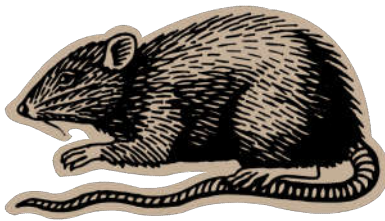




Florida Department of Health in  
Indian River County

You Can Join...

***THE  
"RODENT CONTROL  
PATROL!"***





Rodents, such as rats and mice, like to live where people live. They quickly adjust to the neighborhood. They can thrive on just an ounce of food and water daily, so when they enter a neighborhood and gain access to meat, fish, vegetables, and grains, they will stay. They prefer to feed in and around homes, restaurants, and businesses, but will settle for scraps from trash bags and cans, private yards, and what they can find at the community refuse disposal and transfer station. Rodents get the shelter they need from tall weeds and grass, fences and walls, rubbish piles, and abandoned appliances.

If rodents are living in your neighborhood, there are steps you should take, even if they aren't in your home. They move freely in and out of buildings in the neighborhood, so any steps that your neighbors take to control rodents will encourage them to move into a nearby building (maybe yours!). A community effort works best, where everyone in the neighborhood takes steps at the same time to prevent rodents from entering the buildings and to remove their food and shelter.

## **CHECKING FOR RATS**

The three important urban rodents to note are Norway rats, roof rats, and house mice. The Norway rat, also called the brown, wharf or sewer rat, can be found virtually everywhere humans live. They are attracted to areas that provide a wealth of hiding places and easy access to food. The roof rat, an agile climber, is more at home in the city, with its wires and tall buildings. House mice can establish long-term residence in homes and offices. They are well adapted to life without a steady water supply, and are able to survive long periods on cereals and food scraps.

### **First Signs:**

The following are signs that indicate a rodent infestation:

- Droppings and urine are left wherever rodents travel or rest, especially in corners.
- Damaged foodstuff or other materials, which they use for nesting.
- Dark smears or rub marks are left on surfaces, caused by the oil from the rodent's hair.
- Gnaw marks to wood, wallboard, or other surfaces.
- A distinctive, musky odor may be present.
- House pets, such as cats and dogs, may become agitated because they hear rodents gnawing, digging, running, or fighting.

The sight of a rat or mouse running across an open space is often the first sign of an infestation. However, because rodents are secretive and are active at night, more detailed inspection of the site is required to confirm actual rodent infestation.

- Look for scattered droppings near common pathways, feeding locations, or shelter.
- Look for scratches and sharp gnawing marks on the bottoms and corners of doors, on ledges, in corners of walls, and on stored material.
- Look for dark, greasy rub marks caused by the their fur oil coming in repeated contact with painted surfaces or wooden beams.
- Check for tracks and tail draglines on dusty surfaces indoors and in loose soil and mud outdoors.

***E-e-e-k! Is it a Rat or a Mouse?***

Mainly their size and shape differentiate rat and house mouse droppings.

Mouse	Rat
Droppings have pointed edges at both ends and average 1/4" in size.	Droppings have blunt ends and average 3/4" in size.

Other differences include:

- Rats explore their territory of 100 to 300 feet daily.
- Neophobia, or new-object-fear, makes rats extremely cautious about changes in their territory. It takes several days before a rat will accept a new object as part of its environment.

- Rats are colorblind.
- Rats visit few food sites than mice do. However, rats eat much more at each site than mice.
- A house mouse's home range is rather limited, ranging approximately 10-30 feet. Mice are extremely curious and will explore their territory daily, as well as any new object introduced into their home range. They frequent many feeding sites during their activity period.

### **DORMANT PERIOD**

There is no dormant period for rodents. However, they will attempt to enter into structures more often during late fall and early winter looking for new nesting areas.

**Rats** reproduce year round in stable environments that have adequate food, water, and harborage to support additional animals. About 30 percent of the females may be pregnant throughout the year in these conditions. Less favorable conditions limit reproduction to spring and autumn. Rats are capable of breeding at 3 months of age. Female Norway rats average 3-7 litters per year of 6-12 pups. After giving birth, they are capable of being in heat again within 24-48 hours. The average life span is one year.

**Mice** are prolific breeders, producing offspring year round under ideal conditions. The young mouse can be sexually mature and capable of mating in as little as 5 weeks. The female can still be lactating her young and be pregnant with a new litter. A female will have an average of 8 litters per year containing 5-6 pups each. Mice live approximately one year.

