

Prevention of Myiasis **(Advice on Fly Prevention for Hospitals/Homes for the Elderly)**

Background

Myiasis is the invasion of organs and tissues of mammals by fly larvae. Larvae of *Chrysomya bezziana* (the old world screw worm fly) live on body of mammals to cause myiasis. As fly larvae can cause major and irreversible damage to the human body, the health consequence of myiasis is severe.

Since elderly people with physical disability may be bed-bound and lack of self-care ability, their exposed parts such as wounds and mucous membranes are vulnerable to fly invasion.

Biology of *Chrysomya bezziana*

Chrysomya bezziana is an obligate parasite of mammals. The site of infection is usually superficial wounds.

Female adults lay eggs in wounds, open sores, scabs, ulcers, gums, scratches or even mucous membranes, especially those contaminated with discharges. A female fly can lay as many as 150-500 eggs each time. The eggs hatch within 8-24 hours and newly emerged larvae burrow through the skin to the underlying tissues where they usually congregate together. Larvae tend to penetrate deeply into tissues so that infections near the eyes, nose and mouth can cause considerable destruction of these areas, often accompanied by putrid smelling discharges and ulcerations. Larvae complete their development in 5-6 days and then wriggle out of the wounds and drop to the ground, where they bury themselves and pupate. The pupal stage lasts about 7-9 days in warm weather, but is prolonged to several weeks or even months during cold weather. The life-cycle from egg stage to adult stage under ideal conditions is about 22 days. Adult flies usually feed on decomposing corpses, decaying matters, excreta and flowers.

Prevention and control of fly

To effectively prevent the invasion of flies into premises, good sanitation and sound proofing measures are very important. Points to note include the followings:

Animal attraction

- Do not keep pets, particularly dogs, in the compound.
- Should pets, particularly dogs, are kept in the compound, the pets have to be examined regularly by a veterinary surgeon.
- Report to the Agriculture, Fisheries and Conservation Department if stray dogs are found inside or near the compound.

Environmental sanitation

- Store food in refrigerator or cover it properly.
- Collect, store and dispose of refuse in containers with tight-fitting lids.
- Keep animal remains properly without exposure to air.

Barrier methods

- Screening windows, ventilation openings and doors with 10 mesh screens (10 X 10 mesh per inch). Or use 16 mesh screens to keep off flies and mosquitoes.
- Provide self-closing device for doors / screen doors.
- Create anti-fly curtains by fixing strips of beads or plastic strips, etc. in the doorways.
- Install electric fans to create air curtains with air velocity 8 metres per second or more across the doorways.

Installation of insect electrocuting device (IED)

- Select IED with brighter ultraviolet source (higher wattage).
- Install IED at about 1.5m from the floor.
- Place IED where the light is visible from all directions, but avoid placing them near windows or doors where the light may attract insects from outside.
- Clean frequently the electrifying grid and dead insects in the catch pans of IED.
- To ensure maximum efficiency of the IED, follow the instructions of the manufacturers.

Protecting yourself against screw worm fly attack

As a precautionary measure, inmates are advised to take the following actions:

- Maintain good personal hygiene.
- Maintain good oral health.
- Keep wounds clean.
- Keep home environment clean.

To learn more about oral care and wound care skills, staff of Residential Care Homes for the Elderly may contact the district's Visiting Health Teams of the Department of Health. Information can also be obtained from the website of the Department of Health (www.elderly.gov.hk).

The management of hospitals / homes for the elderly may hire a pest control company for fly control and prevention services. Advice on fly prevention can also be obtained from the Pest Control Advisory Section of the Food and Environmental Hygiene Department.

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