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Hazards of Adopting Stray Animals

IN NEW YORK CITY, families that took in 3 abandoned kittens believed to be less than a month old are undergoing post-exposure rabies prophylaxis since one kitten was diagnosed as rabid. About a dozen people who came into contact with the kittens are being treated and the Department of Health and Mental Hygiene is seeking others who may have come into contact with the animals. Another kitten will be tested for rabies, however, the 3rd animal already had died and been cremated. The kittens were found in a diaper box in a vacant lot. How they became infected and why they were abandoned cannot be answered at this time.

This incident illustrates the potential dangers of recruiting household pets from feral animal populations and from sources with unclear histories.

A similar event occurred in Kansas City in February 1980. A family living near Kessler Park in the northeast section of the city found an approximately 2 m old kitten on their door step in early December 1979. They adopted the kitten and it became an indoor cat staying at both their house and their nearby son's home. The kitten was described as extremely loveable and would sleep on the children's pillows at night. There was no recollection of any bites, although several individuals were scratched during play activities with the kitten.

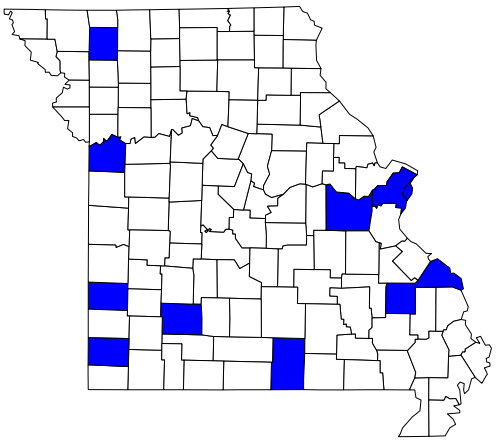
Throughout January, the cat had several bouts of a "respiratory problem" resembling a cat trying to cough up a hairball. Finally, on the 31st of January the respiratory problem became severe enough that the kitten was taken to a veterinarian. Although there appeared to be a temporary improvement in the animal's health, on the 2nd of February, neurological disease began to manifest itself. Animal Control was contacted and the kitten's head was submitted for rabies examination.

At this time, the state laboratory had not totally embraced diagnosing rabies just by fluorescent antibody and also tested each submission by mouse inoculation. This was fortunate since the antibody test was negative, but the mouse inoculation procedure yielded a diagnosis of rabies.

Critical assessment of the situation resulted in 6 persons in the family, a number of staff at the veterinary hospital, and one animal control officer undergoing post-exposure prophylaxis, and 2 animals received booster rabies vaccinations. An additional unvaccinated cat underwent a 6 month strict quarantine. Despite neighborhood quarantine and an increased number of patrols by Animal Control, no additional rabid animals were found.

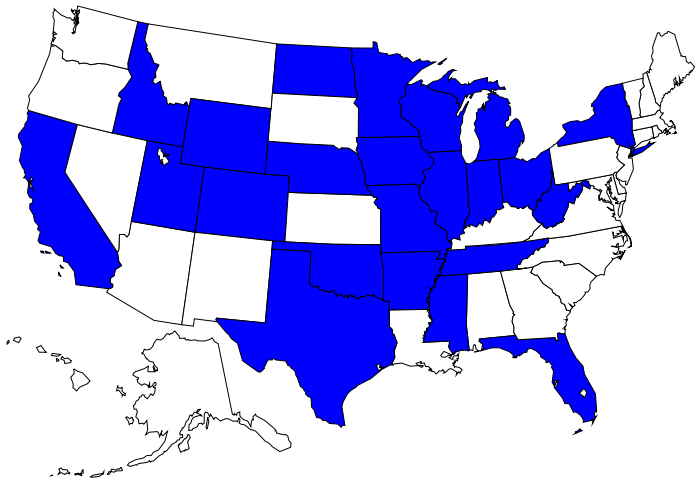
This particular cat was the last domestic animal to be diagnosed with rabies in Kansas City. Since that time all rabid animals have been bats with 20 (2 this year) being found in the city between 1/1/82 and the 6/30/06.

