

Appendix

Years of failed Catch-and-Kill policies prove this method's ineffectiveness.

Animal control officers across the country have taken a stand against misguided policies after observing the futility of lethal methods firsthand.

In Washington, D.C., the Humane Rescue Alliance contracts with the city to provide animal care and control services, which includes Trap-Neuter-Return. As the former vice president of external affairs, Scott Giacoppo says, "Rounding up and killing of feral cats [is] essentially a reversal back to the animal policies of the 1800s that were ultimately proven to have no impact on the population. When they do a round-up-and-kill, that's going to cost taxpayers money, and people won't tolerate it." [xiii]

Per the website of Maricopa County Animal Care and Control in Arizona, "We have over 20 years of documented proof that traditional ways of dealing with feral cats don't work. The 'catch and kill' method of population control (trap a cat, bring it to a shelter, ask that the cat be euthanized) has not reduced the number of feral cats. The cat may be gone, but now there is room for another cat to move in. So, catch-and-kill actually makes the problem worse." [xiv]

San Jose Animal Care & Services decided to implement a Shelter-Neuter-Return (SNR) program to replace their policy of euthanizing feral cats when cat impoundments and euthanasia rates for treatable issues continued to increase at the municipal animal shelter. Jon Cicirelli, Director of San Jose Animal Care & Services, says the alternative is to continue euthanizing cats that don't have owners, a policy that's shown limited results. "For the past 50 years, we've killed umpteen million cats and we're no better off," he said. "That system clearly does not work. We have to try something new." [xv]

In 2009, Arlington County in Virginia approved a TNR program after years of trapping and killing community cats resulted in a continued increase of cat populations, nuisance calls, and euthanasia rates. [xvi] Susan Sherman, COO of the Animal Welfare League of Arlington, the county's animal control shelter, says, "I have been surprised that almost every resident who has complained about feral cats has chosen to participate in TNR once they understand it."

As more municipalities trade in their outdated catch-and-kill policies for Trap-Neuter-Return, it's no surprise that leadership organizations are adjusting their policies as well. The National Animal Care & Control Association amended its feral cat policy in 2008 to be more supportive of Trap-Neuter-Return, in part because, as then-president Mark Kumpf put it, "It's recognizing that in some cases, certain jurisdictions and communities are more interested in maintaining a stable cat population than they are in simply bailing the ocean with a thimble." [xvii] He continues: "What we're saying is the old standard isn't good enough anymore. As we've seen before, there's no department that I'm aware of that has enough money in their budget to simply practice the old capture and euthanize policy; nature just keeps having more kittens."

If catch-and-kill had any long-term effect on cat populations, animal control officers nationwide—and their leadership organizations—would have observed it by now.

ADDITIONAL CASE STUDIES OF SUCCESSFUL TNR PROGRAMS

CARVILLE, LOUISIANA^[xxii]

Until 1988, the Gillis W. Long Hansen's Disease Center had continuously attempted to remove the feral cat population on their grounds by trapping and removing them, but a reduction in overall numbers was never achieved. Patients continuously ignored regulations to stop feeding cats, and they interfered with the removal process by releasing trapped cats in fear of the cats being killed. On top of that, any void from the successful removal of cats created a vacuum effect and was quickly filled back to capacity. A study was conducted with the end goal of stabilizing the feral cat population and reducing turnover. The patients were informed that instead of eradicating the cats, a Trap-Neuter-Return (TNR) program would be put in place, and were reassured that the trapped cats would be returned to their colony after they were spayed or neutered. The cats were then observed on a weekly basis for six months, with a census taken at the 18 and 36-month marks. At the end of the 36-month program, 30 of the 40 original cats were located and identified, and no new litters were found. The overall health of the cats had improved, and there was a reduction in reproductive or territorial behaviors, and nocturnal vocalizing. Not only was the colony successfully stabilized, but the nuisance factor had also drastically decreased. TNR as an alternative to catching and killing, along with the benefits it provides, gained great support from both the patients and the administration.

