

# Ticks: Prevent, Protect, and Promptly Remove



# Preventing Ticks

- Avoid tick prone areas
- Use tick repellents
- Create tick free zone in your yard
- Wear proper clothing when in tick prone areas

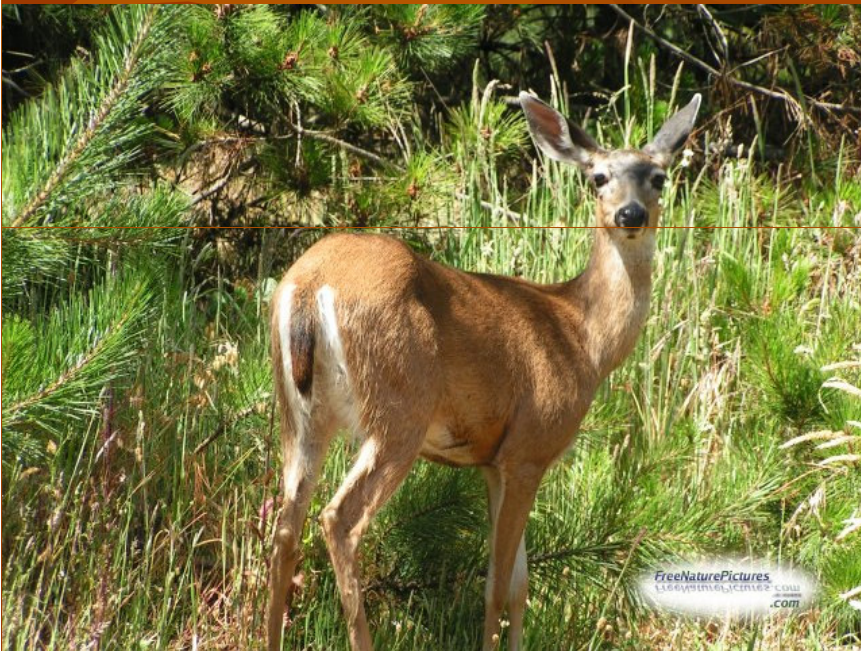
# Preventing Ticks

- 1. Avoid areas where ticks live

## Nature Trails

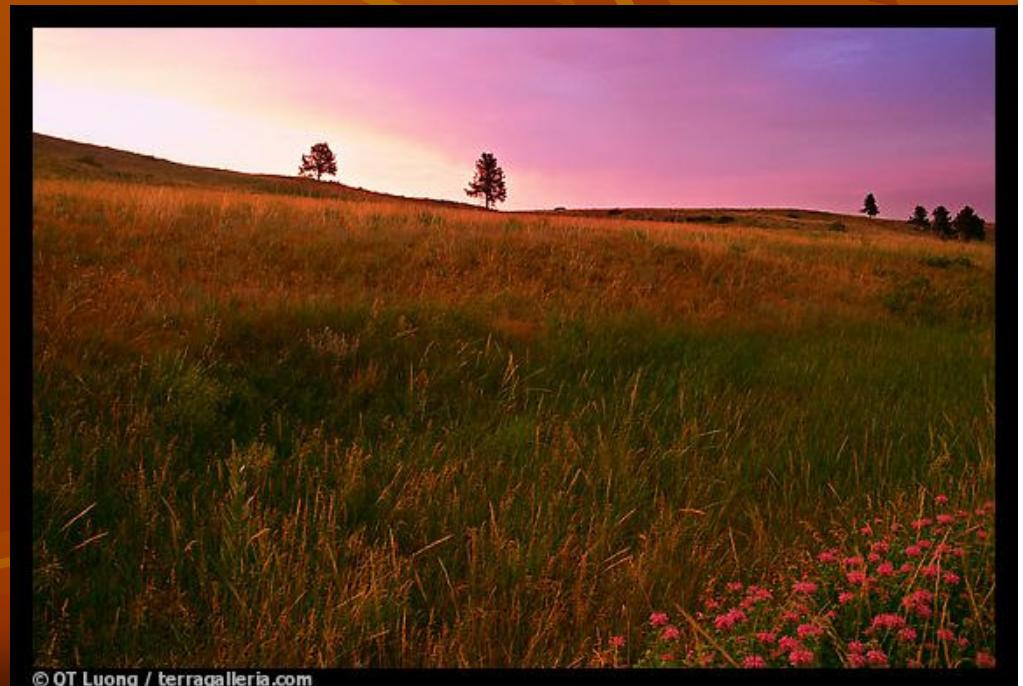


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Deer Habitats

Tall Grass



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# Common Tick Repellents



20% DEET  
(for skin)



Permethrin  
(only for clothes)

# DEET



- DEET is effective against both mosquitoes and ticks.
- DEET can be applied directly to EXPOSED skin and clothing during outings.
- DEET should be washed off with soap and water once you return indoors
- Do not overdose when using DEET
- Remember to follow the instructions on the label before using any product containing DEET.

