



## SUMMIT COUNTY PUBLIC HEALTH

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### HOUSE MOUSE

**Identification:** The house mouse (*Mus musculus*) is a small, slender rodent that has a slightly pointed nose; small, black, somewhat protruding eyes; large, scantily haired ears, and a nearly hairless tail with obvious scale rings. The adult mouse weighs about 2/5 to 4/5 ounces. They are generally grayish-brown with a gray or buff belly. Similar mice include the white-footed mice and jumping mice (which have a white belly), and harvest mice (which have grooved upper incisor teeth.) Native to central Asia, this species arrived in North America along with settlers from Europe and other points of origin. A very adaptable species, the house mouse often lives in close association with humans and therefore is termed one of the "commensal" rodents along with Norway and roof rats. Following their arrival on colonists' ships, house mice spread across North America and now are found in every state including coastal areas of Alaska, and in the southern parts of Canada.



**Habitat:** House mice live in and around homes, farms, commercial establishments, as well as in open fields and agricultural lands. The onset of cold weather each fall in temperate regions is said to cause mice to move into structures in search of shelter and food.

**Food Habits:** House mice eat many types of food but prefer seeds and grain. They are not hesitant to sample new foods and are considered "nibblers," sampling many kinds of items that may exist in their environment. Foods high in fat, protein, or sugar may be preferred even when grain and seed also are present. Such items include bacon, chocolate candies, butter and nutmeats. A single mouse eats only about 3 grams of food per day (8 pounds per year) but because of their habit of nibbling on many foods and discarding partially eaten items, mice destroy considerably more food than they consume.

Unlike Norway and roof rats, they can get by with little or no free water, although they readily drink water when it is available. They obtain their water needs from the food they eat. An absence of liquid water or food of adequate moisture content in their environment may reduce their breeding potential.

**General Biology, Reproduction, and Behavior:** House mice are mainly nocturnal, although at some locations considerable daytime activity may be seen. Seeing mice during daylight hours does not necessarily mean there is a high population present, although this usually is true for rats. Mice have poor eyesight, relying more on their hearing and their excellent senses of smell, taste and touch. They are considered essentially colorblind.

House mice can dig and may burrow into the ground in fields or around structures when other shelter is not readily available. Nesting may occur here or in any sheltered location. Nests are constructed of fibrous materials and generally have the appearance of a "ball" of material loosely woven together. These nests are usually 4 to 6 inches in diameter. Litters of 5 or 6 young are born 19 to 21 days after mating, although females that conceive while still nursing may have a slightly longer gestation period. Newborn mice are naked and their eyes are closed. They grow rapidly and after 2 weeks they are covered with hair and their eyes and ears are open. They begin to make short excursions from the nest and eat solid food at 3 weeks. Weaning soon follows, and mice are sexually mature as early as 6 to 10 weeks old.

Mice may breed year-round and a female may have 5 to 10 litters per year. Mouse populations can therefore grow rapidly under good conditions, although breeding and survival of young slow markedly when population densities become high.

During its daily activities, a mouse normally travels an area averaging 10 to 30 feet in diameter, seldom traveling further than this to obtain food or water. Mice constantly explore and learn about their environment, memorizing the locations of pathways, obstacles, food and water, shelter and other elements in their domain. They quickly detect new objects in their environment, but they do not fear novel objects as do rats. This behavior should be remembered if faced with a large population of mice in a residential, industrial or agricultural setting. Proper placement of mouse bait is a must if you are to have a successful baiting program.