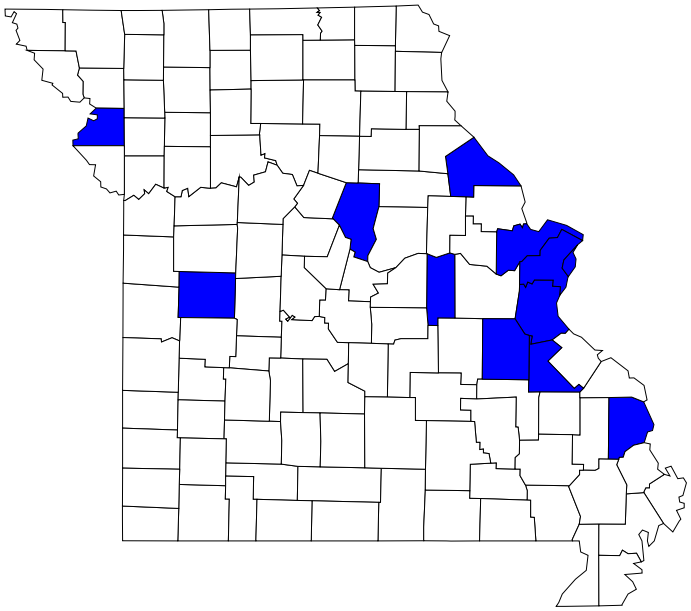
Currently, diagnosed cases of rabies in Missouri during 2006 are running at half the rate of 2005. According to the Missouri Department of Health and Senior Services, as of the 17th of June, only 14 rabid animals (9 bats including 1 in Kansas City, 4 skunks, 1 cow) have been recognized. The distribution of these cases can be seen in the accompanying map. At the same time last year, there had been 26 rabies cases reported. In 2005, Missouri reported 73 cases of animal rabies, the highest count and highest rate per 1,000 animals tested, in the last 10 years.



West Nile Virus—2006

WEST NILE VIRUS (WNV) is currently active across the lower 48 states and across much of Missouri. The two accompanying maps depict the distribution of laboratory confirmed cases as of 27th of June. Five human cases had been reported from California, Colorado, Mississippi, and Texas. Asymptomatic blood donors with probable WNV infections were reported from Colorado and Texas.





In 2005, Missouri recorded 30 human cases of WNV infection with 3 deaths, while Kansas had had 46 cases and 2 deaths. In the Kansas City bi-state metropolitan area, 10 human cases of WNV occurred in Kansas City, Clay, Jackson, Johnson, and Wyandotte counties.

Potpourri

SECONDHAND TOBACCO SMOKE is hazardous to human health, according to US Surgeon General Richard Carmona. On the 27th of June, his office released a 727 page report, *The Health Consequences of Involuntary Exposure to Tobacco Smoke* (www.surgeongeneral.gov/library). The major conclusions from that report were:

- Secondhand smoke causes premature death and disease in children and in adults who do not smoke.
- Children exposed to secondhand smoke are at an increased risk for sudden infant death syndrome (SIDS), acute respiratory infections, ear problems, and more severe asthma. Smoking by parents causes respiratory symptoms and slow lung growth in their children.
- Exposure of adults to secondhand smoke has immediate adverse effects on the cardiovascular system and causes coronary heart disease and lung cancer.
- The scientific evidence indicates that there is no risk-free level of exposure to secondhand smoke.
- Many millions of Americans, both children and adults, are still exposed to secondhand smoke in their homes and workplaces despite substantial progress in tobacco control.
- Eliminating smoking in indoor spaces fully protects nonsmokers from exposure to secondhand smoke. Separating smokers from nonsmokers, cleaning the air, and ventilating buildings cannot eliminate exposures of nonsmokers to secondhand smoke.

