



Safety Concerns on Oysters

Trade Consultation Forum
18 December 2013



Purpose

- To provide Members with information regarding the safety concerns on oysters

Oysters

- Filter feeders – can concentrate contaminants to a much higher concentration than the surrounding water
- If they are grown and harvested from waters contaminated with pathogens, chemical contaminants or natural toxins, these substances accumulated may pose significant health risks to consumers





Food poisoning cases linked to the consumption of oysters in our locality

- More common in Winter time
- Norovirus is usually implicated
- Can result in large outbreak
- Most recent cases suspected to be involved the consumption of raw oysters at buffet dinners

Norovirus – "Winter Vomiting Disease"

- Characterised by high incidence of vomiting and occurs predominantly during the winter season
 - an important cause of foodborne infection throughout the world including Hong Kong
- Transmission occurs by person-to-person, foodborne and waterborne routes
- Only about 10-100 particles are needed to cause disease
- Able to survive in varying temperatures (i.e. from freezing to 60°C)
- Norovirus illness can be serious, especially for young children, elderly and people with compromised immune systems



Norovirus in oysters

- Norovirus binds to oyster tissue within the gut and could concentrate up to 99 times compared to the surrounding water
- Difficult to remove norovirus from oysters through cleansing
- Depuration is often ineffective; consuming raw and partially cooked bivalves is of high risk for infection

Other pathogens associated with oysters

Pathogens	Common symptoms
<i>Vibrio parahaemolyticus</i> , <i>Vibrio cholerae</i> (O1 and O139), <i>Vibrio vulnificus</i>	Gastroenteritis characterised by diarrhoea, vomiting, etc. People with liver disease, diabetes or suppressed immune system are more at risk for its severe complications like septicaemia.
Hepatitis A & E viruses	An abrupt onset of fever, malaise, anorexia, nausea, abdominal pain, dark urine and jaundice. Severe disease in susceptible populations.

Chemical contaminants associated with oysters

Chemical Contaminants	Common symptoms
Heavy metals (e.g. Cadmium)	Acute toxicity of cadmium due to dietary exposure is very unlikely. However, kidney functions may be affected with chronic excessive intake.
Persistent Organic Pollutants (POPs)	Adverse effects depend on the nature of individual POP, amount and duration of exposure. Possible health effects include potentially disrupting immune and reproductive systems and diminishing intelligence.

Toxins associated with oysters

Natural Toxin	Common symptoms
Marine biotoxins	Intoxication including diarrhoetic, paralytic and neurotoxic shellfish poisoning which cause gastrointestinal and/or neurological problems such as abdominal pain, diarrhoea, tingling and numbness, etc.



Advice to Public

- Eating raw oysters carries inherent food safety risk
 - Eating raw oysters with hot sauce, lemon juice, vinegar or alcohol does not kill the pathogens – only thorough cooking can destroy them
 - Cooking cannot remove chemical contaminants in oysters
- Reduce the intake of oysters and maintain a balanced diet for minimising the excessive exposure of chemical contaminants or natural toxins from a small range of food items
- Susceptible populations (e.g. pregnant women, children, elderly and persons with compromised immune systems or liver diseases) should avoid taking raw or partially cooked oysters
- For oysters intended for consumption after cooking, never eat them raw and should be thoroughly cooked before consumption



Advice to Trade

- Raw oysters should be obtained from reliable sources with health certificates issued by relevant authority of the exporting countries
- Transaction records should be kept to ensure traceability as required by the Food Safety Ordinance (Chapter 612)
- Selling raw seafood, including oysters, requires endorsement from the Food and Environmental Hygiene Department
- Raw oysters should be properly handled to minimise the risk of contamination; storage periods should be kept as short as possible
- Always follow good personal hygiene practices
 - food handlers having gastrointestinal symptoms like diarrhoea and vomiting should not handle food



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