FOSTER CITY, CALIFORNIA^[xxiii] ^[xxiv]

In 2004, approximately 175 community cats were living along a popular hiking and biking trail in the San Francisco Bay Area. The City of Foster City, the Homeless Cat Network, and the community decided to join forces to humanely stabilize this colony of cats, and Project Bay Cat was formed. Today, there are 24 cats there. Project Bay Cat's success is due to volunteers who undertook an intensive TNR effort, two private veterinary hospitals that donated their services to sterilize and vaccinate the cats, and one veterinarian who provides free ongoing care to the cats. As of 2017, 133 cats have been adopted, 96 percent of the cats have been spayed or neutered and vaccinated, and the colony size has been reduced by 86 percent.

JACKSONVILLE, FLORIDA^[xxv]

The group First Coast No More Homeless Pets introduced its Feral Freedom TNR program in 2008. The program was the first public-private collaboration in the nation to save all feral, stray, and community cats that entered a city's shelters. Jacksonville Animal Control and Protective Services reported that by 2012, the city saved over one million dollars, decreased cat intakes by over 25 percent (including intake for TNR), decreased cat euthanasia by over 75 percent, and increased feline live release rates to a 12-year high of 72 percent. The number of adoptable cats who are either adopted or transferred to a rescue organization has increased by an incredible 322

percent since 2007. The Feral Freedom program has also improved shelter employee morale and productivity, reduced workers' compensation claims, and reduced instances of shelter disease, like upper respiratory infections.

NORTHERN KENTUCKY AREA DEVELOPMENT DISTRICT[xxvi]

The Northern Kentucky Area Development District (NKADD) launched a community cat program in October 2016 to improve the live-release rates in three of the district's eight counties. Local nonprofit organizations and private veterinarians formed a partnership to provide free and low-cost spay and neuter surgeries to community cats who were diverted from the county shelters, as well as cats owned by low-income people and indoor cats whose owners do not qualify as low-income. In the first four months, the program did 2,262 surgeries and all three of the target county shelters improved their live release rates. Comparing the live-release rates for cats in those shelters for the first nine months of 2016, before the program started, to the first four months of the program from October 2016 through January 2017, live-release rates for cats increased from 82 percent to 88 percent in Boone, from 42 percent to 71 percent in Kenton, and from 49 percent to 83 percent in Campbell. Not only has the NKADD community cat program improved shelter outcomes, but the counties also have more resources available for animals in need, such as large cat-hoarding cases. Seven other districts in the state are now interested in implementing similar programs.

RICHLAND, MISSOURI[xxvii]

In 2015, the organization TNR A Better Chance collaborated with Alley Cat Allies to start a huge TNR effort, with the goal of spaying and neutering all of the estimated 1,000 outdoor cats in the city. In just one year, over 814 of the 1,000 cats were successfully neutered, vaccinated, ear-tipped, and returned. The Richland City Administrator, Greg Stratman, reported many benefits of a TNR program for his community, including a reduction of calls to city hall voicing concern about stray cats, increased public awareness, and more individuals taking responsibility for their pet's reproductive health. TNR A Better Chance has grown, reaching communities surrounding Richland City and over 2,500 community cats—with several hundred additional kittens and socialized cats adopted out. With support from Alley Cat Allies, TNR A Better Chance helped legislators in seven Missouri towns, including Richland, adopt model TNR ordinances that protect ear-tipped cats. These cats were once caught and killed or left to have endless litters of kittens—now they can live free, healthy lives in their outdoor homes.

SAN JOSE, CALIFORNIA[xxviii] [xxix]

In 2010, San Jose Animal Care and Services began a new Shelter-Neuter-Return (SNR) program. Cats who qualify are spayed and neutered, vaccinated, microchipped, and ear-tipped at the municipal shelter. After they recover from surgery, they are transferred to a nonprofit group, Town Cats, who returns them to their colony location. Four years later, cat and kitten impounds decreased

by 29.1 percent, euthanasia decreased to 23 percent of intakes, and euthanasia due to upper respiratory infection decreased by 99 percent. The city is also saving money, since the SNR program costs approximately \$72 per cat, versus \$233 per cat for impoundment and euthanasia. Jon Cicirelli, Director of San Jose Animal Care & Services, says the alternative is to continue euthanizing cats that don't have owners, a policy that's shown limited results. "For the past 50 years, we've killed umpteen million cats and we're no better off," he said. "That system clearly does not work. We have to try something new."