LAWN MOWERS in the United States cause more than 74,000 injuries every year with more than 5,000 injuries to children (*Annals Emerg Med* 2006; 47:567-573). And there has been an increasing trend of lawn mower injuries during the last 9 years. Injuries increase with age, peaking in persons older than 59 years. Debris from under the mower hitting a body part or entering the eye is the most common mechanism for lawn mower injury. The second most common injury is onset of nonspecific pain after the ordinary operation of the mower. Fracture of 1 or more phalanges of the foot was the most common diagnosis among lawn mower injury hospitalizations, with 34.4%, followed by traumatic amputation of the toe, with 32.4%. Individuals 15 to 19 y old have the highest rate of hospitalizations at 0.72 per 100,000 person-years. Among children <15 y of age, push mowers cause significantly more injuries than riding mowers. More than 600 children suffer amputations each year as the result of lawn mower accidents (*J Bone Joint Surg Am* 2004; 86-A:923-928).

NUMBERS, STATISTICS, AND other data flood our lives and many of us feel fortunate to just remember those "key" items, such as PINs and computer passwords. Of all the information a person accumulates over their lifetime, the overwhelming majority of persons cannot recall some basic statistics about themselves at the time of birth, such as how much they weighed. Well, fear not. If you need to know your birthweight and do not have a copy of your birth certificate handy, just ask your mother particularly if you were the first born. A study that asked women the birthweights of their children 35 to 70 years after delivery and then verified those reported weights using the birth certificates, found 96% accuracy for first born children but only 59% for subsequent births (*Ann Epidemiol* 2006; 16:429-431).

THOSE ANNOYING HOUSEFLIES buzzing around your meal at a fast-food restaurant may be more than a nuisance — they also may carry antibiotic-resistant and potentially virulent enterococci that have the capacity for horizontal transfer of antibiotic resistance genes to other bacteria (*Appl Environ Microbiol* 2006; 72:4028-4035). Kansas State University researchers screened houseflies from 5 different restaurants in mid-size communities in Kansas. They found that the majority of the flies carried antibiotic-resistant enterococci. This indicated the flies either developed in the manure of animals that were heavily exposed to antibiotics or that they were in contact with feces of some animals that were exposed to antibiotics. Of the flies found to carry antibiotic-resistant enterococci, 97% were positive for *Enterococcus faecalis*. The majority of *E. faecalis* isolates were found to carry virulence genes and have varying percentages of resistance to tetracycline, erythromycin, streptomycin, ciproflaxin and kanamycin. In addition to *E. faecalis, E. faecium* was associated with nearly 7% of the flies.

IN 2004, Missouri recorded 28 cases of tularemia (etiology: *Francisella tularensis*), the highest case count for any state. Missouri, Arkansas (20 cases) and Oklahoma (19 cases) combined accounted for half of the 134 cases of tularemia reported in the US. Traditionally, these three states have the highest case counts in the nation.

In the US, epidemiologic and microbiologic differences have been noted among *F tularensis* isolates since at least 1959. The bacteria were designated *F tularensis tularensis* (type A) and *F tularensis holarctica* (type B). In nature, these two subspecies are thought to maintain distinct but incompletely defined transmission cycles. Type A isolates are associated primarily with rabbits and hares and traditionally have been considered the more virulent strains, while type B agents are associated with rodents and lesser virulence. Both types are transmitted by ticks, although type A isolates have been associated with deerfly transmitted tularemia in the western states, while type B has been associated with waterborne outbreaks of tularemia.

Overall, the two subspecies can be segregated into several geographically distinct clusters (*Emerg Infect Dis* 2006; 12:1113-1118). Most of the isolates on the eastern seaboard, in and around Arkansas and Oklahoma, and in the broad area from the Colorado Rockies west to the Sierra Nevada Mountains are type A. In contrast, most isolates from the northern Pacific Coast and along tributaries of the Mississippi River are type B. Of 20 typed isolates from Missouri, 12 were type A and 8 were type B, whereas 97% of the isolates from Arkansas and Oklahoma were type A.

