Ticks Outline

1. Meet the Ticks
2. Preventing Tick Attachment
3. Removing Ticks
4. Case Study
5. Lyme disease
   a. Lyme Ecology
   b. Clinical Lyme Disease
   c. Tests for Lyme disease
   d. Treatment
   e. Lyme Controversy and Quackery (especially in Pennsylvania)
6. STARI/Master’s Disease
7. Other Tick-Associated Diseases
   a. Anaplasmosis (Ehrlichiosis)
   b. Babesiosis
   c. Rocky Mountain Spotted Fever
8. Other Weird Stuff
   a. Tick paralysis
   b. Alpha-Gal Allergy

Ticks Educational Objectives

1. Name at least one of the three most medically-important ticks in North America, and at least one disease that it may transmit to humans
2. Name at least one highly-effective repellent ingredient effective against ticks.
3. Differentiate recommended vs. non-recommended methods for removing ticks.
4. Give criteria for clinical diagnosis of Lyme Disease, and give the standard drug treatment indicated.
5. Give reasons why acute care Lyme testing is seldom if ever appropriate, and why “chronic Lyme disease” should never even be entertained as a diagnosis in an emergent or urgent situation.
Ticks Objectives Answer Details

1. Ixodes scapularis, the deer tick or black-legged tick (Lyme disease, anaplasmosis and babesiosis); Dermacentor variabilis, the American dog tick (Rocky Mountain Spotted Fever, tularemia and anaplasmosis); Amblyomma americanum, the lone star tick (STARI or Master’s disease).

2. DEET, Picaridin, and lemon eucalyptus oil on skin are all highly effective. Permethrin on clothing is highly effective.

3. Gently but firmly pulling on the neck of the tick with forceps or some similar commercial device recommended by CDC; burning, suffocating or shooting the tick is not recommended. Twisting, according to the best-quality evidence, actually works better.

4. A red rash >2” diameter at the site of a tick bite or a targetoid red rash after being in an endemic area, or, within two weeks after a tick bite, any disseminated red rash not otherwise firmly diagnosed, or in an endemic area any febrile illness not otherwise firmly diagnosed, should be treated with a course of oral doxycycline or an accepted alternate.

5. Lyme titers take a about a month to rise, and there are many false positives from old disease; there is no association between fibromyalgia or chronic fatigue and evidence of prior Lyme infection, and thus, no “chronic Lyme Disease.”