

FOOD SAFETY



BULLETIN 2018 ■ ISSUE 8

BE FOOD SAFE!

A publication for food retail establishment licensees and food handlers



Everyone's Responsibility

Effective Communication

Pastry Chef

Station Chef

Bartender

Personal Hygiene

Food Safety Mindset

Senior Cook

Counter Server

Food Safety Culture

Quality Manager

Waiter

Food Safety Culture

Lead Chef

Food Safety Culture

Barista

Skill & Standard

Kitchen Crew

Production Manager

Owner

Kitchen Assistant

Education & Training

Chef

Bartender

Food Hygiene Officer

Employer

Pastry Cook

Service Crew

Head Baker

F&B Entrepreneur

Baker

Beverage Manager

Food Safety Supervisor

Food Operator

Best Practices

PREVENTING SCOMBROID POISONING

03

FOOD POISONING CASE STUDY

04

RISK INSIGHT

05

COMBATING PEST: RODENTS

06

FOOD SAFETY MANAGEMENT SYSTEM

08

OPENING MESSAGE

Welcome to Issue 8 of the Food Safety Bulletin.

In this issue, we will be sharing the topic of scombroid poisoning, a lesser known foodborne illness commonly associated with the consumption of certain types of fish. We will learn about the symptoms of scombroid poisoning, and how we can take preventive measures to avoid it.

For the Risk Insight segment, we will look at another popular local dish – Nasi Lemak. The dish though simple comes in many variations, and poses some risk, if not properly handled.

Apart from practicing good hygiene practices, it is equally important to ensure your eating establishment is free from pest. Food retail operators are aware of the effect any pests can have if spotted within or even near their premises. And in this issue we will look at rodent infestation and learn of the preventive measures.

In the last segment, we would like to announce the extension of the Food Safety Management System and introduce the new Food Hygiene Recognition Scheme. Finally, we will briefly introduce the Singapore Food Agency (SFA), a new statutory board to oversee Singapore’s food safety and security.



Publisher
National Environment Agency
Food & Environmental Hygiene Dept
40 Scotts Road
#20-00 Environment Building
Singapore 228231

All information correct at time of printing.

For enquiries or feedback on the Food Safety Bulletin, please submit them electronically via the mobile application (myENV) or Online Feedback Form. Alternatively, you may call 1800-225-5632.

Editorial committee chairperson

Chew Ming Fai

Editorial committee members

Teh Chun Siong
Christopher Goh
Chun Ho Yi
Nazhar Anuar
Chau Man Ling
Aung Kyaw Thu

Special thanks to:

Ministry of Health
Li Huilin
Tan Aik Keat
Woon Pei Jun



Online Feedback Form



Archive of NEA's Food Safety Bulletin



Preventing Scombroid Poisoning

Scombroid poisoning is a foodborne illness that is associated with the consumption of certain types of fishes that have not been stored properly at the correct temperature. Examples of fishes that can potentially form scombroid poisoning are tuna and mackerel, which have a natural presence of histidine. When the fish is exposed to the temperature danger zone (5°C - 60°C), certain types of bacteria that are present in the aquatic environment will multiply rapidly and metabolise histidine into histamine, a toxin that causes symptoms such as itching or rashes. The spoiled fish might look fresh and does not emit odour, but it can contain high levels of histamine.

Some known symptoms of scombroid poisoning:

Symptoms usually appear within a few minutes to several hours after eating the fish and last from a few hours to several days.



1 Heart Palpitations & Diarrhoea

2 Rash or Hives

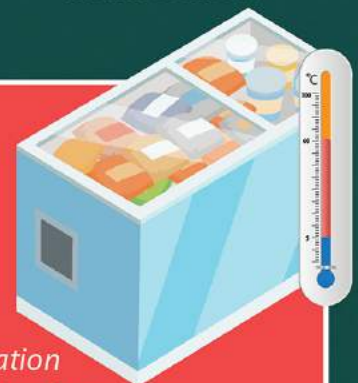
3 Breathing Difficulties

4 Burning sensation in or around the mouth or throat

Do You Know?

The formation of high levels of histamine can potentially occur when exposed to the temperature danger zone for a prolonged period of time before being cooked. Once the fish contains high level of histamine, cooking or reheating will not make the food safe, as histamine cannot be destroyed by heat. Thus, prolonged exposure of raw fish to the temperature danger zone for an extended period of time will quicken the formation of the toxins. Here are some tips on cold chain management to prevent scombroid poisoning.

- ☑ Schedule delivery time with your suppliers so that food deliveries are received and stored properly immediately upon delivery.
- ☑ Ensure regular maintenance of chillers and freezers are operating at the correct temperatures.
- ☑ When delivering food, ensure that food is kept at correct temperatures and delivered as quickly and promptly to customers.
- ☑ Do not overstock chiller and freezers as this will raise temperature.

