

# FLIES



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### Physical Identification

The adult fly is about 0.64 centimeter long and about 1.27 centimeters across the outspread wings. A thousand adults weigh less than an ounce. Each foot on its three pairs of legs is equipped with claws and two hairy pads called pulvilli. These pads secrete a sticky liquid that enables the fly to cling to almost any surface and run upside down along a ceiling.

### Feeding

The feeding habits of one species varies greatly from another. For example, mosquitoes are a type of fly that feed on decaying organic matter in the water while they are in the larval stage. As an adult, the housefly prefers sweets, liquids and rotting fruit.

### Lifecycle

The life cycle of a housefly begins in the egg stage. Within a day, house fly eggs hatch into larvae, also known as maggots. Maggots are legless, white insects that feed from the egg-laying site for three to five days. During this time, maggots molt several times.

### Harbourage

Houseflies live in both urban and rural areas, especially where humans are present. Because human garbage and feces are the most preferred source for larvae development, houseflies are most associated with urban areas. Specifically, dung heaps, garbage cans, and mammalian road kill are the best environments for larvae to develop. Other breeding mediums include rotten fruit and vegetables, old broth, boiled eggs, and even rubber.

Houseflies are primarily found in temperate regions. They are most abundant during the warm seasons, but some adults may survive through the winter season in temperate areas. They are most active and live longest in temperatures between 10 and 26.6 degrees Celsius.

Adult houseflies are inactive at temperatures below 7.2 degrees Celsius and die when temperatures go below 0 degrees

Celsius or above 44.4 degrees Celsius. Extreme temperatures are most dangerous to the life of houseflies when the humidity is high. Feeding larvae prefer temperatures between 30 and 35 degrees Celsius.

### Health Risk

Flies are a well-known risk for spreading diseases and spoilage organisms in the food, healthcare and pharmaceutical sectors. In these sectors, standard hygiene practices, physical barriers and electric fly killers are required components of a good hygiene regime. This ensures the prevention of contamination from flies that are attracted to food.

A team of researchers from the US, Singapore, Brazil and Germany have shown that houseflies and blowflies can carry a far wider range of bacteria. With one key discovery being that the major route of contamination is from walking on a surface.

The researchers collected houseflies and blowflies from three continents in a range of environments, including tropical rainforest in Brazil and urban areas. The researchers used new genetic analysis techniques to identify all the microorganisms carried by the flies and the parts of their bodies they were present on.

The legs and wings show the highest microbial diversity of parts of the fly body, which shows that just by landing on food or surfaces, flies could spread many types of bacteria.

Most studies of flies have concentrated on microorganisms in the gastrointestinal tract of the insects. Blowflies and houseflies feed on and breed in faeces and rotting matter. Through their normal habits, flies will encounter many microorganisms that can cause disease or degrade plant and animal matter. It is, therefore, likely that mechanical means of dispersal are important factors.



Common housefly



Lesser housefly



Horse fly



Bluebottle fly



Sand fly



Tsetse fly (very rare)