The CDC reports that ticks, mosquitoes, lice, fleas and other insect pests cause illness, suffering and death worldwide. Its experts suggest learning which insects are a problem here at home, how to keep them away, and what to do if you are bitten.

West Nile virus, Lyme disease, encephalitis, malaria, dengue fever, Rocky Mountain spotted fever and other diseases occur across the U.S., with the number of reported cases growing annually. Much more than just annoying, bites from infected mosquitoes and ticks can inject dangerous parasites and viruses into your body. These can produce nausea, fever, vomiting, convulsions, seizures, paralysis, coma and permanent brain damage and sometimes are fatal. Some strains of encephalitis result in death for 10 percent or more of the people who contract them.

While a serious threat, public health professionals stress that insect-borne diseases can be controlled and avoided by following the commonsense strategies suggested in this brochure.

Mosquito-Borne Diseases

Mosquitoes can carry an array of serious, sometimes deadly diseases — among them West Nile virus, malaria, encephalitis, dengue fever and yellow fever.

According to the Centers for Disease Control and Prevention, the number of mosquito-borne disease cases is growing in this country.

The rate of reported encephalitis cases has risen to more than 4,000 annually.

There are no approved human vaccines to prevent many forms of encephalitis. Active strains of encephalitis include La Crosse, St. Louis, eastern equine and western equine.

Tick-Borne Diseases

Ticks can spread serious diseases that cause permanent (chronic) health problems.

Lyme disease, human granulocytic ehrlichiosis and babesiosis are all carried by the deer tick. Another tick species carries Rocky Mountain spotted fever, and new tick-borne diseases continue to emerge.

According to the Centers for Disease Control and Prevention:

- More than 15,000 cases of Lyme disease are reported every year, with up to 10 times as many cases unreported and undiagnosed.
- Lyme disease can last a lifetime and cause permanent disability.
- Detected early, Lyme disease can be treated with antibiotics, but health experts suggest prevention as a first line of defense for you and your family.

For more information, visit www.csp.org.

Travel Outside the U.S.

Travelers outside the U.S. are exposed to many exotic tick- and insect-borne diseases, so it’s imperative to take additional precautions to ensure a healthy, happy trip. Each year thousands die from malaria, West Nile virus, dengue fever and other insect-borne diseases. There is valuable disease-prevention information for travel to foreign countries at www.csp.org, which can be found by searching for "global travel."
Insects Are Everywhere

You don't have to go on safari, trek deep into the woods, or take up fishing in the North Country to come into contact with biting insects and ticks. Mosquitoes, flies, chiggers, and ticks can be found much closer to home. Backyard decks, swings and sandboxes, neighborhood swimming pools, parks, recreation areas, sports fields, the beach, and tennis courts—all are prime locations for close encounters of the "biting" kind.

What can you do to reduce the incidence of insect bites and the accompanying risk of mosquito- and tick-borne diseases?

Experts suggest the following:
- Use an EPA-registered insect repellent that contains DEET, as recommended by the Centers for Disease Control and Prevention. These products are the most effective available.
- Carefully read and follow all directions for application and use.
- Dress in light-colored clothes to discourage mosquitoes and to enable you to spot ticks more easily.
- Wear collared long-sleeved shirts and long pants with cuffs for maximum protection. Tuck your shirt into your pants and the pant cuffs into your socks or boots.
- If possible, stay away from heavily wooded, high grassy areas and standing water.
- Look for ticks before you return indoors. Some are only the size of a pinhead. Check your clothing and especially around the scalp, neck, and between your toes, under your arms, and in your underwear.
- Remove ticks completely with tweezers. DO NOT remove ticks with petroleum jelly, hot objects such as matches or cigarettes, or by other methods. These methods can increase the chance of the tick injecting you with dangerous bacteria. Discard ticks carefully—dropping them in your yard invites infestation.
- If bitten by any insect or tick, treat the bite site with a topical antibiotic. If rash or flu-like symptoms occur within the next few weeks, seek medical attention immediately.

Tips for parents
- Do not assume that, just because insects are not biting you, they are not biting the children. You may need to apply repellent to your youngsters as needed.
- Children under age 12 should not apply these products to themselves or others.
- Keep insect repellents out of the reach of small children and carefully follow label directions when using repellents.
- Do not apply repellents containing DEET to a child's lips, mouth, hands, or eyes.
- Always check children for ticks and insect bites after time spent outdoors.

The American Academy of Pediatrics says products containing DEET are "the most effective" repellents available and should be used when necessary to protect against insect- and tick-borne diseases. Additional recommendations from the AAP include:
- Products containing up to 30 percent DEET can be used on children.
- Use DEET-based repellents on children older than two months of age.
- Apply DEET-based repellents sparingly and use additional protective measures (see tips in this brochure under "Insects Are Everywhere").

If a child gets bitten by an insect, the AAP suggests treating the bite area with a topical antiseptic. If rash or flu-like symptoms or signs of infection occur, seek medical treatment immediately.

Frequently Asked Questions:

Q. What is DEET?
A. DEET (N,N-diethyl-m-toluamide) is the active ingredient in most insect repellents available in the United States that are applied to the skin. DEET was developed more than 30 years ago by the U.S. Department of Agriculture for use by our military.

Q. Does DEET still require government approval?
A. Yes, although the EPA does not require that DEET be registered for use by the general public. The EPA has determined that the effectiveness and safety of DEET-based insect repellents have been established over a period of many years. The label instructions for these products require that they be used for a specific purpose, and they should be used as directed. The label instructions should be followed, and the product should be used only as directed.

Q. How long has DEET been available to consumers and how widely is it used?
A. Consumers have used DEET-based insect repellents for more than 30 years. Approximately 30 percent of Americans use DEET repellents each year. Use on children accounts for about 30 percent of all DEET insect repellent applications.

Q. Which DEET concentration should I use?
A. Most DEET insect repellents have a variety of concentrations based on a variety of uses. Generally, the longer you are outside, the higher concentration you should use. Higher concentrations are also recommended for all outdoor activities in regions with large populations of biting insects or ticks. Other factors are the type of activity and geographic location. The EPA has determined that, when label instructions are followed, all concentrations can be used by individuals of all ages.

Q. Can I use a DEET insect repellent and sunscreen together?
A. The effectiveness of insect repellents and sunscreens are dramatically reduced when you apply them at the same time. Decide which is your top priority at the moment—protection from insects or from the sun—and then apply either a repellent or a sunscreen, plus use other measures to reduce insect and sun exposure. If available to you, apply a specially formulated product that combines both DEET-based insect repellent and sunscreen.

Q. How long does bug season last?
A. Mosquitoes are most active from early spring until the first frost in many areas of the U.S. This is also true for ticks. In warmer regions, biting insects may be active year-round.

What's the best way to apply DEET insect repellents?

Do
- Apply to all exposed skin areas and clothing as directed on the product label. Use aerosols or pump sprays for skin and for treating clothing. These products provide even application.
- Use liquids, creams, lotions, towelettes, or sticks to apply more precisely to exposed skin.
- After outdoor activity, wash repellent-treated skin with soap and water. Always keep insect repellents out of the reach of small children.

Don't
- Don't apply to eyes, lips or mouth or over cuts, wounds, or irritated skin.
- Don't wear any2 or smirnare skin or clothing.
- Don't apply to skin under clothing.
- Don't apply more frequently than directed on the product label.