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食物安全中心
風險管理組

楊明晃醫生及羅漢基高級醫生報告

Reported by Dr. William YEUNG, Medical and Health Officer,
and Dr. Kelvin LOW, Senior Medical and Health Officer,
Risk Management Section, Centre for Food Safety

我們在二零一二年十一月初接獲衛生防護中心轉介兩宗懷疑食物中毒個案。流行病學資料顯示，所有患者均曾於尖沙咀一所酒店吃自助晚餐時進食生蠔。患者在進食蠔後約40小時出現腹瀉和嘔吐等特徵，症狀與諾如病毒引致的食物中毒吻合。在採取即時控制措施後，本港再無出現相關的新個案。

這次食物中毒事件造成16宗食物中毒個案，41人染病。由此可見我們易受諾如病毒感染。

諾如病毒 — “冬季嘔吐症”

諾如病毒是世界各地食物中毒的主要致病原。諾如病毒主要經由吃下或飲用受污染的食物或水傳播，但亦可經由人與人直接接觸，或由受污染物件或空氣微粒間接傳播。諾如病毒少至十個病毒粒子便可致病。雖然酒精搓手液可以殺死多種致病菌，但對諾如病毒卻起不了作用。

受諾如病毒感染的人士可以排出大量病毒，有些甚至在感染後一段時間仍然持續。病毒粒子附在物件上多日甚至多個星期後仍能造成感染。因此，徹底洗淨雙手對預防病毒傳播非常重要。諾如病毒感染的潛伏期通常為24至48小時，主要病徵為嘔吐、腹瀉和噁心，有時也會出現低燒。有些患者的病情會特別嚴重，特別是幼童、長者和免疫力弱的人士。現時沒有疫苗或專門療法去預防或治療諾如病毒感染。

諾如病毒能夠在冰點下的低溫生存。與大部分細菌相比，諾如病毒相對耐熱，食物即使加熱至攝氏60度並維持30分鐘後，諾如病毒仍然可具傳染性。此外，諾如病毒也耐酸。因此，如果蠔隻受了污染，即使進食時蘸檸檬汁、醋，或配以酒精，都不能預防感染。

諾如病毒與蠔

蠔與其他雙貝類海產一樣，以過濾大量海水的方式進食，如果蠔生長於受污染水域，便容易受到污染。諾如病毒依附在蠔的消化系統，可以濃縮到周圍海水的99倍。因此很難透過清洗去除蠔體內的諾如病毒，淨化處理也效果不大。因此，進食生蠔或未經徹底煮熟的雙貝類海產風險

In early November 2012, we received two clusters of suspected food poisoning from the Centre for Health Protection (CHP). The epidemiological findings showed that all the affected individuals had eaten raw oysters at buffet dinner in the same hotel in Tsim Sha Tsui. The epidemiological features including diarrhoea and vomiting about 40 hours after consumption of oysters were suggestive of food poisoning caused by norovirus. Immediate control measures were carried out. No further related cases occurred afterwards.

In this incident, there were a total of 16 clusters of food poisoning cases affecting 41 persons. This outbreak illustrates our vulnerability to norovirus infection.

Norovirus – “Winter Vomiting Disease”

Norovirus has been an important cause of foodborne infection throughout the world. The route of infection is faecal-oral via contaminated food or water. It can also spread directly through person to person or indirectly via contaminated objects or aerosols. As little as ten viral particles are sufficient to cause illness. Although alcohol-based antibacterial hand gels work against many harmful bacteria, they do not protect against norovirus.

Viral particles are excreted at high levels by infected people. Some infected individuals can be prolonged shedders. The viral particles can stick onto objects and have the capacity to infect people after days or weeks. Therefore thorough handwashing is very important in preventing its spread through the faecal-oral route. The incubation period of norovirus infection is usually 24 to 48 hours. Predominant symptoms are vomiting, watery diarrhoea and nausea, while low grade fever sometimes occurs. Norovirus illness can be serious, especially for young children, elderly and people with compromised immune systems. No vaccine or specific treatment is available.

Norovirus survives freezing temperature. Compared with most bacteria, norovirus is relatively heat resistant and may remain infectious in food heated to 60°C for 30 minutes. The virus is also acid-resistant. Eating contaminated oysters with lemon juice, vinegar or alcohol does not prevent infection.