## **DAMAGE**

Rats and mice attack our food while it is in farm fields, orchards, in livestock facilities, during processing, storage, transport, and while it is in our supermarkets, restaurants, and homes. They spoil tons of food by contaminating it with their urine, feces, or fur. The loss of food worldwide to rodents is staggering. Experts estimate that rats and mice destroy enough food each year to feed 200 million people. In our buildings, rodents damage doors, floors, ceilings, and walls as a result of their burrowing and gnawing activity. Rodents also damage food, clothing, documents, and structures through gnawing, urination, and defecation. They can cause fires by chewing through the insulation on electrical wires, and they are potential carriers of disease, such as bubonic plague, salmonellosis, and rat bite fever.

Rats and mice have been responsible for, or implicated in the spread of various diseases to people and domestic animals for years. Today, however, because of improvements in sanitation, effective drugs, and rodent and insect control programs, the disease threat from rodents is not as significant as it once was. In fact, the spread of disease by rodents is often not the primary reason for their control. However, because of the habits of rodents traveling in sewers, garbage, etc., there are still cases of human and animal diseases being transmitted, and there is also the constant potential of disease outbreaks, which can be intensified and accelerated in cities where rats and mice live in close proximity to people. Regardless of how small the threat may be, it is a potential that always must be kept in mind.

Rodents have been associated with various diseases ranging from the Plague, Murine Typhus, Rickettsial Pox, Salmonellosis, Rat Bite Fever, and Hantavirus.

**Plague** - spread from rats to people by the oriental rat flea.

**Murine Typhus** - caused by a bacterial organism that is transmitted from infected rats to people, also by the oriental rat flea.

**Rickettsial Pox**, bacterial organism carried from mites to mice. Found mainly in areas of New York City and several New England cities.

**Salmonellosis** (acute food poisoning) - caused by a bacterium that can thrive in sewers, live stock facilities, septic tanks, cesspools, garbage, and other similar environments. Mainly fecal droppings spread it by rats and mice.

**Rat Bite Fever** - is caused by bacterium that can live in the saliva of both rats and mice. It has flu like symptoms that can last for days and is sometimes fatal.

**Leptospirosis, Lymphocytic Choriomeningitis, Trichinosis, Typhoid, Dysentery**, may also be carried by rodents

## **PREVENTION**

Preventive maintenance, good sanitation, exclusion and trapping are the best protection against rodent invasion and establishment in homes and office buildings (see pages 7 and 8 for diagrams).

### **Ridding an Area of Rodents:**

Prevention is by far the best way to deal with rodents, because once they infest an area, they must be killed, and there is no foolproof method that produces a quick, painless death.

Following are some of the non-toxic and less-toxic approaches to rodent destruction each having pros and cons.

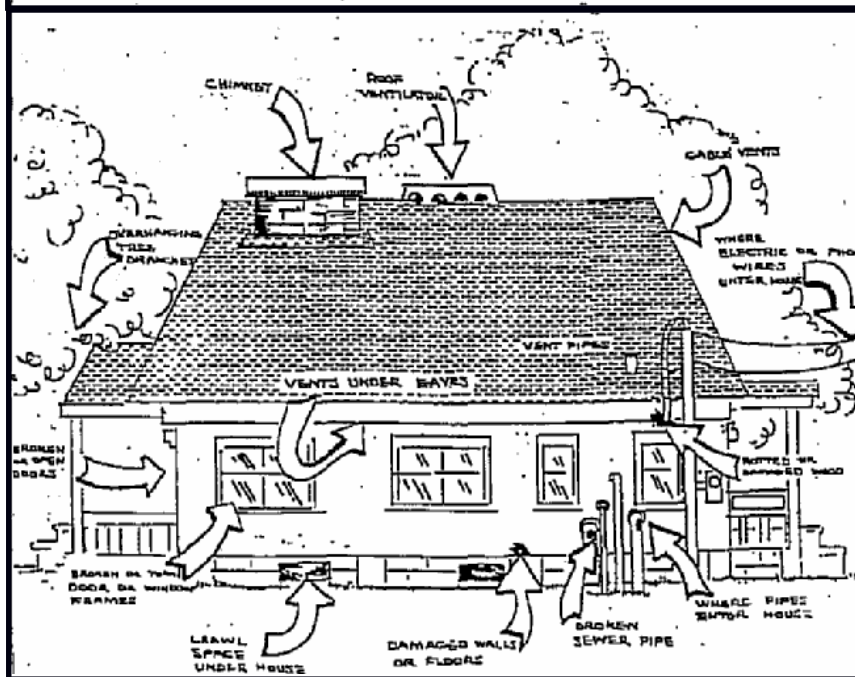
## Live Rodent Trapping:

