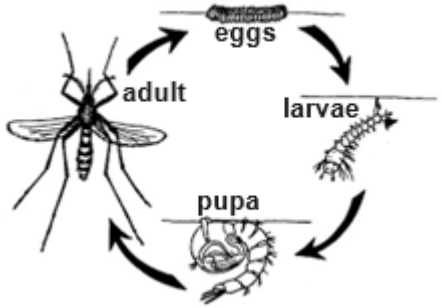
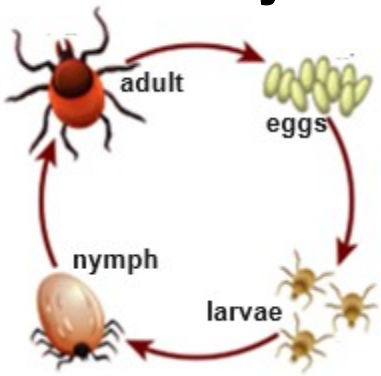
## WARDROBE


- LOOSE FITTING CLOTHES
- DENSE MATERIAL
- LIGHT COLORED FABRIC
- LONG SLEEVES (TUCK SHIRT INTO PANTS)
- LONG PANTS / SOCKS (TUCK PANTS INTO SOCKS)
- GLOVES (TUCK SLEEVE INTO GLOVE)
- EAR, HEAD & NECK COVERINGS


## Mosquito Life Cycle




## Tick Life Cycle




USE AN EPA APPROVED REPELLENT ON EXPOSED SKIN.

*With appreciation to-*

COMMUNITY BANK

HATTIESBURG CLINIC

PINEY WOODS CONSERVATION GROUP

*Forrest County Board of Supervisors*

# THE BUG CAMPAIGN

Education & Prevention

# PROTECTING YOURSELF AGAINST BUG BITES

THE BUG CAMPAIGN INC.
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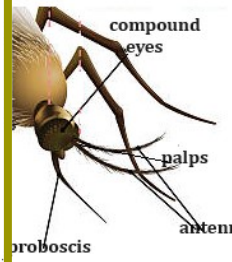
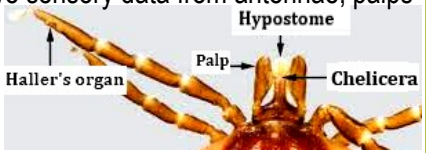
## WHY & HOW DO VECTORS BITE (Vector=Bug + Transferable Germs)

- Adult female mosquitoes and ticks bite humans and other mammals for blood proteins needed to develop their eggs.
- Adult females, but not male mosquitoes, have a sharp mouthpiece to pierce the skin to get to the blood stream. Ticks bite throughout their lifecycle, but adult male ticks do not gorge as do females; both nymph and adult female ticks can spread disease.

## MOSQUITOES, TICKS & OTHER BUGS' SENSORY SYSTEMS (THAT IS HOW THEY FIND YOU)




- Different creatures have unique olfactory systems which provide sensory perceptions of sight, sounds, smells and other. This is how they receive external information to find you and bite; some use mechanical means..
- Mosquitoes' neurons receive sensory data from antennae, palps and proboscis; ticks from their first forelegs.




- Studies indicate mosquitoes have a particular 'taste' for blood type "O". Some humans have skin chemistry that identifies their blood type, once sensed they are targets regardless of type.


- Mosquitoes and ticks detect carbon dioxide and heat to find a target. Ticks then find a dark, moist place to settle in for a long meal. Mosquitoes have preferences. Aedes aegypti mosquitoes like the scent of feet and will head toward the ankle/feet. Culex mosquitoes sense the chemical change in your skin when you sleep and bite with the anticipation it will avoid a slap.

## USE OF (INSECTICIDES) AND DEVICES (FOLLOW INSTRUCTIONS)

- Trapping devices can identify the types of mosquito or pests in your area. They use an attractant, for example CO2 or a UV light in a bluish cyan color to attract bugs and then entrap or kill them.


- Mosquitoes and other bugs are becoming resistant to certain pesticide chemical ingredients. Especially for municipal pest control, it is important to monitor the effectiveness by trapping and periodically changing ingredients to counter resistance.

## AVOIDING A BITE. USE EPA REGISTERED PRODUCTS- FOLLOW INSTRUCTIONS

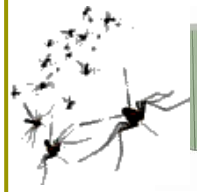
**PROTECTION** against bug bites requires a 'stepping stone' approach. Learn about disease carrying 'bug' vectors, the transmission of disease and how to avoid infection.

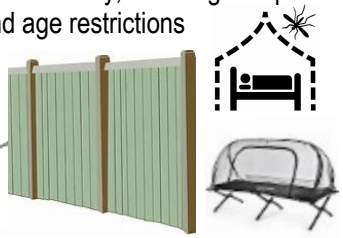
**FEMALE MOSQUITOES** have a 'hypodermic-type' needle to bite. Ticks position themselves on tall grass, bushes or shrubs, use their back legs to hold on, grab onto a target with the front pair of legs—called questing.

**PESTICIDE** products control, repel or kill specific pests. These include repellents, insecticides, acaricides larvicides, herbicides and fungicides. Many contain toxic ingredients. 25b repellents are those deemed a low-risk; these may include oil of citronella, boric acid, oil of lemon eucalyptus or other ingredients.

**REPELLENTS** hides your presence; insecticides kill pests.

- Use repellents on exposed skin; not under clothing
- Check levels of toxicity; and length of protection
- Note use and age restrictions







**OTHER MEASURES**

- Netting can cover the head, body, strollers
- Outdoor devices can be used in open spaces
- Some plants attract, some repel
- Vectors bite 24/7


**COLORS AND MATERIAL.** Mosquitoes are attracted to black, orange, red and cyan; less so to white, green and purple; ticks seemingly are drawn to deeper shades of dark colors.

Fabrics are being developed to be sufficiently dense to prevent a mosquito from biting through it. Ticks have difficulty biting through fabric so are more likely to crawl through it.

**PYRETHRUN, PYRETHRIN, PYRETHROIDS AND PERMETHRIN** are 'formulas' of the chrysanthemum. Permethrin is marketed for use on external garments (nothing touching the skin) and gear only to be used after it is dried. Be cautious (especially if sweating) of toxicity. Follow instructions on washing treated materials.

**WINDOW & DOOR SCREENS.** Install fine mesh window and door screens; check and repair any cracks or crevices in the home.

***While the term 'bug' is not the scientific nomenclature for all invertebrates and vectors, it is useful terminology for public conversations.***