

**FOR IMMEDIATE RELEASE**

## **ADVISORY ON THE INCREASE IN THE NUMBER OF INVASIVE GROUP B STREPTOCOCCUS CASES**

The Ministry of Health (MOH) and Singapore Food Agency (SFA) are investigating a recent uptrend in the number of Group B Streptococcus (GBS) cases. As GBS infections had earlier been associated with the consumption of raw freshwater fish, we advise members of the public who choose to consume ready-to-eat (RTE) raw fish to exercise caution.

2. In July 2020, MOH received reports of 50 GBS cases from public hospitals. This compares with an average of 25 GBS cases per month from January to June 2020. Further laboratory investigations showed that 18 of the cases reported in July were GBS Type III ST283. This compares with an average of 4 cases per month from April to June 2020. The majority of the cases with GBS Type III ST283 were aged 65 and above. Most have since been discharged and have recovered from the infection while one case has passed away due to an unrelated cause.

3. MOH and SFA are currently collecting information on the affected individuals' food history and conducting field investigations at various locations, to determine possible sources of GBS in these cases.

### **No detection of GBS in fish samples so far**

4. Based on SFA's routine sampling and testing of fish samples for GBS between May 2019 and August 2020, the presence of ST283 has not been detected. SFA also conducted inspections at food stalls visited by recent cases and found that none of the stalls sold any RTE raw fish dishes.

5. Nevertheless, SFA is issuing reminders to retail food establishments to adhere to the ban on the use of freshwater fish for sale of RTE raw fish dishes, which has been in force since December 2015. Food establishments selling RTE raw fish are also reminded to ensure good hygiene practices and proper handling of the RTE raw fish. MOH has also alerted doctors to remain vigilant and report suspected invasive GBS cases.

### **Health Advisory**

6. GBS is a common bacterium found in the human gut and urinary tract of about 15% to 30% of adults without causing disease. However, GBS may occasionally cause invasive infections of the skin, joints, heart and brain. The risk factors for GBS infection include underlying chronic or co-morbid conditions, such as diabetes. Transmission may also occur during childbirth. Most GBS infections are treatable with antibiotics.

7. GBS infections have previously been associated with the consumption of raw freshwater fish. Raw food is likely to contain more bacteria compared to well-cooked food. Members of the public who choose to consume RTE raw fish must be aware of the risks involved. Cooking raw food well is still the most effective way to kill bacteria. As a general precaution, vulnerable groups of people, especially young children, pregnant women, elderly persons, or people with chronic illness such as diabetes, may be more susceptible and should exercise caution by avoiding the consumption of raw food. Individuals can also reduce their risk of infection by:

- Thoroughly cooking food;
- Washing hands and kitchen utensils such as knives and cutting boards thoroughly before handling food; and
- Using separate sets of knives and cutting board for raw and cooked food.

**MINISTRY OF HEALTH  
SINGAPORE FOOD AGENCY  
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## **GOOD HYGIENE PRACTICES AND PROPER HANDLING OF READY-TO-EAT RAW FISH**

The Singapore Food Agency (SFA) would like to remind all retail food establishments that the ban of using freshwater fish in ready-to-eat (RTE) raw fish dishes remain in force. This ban has been in place since 5 December 2015.

SFA is issuing a general advisory to retail food establishments on “The Sale of Ready-to-Eat Raw Fish Dishes”. This current advisory is customised for the preparation and retail sale of RTE raw fish, and includes the relevant sections from the earlier advisory. Consumers can also learn more about the food safety risks involved when consuming RTE raw fish from our website.

All retail food establishments that wish to sell raw fish dishes are reminded to use only saltwater fish intended for raw consumption. Establishments are also reminded to ensure that the food sold is prepared hygienically and safe for consumption. The risks involved in the consumption of raw fish are widely known. As there is no cooking process to kill any food-borne pathogens present in the raw fish, retail food establishments intending to prepare and sell RTE raw fish should ensure good hygiene practices and proper handling of such RTE raw fish, as follows:

### **Purchase and receipt of fish intended for raw consumption**

Most fish sold at the general markets and fishery ports are not intended for raw consumption. Depending on the quality of the waters in which they were bred in, harvested from, or transported in, fish could carry a number of parasites or naturally occurring bacteria. Retail food establishments should consider the following when purchasing fish intended for raw consumption.

