

INTEGRATED PEST MANAGEMENT: FLIES



Are house flies buzzing around your face and landing on your food? Are fruit flies in the kitchen circling the bananas on the counter? There are safe and effective ways to keep fly numbers down and prevent them from bothering you. Integrated pest management (IPM) is a strategy to prevent fly invasions and reduce pesticide use.

When are flies a problem?

Although there are thousands of different flies, only a few are pests, and even these serve a useful purpose by breaking down and recycling dead plants and animals. **House flies** and related **filth flies** land on pet waste, garbage, and rotten fruit, and then walk on your food. Filth flies land on your food when you're eating outdoors. **Fruit flies** feed on tiny yeasts present on ripe and rotting fruits and food scraps. They breed outdoors and around overripe fruit or compost piles. These flies can spread germs to our food directly from garbage, rotten meat or fruit, dead animals, animal waste, or even dirty floors.

Fly life cycle

All flies have four life stages. The female house fly lays several batches of eggs in manure or garbage. The eggs hatch into maggots, which are pale and wormlike. Each maggot transforms into a cocoon-like pupa and from these emerge adult flies. During the hottest summer months, flies go from egg to adult in just a week. Outdoors, the shiny, metallic green or blue filth fly also develops from egg to adult in a week, which is why your garbage should be picked up by a collection service every week even if the outdoor bin isn't full.

IPM Strategies

1 DON'T SPRAY!

Spraying pesticides or using no-pest strips treated with pesticides won't kill the thousands of maggots outdoors hiding in garbage or soil. Both will expose staff and children to harmful chemicals.

2 KEEP FLIES OUT

House and filth flies

If flies are getting into your house, repair screens and keep unscreened outdoor kitchen doors and windows closed.

Fruit flies

It's hard to keep fruit flies out because they're so widespread outdoors and will find their way to your kitchen through open doors, or they will come in as eggs from fruit and vegetables you pick from your garden or buy at grocery stores.

3 REMOVE FLIES' FOOD AND SHELTER

House and filth flies

- ▶ Clean dirty dishes, utensils, and surfaces at the end of each day.
- ▶ Keep indoor garbage in covered waste cans that you empty every night.
- ▶ Keep outdoor garbage in tightly covered waste bins. If food residues collect and you notice maggots, wash the bin out with soap and water.
- ▶ Move outdoor garbage as far away from the kitchen as possible.
- ▶ Pick up pet waste frequently, place in plastic bag, seal with a tie, and place in outdoor waste bin.

Fruit flies

- ▶ Keep ripe fruit and vegetables refrigerated.
- ▶ Use mesh food tents for ripening bananas or tomatoes on counter.
- ▶ Keep food scraps for compost in a covered container that you empty every night.
- ▶ Cover outdoor compost heaps.

[IPM Strategies continued]

4 MANAGE FLIES WITH TRAPS

House and filth flies

- ▶ Purchase a wall scone fly trap. These light fixtures, commonly seen at grocery stores and restaurants, have a light to attract flies and sticky paper to capture them.
- ▶ Use a fly ribbon or fly paper, which both use fly attractant and a strong adhesive to trap flies. Note: these are different from no-pest strips containing dichlorvos, a highly toxic pesticide.
- ▶ Use an ultraviolet light trap.

Fruit flies

- ▶ Use cone traps. You can make your own by pouring some apple cider vinegar in a jar and adding a bit of dish soap. Make a cone out of paper and stick it in the jar. You don't want the paper to touch the liquid.

ACTION PLAN FOR FLIES

WHEN TO TAKE ACTION	NONPESTICIDE PRACTICES		LAST RESORT
<ul style="list-style-type: none"> ▶ When you see flies indoors, especially in the kitchen. ▶ When you see a lot of flies around garbage bins outdoors. 	House and filth flies <ul style="list-style-type: none"> ▶ Fix broken door and window screens and remove garbage daily. ▶ Use a fly swatter in your house. ▶ Hang sticky fly paper or fly ribbons. ▶ Use a store-bought or homemade fly trap. 	Fruit flies <ul style="list-style-type: none"> ▶ Use a store-bought or homemade vinegar trap indoors. ▶ Outside, don't let fruit rot on the ground. 	<ul style="list-style-type: none"> ▶ If you suddenly see a lot of flies indoors, contact a pest management professional and consider asking them to look for a dead animal such as a mouse or rat.

LESS COMMON SITUATIONS

Fungus gnats feed on organic matter in soil and appear indoors when house plants are overwatered. They can be annoying when they buzz around your face.

- ▶ Don't overwater potted plants.
- ▶ Repot plants that get infested. Pour infested soil into your garden, wash out the pot, let it dry, and then replant with fresh potting soil.

Drain flies, also known as moth flies, gather on bathroom or kitchen walls. The maggots feed on the slime inside sewers and shower and sink drains. When the slime builds up, some of the adult flies fly out, gather around the drain, and sometimes fly to kitchen counters. They can carry germs from the slime to the counter.

- ▶ Use screened traps on bathroom drains to prevent buildup of hair.
- ▶ Keep kitchen drains clear with baking soda and vinegar followed by boiling water.
- ▶ Use drain cleaners once a month that contain special enzymes. (You'll find enzyme-containing drain cleaners at hardware stores. They're very effective and less toxic than drain cleaners that contain lye or bleach).

RESOURCES

- University of California Statewide IPM Program: *Flies*
www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7457.html

California Childcare Health Program, University of California, San Francisco School of Nursing • cchp.ucsf.edu



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