



## Bug-Wise

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Office: 1-662-325-2085

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**Controlling Ticks On Pets and In the Lawn:** No one likes ticks. Their bites are painful and irritating, and they sometimes carry serious diseases, like Rocky Mountain Spotted fever and Lyme disease. However, several species of ticks occur in the South and anyone who has pets or participates in outdoor activities has to contend with these pests.

**Simplified Tick Biology:** Ticks are strictly blood feeders. Depending on the species and stage of development, they may feed on small mammals, like mice, possums, and raccoons; large mammals, like dogs, coyotes, and deer; as well as on birds or reptiles. Most species will also feed on humans. After mating, engorged female ticks drop to the ground and deposit a mass of eggs. As soon as they hatch the small tick larvae, sometimes called 'seed ticks', crawl onto grass and other low-growing vegetation and await a host. When a host brushes against the vegetation on which they are resting, they crawl aboard and begin feeding. When engorged with blood the larval ticks drop to the ground and molt to the larger nymph stage, which then repeats the process of waiting for a host, crawling aboard and engorging with blood. Engorged nymphs drop to the ground and molt into adult ticks, which repeat the process of finding a host and engorging with blood a third time. Then the engorged female ticks drop to the ground to lay eggs and repeat the cycle.

Having a basic understanding of tick biology can help one know how to better cope with and control these pests. The important point to keep in mind is that ticks are more concentrated along game trails and in areas where pets or other animals spend time resting, because these are the areas where ticks are most likely to drop from their hosts.

**On-Pet Tick Control:** For pet owners, tick control must be a two-pronged effort. It is necessary to control ticks on the pet, and in the lawn. On-pet tick control is best accomplished with one of the topical spot-on type treatments or with tick collars. Some of the more common on-pet tick treatments are listed in the table below. Note that these products also aid in control of fleas. The key to success when using these products is to re-apply them at regular intervals (usually monthly), as indicated on the label. Note that some products are not appropriate for use on cats, and that the rate of spot-on type treatments may vary depending on the size of the dog. Most spot-on type treatments are sold in several 'sizes', each of which is intended for use on dogs of a specified weight range.

In addition to spot-on treatments and tick collars, there are a number of sprays, dusts, and shampoos that are labeled for flea and tick control on pets. When using such treatments, be sure to read the label carefully before use and be especially sure that the product is labeled for use on the type of pet being treated. Many treatments that are safe for use on dogs cannot be used on cats. Sprays containing the active ingredient permethrin are especially useful for controlling ticks on dogs. Permethrin is actually very repellent to ticks, and giving a dog a light application of an appropriately labeled permethrin-based spray before it is allowed to roam in a tick-infested area can greatly reduce the number of ticks that become attached.

## Spot-On and Collar-type Treatments for Control of Ticks on Dogs and Cats

| Product Name          | Active Ingredient         | Application method | Pests Controlled                          | For Use On   |
|-----------------------|---------------------------|--------------------|---|--------------|
| Frontline             | Fipronil                  | Topical spot-on    | Ticks & Fleas                             | Dogs or Cats |
| Frontline Plus        | Fipronil + methoprene     | Topical spot-on    | Ticks & Fleas                             | Dogs or Cats |
| K-9 Advantix          | Imidacloprid + Permethrin | Topical spot-on    | Ticks & Fleas                             | Dogs only    |
| Biospot for Dogs      | Permethrin + Pyriproxyfen | Topical spot-on    | Ticks & Fleas                             | Dogs only    |
| Biospot for Cats      | Pyriproxyfen              | Topical Spot-on    | Ticks & Fleas                             | Cats         |
| ProtiCall             | Permethrin                | Topical Spot-on    | Ticks & Fleas                             | Dogs only    |
| Revolution            | Selamectin                | Topical Spot-on    | Ticks & Fleas & (some internal parasites) | Dogs or Cats |
| Preventic Collar      | Amitraz                   | Collar             | Ticks                                     | Dogs only    |
| Preventic Plus Collar | Amitraz + Pyriproxyfen    | Collar             | Ticks & Fleas                             | Dogs only    |
| Preventef-D           | Deltamethrin              | Collar             | Ticks & Fleas                             | Dogs only    |

This information is for preliminary planning purposes only. Be sure to read labels carefully before purchasing product and follow label directions carefully when using products.

**Control of Ticks In the Lawn:** Ticks accumulate in lawns when they drop from infested pets or from other infested animals, including wild animals, such as raccoons and deer, or stray dogs and cats. Immature ticks will molt and then wait for another host to crawl onto. Adult female ticks will deposit egg masses, containing thousands of eggs, which will hatch into ‘seed ticks’. Obviously, if one has a fenced in yard, or lives in a highly urban situation, and does a good job of controlling ticks on any pets that are allowed to use the yard, the potential for a heavy tick infestation is greatly reduced. On the other hand, unfenced lawns that are frequented by free ranging pets in heavily wooded rural areas can experience heavy infestations of ticks, which will readily attack pets and people that are using the lawn.

