 2013).

Welfare concerns for rabbits, such as increased number of unwanted rabbits and a lack of knowledge on how to care for these animals, are becoming more prominent as companion rabbits become more popular as pets (Washington, McCobb and Dowling, in prep). With 40 percent of pet-owning households possessing rabbits (Cotter, 2001), it is important to assess the potential negative welfare of these animals. While a number of sources address how to properly care for rabbits (Banks et al., 2010; Judah and Nuttall, 2008; Tynes, 2010; Meredith, 2005), there are very few studies addressing pet rabbit welfare in the United States. In contrast, several studies in Europe have examined rabbit care and welfare, as well as owner knowledge at the point of sale.

These European studies have found that owners often have limited knowledge about proper husbandry and nutrition at the point of sale, and that many rabbits do not live in ideal conditions (Edgar and Mullan, 2011; Mullan and Main, 2006). Owners have “a clear responsibility to plan for the animal's optimum welfare before obtaining the animal and this may entail a considerable amount of research and potential expense” (Tynes, p. 215). However, pet store customers often make an impulse decision to purchase a rabbit without any research into how to care for these animals (Edgar and Mullan, 2011). It is hypothesized that those obtaining

rabbits from the internet, fairs, and family or friends likely do not research rabbit care prior to acquiring their pets. Multiple sources cite a lack of knowledge among owners of these small mammals as a huge concern (Edgar and Mullan, 2011). While knowledge levels may vary among all pet owners, the problem seems particularly important for owners of rabbits and other small mammals. Thus, owners may believe rabbits are easy to take care of, low maintenance pets that are appropriate for kids (HSUS, 2010) and can easily obtain animals without knowing how to properly care for them.

Ideally, information about proper husbandry would be passed on to the owner at the point of purchase or adoption, and pet store employees could serve as a valuable resource for customers (Edgar and Mullan, 2011). However, in reality this “expertise for providing the minimum acceptable conditions in which animals thrive may only rarely passed on at point of sale” (Tynes, p. 215). Therefore, the welfare of these animals depends solely on the commitment of the owner to obtain information from a reputable source. A recent study of volunteers and employees at various rabbit acquisition sites in New England found that rabbit rescue workers had the greatest knowledge of rabbit husbandry, and pet store workers had the lowest knowledge scores (Washington, McCobb and Dowling, in prep). Because rescue workers have a greater knowledge of caring for rabbits, it is hypothesized that owners who adopt from these shelters will have better information to properly care for their animals.

We sought to test the hypothesis that owner knowledge of proper husbandry and care depends on research prior to acquisition as well as rabbit acquisition source. As a way to assess the welfare of rabbits in the home, we designed a study that would examine owner knowledge of proper husbandry, as well as owner practices in caring for their animals. It is notable that even

owners that know better, for example about the improved welfare with paired housing, sometimes do not act upon that knowledge (Steiger, 2006; Meredith 2005). We included both knowledge and practice questions in our study to try and account for this discrepancy. Because rabbit health is oftentimes dependent on husbandry practices, we expected that owners with the highest knowledge and best practices would have the healthiest rabbits. Although health is not a definitive indicator of good welfare, it is often an indicator of good husbandry practices.

METHODS

Study Sites

Study sites were recruited via an exotic veterinarian listserv. Five veterinary clinics in Massachusetts and New Hampshire took part in the study. All participating clinics were multi-veterinarian practices that see a significant number of rabbits. Each practice signed a letter of support granting permission for the research team to distribute surveys to rabbit-owning clients at the practice, and to review corresponding medical records with client consent. The protocol was exempted from review by the Tufts Health Sciences Institutional Review Board.

Subjects

Survey respondents were recruited from the five veterinary clinics. At each veterinary site, all rabbit owners presenting their animal for an exam over a period of four months were asked to fill out a short questionnaire. Response rate was determined by the number of completed surveys out of the total number distributed. Written client consent was obtained to review each

rabbit's medical records for his/her health status as determined by the veterinarian.

