Snakes, snails and puppy dog tails: Teach patients to practice proper hygiene around animals to reduce their risk of contracting zoonotic infections
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by Sue Wallace, R.N.
Correspondent

Spurred by media reports of monkeypox, West Nile virus and other zoonotic infections, parents may ask for your opinion on how they should protect their families against these diseases. With more than 250 known zoonoses, the risk is not uncommon.

"With the greater expansion of suburbania [into areas that formerly were inhabited by wildlife], the potential for the spread of these diseases is tremendous," said Leslie Barton, M.D., FAAP, professor of pediatrics and zoonoses expert at the University of Arizona College of Medicine.

At the same time, however, the risk of zoonoses needs to be balanced against the benefits that animals provide, Dr. Barton added. "Children are attracted to them, they're wonderful companions and teach children wonderful lessons," said Dr. Barton. "Animals have inherent risks, but some animals are safer than others."

Diseases spread by pets
"Dogs and cats are great pets," said Carol Glaser, M.D., D.V.M., medical officer, Viral and Rickettsial Disease Laboratory Branch in the California Department of Health Services, although some diseases, such as toxocara from both cats and dogs and cat scratch disease from cats, can be issues.

"Awareness and common sense are important," said Dr. Glaser. Her children always wash their hands after touching an animal, immediately wash any scratches and never eat around animals. Patients' parents can be advised to take these steps with their own families to decrease their children's risk of catching a zoonotic infection.

While dogs in the United States and Canada typically do not carry the rabies virus, it still needs to be ruled out in the event of a bite, which is an extremely common event. There were 4.7 million dog bites, of which almost 800,000 required medical treatment in 1994 (the most recent year with available data), according to the Centers for Disease Control and Prevention (CDC) (www.cdc.gov/mmwr/PDF/wk/mm5226.pdf).

Other animals, such as small rodents, can be safe if appropriate safeguards are taken.

For example, rats are popular pets, said Dr. Glaser, but parents should be cautioned that if their children were to share food with a rat or to be bitten by the rat, they could get rat bite fever. The disease typically is spread via bites, but can be spread via secretions without being bitten. "Rat bite fever is very treatable and it doesn't happen very often, but if it doesn't get diagnosed it can get severe," said Dr. Glaser.

Risks from reptiles
There are some animals that are inappropriate pets, especially for families with young children.

"Kids under 5 years old shouldn't have reptiles as pets due to the increased risk of salmonellosis," said Gordon Schutze, M.D., FAAP, who presented a session on zoonoses and vector-borne infections at the AAP PREP meeting in July.

In addition to reptiles, CDC also advises against exposing children under 5 years old to amphibians, baby chicks and ducklings due to the risk of salmonellosis (www.cdc.gov/healthypets/child.htm).

Exotic animals also are not appropriate pets for children or adults, said Dr. Barton. "If you want to enjoy exotic animals, see them in the zoo," suggested Dr. Barton. "Then wash your hands before you get your ice cream cone."

Petting zoos and farms
The importance of handwashing, as well as not mixing animals with eating, was demonstrated after outbreaks of *Escherichia coli* O157:H7 (www.cdc.gov/mmwr/preview/mmwrhtml/mm5015a5.htm). In 2000, 58 children became ill and 19 were hospitalized after contact with farm animals. Many of the children experienced diarrhea, and nine of them developed hemolytic-uremic syndrome.

Dr. Barton pointed out that direct contact with a farm animal is not necessary to transmit pathogenic microorganisms. Undercooked or raw foods are another potential source of infection, and the U.S. Department of Agriculture recently recalled 729,000 pounds of steak due to possible contamination with *E. coli* O157:H7 (www.cdc.gov/ncidod/ecoli/).

Wildlife and insects
Some of the most publicized zoonotic infections involve wild animals. Deer are a preferred host of the ticks that spread *Borrelia burgdorferi*, the bacteria responsible for Lyme disease. West Nile virus is primarily spread by mosquitoes, which become carriers after biting an infected bird. Prevention efforts for these diseases focus on the invertebrate carrier.

DEET is effective against both ticks and mosquitoes, said Martha S. Wright, M.D., FAAP, a member of the AAP Section on Injury and Poison Prevention. The Academy recommends concentrations of up to 30% for use on children. She also recommended wearing long pants and sleeves and doing a tick check whenever kids are outdoors in areas endemic to Lyme disease.

Rabies is another serious zoonotic infection that is associated with wild animals, especially bats, according to Dr. Schutze. Skunks, raccoons and other wild animals also can carry the virus.

In addition to avoiding contact with wild animals, Dr. Schutze suggested being particularly cautious if a wild animal is acting unusual. However, it's not always obvious when a wild animal is acting strangely. "If you see a skunk in the daytime, that's very unusual and there's a good chance that it's rabid," he advised.

Ask about exposure
"Part of the problem in diagnosing zoonoses is that you have to think of them as possibilities," said Dr. Glaser. Asking about animal contact can be an important part of taking a history.

Pediatricians need to be on the alert for unusual zoonoses, said Dr. Glaser. "Who would have dreamed of monkeypox?" she asked. But "whenever we introduce a new animal into an environment, there's a potential for something to happen."

For more information on zoonoses, visit the CDC Web site (www.cdc.gov/healthypets/health_prof.htm).

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The 'hidden' uninsured
Children who lacked health insurance for part of a calendar year experienced delays in receiving health care similar to those who were uninsured the full year, an AAP analysis of the 2000 National Health Interview Survey indicated.

Approximately one in eight families in both uninsured groups reported that cost was a factor in receiving medical care compared with less than 2% of children insured for an entire year (irrespective of whether full-year coverage was public or private).

The authors noted that these findings highlight the importance of policy supporting health insurance retention, continuous Medicaid/State Children's Health Insurance Program eligibility, and reduction of waiting periods to enroll in government-funded health insurance programs.

Pediatricians and passenger safety
Results from a recent AAP Periodic Survey of Fellows indicated that while child passenger safety counseling is a priority for most pediatricians, there are likely to be age-related differences and gaps in that counseling.

Nearly 90% of pediatricians reported discussing passenger safety with families of patients younger than 12 months of age. However, the percentage of pediatricians counseling families decreased as the child's age increased, with only half of pediatricians counseling adolescents.

Passenger restraint systems also were discussed with greater frequency for younger patients. Almost 60% of pediatricians reported discussing such systems at every preventive visit with families of infants compared with 51% who discussed at every preventive visit for toddlers and 40% for older children.

While most pediatricians reported feeling confident about their ability to discuss the need for and selection of passenger restraint systems, only 45% reported feeling equipped to answer questions regarding proper installation. In addition, only 28% reported feeling comfortable discussing choice of appropriate systems for premature infants, and only 15% felt comfortable discussing systems for children with special needs.

For more information about these and other AAP research programs, visit www.aap.org/research.
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