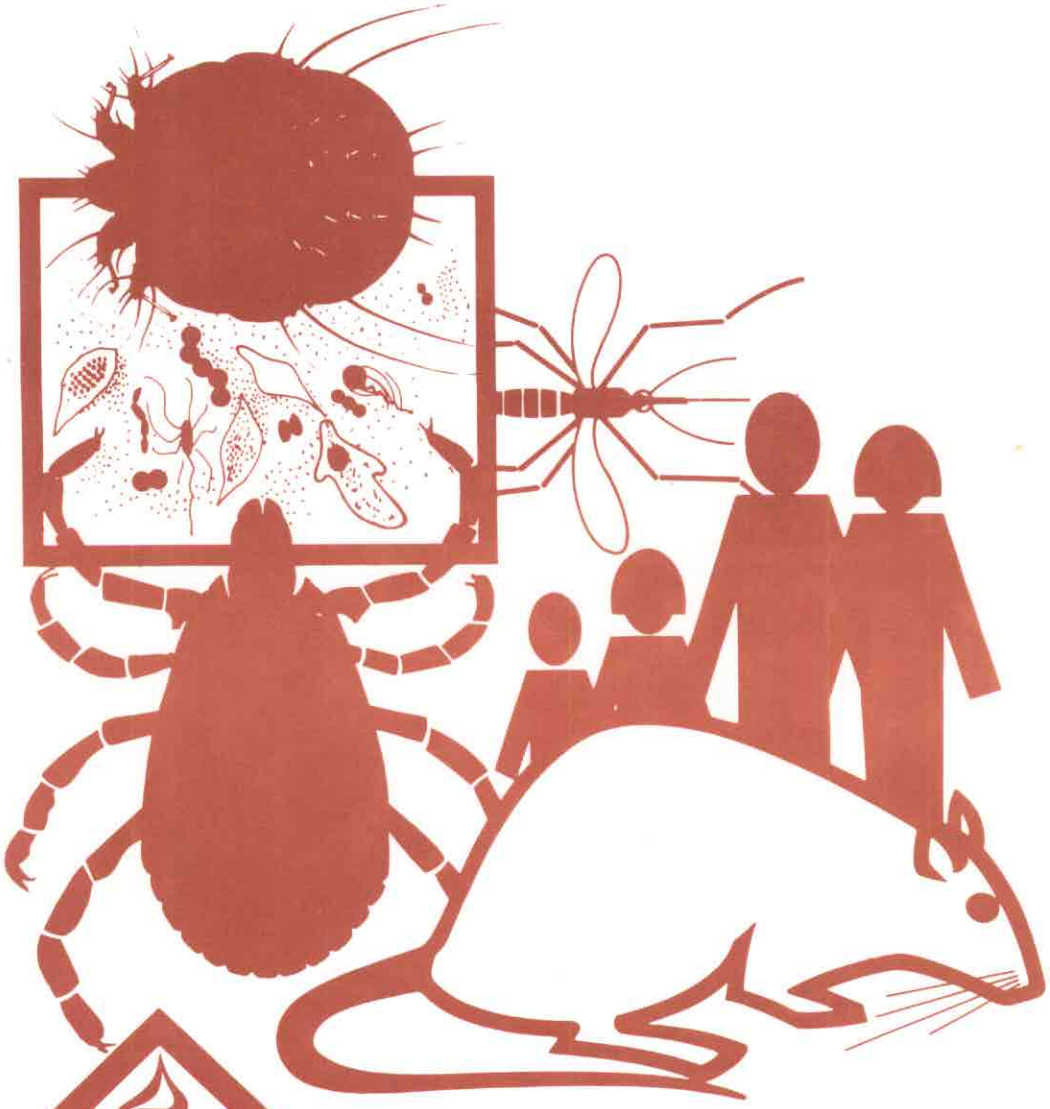
CDC

LESSON 5

SELF-STUDY COURSE 3013-G

Vector-Borne Disease Control

Flies



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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

SELF-STUDY

PUBLIC HEALTH SERVICE
Centers for Disease Control
Public Health Practice Program Office
Atlanta, Georgia 30333

VECTOR-BORNE DISEASE CONTROL

Self-Study Course 3013-G

LESSON 5: FLIES

I: LESSON CONSISTS OF:

Part I: 25 multiple choice questions
Part II: 25 true-false questions

II: REFERENCE:

Flies of public health importance and their control.