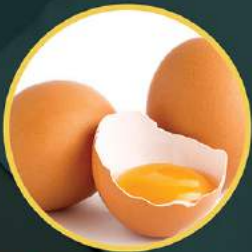


FOOD POISONING

Shortly after consuming raw fish at a local restaurant, two individuals developed symptoms of scombroid poisoning, including generalised body rash and difficulty breathing, and visited a hospital emergency department.

INVESTIGATION FINDINGS

Investigations revealed that samples of raw fish prepared for serving from the restaurant had unsatisfactory levels of histamine, which is often as a result of poor storage and temperature control practices. The operator's poor hygiene practices also extended to throughout the operations:



- 1** Raw eggs stored next to ready-to-eat food and sauces in the chiller.



- 2** Ice scoop left inside the ice machine.



- 3** Refuse bin was uncovered.



- 4** Food debris and dirt in the corners of the kitchen, sink area and glass chiller.



- 5** Temperature in the chiller was higher than temperature indicated on the temperature indicator display of the chiller.

ISSUE

- ★ **Unregistered foodhandlers were not trained on good food hygiene and safety practices**

- ★ **Poor general housekeeping**

- ★ **Poor temperature control for frozen and chilled food products**

LEARNING POINTS

- ★ Ensure food handlers preparing food have attended and passed the Basic Food Hygiene Course to ensure that they are aware of hygienic food preparation practices.

- ★ Ensure good housekeeping through regular cleaning and sanitising to prevent cross contamination of food.

- ★ Ensure that freezers and chillers are equipped with temperature gauges and set at correct storage temperatures, between 0-4°C for chilled food products, and -12°C and below for frozen food products.

RISK INSIGHT




Nasi lemak is a popular traditional Malay dish in Singapore, and is commonly found in hawker centres, food courts and even restaurants. Loosely translated to English, it means 'rich rice'. The aromatic flavoured rice is prepared in coconut cream and cooked with pandan leaves to give the dish its distinctive flavour. It is often served with eggs, peanuts, anchovies, cucumbers and, more importantly, the spicy 'sambal' chilli.

Traditionally, nasi lemak is a simple dish, but it has come a long way to include the different variations that have ingredients such as fried chicken or 'otah', and even adaptations from fast food to fine dining.

In this issue we look into good hygiene practices of preparing nasi lemak.

TIPS ON GOOD HYGIENE PRACTICES WHEN PREPARING NASI LEMAK

Wash cucumbers & garnishes thoroughly

- Wash and peel cucumbers, and wash them again after peeling.
- Prepare cucumbers and garnishes in batches and store them in the refrigerator. 



Prevent cross-contamination

- Use clean gloves or tongs for handling ready-to-eat food.
- Separate ready-to-eat ingredients/garnishes from raw food that are intended for cooking.



- Change gloves frequently, and as soon as they become dirty or torn.
- Do not use gloves when handling money and other tasks other than food preparation.

Chopping board

- **Plastic board:** Scrub with a scouring pad and detergent, and then rinse with clean water after that.
- **Wooden board:** Wash with detergent and water as described above. If washing is not feasible, scrape the top surface with a clean knife and wipe with a dry and clean cloth.



Temperature Control

- Do not store and display food in the temperature danger zone (5°C to 60°C) for more than 4 hours.
- Plan your quantities and your cooking processes to have your food ready in batches instead.



COMBATING PEST: RODENTS



With the presence of ample food, water and shelter, food establishments are a haven for pests, such as rodents, cockroaches and flies. If left unchecked, pest infestations are inevitable. Since pests are known carriers of pathogens, operators have to put in place measures to prevent pests before they cause serious hygiene issues.

In this issue, we will focus on rodents, who are notorious for spreading diseases by contaminating food they come in contact with, and causing economical damage by gnawing on structures, cables and food packaging. In serious cases of rodent infestations, sightings are common even during daytime, when rodents are known to be nocturnal animals. In addition to food contamination and disease transmission, a rodent infestations can also damage a business' reputation and consumers' confidence.

RATTUS NORVEGICUS



- Also known as Norway rat, sewer rat or brown rat.
- Blunt muzzle, small ears, a thick and stout body. Tail is shorter than combined length of head and body.
- Often seen in and around rubbish dumps or beneath building foundations, and tend to nest in burrows near or around the perimeter of a nearby food source, such as food shops, markets and hawker centres.

RATTUS RATTUS



- Also known as roof rats, ship rat or black rats.
- Pointed muzzle, large ears and a slender body. Tail is longer than combined length of head and body.
- Tend to nest above ground in elevated spaces such as enclosed spaces of ceilings and cabinets.

MUS MUSCULUS



- Also known as house mouse.
- Pointed muzzle, large ears, but with small feet and head to differentiate from juvenile roof rats.
- Prefer to nest in dark secluded areas where nesting materials such as paper, cardboard are readily available. Often found in houses and food stores, building its nest in walls, stored goods, furniture and cabinets.