# Permethrin



- Products containing Permethrin can only be applied to clothing and boots. (DO NOT apply permethrin to the skin)
- Apply permethrin to clothing outside and with enough time to allow the chemical to dry before wearing treated clothing.
- Once permethrin is applied it is effective for up to two weeks or two washings whichever comes first.
- Remember to follow the instructions on the label before using any product containing permethrin.

# Preventing ticks

- Create a “Tick Safe Zone” around the house by:
  - Reducing or eliminating rodent harborages or any plants that attract deer.
  - Creating a dry mulch or stone barrier between the yard and the wood line.
  - Keeping grass mowed
  - Removing leaf litter







# Preventing Ticks

- Proper clothing
  - Wear light colored clothing
  - Tuck pants legs into socks
  - Wear long sleeved shirts and long pants



# Don't forget your pets

- Consult your veterinarian for tick and mosquito prevention for pets



# Check for Ticks

- After returning indoors be sure to check yourself for ticks.

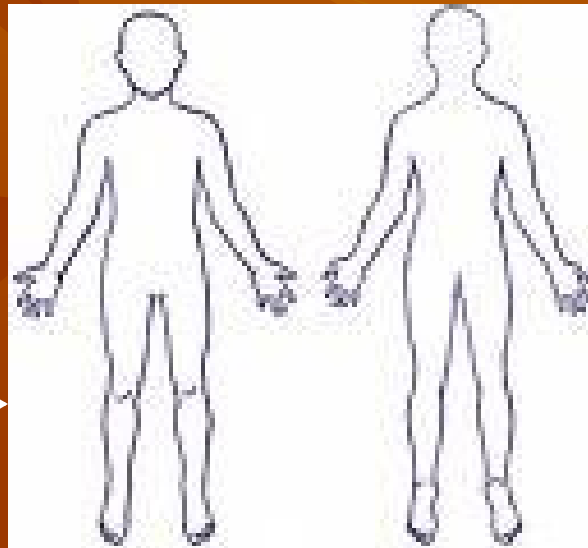
Under Arm



Groin

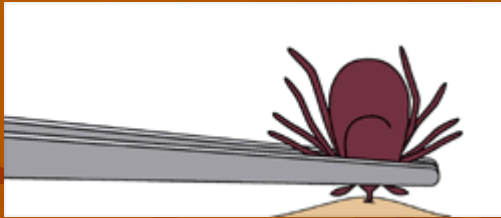


Knees

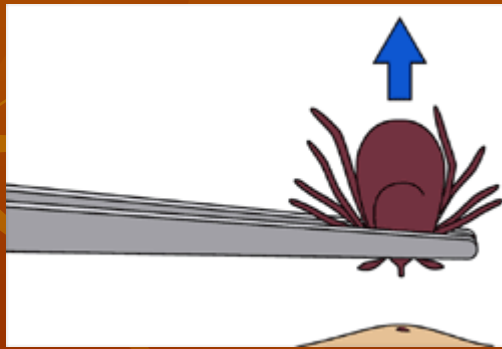




# Prompt and Proper Tick Removal



Swab the tick area with alcohol. Grasp the tick firmly with tweezers or tissue (not with bare fingers) pull the tick until it dislodges.



**Avoid crushing the tick's body. Do not be alarmed if the tick's mouthparts remain in the skin. Once the mouthparts are removed from the rest of the tick, it can no longer transmit the Lyme disease bacteria. Take out the mouthparts the way you would remove a splinter.**

**Wash the bite area with soap and water and apply antiseptic such as alcohol.**

**Do not use heat, oil, or vaseline to  
remove a tick.**

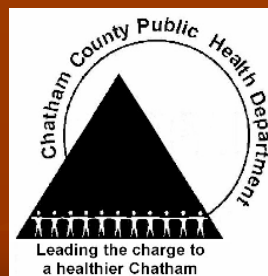


- Record the date of the bite on your calendar then watch for symptoms for the next 3-30 days, contact your doctor if necessary.





