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13 July 2018

To: Specified Operators of Drug Dependent Persons Treatment and Rehabilitation Centres

Anti-mosquito, Rodent Prevention Measures and Prevention and Control of Biting Midges

I would like to enclose six leaflets, “Beware of Dengue Fever” (English and Chinese version), “Prevent Disease Eliminate Rodent Nuisance” (Household setting and Rural Villages) (English and Chinese version) and “Guidelines on the prevention and control of biting midges” (English and Chinese version), regarding the prevention and control measures against mosquitoes, rodents and biting midges published by the Food and Environmental Hygiene Department for your reference. To prevent transmission of dengue fever, rodent infestation and hazards caused by biting midges, you are advised to keep the centres clean and eliminate mosquito and biting midges breeding and rodent nuisance.

Yours sincerely,

Signed

(Ms HAR Man-lai)
for Director of Social Welfare

Encl.

c.c. Business Director (Service Development), HKCSS
SEO(Narcotics)2, Narcotics Division

小心登革熱 齊來把蚊滅

Beware of Dengue Fever



預防登革熱
(給社會服務院舍
的建議)

**Prevention of
Dengue Fever**
(Advice to
Social Service
Hostels / Homes)



食物環境衛生署
Food and Environmental
Hygiene Department

簡介

登革熱是一種由伊蚊傳播的疾病，常見於熱帶和亞熱帶地區。香港夏天炎熱多雨，非常適宜蚊子繁殖，牠們主要在雨季開始滋生，並會持續至年底。要預防登革熱的傳播，市民應保持環境衛生，以防蚊子滋生。



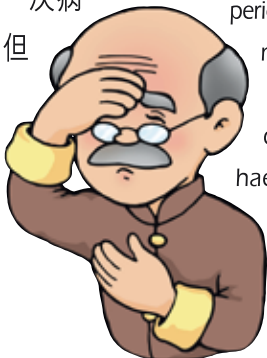
Introduction

Dengue fever, an aedine mosquito-borne disease, commonly occurs in tropical and subtropical regions. In Hong Kong, hot summers are accompanied by heavy rainfall, providing favourable breeding grounds for mosquitoes. Mosquito breeding usually begins in the rainy season and continues till the end of the year. To prevent the transmission of dengue fever, the public is advised to keep the environment clean against mosquito breeding.

登革熱

Dengue Fever

登革熱由過濾性病毒引起，潛伏期約為三至十四日，症狀包括發燒、頭痛、骨骼及肌肉疼痛、後眼窩痛，部分病人可能出現紅疹。第一次病發的症狀通常較為輕微，但如果再次受感染，則可能出現登革出血熱、登革休克症等併發症，嚴重者甚至會死亡。



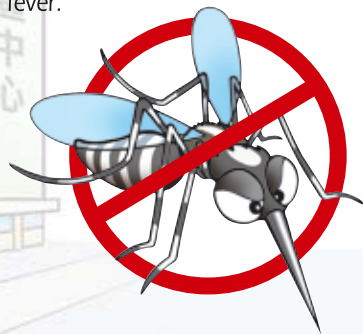
Dengue fever is a viral illness characterised by fever, headache, joint and muscle pain as well as back eye socket pain. Some victims may experience rashes on the skin. The incubation period is about 3 to 14 days. Symptoms are mostly milder on the first infection. Repeated infections, however, can cause complications such as dengue haemorrhagic fever and dengue shock syndrome, and even death.

登革熱的傳播途徑

Transmission of Dengue Fever

登革熱病毒是經由胸背有白線和腳部有白間的白紋伊蚊傳播。人被帶有病毒的白紋伊蚊叮咬後，便可能受感染。市民應時刻保持警覺，防止登革熱的傳播。

Dengue virus is transmitted by *Aedes albopictus*, which has a white stripe on the dorsal surface of its thorax and bands on the legs. One may be infected when bitten by an *Aedes albopictus* carrying dengue virus. The public should remain vigilant against the transmission of dengue fever.