- a) Purchase from suppliers who can show the quality of the fish, e.g. by providing a valid health certificates (or HACCP certificate/equivalent) by the relevant authority of the country of origin.
- b) Fish to be consumed raw should be packed independently in a clean and hygienic environment to avoid cross-contamination.
- c) Transportation of raw fish should be chilled at below 5°C.
- d) Upon receipt, check the temperature of the fish using a temperature gauge/temperature gun and that the fish remains fresh, wholesome and of good quality. Indications to look out for in fish may include firm, shiny flesh with no discolouration, clear eyes, bright red gills free from slime and lack of fishy odour.

## **Cold storage of fish intended for raw consumption**

As there is no cooking process to kill any harmful bacteria present in RTE raw fish, it is important for RTE raw fish to be kept at the correct temperature to prevent multiplication of any harmful bacteria present, to unsafe levels.

- a) Once received, fish for raw consumption must be kept chilled at below 5°C.
- b) Fish for raw consumption should be stored separate from other raw food intended for cooking.
- c) Adopt “first-in-first-out” principle for storage.
- d) Monitor the chiller and freezer temperatures regularly (e.g. twice daily). As a good practice, retain records of temperature monitoring and verify the chiller and freezer temperatures with a temperature monitoring devices regularly (e.g. weekly). All temperature monitoring devices should be calibrated annually.

## **Adopt proper and hygienic handling practices**

It is important for food handlers and operators to practise good hygiene standards when preparing raw fish for raw consumption. The need for proper segregation of food intended for raw consumption from other raw food ingredients intended for cooking is critical to prevent cross-contamination.

- a) Where possible, designate a separate area and sink to prepare fish for raw consumption. Where there is space constraint, prepare the raw fish for raw consumption before any preparation of raw fish intended for cooking to prevent cross-contamination.
- b) Use designated separate chopping boards, knives and other implements to prepare whole fish for raw consumption and slicing the fish fillet into RTE raw fish slices.
- c) When handling whole fish for raw consumption, ensure that de-scaling, degutting and de-boning are done properly to reduce the possibility of cross-contamination from inherent bacteria on the surface and in the gut of the fish.
- d) When handling plastic-wrapped fish fillet, do not place the plastic packaging on the clean chopping board intended to prepare RTE raw fish and ensure proper handling to prevent cross-contamination from the external surface of the plastic-wrapper.
- e) When slicing the fish fillet into RTE raw fish slices, use a separate set of clean and sanitised chopping board, knife and other implements.
- f) Use clean disposable gloves, tongs and other implements to handle RTE raw fish.

- g) Clean and sanitise sinks, chopping boards, knives and other implements thoroughly before use and in between tasks.

### **Personal hygiene of food handlers**

- a) Wear clean attire and disposable gloves when handling fish for raw consumption and RTE raw fish. Do not wear accessories or jewellery as dirt trapped could potentially contaminate the food.
- b) Keep hands clean. Wash hands frequently with soap and water, especially before and after handling RTE raw fish and particularly after going to the toilet.
- c) Cover cuts or sores on hands and fingers with brightly-coloured waterproof dressing.
- d) Do not handle food if unwell or if suffering from vomiting and/or diarrhoea and for 48 hours after symptoms have stopped.

### **Retail display and sale of dishes with RTE raw fish**

- a) RTE raw fish on retail display must be kept chilled at below 5°C.
- b) All food in display cabinets must be stored in covered food-grade containers or properly wrapped with clean food-grade material.
- c) After use, all plates, containers and covers should be cleaned and sanitised.
- d) Front-line staff to be trained to advise consumers to consume the RTE raw fish as soon as possible upon purchase; or to refrigerate immediately if it is not intended to be consumed soon after purchase.
- e) Where possible, retail food establishments should consider indicating RTE raw fish for direct consumption and the proper storage conditions (where applicable).

#### **Regulatory Guidance**

**Please note that SFA-licensed retail food establishments shall be liable for enforcement under the Environmental Public Health (Food Hygiene) Regulations should they fail to comply with the requirements as listed in para 2 (a) & (b); 3 (b), (e), (f) & (g); 4 (a), (b) & (c); 5 (a), (b) & (c).**