



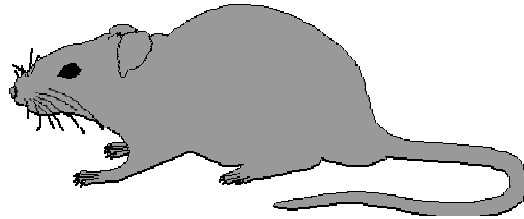
**TULSA HEALTH  
DEPARTMENT**

**TULSA CITY-COUNTY HEALTH DEPARTMENT  
ENVIRONMENTAL HEALTH SERVICES**

4616 East 15<sup>th</sup> Street • Tulsa, Oklahoma 74112-612

(918) 595-4200 • Fax (918) 595-4359 • [ehsd@tulsa-health.org](mailto:ehsd@tulsa-health.org)

## **THE IMPORTANCE OF RODENT CONTROL**



Rodents in the human environment cause great economic loss by consuming or contaminating vast quantities of food and animal feed. They destroy other property, for example, by causing fires by gnawing the insulation from electrical wiring. It is estimated that rats cause 5 to 25 percent of fires of unknown origin on farms.

No reliable estimate of rat population in the United States is available, although the ratio of one rat for every person has frequently been quoted in the literature. Each rat damages between \$1 to \$10 worth of food or other material per year by gnawing and feeding, and contaminates 5 to 10 times more.

Rats and mice can spread a number of diseases. Directly, by contaminating food with urine or feces, and indirectly by way of fleas and mites.

## **RODENT IDENTIFICATION**

An adult Norway rat will be 12-18 inches long from nose to tail. The muzzle is blunt and the body appears heavy and thick. The tail is naked, and shorter than its head to body length. The ears and eyes are small.

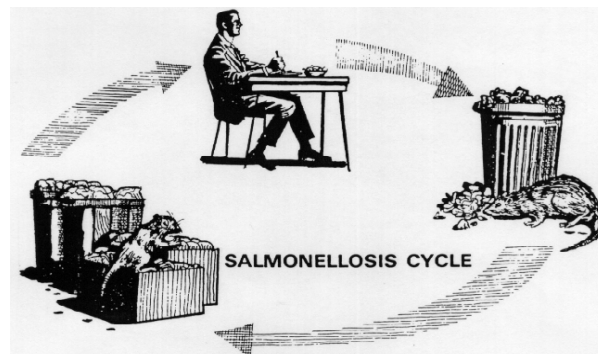
An adult house mouse will be smaller than a rat in size. The muzzle is pointed and its tail is as long as its head and body. Mice have large ears but small eyes and feet. A mouse will look different from a young rat in that the rat will have a large head and feet.

## **ACTIVITY**

The Norway rat is a burrowing rodent. Burrows are found in earth banks, along walls, under rubbish or concrete slabs, and are located close to a source of food and water. Rats need up to one ounce of water daily. They will consume almost any type of food including garbage. They normally feed at night, but can be seen feeding during the day if there is crowding, and if the rats are particularly hungry.

The house mouse is also typically nocturnal, but can be seen in daylight hours. Unlike the rat, this does not necessarily indicate a high population. Mice feed on virtually anything, but do prefer cereals to other items. They nibble on many foods and do not consume large portions at any one feeding. They live indoors in any convenient space. Outdoors, they nest in weeds and rubbish. They do not require as much water as rats and can live in a dry habitat.

Rat and mouse activity may be observed by the sighting of live rodents, tracks, droppings, nest, grease marks from rodent movement, and gnawed materials such as boards.



## **CONTROL**

### **Exclusion and Sanitation**

Control techniques rely on the habits of rats and mice. Rodent proofing structures, trapping, and poisoning are the most common methods to eliminate these pests. Fumigants are occasionally used for rodent control, but they are not recommended for homeowner use.

Several types of electromagnetic and ultrasonic devices have been marketed for rodent control. There is little evidence that these devices will drive established rats and mice from a building.

Man supplies the three basic needs of rats and mice; food, shelter, and water. Eliminating outdoor water sources can be the first step in controlling rodent populations. Leaking pipes and dripping air conditioners should be fixed. Fill in areas where water collects and stands. Place garbage and refuse in containers with a tight seal. A good refuse container is rust-resistant, watertight, easy to clean, rat and damage resistant, and made with a recessed bottom.

Store grain, seed, dog food, etc. in a rodent proof container. Remove lumber, rocks, or debris and keep weeds and other vegetation near buildings closely cut.

Close openings around pipes, doors, windows and other places of possible entry with sheet metal, hardware cloth, or steel wool.

Drain holes in dumpsters should be fitted with a removable hardware-cloth screen, or plugged after each cleaning.

**Permanent removal of harborage and food sources will eliminate existing rat and mice populations.**

## **TRAPPING**

Around the home, traps are used where poisons might be hazardous, where rodents are bait-shy, or where odor control from dead animals would be objectionable. Traps allow for recovery of dead rodents. Snap traps, multiple catch traps, and glue boards are the most common traps used. You should have at least 2 traps for every rodent you might have. Make sure the trap you select is designed for the rodent you are trying to control. Bait for traps include peanut butter, nut, bacon, and gumdrops. The bait must be mounted securely to the trigger. It may be necessary to adjust the trap trigger to ensure release when touched by the rodent. Place the trigger portion of the trap across the probable path of the rat or mouse.

Glue boards do not need bait, but are more effective if two are placed end to end along rodent runways. Please note that glue boards don't work well in dusty areas.

Bait shyness can be a problem. Try placing a trap in the runway without setting the trigger for several days. The rodents will become used to its presence and trapping will be easier. Check baits often and replace them when they become stale. Replace glue boards when they are no longer sticky. Move the traps to another location in a week or so if rodents are not being caught.

Once a rodent is caught, dispose of it in a paper bag. Do not touch it with your bare hands. Rodents caught in live traps can be drowned and then disposed of. It is advisable to place all traps and glue boards out of the reach of children and pets. Be aware that fleas carried on the rodent will leave the dead animal and seek a new host.

## **RODENTICIDES (POISONS)**

Rodenticides are divided into three categories; anticoagulant multiple dose poisons, single dose poisons, and fumigants.

Multiple dose anticoagulants prevent blood clotting, and cause death by internal hemorrhaging. They are considered to be one of the safest forms of control due to their relatively low toxicity to man and non-target organisms. Common anticoagulants will contain; Chlorophacinone, Diphacinone, Warfarin and Coumarin-based rodenticides.

Both rats and mice can be controlled with anticoagulants. Bait shyness is usually not a problem. Baits may be in the form of meal, pellets, or weather resistant paraffin blocks. Dry water-soluble forms for making solutions are also available, and are used when the water supplies of the rodents are limited. Rodents must feed on the bait several times, so control may take 4 to 21 days. Place baits where rodents feed and travel; along walls, in dark corners, under floors, in attics, and under stairways.

**Tamper resistant bait stations or bait boxes are required when placing bait outdoors, or where children and pets may come in contact with the poison.** This also provides a quiet place for rodents to feed, and may improve control.

Keep fresh bait available for at least 2 weeks, or until feeding stops. Replace damp or spoiled bait immediately. For an average rat infestation around the home, approximately 3 pounds of bait is needed for control. Less is needed for mice.

Baits should be placed 10-20 feet apart. All rodent baits must be placed in areas not accessible to children and pets. Consult the product label for more detailed information.