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## Safeguarding Children's Health

Whether it's our children at home or in schools and other public places, we all want to protect them from any threat to their health and well-being. *Pests are one important threat to children.* A wide variety of pests are involved, but listed below are the four top pest health threats to our children.

**1. COCKROACHES.** This was a surprise threat no one was aware of until research showed roaches are a top cause of allergies among children. The allergens are the proteins in the cast skins and excrement of the roaches. The cockroaches' ability to transmit a vast array of other diseases is legendary, including food poisoning as they

wander over food and food-preparation surfaces.

**2. RATS & MICE.** These pests are another source of allergies in children. Rodents also transmit hantavirus and many other diseases, can bite babies, contaminate food with their droppings, and carry fleas and ticks which can then bite children and transmit diseases.

**3. STINGING INSECTS.** Insects like wasps and yellowjackets are everywhere, and fire ants and Africanized honey bees are spreading in this country. One or several stings from any of these insects is usually painful but not life-



threatening unless a child is highly allergic to them. But even children who aren't allergic are in danger if they wander too close to a hive and are attacked by large numbers of stinging insects.

**4. MOSQUITOES.** Because these insects transmit everything from West Nile virus to Zika, these pests are frequently in the news. West Nile is only one of many encephalitis-type diseases that mosquitoes can transmit. All cause a dangerous inflammation of the brain, and children are particularly vulnerable.

### Pest Prevention Tip of the Month

Install or renew weather stripping on the bottom, side, and top of all outside doors to help reduce the number of pests that enter through these cracks. This, along with our regular treatments, will help keep out pests that are attempting to invade your home.

## Mice & Rats—Yikes!

Ever had that *creepy feeling* of seeing something move out of the corner of your eye, only to suddenly realize that it really was a mouse scurrying for cover? There's a lot of that happening these days!



Even people who haven't had problems with mice or rats at other times of the year may have them now and in the months ahead. These pests often move indoors with cool weather—a natural result of their wanting to live in the most suitable environment they can find. It may be a great free deal for them, but it's no fun for you, as they:

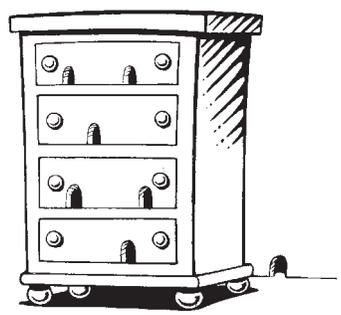
- 1. Eat & contaminate** your food.
- 2. Damage wiring and insulation** as they chew through and use it for nesting material. Even worse, their chewing can cause *electrical fires* and additional damage.

**3. Transmit diseases.** Some of the diseases associated with rats and fleas and mites from rats include *Salmonella* bacteria food poisoning, *leptospirosis*, *plague*, and *rickettsialpox*. Fortunately, the common house mouse isn't a source of *hantavirus*, but deer mouse and certain other mice and rats are carriers. Rodents are also a source of *allergens*.

**4. Can cause rat-bite fever** if they bite you.

**5. Cause embarrassment** and are a nuisance.

These pests don't go away on their own—in fact, the situation usually becomes worse if nothing is done about them because they can have a new brood of babies every 45 days! So, if you are having problems with mice or rats, call us today to control these troublesome pests.



**Oh honey, it's perfect!  
Now all of our children  
can join us for the holidays!**

## Can Spiders Hear You?

It has always been thought that because spiders don't have ears or eardrums, they can "hear" sounds only up to a couple inches away. A recent discovery with jumping spiders showed that these spiders actually have a much more acute sense of hearing than ever believed.



Spiders have very sensitive hairs on their legs that can feel vibrations. These hairs are so sensitive that they can feel the vibrations that sounds make.

Using a new technique, researchers were able to get in the spider's brain and see when neurons fire. *The spiders were able to hear sounds up to 16 feet away.*

So, could spiders be overhearing our conversations? Much is still unknown about what spiders can and can't hear. The jumping spiders were most sensitive to sound frequencies that would enable them to hear the beating wings of certain kinds of wasps that parasitize them—the spiders would stop and remain motionless when they heard those sounds. Spiders may never have developed an ability to hear voices, or other sounds that do not immediately threaten them.

These tests were done with jumping spiders. Other kinds of spiders are now being tested, to determine what they can and can't hear.

## Lone Star Ticks Spreading

Many tick species are expanding their range, including the lone star tick. This tick used to be restricted to Texas, Oklahoma, Missouri, and the Gulf Coast. Now it can be found as far north as Michigan, Wisconsin, and Maine, and is particularly abundant along the East Coast.

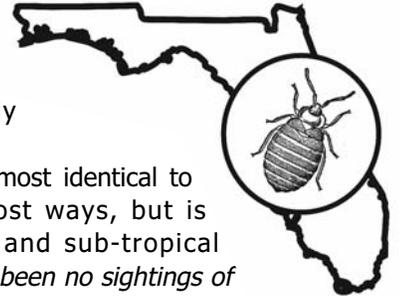
The primary host of this tick are white-tailed deer, which have become more abundant in recent years. But wild turkeys are also playing an important role, as these birds spread and become more numerous. Wild turkeys are a preferred host for the tick larvae and nymphs.

Lone star ticks spread a variety of serious diseases to people, cats and dogs. One of the lesser-known and more unusual problems from their bites is an allergic reaction when people eat red meat. The allergy has been increasing as the ticks have increased and spread.



## A New Bed Bug in Florida

The common bed bug has come back with a vengeance. But there is also another bed bug, the *tropical bed bug*, which has recently been found in Florida.



The tropical bed bug is almost identical to the common bed bug in most ways, but is restricted to more tropical and sub-tropical climates. *Previously there had been no sightings of the tropical bed bug in Florida for over 60 years.* Because it can be easily mistaken for the common bed bug, it may be in many areas, and more widespread than is currently known.

Tropical bed bugs develop faster than common bed bugs, but produce fewer eggs. Whichever bed bug is present, it may not make much of a difference in how we treat them.

*Other Bed Bugs:* Common and tropical bed bugs live entirely on human blood, but there are other bed bugs that occasionally bite people, but can't survive on human blood alone. These include *bat bugs*, *swallow bugs*, and *chimney swift bugs*. They aren't nearly as common a problem as human bed bugs, but they sometimes migrate indoors from bat and bird nests outdoors.

## Mice Make Ultrasonic Sounds



Mice are able to make ultrasonic "songs" to attract mates as well as help them defend their territories. The sounds are high frequency whistles, and are completely inaudible to the human ear.

Until now, it was not known how the mice were making these sounds. It turns out they are making the sounds in a way never seen before in any animal—they shoot air from the windpipe against the inner wall of their larynx. This causes a resonance and produces the ultrasonic "whistle".

The only thing that has been known before to make these high frequency sounds is the engines of supersonic jets. It is possible that other animals, including bats, may be using the same mechanism.



**THANK YOU!**

Whether you are a new or longtime customer, we want to take this opportunity to say "Thank you" for your valued business, and for telling others about our services. We appreciate the opportunity to protect your property and make your lives healthier and better by eliminating your pest problems. *We wish you all Peace, Joy and Love throughout the coming year!*