[xxx] [xxxi] SPARTANBURG, SOUTH CAROLINA

When Major Steve Lamb started directing Spartanburg Animal Services in 2009, he decided to shift the agency's focus from enforcement—handing out tickets and catching stray animals—to being a community partner. He launched a TNR program in 2013, which is funded by grants and includes low-cost spay and neuter clinics and educational workshops for the public. Since implementing the program, the euthanasia rate of cats impounded by animal control officers has gone from 78 percent to virtually zero. In fact, the city of Spartanburg's program has been so successful, a countywide program launched in October 2016.

[xxxii] ST. CLAIR SHORES, MICHIGAN

The city changed its ordinances in 2014 to allow TNR. That was the only way to continue its contract with Macomb County Animal Shelter, which no longer accepts any cats caught by a city that does not have a TNR program. Per Jeff Randazzo, Macomb County Chief Animal Control Officer, "This county was euthanizing all these cities' cats. The whole goal is to change things and make things better for the animals in our care." Not only did the ordinance change save animals' lives, it was also a financially responsible decision. Mayor Kip Walby of St. Clair Shores said, "It is actually cheaper this way than euthanizing. We didn't do it for the money, but as it happens... it is less expensive."

[xl]

Combine RTF and targeted TNR for greater impact

A comprehensive community cat program, combining return to field and targeted TNR, demonstrated a greater impact on feline intake and euthanasia over ongoing community-based TNR efforts. This paper examines data from the Albuquerque Animal Welfare Department, a municipal shelter in New Mexico, over a three year period. In this time, feline euthanasia declined by 84.1%, intake dropped by 37.6% and the live release rate increased by 47.7%.

Additionally, the shelter saw a modest increase in cats returned to their owners and feline adoptions as well as fewer calls to the city about dead cats.

Targeted TNR resulted in 82% decline from peak population in neighborhood study

Citizen science was employed to document the impact of TNR in one Chicago neighborhood. Colony populations decreased by a mean of 82% from peak and 54% from when the colony was first recorded. Eight of the 20 colonies identified in the neighborhood were eliminated by the end of the study period.

KEY SCIENTIFIC STUDIES ON THE EFFECTIVENESS OF TNR

The following scientific studies show that Trap-Neuter-Return (TNR) is the most humane and effective approach for managing community cats.

Finkler, Hilit, Idit Gunther, and Joseph Terkel. “Behavioral differences between urban feeding groups of neutered and sexually intact free-roaming cats following a

trap-neuter-return procedure.” *Journal of the American Veterinary Medical Association* 238, no. 9 (2011):1141-1149.

FINDINGS:

Researchers compared data from four community cat colonies: two that were cared for through Trap-Neuter-Return programs and two that were not. This study demonstrates that TNR reduces the behaviors associated with mating and can, therefore, address community concerns. They found that cats in the TNR colonies were less aggressive overall and that the neutered males were rarely aggressive towards each other at all, resulting in less yowling, fighting, and potential for injury than males in the intact colonies.

Hughes, Kathy L., and Margaret R. Slater. “Implementation of a Feral Cat Management Program on a University Campus.” *Journal of Applied Animal Welfare Science* 5, no. 1 (2002): 15-28.

FINDINGS:

Hughes and Slater document the success of a new Trap, Test, Vaccinate, Alter (spay or neuter), Return, and Monitor (TTVARM, a.k.a. TNR) program on the campus of Texas A&M University, looking at the changes between the implementation year and the year that followed. In the first year, 123 cats were trapped, compared to 35 in the second. Over the course of the program, 32 cats and kittens were adopted. In the second year, only three kittens were found, and the researchers assume that these were lost or abandoned, as no litters or nursing mothers were seen in that year. The program illustrates how a well-managed TNR program can stabilize a population of cats.

