

Fight the Bite: Protect Yourself Against Mosquito and Tick Bites

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Epidemiology Program

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Personal Protection

- Options for Repellents
- Protective Clothing
- Household tasks that can reduce mosquito populations
- Differences in protection options for mosquito bites and tick bites

Mosquito Repellents

- Repellents should be used anytime you are outdoors and could be exposed to mosquitoes
- CDC recommended repellents
 - DEET
 - Permethrin
 - Picaridin
 - IR3535
 - Oil of Lemon Eucalyptus



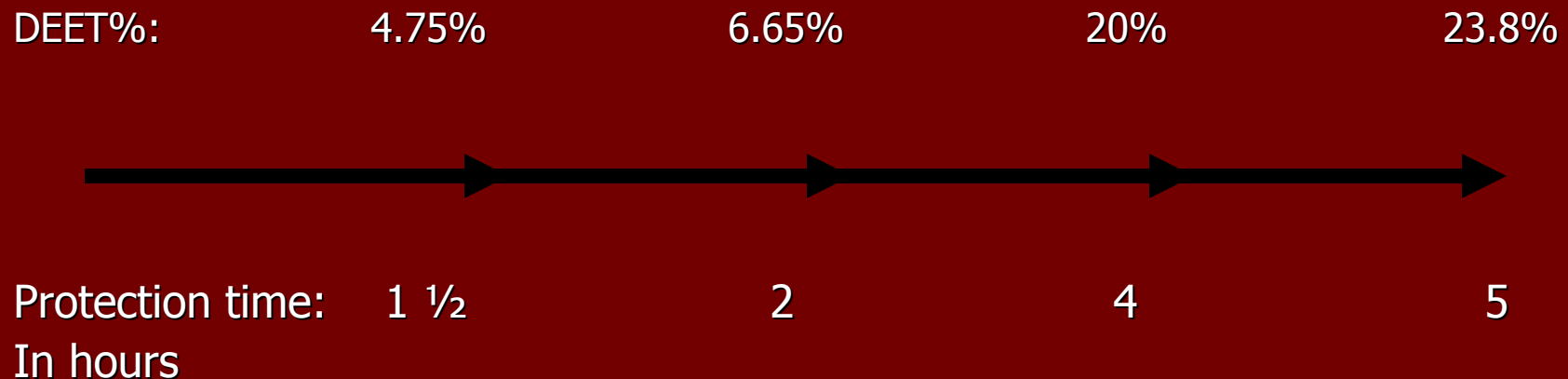
DEET

- N, N-diethyl-m-toluamide
- Available in many forms and concentrations
- Safety considerations for infants and children



DEET

- Effectiveness of DEET varies with concentration levels and time
- Factors such as temperature, perspiration and water exposure also affect efficacy



Permethrin

- Pyrethroid class of pesticides
- Classified as both a repellent and an insecticide
- Intended use is on clothes, shoes, bed nets, camping equipment, etc.
- NOT safe for use on skin



Picaridin

- KBR 3023
- Introduced to the US market in 2005
- Colorless and nearly odorless
- Product contains 5-20% of active ingredient
- Safe for use on skin



IR3535 and Oil of Lemon Eucalyptus



- The “Biopesticides”
 - Pesticides made from natural materials
- Oil of Lemon Eucalyptus – derived from leaves and twigs of *Eucalyptus citriodora*
- IR3535 – related to β -alanine
- Only 2 biopesticides shown to be comparable to DEET and Picaridin in effectiveness

Always Use Repellents Safely!

- Follow the instructions on the product label
- Don't use repellents under clothing
- Don't use repellents on cuts or irritated skin
- Avoid using repellents near mouth, eyes, ears
- Don't let children handle the product
- Wash skin and clothes after returning inside
- Use just enough repellent to lightly cover exposed skin and clothes

What else can I do?

- Wear long pants, long-sleeved shirts and socks when outdoors
- Use mosquito netting on playpens and strollers
- Avoid outdoor activities between dusk and dawn



Protect your home



- Keep window and door screens in good repair
- eliminate standing water
- dispose of or turn over cans, pots, containers, trash cans, wading pools, wheelbarrows, etc.;
- remove old tires
- clear gutters
- drain recycling containers
- larvicide standing water

The Tick



Tick Repellents

■ DEET

- can be used on skin or clothes
- Comes in many forms and concentrations
- Should be used according to package directions

■ Permethrin

- ONLY for use on clothes , not on skin
- Pretreat clothes, bed nets, shoes and camping gear
- Should be used according to package directions

What else can I do?

- Check yourself for ticks everyday
- Wear long sleeves, long pants and socks when outdoors – particularly in spring, summer and fall
- Stay on trails and cleared areas when hiking or camping
- Protect and check pets for ticks



Around the house

- Keep grass cut short
- Remove leaf litter and brush from around the home
- Prune low lying bushes to let in more sunlight
- Keep woodpiles and birdfeeders off the ground and away from the home
- Use a three-foot wide woodchip mulch or gravel barrier between the lawn and the woods
- Consider planting plants that do not attract deer

For more info...

- Massachusetts Department of Public Health - Bureau of Infectious Disease Prevention, Response and Services or Bureau of Environmental Health - www.mass.gov/dph
- Massachusetts Department of Agricultural Resources - www.mass.gov/dar
- US Centers for Disease Control - www.cdc.gov
- US Environmental Protection Agency - www.epa.gov
- National Pesticide Information Center - www.npic.orst.edu

Any questions?

