

Environmental Health Facts about Flies



Flies are a group of winged insects that include many common pests. House flies, mosquitoes, deerflies, and gnats are all examples of flies. Domestic flies are those commonly found around homes and businesses. Flies may carry disease or just be annoying. Here are some facts that can help you control flies.

FLY BIOLOGY

Domestic flies all have a similar life cycle. There are four stages of growth – egg, larva (or maggot), pupa and adult. Depending upon the type of fly, it may take about one to four weeks for the cycle to be completed. Eggs are laid by the female fly onto breeding material, usually dead animal or vegetable material. Most flies prefer the breeding material to be moist, but not liquid. Eggs can hatch very quickly, about 12 hours, after being laid.

The larva is a small, white or cream colored, worm-like state that hatches from the egg. The larva burrows into the breeding material where it feeds and grows for several days. Usually, the larva leaves the breeding material and moves to a dry, protected place just before becoming a pupa.

The pupa is an inactive stage, like a cocoon, in which the adult fly develops. After leaving the pupal case, adult flies mate and the females begin to lay eggs. Adult flies may live for several weeks.

There are three types of domestic flies commonly found around homes and businesses - house flies, bottle or blow flies, and flesh flies.

Houseflies are grey and black with four black stripes on the back. They are about ¼ inch long. Eggs are laid on decomposing organic matter, either plant or animal. Female houseflies lay eggs in batches of 50-100, and as many as 500 eggs may be laid in a lifetime. Depending upon the temperature, it may take as little as 10 days from egg to adult.

A very similar looking relative of the housefly is the **stable fly**, sometimes called the **dog fly**. It is unlike other domestic flies because it actually bites and sucks blood. It breeds in decaying vegetation and can be common around livestock. Sometimes it becomes abundant at the beach where it breeds in rotting marsh vegetation or seaweed that has been washed ashore.

Blow or **bottle flies** have bodies with shiny metallic colors such as bronze, blue, or green.

Adult flies are about $\frac{1}{4}$ inch long. Blow flies will lay eggs on any organic matter, but strongly prefer animal flesh. Eggs are laid in clumps, and a female may lay hundreds in a lifetime. Despite what is commonly thought, meat does not need to be spoiled to attract these flies. Blow flies will lay eggs on freshly cooked meat. In fact, blow flies may even infest the wounds of living animals. Sometimes when animals die in the chimney or crawlspace of a home, blow flies may breed in the carcass and the adult flies enter the house.

Flesh flies are grey and black with three black stripes on the back. They are about $\frac{1}{2}$ inch long and resemble large house flies. As suggested by their name, they strongly prefer to breed in animal flesh. Unlike the other flies mentioned, flesh flies do not lay eggs, but small maggots. Flesh flies, like blow flies, will infest fresh meat, cooked or uncooked.

Two other flies may be common pests in homes or businesses.

Fruit flies are strongly attracted to the odor of rotting fruit and will sometimes be found around wine or vinegar. They may breed in overripe fruit or dirty trash containers.

Drain flies are small and dark grey. They are very hairy-looking and may sometimes be called moth flies. These flies are most common in the bathroom. They breed in the slimy layer that forms inside the drain pipes of sinks or tubs. Removing that slime layer with a brush will end drain fly problems.

FLIES AND DISEASE

Besides contaminating food with eggs and maggots, flies can carry bacteria that cause intestinal diseases. Flies can travel from fecal material to our food very easily, carrying bacteria with them on body hairs or the sticky pads on their feet. When feeding, flies expel saliva

and feces that may also contain bacteria. Sometimes flies will lay eggs or baggots on the flesh or wounds of man and animals.

CONTROLLING FLIES

There are four ways of controlling flies – sanitation, exclusion, mechanical devices, and insecticides.

Sanitation Flies should be kept from entering buildings. Windows and doors need to have good screens. Cracks and other openings that may let flies into a building should be repaired. Businesses should have doors that open outwardly to prevent flies from being drawn into the building. Equip doors with self-closing devices. Exhaust vents and air intakes should be screened. It is important to place dumpsters and trash cans as far from entrances as possible. Plantings should be away from doors so that flies will not rest near entrances.

Mechanical Control There are some good mechanical devices that can be used around homes and businesses to control flies. Sticky traps can be hung to catch flies in buildings or outdoors. For commercial establishments, air doors, when properly installed, can prevent flies from entering buildings. Ultra-violet (UV) light traps work very well for controlling flies inside commercial buildings. It is important to position these UV traps correctly. They should be placed indoors, away from windows, and centered about three feet above the ground. UV traps should not be placed too close to food or surfaces on which it is prepared. Devices that produce ultrasound are not considered to be effective for controlling any insects, including flies.

Insecticides Where necessary, insecticides can be used to control severe fly problems. Fly baits containing methomyl are effective. These can be used around garbage cans or other outdoor places where adult flies are a problem.

Mist timers. Devices that release insecticide, can be used in commercial establishments, but must not be placed near areas where food is being prepared or served. Mist timers usually contain pyrethrins.

Aerosol sprays can be used to control flies, but in areas of commercial buildings where food is prepared all dishes and utensils must be

covered and work surfaces washed after they are used. Aerosols usually contain pyrethrins.

Outdoors, and in some buildings, residual sprays of insecticide can be used. Residual sprays cannot be used in food preparation areas of commercial buildings. Products containing permethrin are good residual sprays for flies.

It is important to read and carefully follow all label directions when using insecticides.

NEED MORE INFORMATION?

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