

# House Flies

## Carolina™ CareSheet

House flies (*Musca domestica*) exhibit complete metamorphosis, passing through egg, larval, pupal, and adult stages in their life cycle. We ship house flies as either larvae or pupae.

### Immediate care and handling

Open the shipping container and remove the cup that contains your house fly larvae or pupae. The pupa is an inactive stage and looks like a small brown capsule. Larvae (maggots) arrive in a cup with wood shavings. The larvae are mature when received and it is not necessary to feed them. If you are using the larvae in an experiment, it is best to do so within 2 days of receipt. At room temperature (20 to 22° C, 68 to 73° F), larvae will pupate 3 to 5 days after receipt. To obtain pupae from the larvae, spread the larvae and wood shavings from the cup onto a tray. Each day collect the fresh pupae.

If you ordered pupae, eclosion (emergence of adult flies) should occur 3 to 4 days after you receive them. This range depends on temperature and time in transit. The fly is ready to eclose when the pupa darkens. For a successful eclosion, you must cluster and stack the pupal cases close together. Thirty to 40 pupal cases can be massed together in a foam-plugged culture vial (item #173120), an ideal container. We recommend keeping the culture at 85° F for optimum results. If you are transferring the flies to a cage, place the culture vial in the cage and remove the foam stopper to release the flies.

### Maintaining and culturing

Feed adult flies a 1:1 mixture of granulated sugar and powdered milk. Place this dry mix in a bowl or dish. Create a water source by placing a clean plastic scrubby in a cup and adding water to the top of the scrubby. This will allow access to the water but prevent the flies from falling in and drowning.

Continuous culturing of the house fly goes beyond the scope of this CareSheet. For continuous culturing, we recommend our item #144400 House Fly Culture Kit.

### Constructing a cage

We recommend holding adult house flies in a sleeve cage. This type of cage prevents flies from escaping when it is opened.

You can construct a simple sleeve cage from a plastic wastebasket, muslin and nylon organdy cloth, staples or hot glue gun, and a large rubber band. In the side of the

wastebasket, cut a 15- to 20-cm-diameter hole (size to wastebasket). Make a muslin sleeve slightly larger in diameter than the hole in the wastebasket, and open at both ends. Fold 1 end of the sleeve around the inside edge of the hole and staple or hot glue with a glue gun. Loosely tie the other end of the sleeve to create an easy-to-access opening to the cage's interior. Form the top of the cage using the nylon organdy held in place with a large rubber band.

Make a simpler sleeve cage from a piece of nylon organdy sewn into a tube and supported by a simple frame made of heavy gauge wire (e.g., a coat hanger). Insert the frame midway into the cloth tube, tightly tie off 1 end of the tube, and loosely tie the other end to allow easy opening for access to the cage's interior.

## FAQs

### **Can I delay development of house fly larvae or pupae by refrigeration?**

We don't recommend it, as refrigeration can harm them. You can hold pupae for a few days at 10° C, 50° F; however, this may reduce the number of adult flies that emerge. This effect increases with time, and after a week you may get little or no emergence. It is better to use larvae and pupae within the time limits given above.

### **How long do adult flies live once they have emerged?**

If given food and water, they typically live 14 to 30 days.

### **Is there a way to distinguish between male and female house flies?**

Observe the space between their eyes. Female flies have a wider space between the eyes than male flies, whose eyes almost touch. Additionally, females are larger than males.

### **What is the optimum temperature for culturing house flies?**

Maximum production is achieved at 27 to 32° C (80 to 89° F).

### **My flies have mated and produced eggs. How long does it take the fly eggs to hatch?**

Hatching takes 12 to 48 hours, again depending on temperature.

### **Why aren't my flies producing eggs?**

Flies require sufficient food before mating. Additionally, female flies require protein to produce eggs. Make sure that the habitat contains adequate food and a rich source of protein (meat) for the females.

### **The eggs are hatching. What do I feed my house fly larvae?**

Carolina supplies an Instant House Fly Medium (item #144424), which supports 2,000 to 3,000 larvae.

## Problems?

We hope not, but if so, contact us. We want you to have a good experience.

Orders and replacements: 800.334.5551, then select Customer Service.

Technical support and questions: [caresheets@carolina.com](mailto:caresheets@carolina.com)



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