

## CDC Southeastern Center of Excellence in Vector Borne Diseases

May 1, 2020

### Tick Talk: "Ticks Don't Social Distance!" Q&A:

**Question:** Ticks are stored in 70% Ethanol?

**Answer:** 70% ethanol is often used to store tick specimens because it will kill the ticks and also preserve them nicely.

**Question:** Are ticks attracted to any specific colors?

**Answer:** A tick's photoreceptor organs are not capable of detecting colors, but they are good at distinguishing light intensity and shadows.

**Question:** Does anyone use two-sided tape for CO<sup>2</sup> traps? Or is there a more passive way to collect ticks with CO<sup>2</sup> that doesn't require you to return in 1-1/2 hours?

**Answer:** We use double sided carpet tape on our CO<sup>2</sup> traps here in Alabama. We also put our dry ice in styrofoam containers, allowing for sublimation to last longer. We will leave traps out anywhere from 2-12 hours, depending on temperature and how much time we have in the field.

**Question:** How far from the edge do you place the tape or is it right up next to the styrofoam or center of cloth?

**Answer:** Our traps aren't cloth but instead 3/4 plywood boards, this allows us to use the carpet tape and are cheap to make. We put carpet tape around the edges of the board and a square of carpet tape around the styrofoam box in the center as ticks have been found on the box in the past.

**Question:** 1m-square board?

**Answer:** Approximately, yes. We generally go for whatever plywood board is the cheapest to buy en masse at Lowe's or Home Depot.

**Question:** Is there a preferred method to clean a tick bite area?

**Answer:** After removing the tick, thoroughly clean the bite area and your hands with rubbing alcohol or soap and water. [https://www.cdc.gov/ticks/removing\\_a\\_tick.html](https://www.cdc.gov/ticks/removing_a_tick.html)

**Question:** Since ticks dry out easily, would a desiccant like Diatomaceous Earth be an acceptable treatment for lawns?

**Answer:** It would probably depend on how it is applied. Landscaping around your home is a tool that can be used to reduce exposure to ticks. This can be accomplished by designing a 3ft-wide barrier of wood chips or gravel. You can read more at the following website: [https://www.cdc.gov/lyme/prev/in\\_the\\_yard.html](https://www.cdc.gov/lyme/prev/in_the_yard.html)

**Question:** What about *Ornithodoros* ticks?

**Answer:** *Ornithodoros* ticks pose more of a problem with those that work in the animal industry in terms of vectoring to humans. *Ornithodoros* also usually do not actively seek their hosts, while *Ixodes* are actively seeking a host by "hunting" or "questing" on vegetation. The difference

in host seeking behavior makes *Ixodes* more likely to interact with humans and result in more opportunities to transmit disease.

**Question:** How often do you get soft ticks along with hard ticks using CO<sup>2</sup> traps?

**Answer:** Sometimes you can collect soft ticks with CO<sup>2</sup> traps if placed near an animal burrow or nesting material. Otherwise to survey for these ticks you need to examine the nest or burrow. Also, you can check for soft ticks on host species.

**Question:** Are there any natural product alternatives as tick repellent recommended by CDC?

**Answer:** CDC recommends using any EPA-registered insect repellent, which includes DEET, Picaridin, IR3535, Oil of Lemon Eucalyptus, Para-menthane-diol, and 2-undecanone.

<https://www.cdc.gov/ncezid/dvbd/about/prevent-bites.html>

**Question:** Is Picaridin considered an effective tick repellent?

**Answer:** Yes! You can use any EPA-registered insect repellent, including picaridin.  
<https://www.cdc.gov/ncezid/dvbd/about/prevent-bites.html>

**Question:** How are the ticks tested for pathogens?

**Answer:** Our lab uses molecular testing that assays for the nucleic acids of the pathogens. We then sequence the genetic material to determine the bacterial species or viral strains.

**Question:** Do CO<sup>2</sup>-baited traps work on species of ticks other than Lone Star ticks?

**Answer:** Yes. I can only speak for Alabama, but we have caught *D. variabilis*, *A. maculatum* and *I. dentatus* on CO<sup>2</sup> traps.

**Question:** During the CO<sup>2</sup> trapping method, does the dry ice kill the tick or do they survive at that temperature?

**Answer:** If the tick comes into contact with the dry ice it can kill it, but further away they usually survive.