

# **TICKS - WHAT HIKERS NEED TO KNOW**

## **Submitted by Mervyn Cohen on May-10-2021**

### **TICKS AND HIKING - Summary**

#### **Key information**

- Tick exposure can occur *year-round*, but ticks are most active during warmer months (April-September).
- Simple measures can prevent tick borne diseases.

#### **Prevention**

- Plan where you hike - Ticks love tall grass, leafy litter, woody areas and humid, damp areas.
- Use tick repellants.

#### **Tick repellents – there are two types:**

1. Short acting (Products containing Deet or Picaridin)
  - a. These are active for 2 – 10 hours, depending on the concentration of the repellent.
  - b. They are applied to skin and clothing.
2. Long Acting (Permethrin).
  - a. These remain active for months.
  - b. They can only be applied to clothing.

All tick repellants are active against TICKS and MOSQUITOES (and chiggers and biting flies)

#### **How intensive should your protection be?**

Plan protection depending on potential risk. There are two extremes:

1. Use maximum protection:  
Summertime with humid weather and walking in shaded woodland with tall grass and shrubs that are close to a narrow natural trail.
2. No protection needed:  
Winter walks on a paved road.

### **TICKS AND HIKING– DETAILED INFORMATION AND PROTECTION for HIKERS**

#### **HEADINGS**

- Myths
- Ticks in Indiana
- Where ticks live and how ticks attack people
- Precautions against ticks
- Repellants – different types and different actions
- How intensive should my protection be?
- Checking after a hike if you think you may have been exposed to ticks.
- Removing ticks
- Useful websites

#### **Myths**

It is easy to know if you have been bitten because tick bites hurt.

NO – tick bites themselves are painless.

Bug sprays billed as natural—containing substances such as lemongrass, citronella, peppermint, and rosemary— can be used to protect against ticks.

NO - Consumer Reports' tests have shown that these products do not perform well.

After a hike in a potential tick area, you only need to look for ticks on exposed skin areas.

NO - once a tick lands on you, it crawls around until it finds an appealing place to bite.

All ticks cause disease in humans

NO – 15 tick species are found in Indiana, but only three can cause disease.

Wear a hat to stop ticks jumping on you from trees.

NO - Ticks cannot jump or fly, so they just wait for an animal to brush up against whatever they are perched on.

Clothing offers complete protection against ticks.

NO - Ticks can penetrate loosely woven clothing. Ticks can cling to clothing and be carried into the home.

Ticks are killed by cold weather.

NO - Ticks are inactive when temperature falls below freezing, but they are not killed.

## **Ticks in Indiana**

- 15 tick species are found in Indiana. Only 3 species cause disease in humans.
- In 2019, more than 300 tick-borne disease cases were reported to the Indiana State Department of Health. The most common disease was Lyme disease, followed by ehrlichiosis and Rocky Mountain spotted fever.
- The presence of ticks in residential areas in Indiana is on the rise, according to tick research led by Karo Omodior an assistant professor at Indiana University's School of Public Health.
- Bryan Price, senior vector-borne epidemiologist for the Indiana State Department of Health, also shared some tips on tick protection. Price said staying in the center of trails and avoiding tall grass and shrubs can reduce the chance of encountering ticks.

## **Where ticks live and how ticks attack people**

- Although ticks can be found almost anywhere, they like warm, humid, damp wooded areas with lots of shrubs, tall grasses, weeds, and leaf litter.
- They will often climb grasses and shrubs to come in contact with people walking by. Ticks like to reach out, extend their front legs, and attach onto a passing person for a delicious bloodmeal. Walk in the center of paths.

## **Precautions against ticks**

- Plan when and where you hike.
- Wear appropriate clothing.
- Use tick repellants.

## **Tick repellents – different types and different actions**

**There are two types:**

They are all active against TICKS and MOSQUITOES (chiggers and biting flies)

1. Short acting
  - a. Active ingredients for all the repellants are either DEET or PICARIDIN.
  - b. These are found in commercial products such as OFF, REPEL, SAWYER etc. Read label very carefully.
  - c. Active for only 2 – 10 hours. The percentage of DEET or PICARIDIN in a repellent determines its protection time, with higher concentrations offering longer protection.
  - d. They are applied to skin and clothing.
2. Long Acting
  - a. The only agent is Permethrin. It is the same chemical used in the delousing shampoos, Nix, and scabies treatment creams.

- b. Remain active for months.
- c. Can only be applied to clothing. Inactive on skin.

**Short acting tick repellants**

1. Pros

- Versatile. They can be applied to skin and clothes (although they should not be applied under clothes).
- Can be purchased as lotions, wipes, and aerosol sprays.
- Inexpensive

2. Cons

- Provides only short-term protection. To get the full benefit you need to apply it every single time you might be exposed to ticks.
- Deet, but **not** Picaridin,
  - Can smell and may feel greasy.
  - Deet can damage plastics (think sunglasses, trekking pole grips, etc.). painted or varnished surfaces including automobiles. **Deet cannot be removed** from these surfaces and any damage is most likely permanent.
  - Deet can damage synthetic clothing fabrics such as acetate, rayon, spandex. It is not harmful to cotton, wool or nylon.

3. How to use:

- Skin - Use just enough repellent to lightly cover but not saturate the skin. If both sunscreen and repellent are being applied, sunscreen should be applied first.
- Clothing - Apply to clothing that may come into contact with ticks, including cuffs, sleeve openings, socks and other openings in outer clothing.

4. Duration of protection

The percentage of DEET or Picaridin in a repellent determines its protection time. A higher percentage of DEET or Picaridin provides a longer duration of protection.

