

## **Tick Prevention:**

- Wear long sleeves and long pants. Tuck in shirts and pant legs. Wear gaiters. Make it hard for a tick to get to you.
- Use tick repellent. For exposed skin, the CDC recommends Picaridin, IR3535, or a product with at least 20% DEET. For clothing, they recommend 0.5% Permethrin. The park will be obtaining a few products for employees to test in the field.
- Use the trails whenever possible. Hike in the center of the trail. When off-trail, pick routes that avoid high grass and brush.
- Check frequently for ticks on your clothing and gear while in the field and when returning from the field.
- Be especially careful when returning to vehicles or housing so ticks are not brought indoors on your clothing or gear.
- Personnel who are handling wildlife are authorized to wear light colored coveralls to make it easier to detect ticks.
- Conduct a full-body tick check when you return from the field. Use a mirror to check all parts of your body.
- Bathe or shower as soon as possible after coming indoors to wash off or more easily find ticks that are crawling on you.
- Ticks can be killed by tumbling dry clothes in a dryer on high heat.

## **Tick Removal:**

- Tick removal kits are available in Dispatch. Keep one in your pack if you are in the field.
- Use fine tweezers or tick removal tool to grasp the tick near the skin surface. Do not squeeze the tick's body.
- Pull upward with steady, even pressure until the tick comes out. Do not twist.
- If any part of the tick remains embedded, seek medical attention.
- After removing the tick, clean the bite area and your hands with alcohol or with soap & water.
- Save any ticks that are removed. Seal them in a plastic bag or vial.
- Document all tick bites in SMIS.

## Recognition and Treatment:

If a tick bites you, be alert for symptoms of Lyme disease. In fact, you may not know you've been bitten, so be aware of these symptoms regardless.

### Early Signs and Symptoms (3 to 30 days after tick bite)

- Fever, chills, headache, fatigue, muscle and joint aches, and swollen lymph nodes
- Erythema migraines (EM) rash:
  - Occurs in approximately 70 to 80 percent of infected persons
  - Begins at the site of a tick bite after a delay of 3 to 30 days (average is about 7 days)
  - Expands gradually over a period of days reaching up to 12 inches or more (30 cm) across
  - May feel warm to the touch but is rarely itchy or painful
  - Sometimes clears as it enlarges, resulting in a target or "bull's-eye" appearance
  - May appear on any area of the body

### Later Signs and Symptoms (days to months after tick bite)

- Severe headaches and neck stiffness
- Additional EM rashes on other areas of the body
- Arthritis with severe joint pain and swelling, particularly the knees and other large joints.
- Facial palsy (loss of muscle tone or droop on one or both sides of the face)
- Intermittent pain in tendons, muscles, joints, and bones
- Heart palpitations or an irregular heart beat
- Episodes of dizziness or shortness of breath
- Inflammation of the brain and spinal cord
- Nerve pain
- Shooting pains, numbness, or tingling in the hands or feet
- Problems with short-term memory