Norovirus in Oysters

Norovirus is commonly found in sewage-contaminated waters. As other bivalves, oysters feed by filtering large amount of water through their gills; therefore they are susceptible to contamination if grown in contaminated water. Norovirus binds to oyster tissue within the gut and could concentrate up to 99 times compared to the surrounding water. It is difficult to remove norovirus from oysters through cleansing. Depuration is often ineffective.

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焦點個案
Incident in Focus

特別高。

“蠔”事成雙

我們在收到衛生防護中心轉介的懷疑個案後，立即展開實地調查，發現有關食肆的食物處理人員並無受到感染，據知亦沒有人曾在食肆嘔吐。因此，食物從業員是本個案源頭可能性的機會較少。另一方面，我們發現在酒店抽取的蠔隻樣本對諾如病毒測試呈陽性反應。

經過深入調查，再發現另有一間酒店的食肆有一宗食物中毒個案與諾如病毒有關，該個案中有四人在進食生蠔47小時後出現腹瀉。從該食肆抽取的蠔隻樣本對諾如病毒測試同樣呈陽性反應。我們立即要求該兩間食肆停止售賣所有蠔隻。

控制措施

我們沿着供應鏈順藤摸瓜，查出這兩間食肆的蠔隻事發時是由同一個分銷商供應的，蠔隻來自同一個源頭，追查之下發現這些蠔隻全部採自英國一個養蠔場。由於有證據證明這些蠔隻受諾如病毒污染，食物安全中心一方面指示分銷商回收及停止進口該養蠔場出產的蠔，另一方面把事件通知所有零售商，並知會英國駐港總領事館。

注意要點：

- 諾如病毒感染在冬天較常見，可引致大型的食物中毒事故。
- 生吃貝類海產(包括蠔)很容易引致食物中毒。
- 徹底煮熟食物，把食物加熱至中心溫度達攝氏90度並維持90秒，能消滅諾如病毒。

給公眾的意見

1. 食用生蠔存在固有的食物中毒風險。
2. 為減低風險，無論是進食還是購買生蠔，都應光顧可靠的持牌店舖。
3. 高風險人士(長者、幼童、孕婦和免疫力較弱的人)應避免進食生的貝類海產，包括生蠔。
4. 切勿生吃只供熟食(即須烹煮)的蠔隻。
5. 以下是一些烹煮蠔隻的提示：
 - 煮3 至5 分鐘
 - 炒至少3 分鐘
 - 蒸4 至9 分鐘

給業界的意見

1. 貝類海產(包括蠔)應購自可靠的供應商，並須附有原產地有關當局簽發的衛生證書。
2. 售賣生吃海鮮(包括蠔)須得到食物環境衛生署批准。
3. 有腸胃炎癥狀(如腹瀉和嘔吐)的飲食業從業員不應處理食物。
4. 感染諾如病毒的飲食業從業員須於症狀消失後至少48小時才考慮可否重回崗位。



圖片取自自助餐中的蠔：蠔隻或帶有諾如病毒
Picture taken from a buffet: Oysters may carry norovirus.

Therefore, consuming raw and partially cooked bivalves is of high risk for infection.

“A Tale of Two Hotels”

Upon referral from the CHP on the suspected case, field investigation was mounted immediately, which revealed that none of the related food handlers was affected and no definite vomiting incident was known in the premises. It was, therefore, not likely that the food handlers served as the source of infection.

On the other hand, oyster samples taken from the hotel were tested positive for norovirus.

Further investigations conducted revealed that a food poisoning case involving a food premises at another hotel was related. Four persons presented with diarrhoea about 47 hours after eating raw oysters. Oysters collected at this food premises were also tested positive for norovirus. Swift action was therefore taken to suspend sale of all oysters of these two food premises.

Action Taken

We worked up the supply chain and found that the same distributor had been providing oysters of the same origin to both food premises during the period. Further investigation revealed that these oysters had been harvested from a oyster farm in England. As there was evidence that these oysters were contaminated by norovirus, the Centre for Food Safety instructed the distributor to recall oysters from the farm concerned and stop further importation. All the retailers were alerted. The British Consulate General in Hong Kong was informed about the incident.