Survey

A copy of the survey can be found in the appendix. Respondents had the option of filling out the questionnaire in the waiting room or online prior to the appointment. The survey took approximately 5 minutes to complete. The instrument contained questions concerning rabbit husbandry practices as well as questions assessing owner knowledge of proper husbandry. The survey began with questions pertaining to acquisition source of the rabbit, research done prior to purchase or adoption, and length of time the owner had had the pet. Personal practices questions looked to evaluate the quality of care each rabbit received in the home. Knowledge questions had correct and incorrect answers, and were gathered from a survey by Washington, McCobb, and Dowling (2014) used to measure the husbandry knowledge of people working closely with rabbits. Topics covered included diet, housing, enrichment, handling, and veterinary care. Demographic questions concerning age, gender, and education level were incorporated at the end to determine characteristics of the population, and to ensure that these characteristics did not influence responses.

Owner knowledge was determined by creating a knowledge score based on the 8 multiple choice and 9 true or false questions with correct answers, as determined by a rabbit expert panel. Scores were calculated as the percentage correct out of a total of 17 possible points. Respondents received 1 point for correct answers and 0 points for incorrect answers. Unanswered questions were marked as incorrect.

Husbandry scores were calculated based on 11 questions about individual practices, and

were calculated out of a total of 18 possible points. Respondents received 2 points for best practices, 1 point for good practices, and 0 points for poor practices.

Medical Records

Medical records were evaluated to determine the health status of each rabbit. Records were reviewed to determine whether each animal came in for a routine wellness visit, or for a health problem. The age, weight, body condition score, and diagnosis of each rabbit were recorded. The presence or absence of dental disease, respiratory disease, and gastrointestinal disease was also noted. An exotics veterinarian determined whether health problems were likely related to poor husbandry practices.

Data Analysis

Data were analyzed using descriptive statistics to create a breakdown of where pet rabbits come from, whether owners conducted research prior to acquisition, how often they visit the veterinarian, and how well owners know and implement care for them in the home. These data were analyzed to determine whether research influenced knowledge and practices. Independent sample t-tests were used to evaluate husbandry practice scores by prior research after determining the data were distributed normally. Mann-Whitney U non-parametric testing was used to analyze knowledge scores by prior research, as the distribution violated normality. Spearman's Rho correlation was used to evaluate the relationship between owner knowledge and husbandry practices. Chi-square tests were used to evaluate whether there were any significant associations between demographic questions and prior research. Differences by response location

(waiting room vs. online) were analyzed as well. All data were analyzed using SPSS v21.

RESULTS

A total of 34 surveys were collected from the five study sites, representing 34 veterinary visits. Twenty-eight subjects (84.8%) filled out the survey in the waiting room, and 5 subjects (15.2%) filled out the survey online. One subject did not specify where the survey was completed.

Prior Research

Most, 23 out of 34 (67.6%), respondents had conducted some research prior to acquiring their rabbit. This was reported in a survey question with a yes or no answer. Respondents were asked to note what type of research they conducted as an open-end response. The majority of respondents stated they conducted research online. One respondent did not answer whether he conducted research prior to the acquisition of his rabbit. Of the 23 respondents who conducted research prior to rabbit acquisition, 7 (30.4%) acquired their rabbit from an animal shelter. All respondents who obtained a rabbit from an animal shelter conducted research prior to adoption.

Of those who had conducted research prior to rabbit acquisition, 21 out of 23 (91.3%) rabbits were litter-box trained and 2 out of 23 (8.7%) were not. Of subjects who had not conducted research prior to obtaining a rabbit, 6 out of 10 (60%) rabbits were litter-box trained and 4 out of 10 (40%) were not. Although not significant, this relationship neared significance (Fisher's Exact Test (1, 34), $p=0.053$). Eight of the ten rabbit owners bringing their rabbit in for his or her first veterinary visit (80%) had researched proper rabbit care prior to purchasing or adopting their rabbit.

Eighty percent (16 out of 20) of respondents who reported only having one rabbit conducted research prior to acquisition of that rabbit. Fifty percent (5 out of 10) of respondents with multiple rabbits had not conducted research prior to acquisition of the rabbit in question. The relationship was approaching significance, but was not significant (Fisher's Exact Test (1,30), $p=0.225$).

There was a significant relationship between prior research and survey completion location, with respondents who conducted prior research being more likely to complete the survey in the waiting room (Fisher's Exact Test (1,33), $p= 0.024$).