III: TOPICS AND READING ASSIGNMENTS:

	Flies
A. Introduction	1
B. Flies and Human Welfare	1- 4
C. General Characteristics of Flies	4- 5
D. Identification and Biology of Flies	5-20
E. Fly Survey Techniques	20-25
F. Domestic Fly Control by Environmental Sanitation	26-30
G. Domestic Fly Control with Insecticides	30-35
H. Mechanical and Physical Control of Domestic Flies	35-36
I. Biological Control of Domestic Flies	36
J. Organized Fly Control	37

VECTOR-BORNE DISEASE CONTROL

Lesson 5 - Objectives

Upon successful completion of Lesson 5, the student should be able to correctly:

- Identify and recognize the public health importance, biological aspects, and methods of control of flies.
- Identify the methods of transmission of disease by flies, the diseases transmitted by each method, and, for selected diseases, the types of flies which commonly transmit them.

LESSON 5: FLIES

Part I: Multiple Choice

1. Which one of the following diseases is caused by organisms which are mechanically transmitted by certain kinds of flies?

   A. Relapsing fever
   B. Sandfly fever
   C. Scrub typhus
   D. Typhoid fever

2. Organisms that cause conjunctivitis, trachoma, and yaws can be transmitted by:

   A. Crane flies.
   B. Deer flies.
   C. Eye flies.
   D. Flesh flies.

3. Which one of the following diseases is caused by organisms which are biologically transmitted by certain kinds of flies?

   A. Relapsing fever
   B. African sleeping sickness
   C. Scrub typhus
   D. Plague

4. Infestation of the flesh of living animals by fly larvae is called:

   A. Filariasis.
   B. Giardiasis.
   C. Loasis.
   D. Myiasis.

5. Most species of flies have:

   A. One pair of antennae and 3 pairs of legs.
   B. One pair of antennae and 4 pairs of legs.
   C. Two pairs of antennae and 3 pairs of legs.
   D. Two pairs of antennae and 4 pairs of legs.

6. The life history of the fly consists of which set of the following stages?

   A. Egg, larva, nymph, adult
   B. Egg, larva, pupa, adult
   C. Egg, nymph, larva, adult
   D. Egg, nymph, pupa, adult

7. The average female house fly lays about how many eggs during her lifetime?

   A. 50
   B. 500
   C. 5,000
   D. 50,000

8. House flies have how many larval stages?

   A. Two
   B. Three
   C. Four
   D. Five

9. During warm weather, the developmental stages of the house fly (from the laying of the egg to the emergence of the adult) require:

   A. 2 - 4 days.
   B. 8 - 20 days.
   C. 28 - 40 days.
   D. About 90 days.

10. House flies prefer to breed in:

    A. Decaying meat and meat products.
    B. Garbage and manure.
    C. Tissues of living animals.
    D. Highly polluted water.

11. The only common domestic fly which bites (sucks blood) is the:

    A. Blue bottle fly.
    B. House fly.
    C. Screwworm fly.
    D. Stable fly.

12. African sleeping sickness is transmitted by:

    A. Deer flies.
    B. Flesh flies.
    C. Stable flies.
    D. Tsetse flies.

13. A dull-colored domestic fly having three dark longitudinal stripes on the thorax, a checkerboard pattern on the abdomen, and reddish-brown tip of the abdomen is a:

    A. Dump fly.
    B. Eye fly.
    C. Flesh fly.
    D. Green-bottle fly.

14. A shiny black domestic fly that causes myiasis in sheep and cattle in the southwestern United States is the:

    A. Black blow fly.
    B. Blue-bottle fly.
    C. Dump fly.
    D. Green-bottle fly.

15. Green-bottle flies prefer to breed in:

    A. Decaying meat and meat products or garbage.
    B. Wet hay.
    C. Tissues of living animals.
    D. Highly polluted water.

16. Primary screwworm flies prefer to breed in:

    A. Decaying meat and meat products.
    B. Decaying vegetables and fruits and their products.
    C. Tissues of living animals.
    D. Highly polluted water.

