A Rentokil Initial Company Retokil Initial Singapore Pte Ltd 16 & 18 Jalan Mesin Singapore 368815

T 6347 8138 F 6347 8102

E enquiry.sg@rentokil.com

W www.rentokil.com.sg



CONTENT



INTRODUCTION

It is essential to understand the common pests and their risks and how these dangers caused by pests may impose on the public and environment. We may encounter problems if the infestation is left untreated, such as food poisoning and contamination, spreading of diseases, stained surfaces, damaged property structures and electrical wiring, thus resulting in short circuit or fire.

You can also help to minimise potential risks by identifying some simple tell-tale signs such as droppings, burrows, smear marks, trails, mud shelter tubes or damaged fixtures or perform simple housekeeping tips to prevent infestation from arising.

ANTS

DID YOU KNOW?

Ants are incredibly strong insects, whom are capable of carrying up to 40 times of their weight

SOME COMMON TYPES OF ANTS



CARPENTER ANTS Camponotus spp.

- Usually black in colour and stretches from 4 to 17 mm long.
- They emit a strong acid odour and nests in trees and wood structures.
- Prefers damp and moist areas.



GHOST ANTS/ SUGAR ANTS

Tapinoma melanocephalum

- Usually comes with a dark head and a pale and translucent body and stretches around 1.5mm long.
- They live in regular to large colonies and often found in highmoisture areas such as kitchens.
- Prefers sweet food, grease and protein from insects such as mealy bugs and aphids.



CRAZY ANTS/ SPEEDO ANTS

Paratrechina longicornis

- Usually black in colour and stretches from 2 to 3 mm long.
- They live in small colonies and often found in dry and moist areas.
- Prefers damp areas and consume all kinds of living and dead insects, sweet food and protein.

POTENTIAL RISK AND HOW TO KEEP PEST AWAY



ANTS MAY IMPOSE SOME DANGERS

- Ants contaminate food, having crawled all over and possibly picking up dirt and infectious organisms.
- They may cause allergy, swelling and pain resulting from ant bites.





SPOT THE WARNING SIGNS

- Presence of ants or ant nests. They are able to grow in number over time, becoming a colony.
- Ant trials as they travel to and from their food source in an organised manner.
- Ants found in food supplies.





WHAT CAN YOU DO TO HELP PREVENT ANTS INFESTATION

- Clear away leftover food and food crumbs found in kitchen, pantries or storage areas.
- Store all food supplies in airtight containers, or in refrigerator to avoid attracting ants.
- Fix any leaking taps and wipe any spills to avoid providing food source to ants.
- Fill any tiny cracks and crevices to prevent ants crawling through to search for food.



COCKROACHES

DID YOU KNOW?

Cockroaches are widely known as "Pests of Poor Hygiene"

SOME COMMON TYPES OF COCKROACHES



AMERICAN COCKROACH Periplaneta americana

- Usually red to brown in colour and hatches egg in 1 to 2 months.
- Cockroaches live about 2.5 years and tend to emerge at night.
- They are often found in hot and humid areas such as inside buildings, drains, sewers, basements and pipe ducts.



GERMAN COCKROACH

Blattella germanica

- Usually brown with two stripes on the thorax and hatches egg in 1 month.
- Cockroaches live about 1.5 years and tend to emerge at night.
- They are often found above floor level, in hot and humid areas such as kitchens, food manufacturing areas and ships.



BROWN-BANDED COCKROACH

Supella longipalpa

- Usually brown in colour and hatches in 1 to 2 months.
- Cockroaches live less than a year and tend to emerge at night.
- They are often found in drier areas of buildings, cabinets and less common in kitchens

POTENTIAL RISK AND HOW TO KEEP PEST AWAY



COCKROACHES MAY IMPOSE SOME DANGERS

- Cockroaches tend to pick up diseases due to their unhygienic habits by lying around decaying matter or in filthy place.
- They transmit diseases such as salmonella enteritis, dysentery and gastroenteritis.
- These diseases may cause food poisoning symptoms such as fever, abdominal changes, diarrhea and nausea.
- Cockroaches may also stain surfaces or dirty fabrics that they come across.