防治蚊患的方法

Control Measures against Mosquitoes

要防止蚊子滋生，最重要是清除積水。食物環境衛生署建議院舍採取以下措施，以防蚊子滋生：

Removal of stagnant water is of prime importance to the prevention of mosquito breeding. The following measures should be taken against mosquito breeding:

1

委派員工專責防治蚊患工作：

Appoint designated staff for mosquito prevention and control;

2

每星期最少更換或清倒容器內的積水一次；

Water in the containers should be changed or removed at least once a week;



3

蓋密貯水容器：

Cover all water containers tightly;



4

汽水罐、空樽及空盒等垃圾應妥善棄置在有蓋的垃圾桶內，以防積水；



Refuse such as soft drink cans, empty bottles and empty boxes should be properly disposed of in covered litter containers to prevent accumulation of stagnant water;

5

每星期最少徹底更換花瓶內及清倒盆栽墊碟的水一次，並應盡量避免使用墊碟；

Change water in flower vases completely and remove the water in saucers underneath potted plants at least once a week. Saucers should not be used as far as practicable;



6

防撞輪胎須鑽上大孔，以防積水；

Make large holes in the tyres used as anti-bumping measure to prevent accumulation of water;



7 定期清理落葉及垃圾，以保持溝渠暢通，並在沙隔、集水溝、氣隔和排水孔施加殺幼蟲劑；

Keep all drains free from blockage by clearing leaves and refuse regularly. Apply larvicide in sand traps, gullies, air filters and drain holes;

8 把凹凸不平的地面填平；以及
Level all defective ground surfaces; and



9 每星期清倒雪櫃盛水盆及冷氣機底盤的水，或把水妥善排放。

Water collected in the water trays of refrigerators and air conditioners should be discarded every week or properly drained off.

查詢 Enquiries

如欲得到防治白紋伊蚊的進一步資料，可致電食物環境衛生署 **防治蟲鼠事務諮詢組 (3188 2064)**。

For further information on how to control and prevent *Aedes albopictus*, please contact the **Pest Control Advisory Section on 3188 2064** of the Food and Environmental Hygiene Department.



ENQUIRIES

Food and Environmental Hygiene Department
Hotline : 2868 0000

Central / Western

10th Floor, Sheung Wan Municipal Services Building,
345 Queen's Road Central, Hong Kong
Tel : 2545 0506

Wan Chai

7th Floor, Lockhart Road Municipal Services Building,
225 Hennessy Road,
Wan Chai, Hong Kong
Tel : 2507 3364

Eastern

3rd Floor, Quarry Bay Municipal Services Building,
38 Quarry Bay Street, Hong Kong
Tel : 2563 4340

Southern

4th Floor, Aberdeen Municipal Services Building,
203 Aberdeen Main Road, Hong Kong
Tel : 2552 8406

Kwun Tong

Level 7, Shui Wo Street Municipal Services Building,
9 Shui Wo Street, Kwun Tong, Kowloon
Tel : 3102 7388

Wong Tai Sin

3rd Floor, Tai Shing Street Market Building,
121 Choi Hung Road, Wong Tai Sin, Kowloon
Tel : 2328 6531

Kowloon City

3rd & 4th Floors, To Kwa Wan Market & Government Offices,
165 Ma Tau Wai Road, Kowloon
Tel : 2711 2493

Yau Tsim

3rd & 4th Floors, Kwun Chung Municipal Services Building,
17 Bowring Street, Yau Ma Tei, Kowloon
Tel : 2302 1299

Mong Kok

6th & 7th Floors, Fa Yuen Street Municipal Services Building,
123A Fa Yuen Street, Mong Kok, Kowloon
Tel : 2395 2727

Sham Shui Po

8th-10th Floors, Un Chau Street Municipal Services Building,
59-63 Un Chau Street,
Sham Shui Po, Kowloon
Tel : 2748 6959

Islands

6th & 25th Floors, Harbour Building,
38 Pier Road, Central, Hong Kong
Tel : 2852 3215

Kwai Tsing

9th Floor, Kwai Hing Government Offices Building,
166-174 Hing Fong Road, Kwai Chung, N.T.
Tel : 2420 9204

Tsuen Wan

3rd Floor, Yeung Uk Road Municipal Services Building,
45 Yeung Uk Road, Tsuen Wan, N.T.
Tel : 2212 9701

Tuen Mun

1st & 3rd Floors, Tuen Mun Government Offices Building,
1 Tuen Hi Road, Tuen Mun, N.T.
Tel : 2146 8642

Yuen Long

2nd-5th Floors, Yuen Long Government Offices,
2 Kiu Lok Square, Yuen Long, N.T.
Tel : 2475 3433

North

4th Floor, Shek Wu Hui Municipal Services Building,
13 Chi Cheong Road, Sheung Shui, N.T.
Tel : 2679 2812