A higher percentage concentration of DEET or Picaridin does **NOT** provide more protection.

concentration	Approximate duration of action
Deet 10%	About 2 hours
Deet 30%	About 5 hours
Deet 50%	About 10 hours
Picaridin 10%	About 2 hours
Picaridin 20%	Over 5 hours

- “Slow-release” formulas can extend protection time to eight hours or more.
- There is no need to use DEET in a concentration greater than 50%.

5. Care when buying:

- “Off”, “Repel” and other manufacturers, all offer their name brand products with Deet and Picaridin. They all give multiple fancy names to the products such as “Woods”, “Deep Woods”, “Max formula” etc. OFF offers 22 products!  
**Ignore** the fancy marketing names. **READ** the LABEL.  
 You only need to know whether the product contains Deet or Picaridin and its concentration. The label tells all.

**Long-acting tick repellants**

1. Pros

- Very long lasting.

- No damage to clothing.
  - No smell
  - Convenient as clothing does not need any spraying before every hike.
2. Cons
    - Need clothing dedicated to hiking.
    - Can be relatively expensive.
    - Cannot be the only source of protection – does not protect exposed skin. Therefore, it must be used with a short acting repellent if any skin is exposed.
  3. How to use
    - An easy way to avoid tick bites and disease is to wear clothing (shoes, socks, hats, shorts or pants, and shirt) treated with permethrin. You can:
      - Spray your own outdoor clothing with 0.5% Permethrin. If you treat your own clothes and gear, it's recommended that you take them outside to spray them to avoid inhalation. Clothes should be completely dry before you wear them, which can take 2 to 4 hours. Clothes you treat yourself will lose their protection after about 6 washes.
      - Buy commercially treated tick repellent clothes. Insect Shield is the brand name. Protection will last through at least 70 washes. Clothing can be purchased at REI, L.L.Bean, Amazon, [www.exofficio.com/bugaway](http://www.exofficio.com/bugaway) and [www.insectshield.com](http://www.insectshield.com). Insect Shield will treat your own clothing for about \$8.50

## How intensive should my protection be?

What different levels of protection are available?

1. Maximum protection
  - Wear long trousers and long sleeve shirt treated with a long-term repellent (Permethrin)
  - Apply short term repellent (Deet or Picaridin) to exposed skin.
2. Medium protection
  - Wear long trousers and long sleeve shirt.
  - Exposed skin treated with short term repellent (Deet or Picaridin)
3. Lower protection
  - Apply short term repellent (Deet or Picaridin) to exposed skin.

How intensive should your protection be?

There are two extremes. Plan your protection depending on the potential risk.

1. Use maximum protection:
 

Summertime with humid weather and walking in shaded woodland with tall grass and shrubs close to a narrow natural trail.
2. No protection needed:
 

Winter walks on a paved road.

## Checking after a hike if you think you may have been exposed to ticks.

“When you leave an area suspected of having ticks, be sure to check yourself and family members for ticks when returning inside.”

- Check your clothing for ticks.
- Examine gear and pets. Ticks can ride into the home on clothing and pets, then attach to a person later, so carefully examine pets, coats, and daypacks.

- Tumble dry suspicious clothes in a dryer on high heat for 10 minutes to kill ticks on dry clothing.
- Showering within two hours of coming indoors may help wash off unattached ticks and it is a good opportunity to do a tick check. Skin folds are favored locations.

### How to remove a tick

Use fine-tipped tweezers to grasp the tick as close to the skin’s surface as possible.

Pull upward with steady, even pressure. Do not twist or jerk the tick; this can cause the mouthparts to break off and remain in the skin. If this happens, remove the mouthparts with tweezers. If you are unable to remove the mouth easily with clean tweezers, leave it alone and let the skin heal.

After removing the tick, thoroughly clean the bite area and your hands with rubbing alcohol or soap and water.

Never crush a tick with your fingers.

### Super helpful web sites

General information – superb site	<a href="https://tickencounter.org/">https://tickencounter.org/</a> univ Rhode island
Clothing - buying treated items	<a href="https://www.insectshield.com">https://www.insectshield.com</a>
CDC	<a href="https://www.cdc.gov/ticks/avoid/on_people.html">https://www.cdc.gov/ticks/avoid/on_people.html</a>
EPA	<a href="https://www.epa.gov/insect-repellents/find-repellent-right-you">https://www.epa.gov/insect-repellents/find-repellent-right-you</a>
Consumer Reports	<a href="https://www.consumerreports.org/insect-repellent/how-deet-and-permethrin-can-protect-you/#:~:text=Deet%20repels%20ticks%2C%20and%20permethrin,as%20directed%2C%20both%20are%20safe">https://www.consumerreports.org/insect-repellent/how-deet-and-permethrin-can-protect-you/#:~:text=Deet%20repels%20ticks%2C%20and%20permethrin,as%20directed%2C%20both%20are%20safe</a>
Tick diseases in Indiana	<a href="https://www.in.gov/isdh/23323.htm">https://www.in.gov/isdh/23323.htm</a>
Insect repellants	<a href="https://www.rei.com/learn/expert-advice/insect-repellents.html">https://www.rei.com/learn/expert-advice/insect-repellents.html</a>
National pest information center	<a href="http://npic.orst.edu/">http://npic.orst.edu/</a>
Other	<a href="https://southampton.stonybrookmedicine.edu/services/tick-borne-disease-resource-center">https://southampton.stonybrookmedicine.edu/services/tick-borne-disease-resource-center</a>