Levy, Julie K., David W. Gale, and Leslie A. Gale. "Evaluation of the Effect of a Long-Term Trap-Neuter-Return and Adoption Program on a Free-Roaming Cat Population." *Journal of the American Veterinary Medical Association* 222, no. 1 (2003): 42-46.

FINDINGS:

This study tracks a TNR program on a Florida college campus over the course of 11 years to determine the characteristics of cats involved and to document the effectiveness of the program at controlling the population of cats on the campus. Kittens and tame cats were adopted out, and new cats were trapped and neutered. At the end of the study, the population had decreased by 66 percent, and over 80 percent of the cats had been residents for more than six years—a duration comparable to the mean lifespan of 7.1 years for pet cats.

Neville, P.F. and J. Remfry. "Effect of Neutering on Two Groups of Feral Cats." *The Veterinary Record* 114 (1984): 447-450.

FINDINGS:

Researchers studied two colonies in Regent's Park, London, to determine whether neutering had any negative effects either on the social structure of the colony or on the individual cats. No negative health effects were observed, and the colony's social structure seemed to strengthen after the cats were neutered. Cats were seen to spend more time in groups, show fewer aggressive behaviors toward each other, and fight less.

J.K. Levy, N.M. Isaza, K.C. Scott. "Effect of high-impact targeted trap-neuter-return and adoption of community cats on cat intake to a shelter, *The Veterinary Journal* (2014), doi: 10.1016/j.tvjl.2014.05.001

FINDINGS:

This study assessed the effect of TNR concentrated in a region with historically high cat impoundments in a Florida community. A two-year program was implemented to capture and neuter at least 50 percent of the estimated community cats in a single zip code area, followed by return to the neighborhood or adoption. Trends in shelter cat intake from the target zip code were compared to the rest of the county. A total of 2366 cats, representing approximately 54 percent of the projected community cat population in the targeted area, were captured for the TNR program over the 2-year study period. After 2 years, per capita shelter intake was 3.5-fold higher and per capita shelter euthanasia was 17.5-fold higher in the non-target area than in the target area. Shelter cat impoundment from the target area where 60 cats/1000 residents were neutered annually

decreased by 66 percent during the two-year study period, compared to a decrease of 12 percent in the non-target area, where only 12 cats/1000 residents were neutered annually. This study demonstrates how high-impact TNR combined with the adoption of socialized cats and nuisance resolution counseling for residents is an effective tool for reducing shelter cat intake.

TNR Reduces Cat Numbers

Long-term TNR results: The ORCAT Program in Key Largo

Study

“Decrease in Population and Increase in Welfare of Community Cats in a Twenty-Three Year Trap-Neuter-Return Program in Key Largo, FL: The ORCAT Program,” published in *Frontiers in Veterinary Science*, 2019. Complete article available (open access) online: <https://www.frontiersin.org/articles/10.3389/fvets.2019.00007/full>

Overview

The Ocean Reef Club is a community of approximately 1,700 homes occupying roughly 2,500 acres, located on the northernmost tip of Key Largo in the Florida Keys. Residents began a trap-neuter-return (TNR) program, called ORCAT, in 1995.

Based on 14 years of cat “census” data and 23 years of veterinary records, this study demonstrates the potential of targeted TNR efforts to produce long-term reductions in free-roaming cat populations and improvements in the health of these cats.

Key points

Although the ORCAT program was launched in 1995, the first rigorous attempt to count the number of free-roaming cats in the community was not undertaken until 1999. Using a series of 10 population censuses conducted by a caregiver who “was highly knowledgeable of the entire population,” these researchers documented a 55% reduction in the population of free-roaming cats over 14 years, “from 455 cats recorded in 1999 to 206 recorded in 2013” [1]. Similar reductions have been reported elsewhere by other researchers investigating the effectiveness of targeted TNR efforts [2–7].

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ORCAT’s periodic censuses suggest that the number of cats congregating at each of the community’s designated feeding stations also decreased over time: “The average number of cats per station started at 7.6 in 1999, decreased to 5.2 in 2001, was maintained at between 4.6 and

5.3 from 2001 to 2006, before decreasing to 3.1 in 2008” [1].

