

## Environmental Health Facts about Rats



Rats are unwanted guests in our homes. Rats eat our food and contaminate it with hair, feces, and urine. They damage our property by burrowing and gnawing. Rats may spread disease and they will bite. To control them, it is important to know some facts about rats.

### **RAT BIOLOGY**

Rats have excellent senses of smell, hearing, taste, and touch. They see well at night, but are color blind. Rats will climb, swim, jump, and dig. A rat can fit through an opening that is just one half inch wide. They can chew through many types of building materials. Rats need to chew in order to keep their teeth from growing too long.

Rats build nests from soft material such as paper, cloth, or straw. They live in family groups and defend their area from other rats. The average rat lives about one year. During this time a female rat may be seven litters, each with 6-12 young.

Rats are most active at night and will travel about 100 feet from their nest in search of food and water. Rats like to live as close as possible to their food. They will eat almost any type of food, but prefer it be fresh. Rats may become accustomed to eating one type of food and choose it over others. They will stop eating food that has made them ill.

Each time the rat leaves the nest it travels the same path. This path is called a "runway". Outdoors the runway may appear as a trail in the grass or dirt. Indoors the runaway may show "rub marks" where oil and dirt from the fur has been left on the walls or floors. Rats like to have body contact with solid objects, so they travel close to walls or other upright surfaces. Noises, droppings, rub marks, tracks, gnaw marks, fur, and burrows may all be signs of rat activity. Rats are very shy of new objects placed into their environment, making them

difficult to trap or poison. Rats commonly live near people and are not scared by the odor of humans.

The rat most commonly found around homes in North Carolina is the Norway rat (*Rattus norvegicus*). An adult Norway rat has brown fur and is about 7-10 inches long (not including the tail). It has a blunt nose, small ears, small eyes, and a hairless tail that is shorter than the length of the body. Norway rats are good diggers and build their nests in holes made around the foundations of buildings, in stream banks, and under piles of wood or trash.

Much less common is the roof rat (*Rattus rattus*). The adult roof rat has gray or black fur and is about 6-8 inches long. It has a pointed nose, large eyes, large ears, and a hairless tail that is longer than the length of the body. Roof rats are very good climbers, building their nests above the ground in attics, trees, or wall spaces.

Other types of rats live in fields and woods and are usually not a problem around homes.

## **RATS AND DISEASE**

Rats can transmit diseases to people. Some of these include leptospirosis, salmonella, trichinosis, and rat-bite fever. The fleas on rats may carry murine typhus or plague. Despite common belief, rats are not known to carry rabies.

## **RAT CONTROL**

Rat control around the home takes four steps:

### **Prevent rats from entering the home**

- Repair openings that may let rats in.
- Repair damage done by rats.
- Sheet metal and hardware cloth are very effective for rat-proofing. Remember, a rat can enter an opening that is just one half inch across.

### **Remove sources of food**

When done properly, trapping can be a good way to control rats. Successful trapping depends on knowing the habits of rats. Remember rats tend to use the same runway.

Traps placed in the runway are most likely to work.

Trapping may be more successful if the trap is left unset for several days. Rats are shy of new objects, not human odor.

If baited, remember rats prefer fresh food. Peanut butter, apple or cheese, make good rat baits.

If there are only a few rats, trapping may be the quickest and safest way to remove them. The more traps used the better. Be careful when placing traps so children or pets will not get into them.

Rats can be poisoned using one of the products sold in stores.

Two types of poisons (or rodenticides) are available – those that require several feedings, and those that require a single feeding to work.

Most of these poisons work by preventing the blood from clotting (anticoagulants). Generally, the single-feeding poison will give quicker results. The rat is more likely to feed on the poison if other food items are first removed. **Rat poisons must be placed where they cannot be reached by children, pets, or any animals other than rats and mice.** If this cannot be done, rat poisons must be placed into a specially designed "tamer-resistant" bait box. When using rodenticides, be sure to read and carefully follow the label directions.

Where large numbers of rats are present in a neighborhood, a community effort is needed to control the rat problem.

## **NEED MORE INFORMATION?**

Contact your Local Health Department at 336-597-1790  
or the Public Health Pest Management Section at (919)733-6407