



A variety of fly species exist and while these insects are all considered a nuisance, certain types are responsible for spreading diseases. To decrease disease risk, it is important to understand where flies live and breed and control methods available.

## Life Cycle

Fly prevention and control involves a basic understanding of their life cycle.

- A fly life cycle has 4 stages: egg, larva (maggots), pupa, and adult
  - This cycle can take less than 2 weeks in warm weather for some species
- Adult flies lay their eggs in wet organic matter, such as animal waste and decaying material
  - Moisture is needed to prevent the eggs, larvae and pupae from drying out
  - Bacteria and viruses that may cause disease are picked up from these sources
- Adult flies can carrying disease organisms on their legs and mouthparts
  - Some flies are biting species and can transmit bloodborne pathogens in this manner

## **Fly Control Measures**

- Integrated pest management is the best approach to controlling flies
  - It combines prevention and non-chemical control methods with the wise use of the least harmful pesticides possible
  - It involves monitoring and environmental control
- The environment must be managed to decrease the areas where flies can lay their eggs
  - Control moisture and remove materials where larvae develop (e.g., feces) to break the life cycle and prevent development of adult flies
  - Fecal material in outdoor areas should be picked up and disposed of on a daily basis
  - Garbage cans should have tight fitting lids to deter entry by flies
  - Organic debris (e.g. rotten vegetation and leaf litter) should also be disturbed once a week to prevent fly eggs from hatching

## Area sprays (knockdown) are fine mist insecticides that kill adult flies on contact

- These products can be used in areas of high fly concentration; they do not last long (1-2 hours)
- Due to evaporation, these products should not be used at temperatures over 90°F; they are not effective at low temperatures (below 65°F)
- Residual sprays are insecticides that can be applied to shaded surfaces
  - The flies are killed when they contact the product while resting
  - Treat places such as walls, ceiling, and rafters
  - Water (e.g., cleaning) will wash off the insecticide
  - To avoid insecticide resistance, alternate between area and residual sprays
- Baits and fly traps can be used in areas where the use and safety of chemical sprays are prohibited
  - These products should NOT be placed in areas where they could contaminate food or water or where animals will have access to them
- With any fly control product, always read and follow all label directions carefully

It is a violation of state and federal law to use a pesticide in any manner that differs from the product label. Use only according to label directions to avoid environmental damage and animal or human injury.

## For More Information

- Flies. University of California, Agriculture and Natural Resources. Publication 7457. April 2004. Available at: www.ipm.ucdavis.edu/PDF/PEST-NOTES/pnfiles.pdf
- Fly control around the house. Texas Agricultural Extension Service. Available at: http://cipm.ncsu.edu/ent/Southern\_Region/RIPM/CHAP6/ flies.htm
- Integrated pest management (IPM): In and around the home. Ohio State University Extension. June 1994. Available at: http://ohioline.osu.edu/ hyg-fact/2000/2159.html