

Rodents in Schools

Guidance for the School Nurse

Rodents in schools pose risks of respiratory disease, including asthma, infectious diseases, and bites. Rodents also contaminate food and their gnawing habits can damage structures and wiring. Rodent-related health risks can be prevented through the use of Integrated Pest Management (IPM)—smart, sensible practices that include good sanitation and maintenance, pest monitoring, clear communication and reporting.

Health Risks

- House mouse urine contains asthma allergens that readily become airborne and settle in dust. Schools with higher levels of these allergens have been shown to have higher rates of asthma-related absenteeism¹.
- Rodents directly transmit infectious diseases including salmonellosis, leptospirosis, hantavirus pulmonary syndrome, lymphocytic choriomeningitis and plague.
- Disease transmission can occur via contact with a rodent, its urine, feces or saliva, or a bite.
- Disease transmission can also occur indirectly through ticks, mites or fleas that have fed on an infected rodent.
- Rodent gnawing on wires can cause electrical fires.

School Nurse's Role

School nurses can play a key role in preventing rodents in schools by advocating for integrated pest management (IPM) policies and practices—sensible, evidence-based methods to keep buildings rodent-free and safely remove them when they get in. Work with administrators, facilities managers and other members of the health and safety team to review and upgrade your school's rodent prevention, monitoring and management program. Ensure that custodians and pest service providers use safe practices to prevent airborne dispersal of allergens and pathogens.



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Use Integrated Pest Management (IPM)

Establish clear communication procedures to report pests and pest-friendly conditions. Assign responsibilities and establish response protocols to ensure prompt and effective action. Use sanitation, rodent-proofing and traps to keep rodents out. Train all staff and students to recognize and report evidence of pests and pest-friendly conditions. Train staff safe procedures for clean up.

Sanitation

The first step in preventing rodents in and around schools is to eliminate their access to food and harborage by keeping buildings and grounds scrupulously clean and uncluttered.

- Keep floors, furniture and equipment clean and dry; free of dust, crumbs, and grease.
- Keep dry food storage well organized and clean. Unpack and recycle cardboard boxes promptly. Maintain adequate space behind and under shelving units to permit inspection.
- Store all edible items (including cloth bags filled with rice, rice tables used for play, pasta and dry beans used for art or math, etc.) in sealed in pest-proof containers.
- Empty trash cans by the end of the day. Keep dumpsters closed and away from buildings. Screen dumpster drainage holes with wire mesh.
- Move stored equipment, construction materials, sheds and other rodent harborage up off the ground and away from buildings.
- Rake up and remove fallen fruit and nuts from trees and shrubs adjacent to buildings. Prune and mow to keep vegetation at least 12" away from buildings.

Rodent Proofing

Rats can squeeze through an opening as small as 1/2-inch. Mice can fit through a 1/4" gap. Seal off entryways and harborages to keep rodents out of buildings. Inspect and

¹Sheehan et al. 2009. *Ann Allergy Asthma Immunol.* 102(2): 125–130

seal gaps under, between and around doors, windows, utility penetrations, cracks in foundation, and other gaps in the building walls, basement, and roof.

Traps

Strategically placed mechanical traps such as snap traps and capture boxes can be used to both monitor and eliminate rodents in buildings. Rodents often run along edges. Identify runways by sprinkling a fine layer of flour or corn starch in suspected areas to observe tracks.

- Placing a food bait such as raisins, trail mix, chocolate candy, bacon, fruit, carrot, rolled oats or bird seed on the trigger of a mechanical trap can improve efficacy. If possible, match bait to food they have been eating. Nesting material, such as a cotton ball tied to the trigger may also work. For trap-shy rodents, especially rats, bait the trap for 4-7 days before setting the trigger.
- Snap traps should be placed in areas inaccessible to children or inside a locked box.
- Glue traps should be placed inside capture boxes to contain dead rodents, blood and droppings. If glue boards are used alone to monitor and capture rodents they are only effective when placed strategically along runways and in dust-free areas.
- Keep a floor plan/map showing locations of all traps

and bait stations. Keep records of all rodent activity sightings, including dates each trap and bait station serviced, and numbers of rodents captured.

- Service traps regularly. For routine monitoring, check traps at least monthly (weekly if using snap traps). When a rodent is captured, reset and check traps more frequently (daily or weekly). Follow US CDC guidelines for cleaning up after rodents. Gloves and respiratory protection should be used when emptying and cleaning traps and when cleaning up rodent droppings, nests and contaminated surfaces. Apply disinfectant to contaminated area and wipe it up. Don't vacuum.

Rodenticides

Rodenticides (rodent poisons) are not generally recommended or needed in schools unless sanitation, exclusion and trapping are insufficient to resolve a rodent problem. Many states restrict the use of rodenticides in and around schools and require they be applied only by a licensed professional. If rodenticides are deemed necessary, only bait formulations secured in a tamper-resistant outdoor bait station, may be used. Bait stations should only be used outdoors (never indoors). They must be firmly anchored and within 100' of a structure. Bait stations should be monitored and serviced regularly, and removed promptly after rodent activity is under control.

Rodent Monitoring and Response Action Chart

