

*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 absenteeism.<sup>1</sup>
- Rodents can carry human pathogens including those causing 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 free of rodents and remove them safely if they do 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.

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



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and report evidence of pests and pest-friendly conditions. Train staff to use safe procedures for cleanup.

Below are IPM best practices for rodent control to share with school staff. Implementing these practices will go a long way toward keeping you school rodent free.

### IPM Best Practices

#### 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 and 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, pest-proof containers.
- Do not leave garbage in classrooms, offices, breakrooms or kitchens overnight. 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 inches away from buildings.

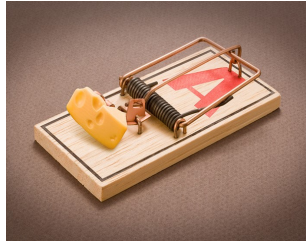
#### Rodent Proofing

Rats can squeeze through an opening as small as ½-inch. Mice can fit through a ¼-inch gap. Seal off entryways and harborages to keep rodents out of buildings. Inspect for gaps and cracks under, between and around doors, windows, pipes, foundation, walls, basement and roof. Rodents readily gnaw through soft materials such as expanding foam. Use materials containing metal such as steel or copper to seal out rodents. Prioritize sealing up the building perimeter first, then seal interior gaps.

## 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 looking for droppings or by sprinkling a fine layer of flour or corn starch to observe tracks. Game cameras can also be used to locate and remediate rodent access and activity points.

- 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. A vanilla-moistened cotton ball or dental floss 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 were serviced, and number 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). Be sure to place mechanical traps in an inaccessible place, and consider the use of non-allergic lures. Follow U.S. CDC guidelines for cleaning up after rodents. (<https://www.cdc.gov/rodents/cleaning/index.html>) 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. Avoid stirring up dust. Don't sweep or vacuum.

## Rodenticides

Rodenticides (rodent poisons) are not generally recommended or needed on school properties. They should never be used indoors. Improper use of rodenticides can pose a risk to people. Wildlife are at risk of secondary poisoning when they eat poison-fed rodents. Many states restrict the use of rodenticides in and around schools and require they be applied only by a licensed professional. However, if sanitation, sealing entryways, and trapping are insufficient to resolve a rodent problem and rodenticides are deemed necessary, only bait formulations secured in a tamper-resistant outdoor bait station may be used. Bait stations must be firmly anchored and located 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