In addition to the long-term population reduction, researchers documented improvements in the health of the Ocean Reef Club’s cats.

Based on 2,571 clinic records of 2,529 community cats, they reported an overall prevalence of feline immunodeficiency virus (FIV) of 3.3% per year (range: 0.0–8.5%) and an overall prevalence of feline leukemia virus (FeLV) of 3.6% per year (range: 0.0–11.6%). Prevalence of both viruses decreased over time, largely due to the “elimination of significant risk factors (fighting, mating, vertical transmission) for infection via sterilization, removal of positive cats, and vaccination against FeLV” [1].

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[Kreisler, R. E.; Cornell, H. N.; Levy, J. K. Decrease in Population and Increase in Welfare of Community Cats in a Twenty-Three Year Trap-Neuter-Return Program in Key Largo, FL: The ORCAT Program. *Frontiers in Veterinary Science* 2019, 6 \(7\).](#)

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5. [Swarbrick, H.; Rand, J. Application of a Protocol Based on Trap-Neuter-Return \(TNR\) to Manage Unowned Urban Cats on an Australian University Campus. *Animals* 2018, 8 \(5\).](#)
6. [Spehar, D. D.; Wolf, P. J. Back to School: An Updated Evaluation of the Effectiveness of a Long-Term Trap-Neuter-Return Program on a University’s Free-Roaming Cat Population. *Animals* 2019, 9 \(10\).](#)

1 00% reduction in 17 years ^[xliii]

Newburyport Massachusetts implemented a trap-neuter-return program in 1992 which resulted in the elimination of more than 300 cats from the small town’s waterfront. Prior to starting TNR, then a new strategy, none of the colonies were managed. The last known cat on the waterfront died at age 16, 17 years after the TNR program began. The area has remained free of cats since that time. Examining retrospective data, this case study illuminates the effectiveness of comprehensive humane cat management efforts, yet points to the need for the establishment of standardized data collection and assessment practices.

Spehar, D. and P. Wolf (2017). "An Examination of an Iconic Trap-Neuter-Return Program: The Newburyport, Massachusetts Case Study." *Animals* 7(11): 81.

3 1% reduction in 2 years^{xliii]}

This survey of Australians involved in trap-neuter-return found colony size decreased from 11.5 cats to 6.5 cats in 2. 2 years, a 31% reduction, through a combination of TNR and rehoming of social cats and kittens. Those surveyed reported a median of 69% of cats being sterilized. Cats were fed daily and provided prophylactic health care (primarily treatment for fleas and intestinal

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A n 85% reduction in population over 11 years^[xliv]

Before implementing a TNR program on the University of Central Florida campus, periodic trap and removal efforts tried to keep the population at bay when it increased to nuisance levels. This 11-year study followed a population of 155 free-roaming campus cats from 1991, when the TNR program began, to 2002. No kittens were observed on site after 1995. Additional stray or abandoned cats arrived, but they were neutered and adopted before they could reproduce. The campus cat population decreased by 85% to 23 cats in 2002, demonstrating that a long-term program of neutering plus adoption or a return to the resident colony can reduce free-roaming cat populations in urban areas (Levy et al., 2003).

H OW TNR BENEFITS PUBLIC HEALTH

Approximately 2–3 million cats enter animal shelters annually in the United States. A large proportion of these are unowned community cats that have no one to reclaim them and are too unsocialized for adoption. More than half of impounded socialized cats are euthanized due to shelter crowding or shelter-acquired disease, while the euthanasia rate for feral cats is virtually 100 percent. Trap-Neuter-Return (TNR) is an alternative to shelter impoundment, improves cat welfare, and stabilizes or reduces community cat populations. Opponents of TNR argue

free-roaming cats are a threat to public health, but there is a lot of misinformation in their claims.

* THE TRUTH ABOUT CATS AND TOXOPLASMOSIS

Understanding its Complex Lifecycle ^[xxxiii]

Enteroepithelial replication occurs in the cat intestine after ingestion of oocysts from fecal contamination or bradyzoites within tissue cysts. The oocyst is excreted unsporulated in the feces and is noninfectious. It sporulates in the environment, becomes infectious, and then can be ingested by a variety of intermediate hosts. Muscle and tissue encystment occur in the intermediate host.