SPOT THE WARNING SIGNS

- The distinct and unpleasant smell which cockroaches leave on surfaces they come into contact with.
- Presence of droppings, which are usually black or brown cylindrical pellets.
- Egg cases (oothecae) which are found in hiding places such as cupboards, drawers and fittings.





WHAT CAN YOU DO TO HELP PREVENT COCKROACHES INFESTATION

- Store all food supplies in airtight containers or in refrigerator.
- Fix any leaking taps and wipe any spills especially in the kitchen to remove potential food sources.
- Seal all cracks and crevices and remove any bulky items from the ground which can be potentially a breeding ground for cockroaches.
- Check and clean hard to reach areas such as behind cupboards or refrigerator to prevent the start of breeding.



FLIES

DID YOU KNOW?

A housefly's wing can flap 200 times per second

SOME COMMON TYPES OF FLIES



HOUSE FLY *Musca domestica*

- Usually black and yellow in colour and stretches around 5 to 8mm long.
- Tends to breed in warm and moist or decaying matter and are major carriers of diseases.
- Feeds on variety of food, including human food, animal feeds, garbage and excrement.



FRUIT FLY Drosophila species

- Usually yellow-brown in colour and stretches to around 3mm long.
- Tends to breed in fermenting residue, unclean drains and cleaning utensils.
- Feeds on ripe fruits, vegetables and fermenting products.



FILTER FLY

- Usually grey in colour and stretches around 2mm long.
- Often found in sewage beds where larvae feed on bathroom sinks and water traps.
- Feeds on fungal and decaying matter.

POTENTIAL RISK AND HOW TO KEEP PEST AWAY



FLIES MAY IMPOSE SOME DANGERS

- Flies carry disease causing organisms on their bodies, body hairs, feet and mouthparts and spread these organisms by dropping faecal matter onto food.
- Some of the disease spreading includes cholera, dysentery, polio and typhoid.





SPOT THE WARNING SIGNS

- The presence of larvae and pupae in potential breeding sites such as sludge, garbage or decaying organic matter.
- Presence of flies in your premises.





WHAT CAN YOU DO TO HELP PREVENT FLIES INFESTATION

- Ensure outside areas are clean and odour free as odour attract flies.
- Wash your garbage bins regularly.
- Store all food supplies in airtight containers or in refrigerator.
- · Remove any decomposing objects and reduce dampness.



MOSQUITOES

DID YOU KNOW?

An adult female mosquito weighs just 1/15,000oz or about 2.0mg – hence we hardly can feel them on our skin!

SOME COMMON TYPES OF MOSQUITOES



AEDES MOSQUITOES Aedes aegypti

- Usually have black and white markings.
- Tends to breed in clean water and man-made containers.
- Usually bites more at dawn and dusk and are attracted to dark colours.
- They are carrier for Dengue Fever.



ANOPHELES MOSQUITOES

Anopheles spp.

- Usually has pale and dark markings on its wings.
- Tends to live in spring or sea water and swamps.
- Usually bites more at night and are attracted to dark colours.
- · They are carrier for Malaria.



CULEX MOSQUITOES

Culex tritaeniorhynchus

- Usually has pale and dark markings on its wings.
- They live in dirty, polluted and stagnant water.
- Usually bites more at night and are attracted to dark colours.
- They are carrier for Japanese B Encephalitis.

POTENTIAL RISK AND HOW TO KEEP PEST AWAY



MOSQUITOES MAY IMPOSE SOME DANGERS

- Female mosquitoes suck blood to obtain protein and these bites cause small red bumps on skin, which may lead to severe itching or allergies.
- In serious cases, mosquitoes may transmit diseases such as Dengue fever and Malaria. These diseases can be fatal without prompt medical care.





SPOT THE WARNING SIGNS

- Presence of itchy and small red bumps on your skin indicates that you may have been bitten.
- Larvae or pupae growing in stagnant water found in drains, flower pot plates, discarded tyres, gulley traps and other receptacles.