RAT INFESTATIONS

Rats are resilient creatures. They can live for up to three years and breed rapidly, producing up to 2,000 broods in a year. A dirty premises with improperly kept food makes an ideal breeding ground. Therefore, it is important to prevent infestation before it happens.

Identifying possible signs of rat infestation

- **Rub marks:** Grease and dirt stains from rat's fur, left on the walls, due to repeated rubbing of rat body against surfaces.
- **Bite/Gnaw marks:** Visible bite marks on wood, plastic, structures or food packaging, or shredded material such as newspaper or fabrics, used as nesting material.
- **Tracks and footprints:** Especially visible on dusty surfaces.
- **Rat droppings:** Mouse droppings resemble a large grain of rice, while rat droppings are larger (1 – 2cm) and banana shaped; typically brown and dark, and concentrated around areas of rodent activity.
- **Noises at night:** Moving, scratching and squeaking sounds on false ceilings or in wall voids.
- **Burrows:** Norway rats are well known for their extensive burrow system, usually at turf and planter areas along the perimeter of buildings.

PREVENTIVE MEASURES

1 Effective Pest Control Programme

- Engage a registered Pest Control Operator (PCO). Operators may refer to the list of registered PCOs on NEA's website. <https://www.nea.gov.sg/our-services/pest-control/pest-control-operators>
- Work with appointed PCO to develop an integrated pest management programme that is suitable for your premises and ensure service areas and frequency are clearly defined, with layout plans showing all pest monitoring stations.
- PCO should provide service reports detailing the pest situation, findings, follow ups and advice on preventive measures.
- Ensure service contract is adequate to control pest effectively in the eating establishment. Operators can refer to a sample contract available on NEA's website. <https://www.nea.gov.sg/our-services/pest-control/rodent-control>



List of Registered PCOs



Sample Contract



2 Deny Entry Into Premises

- Work with appointed PCO to conduct regular inspections/checks within and surrounding the premises to identify possible access points for rodents.
- Seal all holes and gaps in false ceilings, floors, walls and any other possible access points.

3 Practise Proper Refuse Management

- Keep bin covered when not in use.
- Bag and store refuse in covered rat-proof bins.
- Refuse bags should be tied up and not have any holes.
- Clean refuse bins regularly, especially those containing food waste.
- Dispose all refuse and remove from premises at the end of every day.
- Replace/repair damaged bins.



4 Adopt Good Housekeeping Practices

- Maintain cleanliness and keep area clutter-free; avoid accumulation of unused items within the premises – less clutter means less places to hide.
- Regularly clean and keep drains, gullies and floor traps free from food scraps.
- Check and clean hard to reach areas regularly, e.g. under cabinets, tables, corners, behind chiller/refrigerators, underneath cooking area etc.
- Store and keep food in pest-proof containers or cabinets.

Food Safety Management System

– Extension to licences with permission to provide catering

Food Safety Management System (FSMS) is a systematic way of analysing and identifying food-borne hazards along the food processes and implement appropriate measures to control the hazards so that the food serve is safe for consumers. The key elements of a FSMS are good practices (prerequisite programmes), Hazard Analysis and Critical Control Points (HACCP) principles, and maintenance of documents. It involves a regular regime of self-inspections and monitoring of food processes, thereby encouraging greater ownership and responsibility for food safety.

In March 2013, the National Environment Agency (NEA) announced the introduction of FSMS scheme to improve food hygiene standards in the food catering industry from 1 June 2014 onwards. NEA will be extending FSMS requirement to all licences with permission to provide catering as an ancillary service, with effect from 1 April 2019.



Find out more at:

<http://www.nea.gov.sg/our-services/food-hygiene/food-safety-management-system>

New Food Hygiene Recognition Scheme

A new Food Hygiene Recognition Scheme (FHRS) will be rolled out in late 2020 to recognise and affirm consistent efforts of the operators of licensed food retail establishments in upholding high hygiene standards. Under the new scheme, operators of licensed food retail establishments may attain a Bronze, Silver or Gold award if they have at least 2, 5 or 10 years of good food hygiene track record respectively, without any major hygiene lapses carrying 4 or more demerit points under the Points Demerit System. This will replace the current hygiene grading system.



Find out more at:

<https://www.nea.gov.sg/our-services/food-hygiene/food-hygiene-recognition-scheme>

Singapore Food Agency

A new statutory board to oversee food safety and security

The Singapore Food Agency (SFA) will be formed in April 2019 under the Ministry of Environment and Water Resources (MEWR) to oversee food safety and security, bringing together food-related functions currently carried out by the Agri-Food and Veterinary Authority of Singapore (AVA), the National Environment Agency (NEA) and the Health Sciences Authority (HSA). The formation is in response to challenges posed by the global food landscape and climate change. The SFA will manage food safety, hygiene regulations and address issues of food supply. The food hygiene regulatory function currently under NEA will be transferred to the new agency.