Recently, newer laboratory techniques have been applied to the epidemiology of tularemia and it was discovered that there are two variants of *F tularensis* type A ; these

are designated type A-east and type A-west (deer fly associated strains). Type A-west infections appear to be less severe than either type B or type A-east. This is supported by mortality figures: 14% for type A-east, 7% for type B, and 0% for type A-west.

F tularensis is listed as a potential category A bioweapon.

THE RATE OF antibiotic resistant invasive pneumococcal infections (etiology: *Streptococcus pneumoniae*) has decreased among young children and older persons in the US following the introduction of the pneumococcal conjugate vaccine (*N Engl J Med* 2006; 354:1455-1463). There was an increase in infections caused by serotypes not included in the vaccine.

HEALTH CARE WORKERS, black women, and women with high body mass index may be at greater risk of group B streptococcal (GBS) genitourinary tract colonization in pregnancy (*Obstet Gynecol* 2005; 16:1246-1252). Increases in risk are modest.

THE CENTERS FOR DISEASE CONTROL and Prevention (CDC) has issued its 2006 recommendations for the prevention and control of influenza (*MMWR* 2006; 55(RR-9):1-41). The principal changes compared to last year's recommendations include:

- Recommending vaccination of children aged 24-59 months and their household contacts and out-of-home caregivers against influenza.
- Highlighting the importance of administering 2 doses of influenza vaccine for children aged 6 months to <9 years who were previously unvaccinated.
- Advising health-care providers, those planning organized campaigns, and state and local public health agencies to a) develop plans for expanding outreach and infrastructure to vaccinate more persons than the previous year and b) develop contingency plans for the timing and prioritization of administering influenza vaccine, if the supply of vaccine is delayed and/or reduced.
- Reminding providers that they should routinely offer influenza vaccine to patients throughout the influenza season.
- Recommending that neither amantadine nor rimantadine be used for the treatment or chemoprophylaxis of influenza A in the US until evidence of susceptibility to these antiviral medications has been re-established among circulating influenza A viruses.
- Using the 2006-07 trivalent influenza vaccine virus strains: A/New Caledonia/20/1999 (H1N1)-like, A/Wisconsin/67/2005 (H3N2)-like, and B/Malaysia/2506/2004-like antigens.

MOTOR VEHICLE CRASHES are the leading cause of injury related death in the US. In 2005, more than 43,200 persons died as the result such accidents (www.nhtsa.dot.gov). Male drivers who have either a high (>35) or low (<22) body mass index (BMI) have a significantly increased risk of death in a motor vehicle crash compared to men with intermediate BMI (*Am J Public Health* 2006; 96:734-739). Female drivers do not have increased risk across the range of BMI. Men who had higher BMI were at greatest increased risk for death in front-end and left-side crashes, but not right-side and other collisions. The lowest risk for crash fatality was among men with a BMI of 28.

THE SUSTAINLANE US CITY RANKINGS (www.sustainlane.com) are the nation's first detailed report card on city quality of life combined with indicators of sustainability programs, policies and performance. Hallmarks of sustainable cities include a commitment to public health, an emphasis on creating a strong local economy, and citizens and city officials working together to make positive, thoughtful choices for the long-term benefit of the city and its residents. Of the 50 largest cities in the nation, Kansas City ranked 18th in sustainability. The quality of Kansas City's drinking water was ranked 1st and Kansas City was the only city where no contaminants were found in the drinking water.

THE PREVALENCE OF obese (BMI ≥30) smokers in the US is estimated to be 4.7% based on the national 2002 health interview survey (*Brit Med J* 206; 333:25-26). This translates into ~9 million smokers, concentrated primarily in the lower socioeconomic groups.