



A GUIDE TO MITES

MITES

Mites are arachnids, belonging to the same group as ticks and spiders. Adult mites have eight legs and are very small—sometimes microscopic—in size. They are a very diverse group of arthropods that can be found in just about any habitat. Mites are scavengers, predators, or parasites of plants, insects and animals. Some mites can transmit diseases, cause agricultural losses, affect honeybee colonies, or cause dermatitis and allergies in humans. Although mites such as mold mites go unnoticed and have no direct effect on humans, they can become a nuisance due to their large numbers. Other mites known to cause a red itchy rash (known as contact dermatitis) include a variety of grain and mold mites. Some species can also bite, causing irritation and itchy swelling.

Most mites (for example the tropical rat mite or the bird mite) will bite humans only when their normal host is unavailable. The bite of a mite can cause severe itching and anxiety. Eliminating rats from a property will solve some biting mite problems. Upon request, District staff will identify mites, and can conduct an external evaluation of residences to find areas where rodents might be entering.



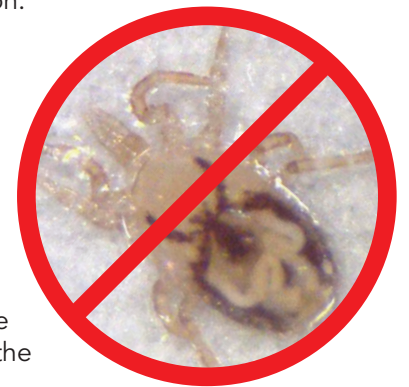
BITING MITES IN HOMES

Several types of mites are associated with skin dermatitis in humans. The tropical rat mite (*Ornithonyssus bacoti*) is one of the most commonly encountered species. This mite is a parasite of rats and inhabits the area in and around the rat's nest. The tropical fowl mite (*Ornithonyssus bursa*), northern fowl mite (*Ornithonyssus sylviarum*), and chicken mite (*Dermanyssus gallinae*), are associated with domestic or wild birds and can also be found in homes. Although none of these species are truly parasitic on humans or pets, they will readily bite humans. Some people are unaffected by the bites while others will experience itching and dermatitis. Mite bites are normally pimple-sized and can itch for up to a week, although the bite mark may last up to three weeks. The bites are often

concentrated in areas where clothes constrict the body, or in areas like the armpits or under the breasts. These bites can be extremely itchy and may cause emotional distress. Scratching the affected area may lead to secondary bacterial infections. Rat and bird mites are very small, approximately the size of the period at the end of this sentence. They are quite active and will enter the living areas of a home when their hosts (rats or birds) have left or have died. Heavy infestations may cause some mites to search for additional blood meals. Unfed females may live ten days or more after rats have been eliminated. In this area, tropical rat mites are normally associated with the roof rat (*Rattus rattus*), but are also occasionally found on the Norway rat, (*R. norvegicus*) and house mouse (*Mus musculus*). The tropical rat mite does not transmit disease.

CONTROL

The solution to a mite infestation is to eliminate the hosts, usually rats or birds. The mites will survive only two to three weeks without their hosts. Rodent control, including rat proofing buildings, offers a permanent solution to a rodent mite infestation. Pesticide treatments may help prevent further bites from occurring but must be used in combination with bird or rodent control. Pesticides may be applied prior to or concurrently with rodent control and exclusion. Repeat treatments may be necessary depending on the pesticides used.



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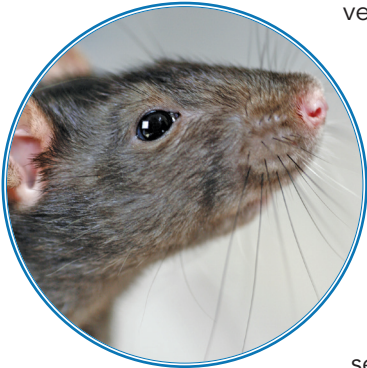
THE DISTRICT IS HERE TO HELP

If you think you have a mite problem, you are welcome to call the District for more information. If appropriate, one of our staff may conduct an external on-site inspection to try to identify rodent entryways into the residence.

RODENT CONTROL

Inspect the basement, the interior, and the attic of your home for signs of rodents. Look for droppings, gnawed items, cached or eaten food items (like snails and nuts), and rodent runways or pathways, especially in the attic. If a rodent infestation is confirmed, formulate a control plan. Determining how the rats are entering your home is the most important control measure. Roof rats are

agile climbers and will climb up vegetation that is in contact with the roof. Vegetation and tree branches should be trimmed at least 5 feet away from the roof. Holes along the base of the building should be sealed, and broken foundation vents should be repaired. Gaps under exterior doors should be sealed.



Eliminate any rodents that may be present. The District does not recommend the use of poison baits due to the potential for non-target exposure. This could include primary and secondary poisoning of children, pets and wildlife.

Snap traps or electronic traps are the best method to catch rats, but do not use the mouse sized traps for rats. There are several different types of snap traps on the market, and you may call the District for advice on which is best for your situation. Place the baited traps in areas with rodent activity, then check and maintain the traps regularly. If no activity is detected in the traps after a week, start to rodent-proof the structure. (Further details are available on our website at msmosquito.org/rats)

MITE CONTROL

Since mite control can be time-consuming and difficult, it is best to concentrate your efforts on controlling the host. Once the mite host is eliminated, the mite problem will usually be solved within two to three

weeks. Thorough vacuuming is effective in eliminating some mites and their eggs. Dispose of the vacuum cleaner bag after use.

Mites can also be collected on clear sticky tape if they are visible. Transferring the tape to a sealable plastic bag or alcohol can help with mite identification. Correct identification of the mites can help to determine the source of the mite problem. Dusting the attic with an insecticidal dust such as Drione or Tri-Die (pyrethrum and silica gel), Deltadust (deltamethrin), or diatomaceous earth may reduce the number of mites. Take care to ensure that these dusts remain in the attic and do not filter down into living areas. Insect foggers for mites can be used in attics or other interior areas where rats may be nesting. Read the insecticide label thoroughly and follow the directions. It is best to consult a licensed pest control operator for interior pesticide treatments. Some pest control companies are unfamiliar with treating mites and others prefer not to take on “bug bite” cases because there are other conditions— medical and environmental—that may be involved. Once you have eliminated the rodents and rodent-proofed the property, applying pesticides for controlling mites becomes optional.

Some of the grain and mold mites (*Tyrophagus putrescentiae*) may cause dermatitis in humans. Although most mold mites do not bite, they can cause a severe nuisance due to the large numbers that can develop. Mold mites are associated with moist conditions and high humidity that promote mold growth on which they feed. Moist conditions could be caused by leaking roofs, windows, and siding, or condensation, poor ventilation, inadequate drainage, and damp food products. As these conditions may be difficult to identify, it is advisable to hire a professional to assess the situation. Correcting the high-moisture condition will control the mite infestation. The straw itch mite (*Pyemotes triticis*), one of the grain mites, feeds on insect pests associated with food products, grains or hay. In homes, finding and discarding the infested product will eliminate the infestation. Another mite that may cause dermatitis is the dandruff mite (*Cheyletiella* spp.), which is associated with pet dogs and cats. Consult a veterinarian for help with these cases.



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