The treatments listed below are recommended for control of ticks in home lawns. Note that, for control of ticks, liquid sprays are more effective than granular treatments. This is because granules tend to fall all the way to the ground, rather than remaining on the grass blades where the ticks are. Further note that when ticks are the primary target pest, treatments should not be ‘watered-in’ like one would do if the target was a thatch or soil-inhabiting pest, such as chinch bugs or mole crickets. When applying treatments keep in mind that while ticks may drop from the pet anywhere in the yard, they tend to be concentrated in areas where pets spend most of their time. This means that one should be sure to focus treatments under shrubs and porches and in other areas where pets tend to rest.

### Some Insecticides for Control of Ticks in Home Lawns

| Insecticide                           | Brand Name *   | Rate/1000 sq ft | Comments  |
|---------------------------------------|--|-----------------|---|
| carbaryl (22.5% liquid)               | Sevin Concentrate Bug Killer                                   | 3 to 6 fl oz    | Apply as a broadcast spray using a hose-end sprayer or other appropriate sprayer. |
| cyfluthrin (0.75% liquid)             | Bayer PowerForce Multi-Insect Killer                           | 6 fl oz         | Apply as a broadcast spray using a hose-end sprayer or other appropriate sprayer. |
| lambda-cyhalothrin (0.5% concentrate) | Triazicide Soil & Turf Insect Killer Concentrate               | 2 to 4 fl oz    | Apply as a broadcast spray using a hose-end sprayer or other appropriate sprayer. |
| permethrin (2.5% concentrate)         | ProTech Sniper Yard & Garden Concentrate                       | 6 fl oz         | Apply as a broadcast spray using a hose-end sprayer or other appropriate sprayer. |
| permethrin (38% concentrate)          | Hi-Yield 38 Plus Turf, Termite & Ornamental Insect Concentrate | 0.8 fl oz       | Apply as a broadcast spray using a hose-end sprayer or other appropriate sprayer. |

**Control of Ticks in Outdoor Dog Kennels:** Permethrin is probably the best option for treating ticks in and around a dog kennel. However, there are many formulations of permethrin that are not labeled for use in kennels, and it is important that any product used in a dog kennel be specifically labeled for this type use. Be sure to carefully read product labels before purchase. Hi-Yield Indoor/Outdoor Broad Use Insecticide (contains 10% permethrin) is an example of one permethrin-based product that is labeled for use in dog kennels, as well as for use directly on dogs and for treatment of lawns.

**What can people do to protect themselves from ticks?:** One of the best ways to avoid being bitten by ticks is to avoid entering tick-infested areas during the spring, summer and early fall months when ticks are most numerous. When walking in outdoor areas, one can reduce the potential for infestation by staying on well-maintained paths where vegetation is kept ankle height or lower. When possible, avoid walking along overgrown game trails.

When work or other outdoor pursuits require that one enter tick-infested areas during times when ticks are present, there are several preventive measures that one can take to reduce the potential for being bitten. Wear light-colored long pants and keep pants legs tucked inside socks or inside high-topped boots. Keep shirt-tail tucked inside pants and stop frequently to check for, and remove, any ticks that may be observed on clothing.

An effective repellent can provide substantial protection from tick bites. Although repellents containing the active ingredient DEET are primarily used to repel mosquitoes, they repel ticks as well. Repellents with higher concentrations of DEET tend to provide correspondingly greater, or longer, protection, but be sure to apply and use according to label directions. One commercially available repellent, sold as Repel Permanone, contains the active ingredient permethrin, which is the same insecticide that has been mentioned previously for control of ticks. Because it is an insecticide, Permanone should not be applied directly to the skin. Instead, it should be applied as a light spray to the outer clothing, especially to pants legs, and allowed to dry completely before clothing is worn. This product can provide several weeks of residual protection and also aids in repelling mosquitoes.

When used in combination with long pants with pants legs tucked inside the socks or boot tops, permethrin-based tick repellents offer a high level of protection against ticks. Still, persons who are exposed to tick-infested areas should bathe and examine themselves carefully for ticks as soon as possible after leaving the area. Finding and removing ticks promptly helps reduce the potential for disease transmission.

**How does one remove a tick that has become attached?:** Use a pair of blunt-ended tweezers to firmly grasp the tick as near the skin as possible and pull slowly but firmly. Examine the bite area to be sure that the head, or some of the mouthparts, have not remained attached. If this occurs, it may be necessary to seek medical attention. Promptly disinfect the bite area with alcohol or other appropriate disinfectant and wash hands thoroughly with soap and water. Ticks are best disposed of by placing them into a bottle containing a small amount of rubbing alcohol, or by ‘wrapping’ them in a cotton ball or piece of tissue that has been saturated with alcohol and flushing them down the toilet. Avoid crushing ticks or handling them by hand because this increases the potential for disease transmission.

\* This information is for initial planning purposes only. Always read and follow product label. Brand names listed here are examples only. Many insecticides are marketed under a number of different brand names. Other products containing the same active ingredient should provide equal performance, provided they are labeled for use in the site in question and are applied at equivalent rates.