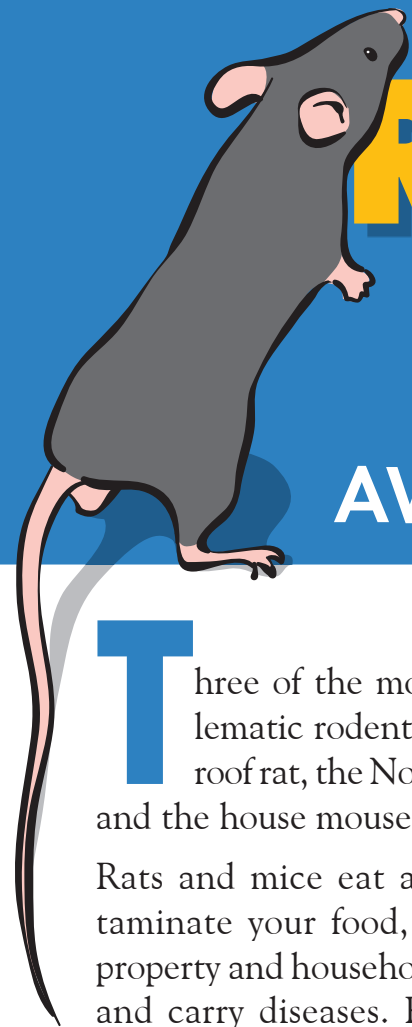


KEEPING

RATS AND MICE

AWAY FROM YOUR HOME



Three of the most problematic rodents are the roof rat, the Norway rat, and the house mouse.

Rats and mice eat and contaminate your food, damage property and household items, and carry diseases. Rodents, especially mice, can harbor ticks that may carry pathogens causing tick borne diseases, like Lyme Disease. Rats may carry tropical rat mites that can bite humans and cause severe itching. Rodents can aggravate allergies and asthma, and can even cause fires by chewing the plastic insulation off electrical wires in your walls or attic. It is important to keep rodents out of and away from your home.

DETECTION

Look for droppings, gnawed holes and other signs of gnawing, rat burrows in the ground, and nests made from shredded fibrous materials such as paper, cloth, or insulation. Rats and mice leave brown, greasy “rub marks” from the oil and dirt on their fur as they move along frequently traveled paths. You may see the animals themselves, smell them, or hear them gnawing and scampering at night in walls and ceilings.

PREVENTION

ELIMINATE ACCESS TO STRUCTURES

The most important preventive measure is making it difficult for rodents to get into your home. Seal any cracks, crevices or voids that are large enough to stick a pencil through. Mice can squeeze through a hole that small, and both rats and mice can gnaw on a small hole to make it larger.

- Seal large holes with sheet metal flashing, 1/4" hardware cloth, plaster, or mortar.
- Seal smaller holes with caulk, spackle, or cement.
- Use knitted copper mesh (scouring pads) to stuff into large gaps. (Steel

wool will rust and eventually allow rodents access again.)

- Seal gaps around pipes and wires where they enter the structure or where they pierce an interior wall.
- Make sure that windows and doors fit properly. Use weather stripping and door sweeps if necessary, or repair thresholds and windowsills.
- Keep outside doors (or screen doors) closed.
- Keep tree and shrub branches 3' to 6' away from buildings to prevent roof rats from using them as a walkway to the upper parts of the structure.

STORE FOOD PROPERLY

- Keep food in the refrigerator or pest-resistant containers made of glass, metal, or heavy plastic with tight-fitting lids. Do not leave food out overnight.
- Store dry pet food, birdseed, and grass seed in pest-resistant containers.
- Remove and clean pet dishes after pets have eaten. Do not leave pet food out over night, especially outdoors.

KEEP THINGS CLEAN

- Sweep or wipe up food spills promptly.
- Clean food preparation and eating areas daily.



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- Promptly wash dishes and utensils, or store them in the dishwasher with the door closed.
- Empty garbage regularly. Store it outside in rodent-proof garbage containers with the lids closed tightly.
- Rinse recyclables before storing.
- Pick up pet droppings outside with a plastic bag and place in trash.
- Pick up fallen fruit and nuts, and be sure to harvest all fruit and nuts as they ripen.
- Fallen seed from bird feeders is a prime source of food for rodents. Clean seed up daily at the end of the day or remove bird feeders.
- Eliminate ivy; not only is it an invasive weed, it also provides excellent shelter and food for rats. If you cannot remove it, shear the ivy close to the ground.
- Thin dense bushes and hedges and remove heavy vine growth.
- Remove excessive mulch; it can hide burrows and runways.
- Compost in rodent-proof compost bins and never put meat in the compost.
- Remove woodpiles, rock piles, and construction or other debris piles.

IF YOU HAVE AN INFESTATION

REDUCE ACCESS TO WATER

- Fix leaking faucets and pipes, including those in your irrigation system.
- Improve drainage in areas where standing water collects.
- Remove tires stored outdoors or drill holes in them so water can drain.
- Keep food preparation areas and sinks dry when not in use, especially over night.

REDUCE SHELTER AND NESTING SITES

- Reduce clutter; it provides great hiding places and runways.
- Store potential nesting materials, such as shredded paper, cotton or polyester batting, foam rubber, insulation, rags, string, etc. in pest-resistant containers.
- Store firewood and lumber on supports at least 18" above the ground and 18" away from all structures.
- Keep hedges, vines, grass, ground-covers, and weeds at least 18" away from structures to decrease cover for rodent runways and prevent hidden access to buildings, both at ground level and at the roof.
- Keep weeds and grass mowed to the height of a few inches.