WHAT CAN YOU DO TO HELP PREVENT MOSQUITOES INFESTATION

- Remove possible breeding grounds, including puddles of water as small as a twenty-cent coin, wet surfaces and water left in containers.
- Cover all containers that you use to store water.
- Discard any bulky items within your premises that encourage the rampant breeding of mosquitoes.
- Check your premise for leaf litter, pails, sheets, trays and other containers that may trap water regularly.



RODENTS

DID YOU KNOW?

It only requires 1 cm gap for a mice to enter a building

SOME COMMON TYPES OF RODENTS



HOUSE MOUSE Mus musculus

- Usually good climber, jumper and swimmer.
- They live about a year, and produces 4 to 6 young per litter, at 7 to 8 times a year.
- Prefers cereal and can be found within structures and stored food area.



ROOF RAT/BLACK RAT

- Usually good climber and swimmer.
- They live about a year, and produces 5 to 10 young per litter, at 3 to 6 times a year.
- Prefers moist fruits for food and can be found within aerial nests, elevated spaces such as attics, false ceilings etc.



NORWAY RAT/BROWN RAT Rattus norvegicus

- Usually excellent swimmer.
- They live about a year and produces
 7 to 8 young per litter, at 3 to 4 times
 a year.
- Prefers cereals for food and can be found within sewers or buildings.

POTENTIAL RISK AND HOW TO KEEP PEST AWAY



RODENTS MAY IMPOSE SOME DANGERS

- Rodents excrete urine and droppings freely, which can contaminate food, utensils and surfaces they come across.
- It places us at risk of contracting diseases such as Salmonellosis, which can cause food poisoning symptoms such as fever, diarrhea and nausea.
- Their gnawing habits on furniture, plastic, wood and metals may damage electrical wires, causing short circuit and fire.





SPOT THE WARNING SIGNS

- Bite marks especially on electrical cables and food packaging.
- Smear or grease marks on walls or surfaces.
- Presence of burrows which are usually signs of heavy infestation.
- Droppings or urine stains with distinctive and musty odour.
- Scratching sounds which rodents made when they gnaw or claw on hard surfaces to search for food source





WHAT CAN YOU DO TO HELP PREVENT RODENTS INFESTATION

- Remove food spills and waste from your surroundings or bulky items from the ground.
- Store all food suppliers in airtight containers or in refrigerators.
- Empty garbage bins regularly and ensure they have tightfitting covers to prevent rodents from rummaging.
- Conduct regular building maintenance and cover gaps and crevices to ensure mice do not easily squeeze through.



DID YOU KNOW?

LEARN MORE ABOUT

TERMITES

Termite workers usually have undeveloped eyes and are blind

SOME COMMON TYPES OF TERMITES



SUBTERRANEAN TERMITES Coptotermes gestrol

- Usually broad, white bodies with a brown head.
- Lives in colonies below the soil and feeds on wood and other cellulose matters.
- Consists of workers who build protective tunnels out of mud, saliva and faecal matter to search for food above ground.



DRYWOOD TERMITE

Cryptotermes spp.

- Usually brown in colour.
- Lives in relatively small colonies, compared to subterranean termites.
- Consists of colonies made up of tunnels and chambers and expands nest by eating timber in all directions.

POTENTIAL RISK AND HOW TO KEEP PEST AWAY



TERMITES MAY IMPOSE SOME DANGERS

- Subterranean termites are considered the most major architectural and most financially damaging pest.
- They consume beyond timber, attacking any cellulose material.
- They tend to cause physical damage to electrical wiring and conduits and are known to invade ceilings, windows, door frames and wall panels.





SPOT THE WARNING SIGNS

- Mud shelter tubes, which subterranean termites build out of mud and faecal matter and salive.
- Swarmer or discarded wings found on window sills, floors etc. They are the first sign of termite activity in your premise.
- Presence of damaged or eaten wood.





WHAT CAN YOU DO TO HELP PREVENT TERMITES INFESTATION

- Fix any leaking pipes and taps and keep structures dry to avoid providing termites sources of water.
- Seal all cracks around utility and water pipes to prevent termites from crawling through to search for food.
- Remove possible sources of food, including unused timber, stumps or debris from your premises.

