Bites & Stings from Outdoor Arthropods

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We don’t know what we want, but we are ready to bite somebody to get it.

—Will Rogers

Learning Objectives:
1. Differentiate various clinically significant arthropod bites and stings based upon seasonality, pattern of distribution, and geographic location
2. Manage arthropod bite and sting reactions and be able to identify common complications
3. Counsel families on prevention of arthropod bites

Primary Reference:

Editor’s note: There is much overlap between bites and stings that can occur outdoors and indoors. Please refer to the chapter on Indoor Arthropod Bites & Infestations for additional discussion of this topic.

CASE ONE:

Atticus is an 11-year-old boy who was brought in for an urgent visit after his grandmother noticed a spot behind his knee. She fears it may be a tick but was worried about removing it incorrectly. He played in the woods yesterday while on a field trip to see the fall leaves, but does not usually spend time in the woods.

1. What is the proper way to remove a tick?

2. What types of infections can ticks transmit? Should the family be concerned about any of these? Should you offer prophylactic antibiotics?

3. How can he prevent tick bites in the future?
CASE TWO:

Darbee is a 9-year-old girl presenting to the emergency department after being stung by bees while playing outside in her yard 6 hours ago. Her mother believes she may have stepped on a hive. Upon examination, you notice several erythematous patches with central puncta over her extremities and trunk. Some lesions are 8-10 cm in diameter.

4. What are Hymenoptera? How can you differentiate among the different types?

5. What type of reaction is Darbee having? What other types of reactions are possible with Hymenoptera stings? How would you manage these?

CASE THREE:

Mr. Arachne brings his 15-year-old son, Ricky, in to your office. They had been doing yard work yesterday and were moving a pile of wood when Ricky was bitten by something. They noticed a spider crawling away. On your exam, you notice a red painful papule on his right lower leg.

6. What types of spiders cause serious reactions in humans?

7. How should you manage this bite? What should you do if he begins to manifest systemic symptoms?
8. How can spider bites be prevented?

CASE FOUR:

Mrs. Pod brings her son Arthur in to your office. He has several itchy red bumps on his leg. She is concerned because they were outside at a picnic yesterday evening and there were many mosquitoes around.

9. What types of diseases are transmitted by mosquitoes?

10. How can you guide the Pod family about prevention of further bites?

11. What are some secondary complications of bites/stings?
12. What are some other clinically significant arthropods?

**Additional References:**


**Resources:**

1. Information for families about insect repellent from American Academy of Pediatrics. [https://www.healthychildren.org/English/safety-prevention/at-play/Pages/Insect-Repellents.aspx](https://www.healthychildren.org/English/safety-prevention/at-play/Pages/Insect-Repellents.aspx)
2. Information on insect repellents from the EPA. [https://www.epa.gov/insect-repellents](https://www.epa.gov/insect-repellents)