- First, use a spray bottle or garden sprayer to thoroughly wet any nests or rodent droppings with a 5% bleach solution (6 1/2 oz. of bleach in 1 gallon of water) to prevent small particles from becoming airborne where you can breathe them in. Wearing rubber gloves, sweep up the droppings and nesting material and dispose of them in a sealed plastic bag in the trash.
 - Wash hard surfaces with the 5% bleach solution to eliminate food residue and pest saliva, droppings, and urine. Wear rubber gloves and change water frequently.
 - Remove or clean up any food or nesting material that was attracting the rodents.
 - Remove clutter.
 - Seal holes.
 - Set traps: use snap traps rather than glue boards. Not only do glue boards catch other creatures interested in the trapped rodents, they also cause trapped animals to die a cruelly slow death.
- Always keep snap traps out of the reach of children and pets.*
- Snap traps come in different sizes for rats and mice.

Mice are easy to trap using peanut butter as bait. Use plenty of traps.

Trapping rats takes more patience and may require the expertise of a pest management professional.

Bait the traps with whatever food the rats have been infesting, or with bacon, nutmeats, or pieces of apple or candy. You can also use attractive nesting materials (see above) as bait. Accustom rats to using the trap as a food source (or source of nesting material) by placing the bait on the trigger without setting the spring for a few nights. Set the spring once you are sure the rats are taking the bait. Use a plenty of traps and try several different baits to see which is most attractive. Once the rats are taking food bait, you can smear a small quantity of the bait onto the underside of the trigger before setting the trap. Rats will manipulate the trigger trying to find the food and in the process, spring the trap.

Always place traps along the edge of a wall or other object, perpendicular to the wall with the trigger end close to the wall where the rodent will have to walk across it. Rats and mice prefer to move along the edges of a room or building and not out in the open. Placing 2 or 3 traps side-by-side (with their triggers next to the wall) will prevent rats from safely jumping over a single trap.

Check traps daily and dispose of dead rodents in the trash in sealed plastic bags. Use rubber gloves and thoroughly wet the rodent body with a 5% bleach solution before disposal.

- Electric traps, such as the Rat Zapper[®], are effective, but very expensive compared to snap traps. However, electric traps ensure that rodents die quickly and also make disposal easier.



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IF YOU CALL A PROFESSIONAL

- Ask for a thorough inspection to determine where rodents are getting in and what they are eating.
- Ask if the professional provides pest-proofing services.
- Ask the professional to use traps before resorting to poison. The use of poison baits, especially in heavier infestations, can lead to the presence of dead rodents in wall voids and serious odor and fly problems. Make sure the company will return to remove dead rodents.
- Poison bait should be used only as a last resort or in an emergency. Not only is there a danger of directly poisoning people or pets, but animals that eat the carcasses of poisoned rats can also be killed.

- If poison bait is necessary, ask for low-toxic ingredients that have a readily available antidote. Examples are baits containing chlorophacinone or warfarin (their antidote is vitamin K₁).
- Insist on locking, tamper-resistant bait stations that are anchored to either the ground or the floor so that humans or other animals cannot move them.
- Poison baits will be most effective when you have removed all other materials that the rodents can use as food.
- For more information on hiring a pest control company, see the fact sheet, "Finding a Company that can Prevent Pest Problems."

PRODUCTS

Examples of trade names of products listed in this fact sheet:

Snap Traps

Victor® Rat Traps
Victor® Mouse Traps

Electric Traps

Rat Zapper®

Chlorophacinone Baits

Enforcer® Rat Bait
J.T. Eaton AC Formula Rodenticide®

Warfarin Baits

D-Con Pellets Kills Rats and Mice®
Kaput® Rat & Mouse Bait

PESTICIDES AND WATER POLLUTION

Common household pesticides show up in treated wastewater and in local waterways, sometimes at levels that can harm sensitive aquatic life. So, water pollution prevention agencies have teamed up with participating retail stores, pesticide distributors, and manufacturers to reduce the risks associated with pesticide use. This fact sheet is part of a series of fact sheets and store displays aimed at educating residents about less-toxic pest management. For the rest of the series of fact sheets, visit www.ourwaterourworld.org. Also, look for the "Our Water Our World" logo next to products in participating stores and nurseries. See the Pesticides and Water Pollution fact sheet for information on active ingredients in common pesticides that may cause water quality problems.

Pest control strategies and methods described in this publication are consistent with integrated pest management (IPM) concepts, and are based on scientific studies and tests in actual home and garden settings. Use **suggested products according to label directions and dispose of unwanted or leftover pesticides at a household hazardous waste collection facility or event**. For more information on pesticide disposal, call 1-800-CLEANUP or visit: www.1800CLEANUP.org. No endorsement of specific brand name products is intended, nor is criticism implied of similar products that are not mentioned.

ACKNOWLEDGMENT

The Central Contra Costa Sanitary District originally developed this IPM outreach program.

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FOR MORE INFORMATION

For more information, contact:

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University of California Cooperative Extension Master Gardeners in your area (in the phone book)

University of California IPM website:
www.ipm.ucdavis.edu