Key Points to Note:

- Norovirus infection is common in winter and can cause large scale food poisoning outbreaks.
- Consumption of raw shellfish, including oyster, is of high risk for food poisoning.
- Thorough cooking to an internal temperature of 90°C for 90 seconds can kill norovirus.

Advice to Public

1. Eating raw oysters carries inherent food safety risk.
2. To reduce risk, raw oysters should only be consumed in or obtained from reliable licensed premises.
3. Susceptible populations (elderly, young children, pregnant women and people with weakened immune systems) should avoid taking raw shellfish, including oysters.
4. For oysters intended for consumption after cooking, never eat them raw.
5. Some tips of cooking oysters:
 - Boil for 3-5 minutes
 - Fry for at least 3 minutes
 - Steam for 4-9 minutes

Advice to Trade

1. All shellfish, including oysters, should be obtained from reliable sources with health certificates issued by relevant authority of the exporting countries.
2. Selling raw seafood, including oysters, requires endorsement from the Food and Environmental Hygiene Department.
3. Food handlers having gastrointestinal symptoms like diarrhoea and vomiting should not handle food.
4. Food handlers infected by norovirus should be symptom free for at least 48 hours before resumption of work is considered.

減少從早餐穀類食品攝入糖 營養標籤幫到你

Check out Nutrition Label to

Reduce Sugars Intake from Breakfast Cereals

食物安全中心 風險傳達組 科學主任陳家茵女士報告
Reported by Ms. Michelle CHAN, Scientific Officer,
Risk Communication Section,
Centre for Food Safety



我們在上兩期介紹了如何善用“活用營養標籤三部曲”(三部曲)，在吃即食麵和小食脆片時作出更健康的選擇。這期是本系列的最後一篇，我們會談談如何利用三部曲，減少從早餐穀類食品攝入糖。

認識糖

糖是簡單碳水化合物，能為身體提供能量(1克糖提供4千卡能量)。有些糖天然存在於食物中(例如水果中的果糖)，部分亦可能會添加於食物裏，例如糖果、朱古力和碳酸飲料(俗稱汽水)等，令食物更為可口。

進食過多糖有可能導致超重和肥胖症，從而增加患上心臟病和糖尿病等慢性病的風險。此外，經常過量攝入糖容易導致蛀牙。世界衛生組織建議，製造和食用過程中加入食物的糖，以及蜂蜜、果汁和糖漿裡的天然糖分，全部加起來的攝取量應少於每日所需能量的10%。換言之，在2000千卡的膳食中，一般人每天應攝取不多於50克糖(約10粒方糖)。

早餐穀類食品與糖

市面上的早餐穀類食品林林總總，大致可分為冷食類和熱食類。前者只須加入牛奶或豆奶便可食用，非常方便。後者則以須煮煮的燕麥片和沖調即成的即沖麥片為主。

早餐穀類食品以燕麥或小麥等穀類製成，這些穀類含豐富的碳水化合物，並能提供膳食纖維。早餐穀類食品的製作過程中一般會加入糖或含糖配料如蜜糖、可可粉或乾果等，以豐富味道和口感。

活用三部曲 減少從早餐穀類食品攝入糖

首先，“睇營養標籤”。留意標籤上所標示的糖含量，找出糖含量較低的產品。根據食物安全中心在二零一零年與消費者委員會所作的聯合研究，早餐穀類食品的糖含量可以相差50倍之多。研究所搜集的38個樣本中，每100克食物的糖含量由0至50克不等。

其次，“知我食多少”。計算糖分的攝入量時，先找出營養標籤上的食物參考量。早餐穀類食品的營養標籤一般以“每食用分量”標示。食用分量指我們每次進食某款食物時通常會進食的分量。包裝食品上標示的食用分量是由有關的製造商決定的，不同的食物或牌子所標示的食用分量亦會有所不同。

以下面即沖麥片A的營養標籤為例，該款即沖麥片標示的食用分量是30克，而每包裝所含食用分量數目是8，即是說若根據製造商的建議，一整盒麥片分八次吃，每次攝取到的糖的分量便與營養標籤上所標示的一樣，即15克糖。如果一天吃兩份，就會攝取雙倍的糖，即是30克。

即沖麥片A的營養標籤
Nutrition label of instant cereal drink A.