Tai Po

3rd Floor, Tai Po Complex,
8 Heung Sze Wui Street, Tai Po, N.T.
Tel : 3183 9119

Sai Kung

8/F, Sai Kung Tseung Kwan O Government Complex,
38 Pui Shing Road, Tseung Kwan O, Sai Kung, N.T.
Tel : 3740 5100

Sha Tin

Level 12, Tower 1, Grand Central Plaza,
138 Sha Tin Rural Committee Road,
Sha Tin, N.T.
Tel : 2634 0136

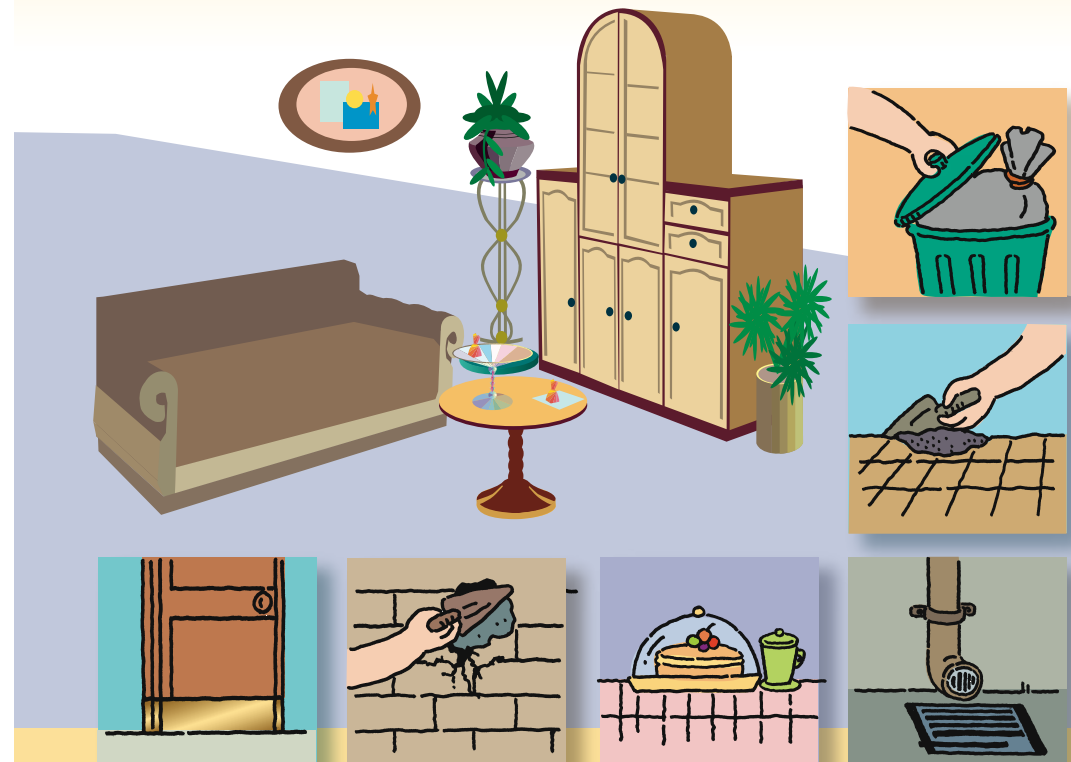
Pest Control Advisory Section

6/F, Yung Fung Shee Memorial Centre,
79 Cha Kwo Ling Road, Lam Tin, Kowloon
Tel : 3188 2064

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Prevent Disease Eliminate Rodent Nuisance

Household setting



Types and Characteristics of Rodents

Rodents are social animals living in family groups or colonies. They have good senses of smell, touch and hearing, and are good at swimming and climbing. A rodent can locate itself and direct movement by its strong memory. Their reproductive rate is very high: an adult female rodent can give birth to about 50 young rats in a year. Common types of rodents include *Rattus norvegicus* (sewer rat), *Rattus rattus* (black rat) and *Mus musculus* (house mouse).

Hazards caused by Rodents

1. Transmission of Diseases

The biggest problem caused by rodents is public health hazards. Rodents can directly or indirectly transmit to humans diseases such as plague, scrub typhus, urban typhus, hantaviral infection and leptospirosis. Rodents, living in dirty environment, are prone to carry pathogens. Ingestion of food and water contaminated by rodents may cause food poisoning and other infectious diseases.

2. Loss of Property

Rodents cause financial loss by gnawing building fittings and household furniture. They may even bite electric wires or cables, causing fire due to short-circuiting. Besides, they may gnaw and damage telephone wires and computer cables.