# Tick-borne Illnesses



# Rocky Mountain Spotted Fever

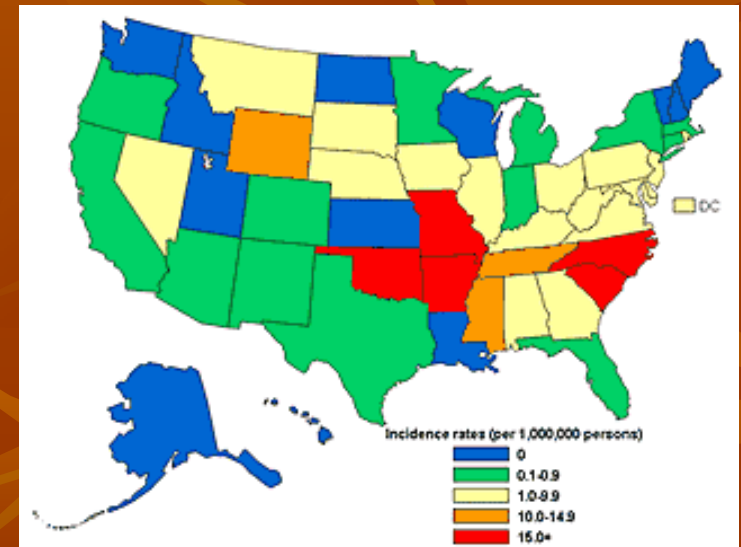


\*Most severe and most frequently reported rickettsial illness in the U.S.

\*The American dog tick *Dermacentor variabilis* and the Rocky Mountain wood tick *Dermacentor andersoni* are the primary arthropods that transmit *Rickettsia rickettsii*

\*5 to 10 days after an infected tick bite:  
Sudden onset of fever, headache, nausea, muscle and joint pain

\*Later symptoms include rash, abdominal pain, diarrhea  
\*Can be fatal



# Ehrlichiosis



\*Caused by the organism *Ehrlichia chaffeensis* or *Ehrlichia ewingii* which can be transmitted by an infected Lone Star tick

\*5 to 10 days after an infected tick bite:  
Fever, headache, fatigue, muscle ache nausea, vomiting, diarrhea, cough joint pain, confusion and rash

\*Symptoms could be mild or absent





# Lyme Disease



\*Caused by the organism *Borrelia burgdorferi* which is transmitted to humans by the bite of infected blacklegged ticks

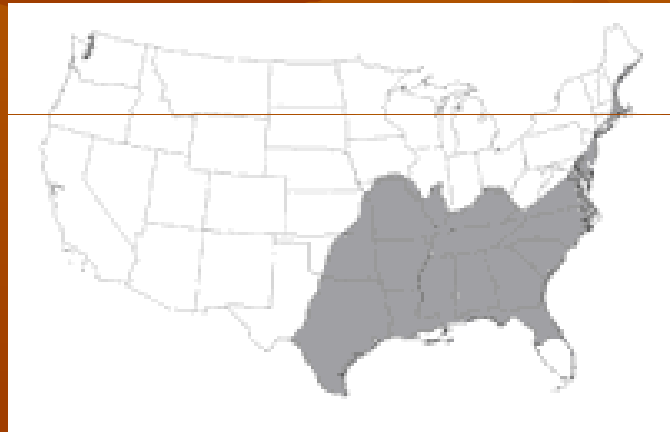


- \*Typical symptoms include fever, headache, fatigue
- \*Characteristic skin rash called erythema migrans
- \*Most cases can be treated with a few weeks of antibiotics
- \*We do not have good information on Lyme disease in NC yet

# Southern Tick Associated Rash Illness: STARI



\*Lone Star tick *Amblyomma americanum* found in Southeastern U.S. and Northeast coast



- \*Rash similar to that of Lyme disease
- \*Red expanding bulls eye lesion may appear 7 days after tick bite
- \*May also have fatigue, fever, headache, muscle and joint pain

# Relapsing Fever



Tick-borne relapsing fever (TBRF)  
Louse-borne relapsing fever (LBRF)



Commonly associated with soft ticks or lice  
found in or near old/rustic cabins in Western U.S.