營養資料 Nutrition Information	
每包裝所含食用分量數目/Servings Per Package: 8	
食用分量/Serving Size: 30 克 g	
Per Serving 每食用分量	
能量 Energy	135 千卡 kcal
蛋白質 Protein	4 克 g
總脂肪 Total Fat	3 克 g
-飽和脂肪 Saturated fat	1.8 克 g
-反式脂肪 Trans fat	0 克 g
碳水化合物 Carbohydrates	23 克 g
-糖 Sugars	15 克 g
鈉 Sodium	150 毫克 mg

In the previous issues, we have illustrated the use of “three-step to use nutrition labels” (three-steps) to consume instant noodles and crispy chips more healthily. As the last issue of the series, let’s see how three-steps help reduce sugars intake from breakfast cereals.

Take a Look at Sugars

Sugars are simple carbohydrates which provide energy (1g of sugars provides 4 kcal). Some sugars are naturally present in foods (e.g. fructose in fruits), while some are added to processed foods like confectionery and carbonated drinks to enrich flavour.

Getting too much sugar may lead to overweight and obesity, which in turn, increases the risk of chronic diseases including heart diseases and diabetes. Furthermore, dental caries are also associated with frequent excessive intake of sugars. The World Health Organization has set the intake goal that less than 10% of energy contribution should come from sugars added to foods during production and consumption plus natural sugars found in honey, fruit juices and syrups. In other words, for a 2000 kcal diet, intake of sugars should not exceed 50 g per day (about 10 sugar cubes).

Breakfast Cereals and Sugars

Different types of breakfast cereal products are available in the market. They can be broadly divided into the cold-served and hot-served ones. The former is ready to be consumed with milk or soy milk without further processing. The hot-served ones are usually oatmeal or instant cereal drinks that require cooking or reconstitution.

Breakfast cereals are made with grains such as oat or wheat rich in carbohydrates and provide dietary fibre. Sugar or sugar containing ingredients such as honey, cocoa powder or dried fruits are commonly added during manufacturing process to enrich taste and texture.

Reduce Sugars Intake from Breakfast Cereal with Three-steps

Firstly, **read the nutrition label**. Look for sugars and identify product with lower level. The variation in sugars content of breakfast cereals can be as much as 50 times according to the results of a joint Centre for Food Safety(CFS)/Consumer Council study in 2010. Among the 38 samples collected, the amount of sugars ranged from 0 to 50 g per 100 g of food.

Secondly, **know how much I eat**. Pay attention to the **reference amount** on the nutrition labels for calculating your sugars intake. Breakfast cereals usually carry nutrition labels expressed as “per serving”. Serving

size, determined by the manufacturer, is the amount of a food people customarily consume per eating occasion. Variations exist among different food types and brands.

Referring to the example below, the serving size of instant cereal drink A is 30 g and there are totally eight servings in the package. The whole pack of food is suggested to be consumed on eight separate occasions, and the sugars intake each time will be the same as that shown on the nutrition label, i.e. 15 g of sugars. In case you consume two servings a day, your sugars intake will double, i.e. 30 g.

其三，“**揀啱我需要**”。將你的糖攝入量與自己的每天攝取上限比較。以2000千卡的膳食計，吃掉一份即沖麥片A所攝入的糖，已佔糖每日攝取上限的30%。想“揀啱需要”，你可以：

- 減少吃即沖麥片A的次數；
- 當天減少從其他糖分較高的食物(例如汽水)攝入糖；或者
- 比較其他早餐穀類食品或即沖麥片的營養標籤，盡量挑選糖含量較低的產品。

更多健康貼士

業界應遵從《[降低食物中糖和脂肪含量的業界指引](#)》，為消費者提供更多糖含量低的食物。除糖含量外，消費者亦應留意早餐穀類食品的脂肪含量，因為這些產品有時會用不同脂肪含量的奶粉或油炸果仁作為配料。

Thirdly, **make better choices**. Compare your sugars intake to your daily intake upper limit. Based on a 2000 kcal diet, your sugars intake will meet 30% of the daily limit if you consume one serving of instant cereal drink A. You can observe the followings for making better choices:

- decrease the consumption frequency of instant cereal drink A;
- reduce the amount of food rich in sugars such as carbonated drinks on that day;
- switch to other breakfast cereals or instant cereal drinks with less sugars, if possible, by comparing their nutrition labels.