3. Biting People

Rodents may bite people of low mobility, such as babies, the aged, the invalid, the disabled or people who are asleep.

Signs of Rodent Infestation

Apart from finding rodents around the premises, other signs of rodent infestation include rodent droppings, holes, runways, gnawing marks, footmarks and smears.

Measures to Prevent and Control Rodent Infestation

1. Basic Principles

a) Eliminate Food Sources for Rodents

- Keep your home and the surrounding areas clean, especially the refuse rooms and stairways.

- Store food and handle pet food properly so that they will not become food for rodents.
- Store all refuse and food remnants in dustbins with well-fitted covers. Dustbins must be emptied at least once a day.
- Refuse bags should be tied up to prevent spillage, and then disposed of properly in refuse collection chambers with well-fitted covers.

b) Eliminate Rodent Harbourage

- Clear away the refuse and disused articles at homes and in the communal areas of a building.
- Regularly clear up the void underneath or behind bulky furniture, and inspect any concealed places like false ceilings, air ducts and wire ducts.
- Seal any holes or crevices in the ceilings, walls or floors.
- Keep flowerbeds clean and tidy without accumulation of refuse and articles.

c) Stop Rodents from Entering Premises

- Fix gratings with apertures not more than 6 mm to all drain outlets. Replace them if they are damaged.
- Use metal plates or cement to seal all the openings left in the external walls, floors and roofs after the installation of pipes, wires or split-type air conditioners.
- Render all ventilation openings rodent-proof by installing strong wire meshes with apertures not greater than 6 mm or other rodent-proofing devices.
- Affix metal plates of at least 30 cm high to the lower parts of doors and door frames to keep rodents away. Threshold clearance should not exceed 6 mm to prevent rodents from entering the premises.

2. Supplementary Measures

a) Trapping

- Use baited trapping devices (e.g. cages) at the places frequently visited by rodents.

b) Poisoning

- Use rodenticides with caution. Strictly follow the application instructions to avoid harming people and other animals.



Prevent Disease Eliminate Rodent Nuisance

Rural Villages



食物環境衛生署
Food and Environmental
Hygiene Department

Rodent problems in villages

In rural villages, food remnants and refuse provide food sources for rodents, while disused articles and temporary structures are ideal hiding places for them. Besides, improperly maintained drains and sewers also provide favourable harbourages and easily accessible passages for rodents.

Signs of rodent infestation

Apart from finding rodents around the premises, other signs of rodent infestation include dead rodents, droppings, burrows, runways, gnawing marks, footprints and smears.

Hazards caused by rodents

1. Transmission of infectious diseases

Rodents transmit directly or indirectly to humans a number of diseases such as plague, hantaviral infection, leptospirosis, scrub typhus, urban typhus and spotted fever.

2. Damage of property

Rodents can cause physical damage to properties by gnawing building fittings. They may bite electric wires or cables, posing fire hazards due to short-circuiting. They may also cause damage to telephone wires and computer cables. Their excreta can spoil food and goods.



3. Biting people

Rodents normally avoid contact with humans, but may bite people of low mobility, people who are asleep or those who attempt to attack them.



Rodent prevention measures

a. Remove food sources for rodents

- Keep premises clean and tidy.
- Dispose of food remnants and refuse properly in covered rubbish bins, which have to be cleared daily.
- Remove leftover pet food.



b. Eliminate rodent harbourage

- Avoid accumulation of disused articles both inside and outside buildings.
- Maintain the drains and sewer systems in good condition, and replace any broken drains and manhole covers.
- Seal any hole in the roofs, walls and floors.
- Trim vegetation around buildings regularly.



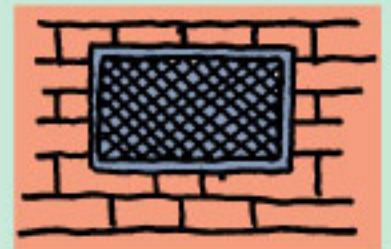
c. Exclude rodents from buildings

- Use metal plates or cement to seal all openings left in the external walls, floors and roofs after the installation of pipes, wires and split-type air conditioners.



- Lower the threshold clearance of doors to not more than 6 mm and affix metal kicking plates of at least 30 cm high to the lower edges of doors and door frames.

- Install wire meshes with apertures not larger than 6 mm to screen the vents, exhaust fans and ventilation louvers.
- Repair all defective pavements with cement.



Appoint a pest control company to handle rodent problems.



