

## Chiggers

Are you itching at the ankles soon after hiking, picnicking, or walking on a lawn? You may have chigger bites. The chiggers found in Maryland, also known as red bugs, are the immature form of a mite. The bites can cause small, red bumps on the skin and intense itching. Chiggers occur most frequently in areas of thick vegetation where the animals they normally bite (small mammals, birds, and reptiles) live. Although chiggers are more common in damp shady areas, they also occur on golf courses or lawns. Peak chigger activity is from late spring through early fall, just when people are most likely to be outdoors.

### Life Cycle

Chigger mites have four life stages: egg, larva, nymph, and adult. Only the tiny (1/120 - 1/150 inch) larval chiggers bite humans and other vertebrates. After feeding for up to 3 days, a larva drops off and transforms into the nymphal stage. Both the nymph and adult stages of the mite are predators of small arthropods and arthropod eggs.

### Chigger Bites and Treatment

Contrary to popular belief, chiggers do not burrow into the skin or suck blood. When the larval mites find a host (such as snakes, toads, squirrels, mice, or humans) they search for a suitable feeding site, usually a skin pore or hair follicle. Then the mite secretes a digestive enzyme which breaks down the skin cells and causes the surrounding skin tissue to form a hardened, raised area that functions as a feeding tube. This tube allows the mite to gain access to the digested skin cells.

Chiggers can be removed by a soapy shower; the sooner they are removed, the less intense and long-lasting the reaction will be. Bites typically occur where clothing is tight or skin is wrinkled, usually around the ankles, wrists, thighs, groin and waist. The body's reactions to the mite's digestive enzyme creates the initial itch starting three to six hours after initiation of the bite. The agonizing itching can last longer than one week, especially without treatment at the onset of itching. Secondary infections caused by scratching bites can increase both size and duration of the skin irritation.

For temporary relief of the itching that accompanies chigger bites, apply ointments that contain benzocaine, hydrocortisone, or calamine. Common names are Caladryl® lotion and the product After Bite®. Antihistamines, such as Benadryl®, also reduce itching. For best results, apply treatments as soon as symptoms occur.

A common myth is that applying nail polish directly to the bite will suffocate the chigger. This home remedy is based on the misconception that the chigger actually burrows into the skin. The nail polish seems to reduce itching by limiting skin contact with the air, not by suffocating the chigger. The itch relief products suggested above are recommended over the use of nail polish.

### Preventing Chigger Bites

The best way to avoid chigger bites is to avoid chigger habitats, such as stream beds, low vegetation, and grasses during the peak summer months. These places are likely to harbor small rodents, the chigger mite's preferred host. If you cannot avoid these areas wear long tightly woven pants with cuffs tucked into socks. Closed-toed shoes and a long-sleeved shirt are also recommended. Try not to brush against vegetation or sit in grassy areas or leaf-litter. Stay in the center of trails.

Immediately after returning from chigger habitats, take a hot, soapy shower to wash off any chiggers. If you cannot bathe immediately, rub down with a towel to dislodge chiggers. Chiggers often spend several hours wandering on the host before settling down to feed.

Wash clothing and picnic blankets immediately in hot soapy water (at least 125°F) after being exposed to chigger habitat. Chiggers can survive laundering in cool water.

### Chemical Treatments

Insect repellents containing DEET (N, N, -diethyl-m-toluamide) are effective for 2-3 hours. Apply repellents to pant legs and cuffs, socks, and shoes. DEET should never be applied to skin

covered by clothing or gloves. Follow the label directions closely, and use with caution on children.

Another option for chemical prevention is the use of permethrin (0.5%) only on clothing, never directly on skin. For best results apply to clothing the day before use. Make sure garments are completely dry before wearing. This pesticide can give days of effective protection against chiggers.

### **Treating Infested Habitats**

The easiest and most effective long term solution to chigger infestations is vegetation management. Keep lawns cut low and vegetation pruned to allow air circulation. These steps will decrease the amount of moisture in the area, drying out the vegetation and making it inhospitable to chiggers. Landscape management techniques that discourage other hosts (such as rodents) will also help lower chigger populations. It is best to continue these practices each year because chigger adults spend the winter under the soil and may reinfest a yard in the early spring when adult females lay eggs.

Pesticides are not effective or recommended to control chiggers outdoors. The infestations occur in dense, little patches depending on where eggs were laid. Even if treated, chigger populations will rebound quickly.

**Authors: D. L. Finke, A. F. Huberty, N. L. Breisch, and B. L. Thorne, Department of Entomology, University of Maryland, College Park, MD 20742**

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