More Healthy Tips

To create an enabling environment for consumers to choose lower sugars options, food manufacturers are encouraged to follow the [CFS Trade Guidelines for Reducing Sugars and Fats in Foods](#). Consumers should also pay attention to the fat content of breakfast cereals as milk powder of various fat levels or deep fried nuts may be used as ingredients.

食物事故點滴 Food Incident Highlight

嬰兒配方奶粉的營養素含量

食物安全中心(中心)上月發現兩款嬰兒配方奶粉的生物素含量低於食品法典委員會的要求，一款嬰兒配方奶粉的鉀和蛋白質含量超出標準的最高值。如果零至六個月大嬰兒長期純粹靠上述奶粉攝取營養素，不排除對健康有不良影響。因此，中心一方面指示進口商停售及回收有關產品，一方面向公眾發出食物警報。

生物素是一種維他命，在能量和氨基酸代謝，以及脂肪和糖原合成中扮演重要角色。生物素是母乳中的重要成分，另外多種食物如肝、腎、蛋黃、蔬菜和穀類都含有生物素。生物素缺乏的嬰兒可能會出現脫髮、皮疹、肌肉張力低等症狀。但是，膳食生物素缺乏症非常罕見，未曾在母乳餵養的嬰兒發現。

鉀是人體必需的元素，負責保持人體內的電解質平衡和細胞功能正常。蛋白質主要用作促進人體生長發育和修補身體組織。雖然世界衛生組織(世衛)現時沒有就六個月以下嬰兒鉀及蛋白質的每日最高攝取量訂立標準，但一些流行病學研究顯示，對於腎臟功能未完全發育的嬰兒，過量攝入鉀或蛋白質可能加重嬰兒的腎臟負荷，對健康造成風險。

中心會繼續檢測市面有售的**嬰兒及較大嬰兒配方奶粉中的營養素**。已購買有關產品的市民，應停止讓嬰兒飲用，改以其他嬰兒配方奶粉餵哺。家長如果對嬰兒健康有疑慮，可請教醫護人員。母乳是嬰兒健康生長發育最理想的天然食品，家長應採納世衛的建議，在嬰兒出生後頭六個月內純以母乳餵哺，以達至最佳成長、發育和健康。之後，嬰兒繼續以母乳餵哺至兩歲或更長時間，同時接受營養充足和安全的補充食品，以滿足他們不同階段的營養需求。

Nutrient Content of Infant Formulae

Last month, the Centre for Food Safety (CFS) found the biotin content in two infant formulae below the requirement of the Codex Alimentarius Commission (Codex) while the potassium and protein content of another infant formula was found exceeding the maximum values stated in the standard. Adverse health effects cannot be ruled out for infants less than six months old whose intake of nutrients relies solely on the concerned products. Therefore, the CFS instructed the importer to stop sale and recall the concerned products. **Food alerts** have been issued to inform the public.

Biotin is a kind of vitamin involved in energy and amino acid metabolism, as well as fat and glycogen synthesis. It is an important element of breastmilk and is also widely distributed in many foods such as liver, kidney, egg yolk, vegetables and cereals. Biotin-deficient infants may show symptoms such as hair loss, skin rash and decreased muscle tone. However, overt dietary biotin deficiency is rare and it has not been found in breastfed infants.

Potassium is essential in maintaining the body's electrolyte balance and normal cellular function, whereas protein is mainly used for growth and body repair. Although currently no international standards have been set by the World Health Organization (WHO) on the maximum daily intake of potassium or protein for infants below six months old, epidemiological studies suggested that excessive intake of potassium and protein may increase the renal load of infants, posing a health risk to them as their kidney function is not fully developed.

The CFS will continue the testing on the [nutritional composition in infant and follow-up formulae](#) available in the local market. Consumers who have purchased the concerned products should stop feeding their infants with these products and switch to other infant formulae. Parents should consult medical professionals if in doubt about their infants' health. Breastmilk is the ideal natural food for the healthy growth and development of infants. Parents are advised to follow WHO's recommendation on exclusive breastfeeding for the first six months of life to achieve optimal growth, development and health. Thereafter, to meet their evolving nutritional requirements, infant should receive nutritionally adequate and safe complementary foods while breastfeeding continues for up to two years of age or beyond.

風險傳達 工作一覽 Summary of Risk Communication Work

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