Guidelines on the prevention and control of biting midges



吸血蠓的 防治指引

吸血蠓的生態和特徵

吸血蠓體型細小，全身深色，是屬於蠓科的飛蟲。不論在鄉郊或市區，吸血蠓都對人類構成滋擾。



只有雌性吸血蠓叮人，但牠們很少在室內叮人。由於牠們的口器短小，無法刺穿衣服叮人，因此身體外露部分往往較易受襲。在本港，叮咬人類的吸血蠓包括有環斑庫蠓和台灣蠓蠓。

吸血蠓會在密林間或偶爾在有遮陰的地方歇息。牠們作“之”字形飛行，通常不會飛越離滋生地100米的範圍，惟有可能被風吹而擴散。然而，若風速每小時超過5.6公里及溫度低於攝氏10度，便會阻礙吸血蠓的飛行。事實上，吸血蠓的生命很脆弱，乾涼的天氣會縮短其壽命。吸血蠓的幼蟲是水棲或半水棲動物，通常可在潮濕地方或污泥中找到。

吸血蠓的危害

吸血蠓叮所引致的發炎和不適可持續數天至數星期。抓搔使瘙癢惡化，更可導致細菌感染及延緩傷處癒合。不過，吸血蠓不算是傳播疾病給人類的重要病媒。

吸血蠓的防治

由於吸血蠓的滋生地範圍廣泛，而且並不明顯及難以識別，所以很難才能完全消滅其幼蟲。以下方法可減少吸血蠓的滋生：

- 利用犁田或排水方法減少泥土表面水分。
- 清除斜坡或花園上的垃圾、落葉和其他枯萎植物，以及沙隔/排水明渠內的堵塞物（例如淤泥）。
- 定期修剪生長茂密的植物，令泥土表面多些暴露於陽光和空氣中。
- 如有需要，可施放殺蟲劑。

短暫防治方面，可以在吸血蠓的歇息地方直接噴灑即殺性殺蟲噴霧，以便控制吸血蠓的成蟲。

此外，可在適當地點設置捕蟲器，防止該等地點受到吸血蠓的侵襲，從而減低吸血蠓帶來的滋擾。

如有需要，可聘請滅蟲公司提供滅蟲服務。

個人保護措施方面，市民可安裝紗網（網眼小於0.75毫米）、穿長袖衫、長褲及按驅蟲劑標籤的指示使用驅蟲劑驅避吸血蠓。

Biology and Characteristics of Biting Midges



Biting midges are tiny and dark-coloured flies belonging to the family Ceratopogonidae. They cause nuisance to human beings in both rural and urban areas. Only females bite but they rarely do it indoors. Since they have short mouthparts, they cannot bite through clothing and so exposed body parts are more often attacked. Examples of local species of biting midges attack humans are *Culiseta circumscriptus* and *Lasiohelea taiwana*.

Biting midges rest in dense vegetation and sometimes shady places. They fly in zigzag patterns and usually no more than 100 meters from their breeding grounds; however, dispersal by wind is possible. Nevertheless, wind over 5.6 kilometers/hour and temperatures below 10°C inhibit flying. In fact, they are so fragile that cool and dry weather will shorten their life. Larvae are aquatic or semi-aquatic, and are usually found in damp places or in mud.

Hazards Caused by Biting Midges

Irritation and discomfort caused by their bites can last for days, or even weeks. Scratching aggravates the pruritus and may lead to bacterial infection and slow-healing sores. However, biting midges are not considered important vectors of human diseases.

Control and Prevention of Biting Midges

Breeding places for biting midges can be extensive, unobvious and indiscernible. Complete disinfestation of larvae is difficult. Reduction of breeding could be achieved by:

- keeping the moisture content of soil surface low by techniques like plough or draining.
- removing refuse, fallen leaves and other decaying vegetation on slopes or on the flower beds as well as choking matters (e.g. muddy soil) in sand-traps/surface drainage channels.
- trimming, on a regular basis, densely grown vegetation to increase the exposure of soil surface to sunlight and air.
- applying insecticide if necessary.

For temporary control, adult midges can be controlled by fogging of knockdown insecticide directly to their resting places.

The nuisance caused by the insect could be reduced by installation of insect traps at appropriate sites to protect the venues from invasion by the insect.

Pest control company could be appointed to provide insect control services if necessary.

Personal protection measures against biting midges include installation of screens (mesh size <0.75 mm), wearing long-sleeved clothing and applying insect repellents according to label instructions.