The enteroepithelial cycle is found only in the definitive feline host. The extra-intestinal development of *Toxoplasma gondii* is the same as it is for all hosts, including rodents, dogs, cats, and humans, and is not dependent on whether tissue cysts or oocysts are ingested. After ingestion of oocysts, sporozoites excyst in the lumen of the small intestine. Sporocysts divide into two and become tachyzoites which multiply in almost any cell of the body and eventually encyst. These cysts grow intracellularly and contain numerous bradyzoites. Bradyzoites are released in the stomach and intestines when digestive enzymes dissolve the cyst wall.

Most cats become infected from eating animals soon after weaning and shed oocysts for only short periods (under three weeks) thereafter. Typically, cats shed oocysts for no longer than two weeks after their first exposure to the organism and generally do not shed them again.

Causes of Toxoplasmosis

Ingestion of undercooked, contaminated meat, or eating food that was contaminated by knives, utensils, cutting boards, or other foods that had contact with raw, contaminated meat are the most common sources of *Toxoplasma* infection for humans. The CDC lists Toxoplasmosis as the second leading cause of death from foodborne illness in the [xxxiv] US. Despite the infrequency of cat-associated toxoplasmosis, many physicians, including obstetrician-gynecologists, still focus on cat litter disposal and overlook other, more common, potential sources of food ingestion or environmental exposure.

Substantial scientific evidence now exists that given that individual cats provide human emotional health benefits and are not a direct risk factor for acquiring toxoplasmosis where good hygiene is practiced, relinquishing them for that reason is unnecessary.

Toxoplasmosis and Schizophrenia

Research that shows individuals with schizophrenia, compared to controls, have had more contact with cats during childhood has been discredited by rigorous scientific review. According to the National Institutes of Health, research has identified several factors that contribute to the risk of developing schizophrenia: genes, environment, and different brain chemistry and structure. No mention of *Toxoplasma gondii* is included. ^[xxxv]

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Research from the National Feline Research Council:

See Appendix for a link to the website and further research. [xlv]

Do Cats Cause Schizophrenia? Longitudinal study challenges previous findings Study

“Curiosity killed the cat: no evidence of an association between cat ownership and psychotic symptoms at ages 13 and 18 years in a UK general population cohort,” published in *Psychological Medicine*, 2017. [Abstract available online here.](#)

Overview

In this study, researchers used data from the large-scale Avon Longitudinal Study of Parents and Children (ALSPAC) to investigate the possible relationship between cat ownership in pregnancy and early childhood (measured at 4 and 10 years of age) and psychotic experiences at ages 13 (6,705 survey respondents) and 18 (4,676 survey respondents) [1]. Their analysis suggests that cat ownership in pregnancy and early childhood poses no increased risk of psychotic experiences among young adults.

Key points

These researchers were interested in examining the possible connections between cat ownership in pregnancy and early childhood and psychotic experiences among young adults, in part, as a response to earlier studies that had demonstrated such a link [2,3] (in particular, to schizophrenia) but were “hindered by notable methodological limitations” [1]. And psychotic experiences in adolescence are, as the researchers note, “an established risk factor for later schizophrenia, particularly with respect to psychotic symptoms which emerge or persist in late adolescence” [1].

Earlier investigations likely suffered from small sample sizes, lack of control for confounding variables, selective participation, and recall bias.

Many previous investigations assumed that cat ownership early in life increases the risk of infection with the common parasite *Toxoplasma gondii*, for which cats (both domestic and wild felids) are the only known “definitive host” (the parasite is able to reproduce sexually and form egg-like spores, called oocysts, in these animals).”

Results

This study revealed no evidence of a relationship between cat ownership in pregnancy and early childhood and psychotic experiences among young adults — thereby challenging the links between cat ownership, *T. gondii* infection, and mental illness suggested by some previous studies.

Methodology

The large sample size and research design employed in this study offered many advantages over previous research on the topic. The Avon Longitudinal Study of Parents and Children recruited 14,541 pregnant women from Avon (formerly designated as a county in the southwest of England) with a total of 14,701 children eventually enrolled.

