New Hampshire
Department of Health and Human Services

Fact Sheet

Flooding and Mosquitoes

Mosquitoes have four stages of development- egg, larva, pupa, and adult. The larval and pupal stages reside in water. Female mosquitoes deposit eggs on moist surfaces near water or directly on the surface of still water.

Heavy rains and floods can have a dramatic effect on mosquitoes. Floods in the spring can "wash away" existing mosquito larvae, pupae, and eggs before they have had a chance to become adults. However, an increase in water also provides ideal locations for future mosquito breeding for mosquitoes that survive the flooding conditions. A number of additional factors, including temperature, influence the number of surviving mosquitoes. The final result of these events is difficult to predict.

Although mosquito numbers may increase after a flood, most species of mosquitoes do not transmit diseases. These "nuisance" mosquitoes will bite people and may increase in numbers as soon as several weeks following a flood. Prevention methods described below can be used to decrease the number of bites. In New Hampshire, the mosquito species that can transmit Eastern Equine Encephalitis (EEE) and West Nile Virus (WNV) to humans and animals pose a risk between July and October; this is the time individuals need to be most diligent in preventing mosquito bites. It is impossible to predict the final effect of flooding on the number of mosquitoes of these species.

Regardless of the effect of flooding, New Hampshire citizens are urged to use the following precautions to protect themselves and their families from diseases transmitted by mosquitoes:

1. When possible, eliminate standing water and other mosquito breeding locations.
In warm weather, mosquitoes can breed in any puddle that lasts more than 4 days!

- Remove old tires from your property.
- Dispose of tin cans, plastic containers, ceramic pots, or other containers. Don't overlook containers that have become overgrown by aquatic vegetation.
- Drill holes in the bottom of recycling containers that are left outside.
- Make sure roof gutters are clean and draining properly.
- Clean and chlorinate swimming pools and hot tubs. If not in use, keep empty and covered and keep covers free of standing water.
- Aerate garden ponds or stock them with fish.
- Turn over wheelbarrows and change water in birdbaths at least twice weekly.
- Turn over plastic wading pools when not in use.
- Remind or help neighbors to eliminate breeding sites on their properties.

2. Be aware of where mosquitoes live and breed and keep them from entering your home.

- Mosquitoes lay their eggs in standing water. Weeds, tall grass, and bushes provide an outdoor home for the adult *Culex pipiens* mosquito (the common northern house mosquito), which is most commonly associated with West Nile Virus.
- Mosquitoes can enter homes through unscreened windows or doors or broken screens. Make sure that doors and windows have tight-fitting screens. Repair or replace all screens in your home that have tears or holes.

3. Protect yourself from mosquito bites.

- If outside during evening, nighttime, dawn hours, or when mosquitoes are biting, children and adults should wear protective clothing such as long pants, long-sleeved shirts, and socks.
- Consider the use of an effective insect repellent, such as one containing DEET. A repellent containing 30% or less DEET (N,N-diethyl-methyl-meta-toluamide) for children and adults. Use DEET according to the manufacturer's directions. Children should not apply DEET to themselves. Repellents that contain Picaridin or oil of lemon eucalyptus have also been determined to be effective.

For specific concerns about diseases caused by mosquitoess, call the New Hampshire Department of Health and Human Services, Communicable Disease Control Section at 603-271-4496 or 800-852-3345 x4496. For further information, refer to the Centers for Disease Control and Prevention website at www.cdc.gov or the New Hampshire Department of Health and Human Services website at www.dhhs.nh.gov.