Recurring episodes of fever, often accompanied by  
headache, muscle and joint aches and nausea



# Tularemia

- \*Also known as rabbit fever because it is typically found in animals such as rabbits, rodents and hares
- \*The bacterium *Francisella tularensis* can be transmitted through the bites of infected ticks or deerflies
- \*3 to 14 days after an infected tick bite:  
Skin ulcers, mouth sores, painful lymph glands, inflamed eyes, sore throat, pneumonia and diarrhea

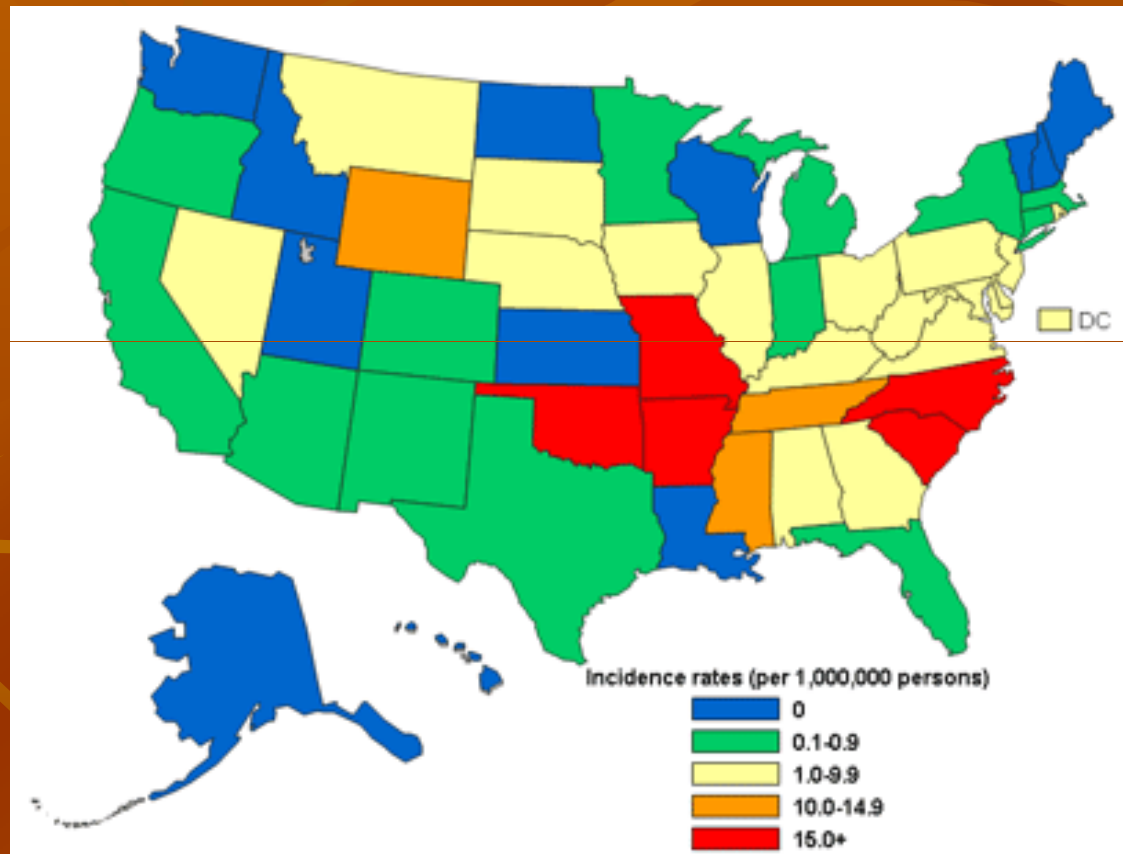




# Tick-borne illnesses in Chatham County

- Most often . . .
  - Rocky Mountain Spotted Fever - 48 cases in 2010
  - Ehrlichiosis - 11 cases in 2010
  - Lyme Disease - 10 cases in 2010
  - Southern Tick-Associated Rash  
Illness (STARI)

# Chatham County reported 48 cases of Rocky Mountain Spotted Fever in 2010

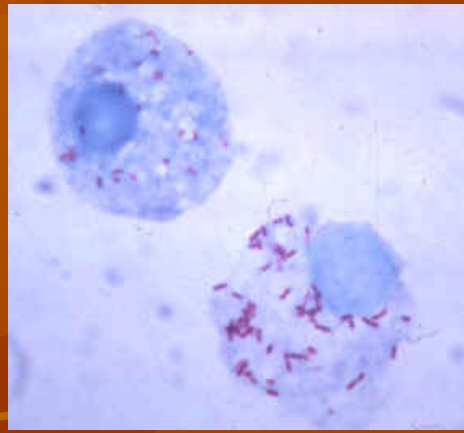


# What to watch for:

- Exposure to ticks: known attachment or exposure to habitat
- Fever over 101°
- Headache and/or muscle aches
- Other “flu-like” symptoms: nausea, diarrhea, malaise
- Rash—characteristic of RMSF and STARI

# See your doctor!!

If flu-like symptoms occur during tick season,  
*with or without* a known tick attachment



**Treatment:**

Antibiotics—usually doxycycline, 100mg twice daily for at least 10 days.



# Please Don't Feed the Ticks!!