The unusually large sample used for this study allowed researchers to consider various co-founding factors (e.g., “ethnicity, maternal academic achievement, and social class”) and examine the impact of missing data in their analysis. Among the key advantages of prospective cohort studies is that they allow researchers to know when “exposure” occurs (e.g., cat ownership) and whether or not that precedes the outcome of interest (e.g., psychotic experiences). They also allow researchers to assign numeric values to risk factors.

As also noted by the authors of a related 2016 study [4], the results of this study differ from those of many others on this topic. The researchers note that earlier investigations likely suffered from small sample sizes, lack of control for confounding variables, selective participation (i.e., a non-random sample), and recall bias (i.e., when participants report previous experiences inaccurately).

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In Summary

“Cats have gotten a bad rap about how they transmit toxoplasmosis to humans and how they cause spontaneous abortion in women and blindness and mental retardation in newborn and older children. While it is true that cats are the only definitive host for the infective stage of the *Toxoplasma* organism, they are not the most common source of human infection. The most efficient way to get toxoplasmosis from a cat is to eat the cat undercooked. ^[xxxvi]”

THE TRUTH ABOUT CATS AND RABIES

Rabies in the United States

Every year the Centers for Disease Control and Prevention publish rabies surveillance in the United States the previous [xxxvii] This comprehensive document lists the numbers, and year. percentages, of wild and domestic animals diagnosed with rabies. It also gives guidance for what is considered exposure.

For the latest year available, cats accounted for 61.1% (272/445) of the rabid domestic animals reported in 2014, a 10.12% increase, compared with the 247 reported in 2013. Most of the rabid cats were reported from states where the raccoon rabies virus variant was considered enzootic (Pennsylvania, 47 [17.3%]; Virginia, 28 [10.3%]; New York, 25 [9.2%]; New Jersey, 22 [8.1%]; and Texas, 22 [8.1%]).

The 10.12% increase in feline rabies during 2014 does not signal a significant increase. CDC data shows that while there are annual fluctuations, the incidence is relatively flat over the past decade and a half. And, the 272 cases reported in 2014, while an increase of 10.12% over 2013 is below the average of 283 reported during the period 2009-2013, and is consistent with the average during the period 1989-2014.

Rabies has been diagnosed in a total of 37 persons in the United States since 2003. Twenty-six of the 37 (70%) individuals acquired the disease in the United States or Puerto Rico. Organ or tissue transplantation was identified as the source of infection for 5 of these 26 (19%) individuals. Bats were implicated as the source of infection in 17 of the 26 (65%) individuals.

The remaining four individuals consisted of two patients who were infected with the raccoon rabies virus variant, one who was infected with the mongoose rabies virus variant (Puerto Rico), and one (the only patient who survived) who was infected with an unknown rabies virus variant.

Nowhere does it list the cat as a source of exposure for a person acquiring rabies during 2014 (the latest year for which reporting exists). The last documented case of human rabies from exposure to a rabid cat was in 1975.

Rabies Vaccinations

Misinformation about rabies vaccines is largely due to confusion about the labeled duration of the vaccine and the duration of the certificate issued at the time of vaccination. There is guidance in the form of the Compendium of Animal Rabies Prevention and Control, which is updated every few years. The latest issue, published on March 1, 2016, took five years to be developed because there was ongoing research that documented the fact that dogs and cats who had been previously vaccinated, but were overdue, had just as robust an anamnestic response as those who were currently vaccinated. This scientific evidence has fundamentally changed the guidance in the

Compendium with how to handle animals who had been previously vaccinated, but were not currently vaccinated, and were exposed to rabid, or potentially, rabid animals.

Community cats have an excellent immune response following vaccination at the time of neutering.[xxxix] These vaccinations, which are an integral component of Trap-Neuter-Return (TNR) programs, help protect the health of individual cats and reduce the disease burden in the community. In addition, the vaccination of community cats at the time of neutering may protect them for much of their lifespan since the immunity that is developed has been shown to persist for a minimum of three to seven years in most cats.

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