Knowledge Scores and Husbandry Scores

The mean knowledge scores of respondents, by prior research, are in Table 1. Knowledge scores were generally higher for respondents who conducted research prior to acquisition, but this relationship was not statistically significant ($U(31)= 67.0$, $p=0.053$). The mean husbandry practice scores of respondents, by prior research, are in Table 2. The difference between husbandry scores by prior research was not significant ($t(12.2)=1.013$, $p=0.415$). However, husbandry practice scores were generally higher for those who researched prior to acquisition.

Spearman's Rho revealed a statistically significant relationship between owner knowledge and husbandry practices of respondents ($R_s(32)=0.73$, $p<0.001$).

Rabbit Demographics and Acquisition

The rabbits in this study had a mean age of 3.44 years, and a median age of 2 years. Over

one half (19 out of 34 (57.6%)) of rabbits were spayed/neutered. Six of 7 (85%) rabbits from animal shelters were spayed/neutered. One respondent was unsure if his rabbit was intact.

Rabbits were acquired through a number of sources. Only 4 of the 34 (11.8%) rabbits came from pet stores. The same number of rabbits was acquired from breeders. Twelve of 34 rabbits (35.3%) of rabbits came from an animal shelter or rabbit rescue. Two out of 34 (5.9%) rabbits were found outside. Four of 34 (11.8%) rabbits were acquired from a friend or family member, 3 of 34 (8.8%) rabbits came from fairs, and 2 out of 34 (5.9%) were purchased online. Three of 34 (8.8%) rabbits were acquired from sources other than those listed above; self reported as being from an “old person”, “rabbit enthusiast”, and “herder.”

Rabbit Husbandry and Lifestyle

Twenty-seven out of 34 (79.4%) of rabbits were litter-box trained, and 7 out of 34 (20.6%) were not. Most of the rabbits owned by survey respondents (20 of 34 or 58.8%) were the only rabbits in the home. Eleven out of 34 (32.4%) rabbits lived with at least one other rabbit.

Nearly one third of the survey respondents (10 out of 34 or 29.4%) reported that they were bringing this rabbit to the veterinarian for his or her first visit. Of rabbit owners who had previously brought their rabbit to the veterinarian, 6 (17.6%) had done only 1 or 2 previous times, 8 (23.5%) had done so 3 or 4 times, and 10 (29.4%) had brought their rabbit in 5 or more times.

Medical Records and Health Issues

Most, 23 out of 34 (67.6%) subjects reported that their rabbits were coming to the veterinarian for routine wellness, while the remaining 11 out of 34 (32.4%) subjects stated their rabbits were coming in for health problems. Each veterinarian indicated in the medical records if a rabbit was coming in for routine wellness or for a medical problem. These veterinarians reported that 15 out of 34 rabbits (44.1%) were coming in for wellness visits, and the remaining 19 out of 34 (55.9%) were coming in for problem visits. Eight of 23 (34.8%) rabbits were categorized as problem visits by veterinarians, but reported as wellness visits by owners. Nine out of 19 (47.4%) rabbits presented with medical problems that were likely attributed to poor husbandry. It could not be determined from the medical records whether 2 (5.9%) rabbits' health problems could be helped with better husbandry practices.

Respondents reported respiratory signs such as sneezing, runny nose/eyes, and coughing as the most common reason for problem visits. Rabbits also presented for decreased appetite and defecation, and dermatology issues. One respondent stated behavioral problems, specifically barbering, as the cause for the visit. All rabbits coming in for wellness visits were either for annual visits, pre-neuter visits, or routine teeth trims. Veterinarian assessments often reported dental issues, such as malocclusion, overgrown incisors, and irregular incisors, in addition to the problem that the owner cited as the presenting complaint.

Owner Demographics

The age and gender distribution of respondents are given in Table 1.

The education level of respondents ranged from high school to the completion of a professional degree. Half of the respondents (17 out of 34) were highly educated, either having

completed college or a graduate or professional degree. Two out of 34 (5.9%) respondents had completed some high school. Four out of 34 (11.8%) subjects completed high school. Eight out of 34 (23.5%) respondents had completed some college or vocational training. 3 out of 34 (8.8%) respondents had an Associate's degree.

