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## Fact Sheet: Insects, Ticks & Spiders

You may encounter a variety of insects, ticks, and spiders in the field. Bites and stings can induce an allergic reaction and some can be venomous. There are also many diseases associated with insects, ticks, and spiders including:

- [Malaria](#)
- [West Nile](#)
- [Lyme Disease](#)
- [Rocky Mountain Spotted Fever](#)

### Personal Protective Equipment

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- Light-colored, smooth finished clothing with long sleeves and long pants
- Bug net for camping
- Insect repellent
  - Permethrin for external clothing and gear (never to skin)
  - DEET for personal use

### Preparation and Training

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- Research the variety of species you may encounter and recommended actions before travel.
- Research possible regional vector-borne diseases and symptoms before travel.
- If you are pre-disposed to an allergic reaction or asthma, consult your primary care physician and carry a life saving device like an epinephrine auto-injector or a rescue inhaler on your person at all times. Consider wearing a medical ID bracelet.
- Consult your primary care physician about potential immunizations and preventative measures for endemic vector-borne diseases in your field location.
- It is recommended you take courses in: [Basic First Aid](#)

### General Safety

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- Avoid being bitten by ticks, mosquitoes, and other biting insects by wearing long clothing and using repellants.
  - DEET- Insect repellents that contain DEET offer the best protection against mosquito bites. It is designed for direct application to skin to repel insects, rather than kill them.

- Permethrin- Permethrin is a highly effective insecticide-acaricide and repellent. Permethrin-treated clothing repels and kills ticks, chiggers, mosquitoes, and other biting and nuisance arthropods. It should NEVER be used on skin.
  - Apply repellents only to exposed skin and/or clothing (as directed on the product label). Do not apply repellents under your clothing.
  - Never use repellents over cuts, wounds or irritated skin.
  - Do not apply to eyes or mouth, and apply sparingly around ears. When using repellent sprays, do not spray directly on your face—spray on your hands first and then apply to your face.
- Do not stick your hand into a place that you cannot see.
  - Do not disturb webs, beehives, wasp nests, or ant mounds.
  - Be careful lifting items off the ground.
  - Periodically, check yourself for ticks.
  - Shake out clothing, shoes, and other items before use.

## First Aid Treatment

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- Monitor insect bites and contact medical professionals in the case of rashes, signs of infection, unusual swelling, and symptoms of illness that shortly follow being bitten.
- If it was venomous, you may need to contact emergency services. Try to identify the species, or take a photograph of it, if possible.
- Do not try to suck out venom.
- If you are bitten by a tick, remove it carefully with tweezers and clean the area thoroughly with soap and water.
- If someone experiences difficulty breathing, widespread severe swelling, dizziness, numbness, nausea, appears pale or sweaty, or becomes unconscious as a result of a bite or sting, contact emergency services.
- If you are attacked by multiple insects, run away from the swarm to prevent additional stings/bites.

## References and Additional Resources

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- CDC National Institute for Occupational Safety and Health [Hazards for Outdoor Workers](#)
- Adapted from *Insects, Ticks and Spiders Fact Sheet*, by University of Maryland: Department of Environmental Safety, Sustainability & Risk (<https://essr.umd.edu/about/research-safety/field-research-safety/planning>) with permission.