Live traps can be used to catch rats and mice. Once caught, the rodent can be killed or released. Relatively humane ways of disposing of a live rodent are by drowning or freezing. To drown, confine the rodent inside a heavy-duty paper bag, then submerge the bag in a bucket of water held down with a heavy object, such as a brick. To freeze, place the bag inside a larger plastic garbage bag, seal it and place it in a freezer for a couple of hours. The rodent will lose consciousness before it freezes. Integrated Pest Control Management (IPM) practitioners do not recommend the release of rodents in fields or vacant lots since they will find their way back again.

PREVENTIVE MAINTENANCE	SANITATION	
	Indoors	Outdoors
Mice can enter a building through exterior openings less than 1/4" in diameter. Rodent-proofing is the best way to deny these unwelcome pests access to your home.	Clean out debris in attics, basements, closets, lockers, and lounge areas.	Stack woodpiles and lumber 18" off the ground and 12" away from walls.
Seal small holes with 1/4" galvanized hardware, cloth or copper mesh, and caulk.	Store foods in tightly closed metal, glass, or plastic containers.	Trim all shrubs and grass away from buildings to create a 12-18" space of open ground. Algerian ivy, oleander, bougainvillea, and other thickly matted plants should be periodically thinned and trimmed well away from roofs, walls, fences, and utility poles.
Check for gaps around exterior doors and seal with weather stripping. Door sweeps can be used to prevent rodent entry.	Store bags of grass seed, dry pet food, and other similar items in rodent-proof containers.	
Inspect and repair damaged air vents, vent pipes and shafts, louvers, tile roofs, and gaps around chimney.	Never leave uneaten pet food outside overnight.	Pick up all ripe fruits and vegetables.
Install a pea gravel barrier to separate landscaping from the building foundation. Rats dislike burrowing loose gravel.	All food waste from the kitchen, cafeteria, and other areas should be drained and stored in sealed plastic bags.	Repair leaky faucets and eliminate any unnecessary standing water.
	Rinse all cans, bottles, and plastic containers before recycling or discarding.	
	Make sure garbage can and dumpster lids seal tightly when closed.	



# RODENT-PROOFING YOUR HOME



## - HOW RODENTS CAN ENTER YOUR HOME -

### Spring-Loaded Trapping:

When rodents are instantly killed with a trap, this is possibly the most humane method of control. Unfortunately, they are not always killed outright, or at all. If using a trap, use expanded-trigger traps whenever possible.

- Place traps in areas where they are inaccessible to children and pets.
- Use effective baits; for Norway rats, use a piece of bacon or a slice of hot dog; for roof rats, raisins and nuts; for mice, gumdrops and raisins. Since rats are sensitive to changes in the environment, traps should be pre-baited. Place baited traps out for several days without setting the trap. Check traps daily to see if bait is being taken.

- Once rats take the bait, add fresh bait and set the trap.
- Set three traps side by side at right angles to the wall with the triggers facing the wall. Alternatively, set two traps end-to-end and parallel to the wall with the trigger facing out.
- Place traps for roof rats on tree limbs, under vegetation, on backyard trellises and fences, and at other above-ground sites.
- Traps should be inspected daily, and stale bait should be replaced.

### **Chemical Control Options:**

Use poison baits only when trapping and rodent-proofing have failed to solve the problem. A word of caution when using poison baits: Rodents poisoned by baits will take several days to die. There is a chance that a mouse or rat will die within walls and it becomes inaccessible to remove. A decaying rodent can create foul odors and presents a health hazard.

### ***So...Fellow “Rodent Controllers”...***

If you do have rats, it’s a community problem and the entire neighborhood should work together.

Once the rat infestation is under control, the goal is to prevent them from coming back. Help yourself and your neighbors by keeping trash picked up and placed in covered, rat-resistant containers. Promptly remove or repair any shelter areas, such as fences and old appliances. Periodically check for new entry holes into neighborhood buildings and seal them up quickly.



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***For more information, call 772-794-7440***