DISCUSSION

Our prediction that owner knowledge influences husbandry practices was confirmed by the relationship between knowledge scores and husbandry practice scores. Owners who were more knowledgeable in rabbit care were more likely to act out these practices, and provide better care for their pets. Better husbandry practices can effectively minimize the number of visits these owners make to the veterinarian with their rabbit for health problems (Banks et al., 2010).

Owners with higher knowledge scores were more likely to have done research about rabbit care and husbandry prior to acquiring their pet. However, this relationship was not statistically significant, likely due to our small sample size. If owners conduct research prior to purchase from pet stores or other less reputable sources, where knowledge is rarely passed on at point of sale, many rabbits' welfare in the home could be improved. Many survey respondents had previously owned rabbits, so while they had not conducted research prior to acquiring their current pet their knowledge scores were high due to their previous experience. The small size of this study did not allow us to further explore this relationship.

Husbandry practices we evaluated in the husbandry practice score included questions about spay/neuter status, diet, exercise, cleaning practices, and companionship. This composite

score thus evaluates the total care of the rabbit, but does not highlight specific practices that seem to be influenced by whether prior research was conducted. Trends in the data support the hypothesis that knowledge leads to better husbandry practices, and can be shown through specific practices. For example, the vast majority of respondents who conducted research had litter-box trained rabbits. It is possible that owners who choose to take the time to research also may be willing to take the time to learn how to litter-box train their rabbits, as well as to spend the time actually training them. Owners who conducted research were also more likely to have castrated rabbits than those who did not suggesting they know of the health benefits of spaying/neutering pet rabbits. Owners who conducted research represented a large portion of the rabbits coming in for their first veterinary visit. This finding indicates that these owners may understand the importance of establishing routine veterinary care for their pet, and are more likely to bring a rabbit in after acquisition. Furthermore, owners bringing in rabbits to the veterinarian may be more likely to have conducted research than the average rabbit owning population. It also suggests that these owners may care for their rabbits well and do not need to bring their rabbit in for many sick visits due to poor husbandry. It also indicates that if owners are educated about the need to bring their rabbit in for routine care veterinary visits may increase.

All respondents who adopted their rabbit from an animal shelter conducted research prior to acquisition, and made up almost one third of total respondents who conducted research. This suggests that potential owners who conduct research are more likely to obtain animals from reputable sources. It can also be inferred that these owners are not making an impulse purchase or adoption, as is found in many pet stores (Edgar and Mullan, 2011). Most rabbits coming from

animal shelters were spayed/neutered. Many animal shelters castrate rabbits prior to adoption both to prevent unwanted litters, as well as for the health and behavioral benefits.

One half of respondents that did not conduct research prior to rabbit acquisition had more than one rabbit. It is possible that these owners did not research rabbit care because they already owned a rabbit, and did not feel they needed to research further. This phenomenon may have affected the results because these rabbit owners may still have been very knowledgeable.

Several limitations in this study may prevent results from being generalized to the larger population. In order to show statistical significance for trends found in our data, the study would need to be replicated on a larger scale. Because we set out to characterize the health and welfare of rabbits presenting to the veterinarian, our study is only representative of rabbit owners seeking veterinary care for their pets. These rabbit owners are likely more informed than the general population of rabbit owners who do not seek veterinary care for their rabbits.

There are notable differences between respondents who filled out the survey online, and those who filled it out in the waiting room. Those who filled it out online were both less likely to do prior research and had lower knowledge scores. It is possible that these owners had lower knowledge scores because they did not conduct research prior to rabbit acquisition. It is unknown why respondents filling out the questionnaire online were less likely to do research. We theorize it may be because the majority of online respondents had more than one rabbit, and owners with multiple rabbits were less likely to have conducted research.

A number of studies in Europe have demonstrated that poor husbandry in the home is often associated with health problems such as dental issues, respiratory disease, and gastrointestinal upset. This study showed that over one quarter of rabbits presenting to the

veterinarian had health problems that could be improved with changes in husbandry, such as diet and housing. As an incidental finding, we saw that many of these rabbits' health issues, particularly dental problems that were not related to husbandry were likely due to poor genetics. This finding presents an avenue for potential future research into the role poor genetics plays in the health and welfare of pet rabbits.

