



## **Tickborne Disease Prevention in the NPS**

### **Background:**

- Ticks and tickborne diseases are increasing in number and in geographic spread in the United States. (The number of counties in the northeastern and upper midwestern U.S. considered high-risk for Lyme disease increased by more than 300% between 1993 and 2012.)
- Although Lyme disease risk exists throughout the year, cases peak from May to September.
- Employees and visitors in National Parks, because of time spent outside, may be at high risk.

### **How to Prevent Tickborne Diseases:**

- Optimize your clothing (tuck pant legs into boots; roll sleeves down and close collar; tuck undershirt into pants).
- Consider adding barriers to prevent ticks crawling up (duct tape, gaiters).
- When possible, walk in the center of trails to minimize contact with questing ticks, and avoid sitting on logs or other vegetation.
- Treat boots, clothing, and gear with products containing 0.5% permethrin.
- Use on skin an EPA-registered insect repellent (20-30% DEET, picaridin, IR3535, Oil of Lemon Eucalyptus, para-menthane-diol, or 2-undecanone. Refer to the EPA online tool to help find the repellent that is right for you (<https://www.epa.gov/insect-repellents/find-repellent-right-you>).
- Check for ticks at least every shift and prior to getting into vehicles.
- Change clothes after being outdoors and tumble-dry clothes on high heat for at least 10 minutes. If clothes are damp, they may need additional time. If clothes require washing first, use hot water.
- Shower soon after being outdoors (within 2 hours).
- Examine gear and pets for ticks.
- Remove attached ticks immediately. Use fine-tipped tweezers to grasp the tick as close to the skin's surface as possible. Pull upward with steady, even pressure. Thoroughly clean the bite area and your hands with soap and water, or rubbing alcohol, or iodine scrub.
- Dispose of live tick by placing in alcohol, in a sealed container, or wrapping it in tape. Do not crush a tick with your fingers. You do not need to send the tick for testing.
- After a tick bite, be alert to any symptoms that develop, including fever and chills, aches and pains, and rash. If symptoms develop within days or several weeks after removing a tick, you should promptly see a healthcare provider.
- In general, the CDC does not recommend taking antibiotics after tick bites to prevent tickborne diseases. However, in certain circumstances, a single dose of doxycycline after a tick bite may lower your risk of Lyme disease. Consider talking to your healthcare provider if you live in an area where Lyme disease is common.

- Report tick bites to your supervisor. Tick bites, even if symptoms of disease are not present, should be recorded in the NPS’s electronic reporting system (SMIS) as an exposure.

### Is Your Park At Risk?

- Information on the geographic distribution of ticks that bite humans is available through the CDC — [https://www.cdc.gov/ticks/geographic\\_distribution.html](https://www.cdc.gov/ticks/geographic_distribution.html)
- If you are unsure about the risk for tickborne diseases in your park, please contact us.
- We can also discuss how you might set up a tick monitoring/surveillance program within your park and can provide materials and resources.

### Resources:

- **Tickborne Disease Prevention SOP:** This guidance lays out roles and responsibilities among NPS personnel and provides the components of a tickborne disease prevention education program. It can be tailored by parks to meet their needs. [https://drive.google.com/file/d/1m0CVyYMKSfxhs2CPTnB1KA6Y5qU1zp\\_3/view?usp=sharing](https://drive.google.com/file/d/1m0CVyYMKSfxhs2CPTnB1KA6Y5qU1zp_3/view?usp=sharing)
- **Tickborne Disease Slide Set:** This slide set can be used by parks to provide education on tickborne diseases and how they can best be prevented. [https://docs.google.com/presentation/d/1amburc7P0iBkj1LADvik\\_qIcWC0GjilL-5k0n8SxZSk/edit?usp=sharing](https://docs.google.com/presentation/d/1amburc7P0iBkj1LADvik_qIcWC0GjilL-5k0n8SxZSk/edit?usp=sharing)
- **Tickborne Disease Fact Sheet:** [https://drive.google.com/file/d/0B\\_JsBec6A8WnNTFFbC1HNnVHNUE/view](https://drive.google.com/file/d/0B_JsBec6A8WnNTFFbC1HNnVHNUE/view)
- **Tick Bite Prevention Poster:** [https://drive.google.com/file/d/1Y5iNvgDoE\\_Dw84GryVfulX-hDb9M4UB4/view](https://drive.google.com/file/d/1Y5iNvgDoE_Dw84GryVfulX-hDb9M4UB4/view)
- **“Lyme Disease and Ticks” Rack Card:** [https://drive.google.com/file/d/1YOcE\\_AyGS9XugZ7q\\_1x33nbOLGL4agV8/view](https://drive.google.com/file/d/1YOcE_AyGS9XugZ7q_1x33nbOLGL4agV8/view)
- **Tick FAQs:** <https://sites.google.com/a/nps.gov/in2-protect-and-promote-health/home/disease-surveillance-response/tickborne-diseases/tick-faqs>
- **NPS Tick Website (external):** <https://www.nps.gov/articles/one-health-disease-ticks-borne.htm>
- **NPS Tick Website (internal):** <https://sites.google.com/a/nps.gov/in2-protect-and-promote-health/home/disease-surveillance-response/tickborne-diseases>
- **CDC Tick Website:** [www.cdc.gov/ticks](http://www.cdc.gov/ticks)

### Contact Information:

- Maria Said, MD, MHS, Epidemiology Branch Chief, OPH ([maria\\_said@nps.gov](mailto:maria_said@nps.gov); 202-513-7151 — tickborne diseases)
- Danielle Buttke, DVM, PhD, MPH, One Health Coordinator, OPH and WHB ([danielle\\_buttke@nps.gov](mailto:danielle_buttke@nps.gov); 970-267-2118 — tick biology and surveillance)
- Susan Eaves, Occupational Safety Manager, ORM ([susan\\_eaves@nps.gov](mailto:susan_eaves@nps.gov); 202-513-7196 — workers’ safety, health, and injury and exposure reporting)