17. Which kind of fly overwinters in buildings and becomes a pest inside buildings in mild weather?

    A. Screwworm fly
    B. Cluster fly
    C. Horse fly
    D. Deer fly

18. Black fly larvae live in:

    A. Manure.
    B. Refuse.
    C. Quiet lakes.
    D. Flowing streams.

19. The small, fuzzy flies which create serious problems at many sewage treatment plants are:

    A. Crane flies.
    B. Deer flies.
    C. Eye flies.
    D. Filter flies.

20. Organisms causing loasis, tularemia, and anthrax may be transmitted by:

    A. Crane flies.
    B. Deer flies and horse flies.
    C. Eye flies.
    D. Filter flies.

21. During their larval stage, "rat-tailed maggots" usually live in:

    A. Decaying meat and meat products.
    B. Decaying vegetables and fruits and their products.
    C. Tissues of living animals.
    D. Highly polluted water.

22. Which of the following survey techniques gives the most useful measure of the relative numbers of the various species of flies in an area?

    A. Fly egg counts
    B. Fly grill surveys
    C. Fly trap surveys
    D. Sweep net surveys

23. To reduce fly breeding on residential premises, refuse should be collected:

    A. Every day.
    B. Twice weekly.
    C. Once a week.
    D. Every two weeks.

24. The best and most economical method of refuse disposal is:

    A. Hog feeding.
    B. Home garbage grinders.
    C. Open dumps.
    D. Sanitary landfills.

25. Which of the following has proven to be of least value in fly control?

A. Electrocution devices
B. Fly paper
C. Fly repellents
D. Insect screening

Part II: True-False - Mark "A" for True, "D" for False.

1. The bites of biting flies can produce severe lesions, high fever, and even general disability in susceptible individuals.

2. Domestic flies can disrupt picnics.

3. All flies have wings.

4. The presence of four wings is a feature that distinguishes flies and mosquitoes from all other insects.

5. Flies and mosquitoes belong to the Order Diptera.

6. Females of some fly species retain their eggs within their bodies until the eggs hatch; they give birth to larvae.

7. House-fly larvae regulate their temperatures by moving to various levels in the breeding materials.

8. Pupae of house flies are usually found in drier portions of breeding media than are larvae.

9. Generally speaking, house flies make up the vast majority of domestic fly populations in the southwestern United States and become progressively less prevalent to the north and east.

10. Temperature has no effect on the length of the life cycle of a fly.

11. Much of our knowledge of genetics is based on experiments with *Drosophila melanogaster* (fruit fly).

12. Eye gnats do not bite, and their rasping mouthparts are incapable of damaging even delicate eye membranes.

13. Surveys of fly larvae incidence are of no importance for domestic fly control work.

14. Weed control can be an important factor in domestic fly control.

15. Long-term fly control can be accomplished by residual spraying.

16. Dry fly-baits usually contain 1 to 2 percent of an insecticide such as malathion or dichlorvos.

17. Long-term fly control can be accomplished by space spraying.

18. All aerosol dispensers contain synergized pyrethrins or allethrin.

19. Diethyl toluamide, a repellent, is often sprayed into buildings to chase flies outdoors.

20. Fly attractants have been used extensively and have great value in large fly control programs.

21. Insects inherit tolerance to insecticides.

22. The two main types of resistance to insecticides are physiological and behavioristic.

23. Putting screens on windows is an inexpensive method of fly control.

24. A high level of environmental sanitation is one of the most important elements in domestic fly control.

25. Since most fly control requires the cooperation of the entire community, education is the number one requirement of a good program.

NAME _____

MAILING ADDRESS:

_____

_____

_____ ZIP _____

CDC

LESSON 5

SELF-STUDY COURSE 3013-G

Vector-Borne Disease Control

ANSWER SHEET

PART I					PART II		
NO.	A	B	C	D	NO.	A	D
1	0	0	0	0	1	0	0
2	0	0	0	0	2	0	0
3	0	0	0	0	3	0	0
4	0	0	0	0	4	0	0
5	0	0	0	0	5	0	0
6	0	0	0	0	6	0	0
7	0	0	0	0	7	0	0
8	0	0	0	0	8	0	0
9	0	0	0	0	9	0	0
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19	0	0	0	0	19	0	0
20	0	0	0	0	20	0	0
21	0	0	0	0	21	0	0
22	0	0	0	0	22	0	0
23	0	0	0	0	23	0	0
24	0	0	0	0	24	0	0
25	0	0	0	0	25	0	0

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