Owners reported in the survey whether their rabbits were coming in for wellness or sick visits with the majority stating the visits were routine care. Veterinarians marked in the medical record the type of visit the rabbit was coming in for as well. It is notable that there was a discrepancy between 8 of these rabbits reported as wellness visits by the owner and sick visits by the veterinarian. This discrepancy occurred with dental issues, skin issues, and digestive issues. Thus, owners may not always have the ability to tell when their pet is not healthy, and may need more knowledge of normal rabbit behavior to pick up on clues that their rabbit feels unwell, such as changes in defecation, changes in coat characteristics, and trouble eating or discomfort.

Veterinarians are a resource for rabbit owners to learn more about proper care of their animals, especially when they may have not had much guidance at the point of sale or adoption. However, by the time these animals are at the veterinarian they may have already suffered from the consequences of poor husbandry. Owners that do not know or do not want to bring their animal to the veterinarian miss out on this potential resource. Ideally, rabbit owners should have a working knowledge of caring for their pet prior to purchase or adoption, and use veterinarians as an avenue for further education.

The findings of this study suggest that owner knowledge plays a large role in how rabbits are cared for in the home, and emphasizes the importance of ensuring pet owners have this

knowledge at the point of sale or adoption. While respondents in our survey who conducted research were likely to have more knowledge on proper care, we cannot rely on potential owners to conduct independent research prior to purchase or adoption, especially when owners make an impulse purchase, or obtain a rabbit through a friend or family member. Therefore, it is important owners have knowledge passed on at the point of sale. A 2012 study by Cook and McCobb showed that rabbits in New England were most often surrendered to shelters due to an inability or lack of desire to care for the rabbit(s). European studies have shown that rabbits purchased at pet stores are often impulse purchases, and purchasers have no real knowledge of how to care for these animals. A recent study by Washington, McCobb, and Dowling demonstrated that pet store workers have the least knowledge of rabbit husbandry and care, when compared to rabbit rescues and animal shelters. Our findings indicate that knowledgeable owners are more likely to better care for their rabbits. We encourage anyone who sells or adopts out rabbits to work to ensure that their employees are able to provide comprehensive guidelines to new owners about how to care for their rabbits in order to improve pet rabbit welfare. If owners are better informed they may either choose not to purchase or adopt a rabbit that they do not have the time or desire to care for, or will obtain a rabbit and provide him or her excellent care in the home.

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TABLE 1

Mean knowledge scores of 34 veterinarian clients with rabbits in Massachusetts and New Hampshire

Prior Research	Mean*	Standard Deviation	Std. Error
Yes	87.7%	0.106	0.022
No	80.0%	0.137	0.043

Note:

* A Mann-Whitney test indicated that the difference in mean scores between those who conducted research and those who did not was not significant, $U(31)=67.0$, $p=0.053$

TABLE 2

Mean husbandry practices scores of 34 veterinarian clients with rabbits in Massachusetts and New Hampshire

Prior Research	Mean*	Standard Deviation	Std. Error
Yes	64.3%	0.139	0.029
No	57.8%	0.224	0.071

Note:

* An independent samples t-test indicated the difference between those who conducted research and those who did not was not significant, $t(12.2)=1.013$, $p=0.415$

TABLE 3

Age and gender distribution of respondents surveyed at veterinary clinics in Massachusetts and New Hampshire

		# of respondents
Age	18-34	16 (47.1%)
	35-54	12 (35.3%)
	55-74	5 (14.7%)
	75+	1 (2.9%)
	Total	34
Gender	Female	22 (68.8%)
	Male	10 (31.1%)
	Total	32

Note: Two survey respondents omitted gender when responding to demographic questions

Appendix

Rabbit Husbandry and Health Survey

Where did you get your rabbit?

- a) from a pet store
- b) from an animal shelter
- c) from a rabbit rescue
- d) other, please describe: _____

Did you conduct any research on rabbits before acquiring your pet?

- a) yes
- b) no

If yes, please explain what type of research: _____

How long have you had your rabbit? _____

How many times has your rabbit been to the vet?

- a) first visit today
- b) 1-2 previous times
- c) 3-4 previous times
- d) 5 previous times or more

My rabbit is at the vet today

- a) for a routine wellness visit
- b) because he/she is sick

If sick, please describe: _____

How can you tell if your rabbit is sick? _____

Is your rabbit spayed/neutered?

- a) Yes
- b) No

Who is the primary caretaker for the rabbit?

- a) I am

- b) A spouse/significant other/other adult
- c) A child over the age of 12
- d) A child under the age of 12

What do you feed your rabbit? Please list everything you feed and approximate amounts: _____

How often do you give your rabbit leafy greens?

- a) never
- b) 1-2 days a week
- c) 3-4 days a week
- d) 5-6 days a week
- e) 7 days a week

Does your rabbit participate in destructive behavior?

- a) yes
- b) no

If yes, please describe: _____

Does your rabbit

- a) live alone
- b) lives with one other rabbit
- c) lives with another type of small mammal
- d) lives with two or more other rabbits

What type of enclosure does your rabbit live in?

- a) cage
- b) hutch
- c) tank
- d) other

If other, please describe: _____

What size is your rabbit's enclosure? (Ex. Standard sized rabbit cage from pet store, specific dimensions, etc.)

Where is your rabbit's enclosure?

- a) inside
- b) outside
- c) both

If both, please describe _____

Is your rabbit litter-box trained?

- a) yes
- b) no

What kind of bedding do you give your rabbit?

- a) hay
- b) pine chips or other wood chips
- c) Care Fresh
- d) Recycled newspaper
- e) Towels
- f) No bedding necessary

How often do you clean your rabbit's enclosure? What do you clean it with? _____

How often does your rabbit spend time out of the cage? _____

Spaying/Neutering a rabbit

- a) can reduce the likelihood of cancers
- b) will create behavioral problems
- c) is not recommended
- d) will have no health benefits

Spaying a female rabbit

- a) can decrease behavioral problems
- b) reduce her chances of getting uterine cancer
- c) eliminate unwanted litters
- d) all of the above

Rabbits live on average

- a) 1-2 years
- b) 3-5 years
- c) 6-12 years
- d) 12-16 years

Rabbits are considered to be senior at ___ years of age

- a) 3
- b) 4
- c) 5
- d) 6

A rabbit should eat (circle all that apply):

- a) plain pellets
- b) pellets fortified with seeds/grains
- c) hay
- d) leafy greens
- e) fresh fruits

Should a rabbit be given toys?

- a) Yes

What kind of toys? _____

- b) No

Why? _____

When a rabbit thumps his/her back legs, he/she feels

- a) happy
- b) tired
- c) threatened
- d) content

Do rabbits enjoy being handled?

- a) yes
- b) no

How should a rabbit be held?

- a) in a loose grip
- b) away from the body
- c) by the scruff or ears
- d) by supporting their back end

How should you ensure a rabbit does not leap out of your arms?

- a) put down with backend first
- b) Picked up by their scruff and placed on the ground
- c) put down facing forward
- d) It's alright to let them leap out of arms.

Agree or Disagree: Rabbits teeth naturally wear down, so they do not need to be checked

Agree or Disagree: Rabbits should have time out of the cage to exercise everyday

Agree or Disagree: Rabbits do not need to be provided with unlimited amounts of hay

Agree or Disagree: Spaying/Neutering a rabbit has no health benefits

Agree or Disagree: New foods should be introduced slowly and one at a time

Agree or Disagree: A rabbit only needs pellets; all other foods are a treat

Agree or Disagree: Scented shavings make good bedding

Agree or Disagree: Routine wellness visits at the veterinarian can help prevent later health problems

Did you fill out this survey:

- a) online
- b) in the waiting room prior to your rabbit's examination

Gender (please circle): M F

Highest Level of Education Completed (please circle):

- Some High School, no diploma
- High School Graduate: Diploma or Equivalent (ex. GED)
- Some College, no degree
- Trade/Technical/Vocational Training
- Associate's Degree
- Bachelor's Degree
- Master's Degree
- Professional Degree
- Doctorate

Age (please circle):

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75+