



由食物環境衛生署食物安全中心於每月第三個星期三出版  
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## 焦點個案

Incident in Focus

## 冷藏蔬菜含李斯特菌引發疫情

## Listeria Monocytogenes Outbreak in Frozen Vegetables

食物安全中心風險評估組吳雪兒獸醫及  
風險傳達組科學主任林伏波博士報告

Reported by Dr. Cherrie NG, Veterinary Officer,  
Risk Assessment Section, and Dr. Violette LIN, Scientific Officer,  
Risk Communication Section, Centre for Food Safety

二零一八年七月初，食物安全中心(中心)呼籲市民，不要食用數款英國Greenyard Frozen UK Ltd生產的預先包裝冷藏蔬菜產品，因為有關產品可能受李斯特菌污染。本文將提供有關李斯特菌的資料，包括預防感染李斯特菌的措施、中心採取的行動、給業界和消費者的建議，以及有關非即食冷藏蔬菜的須知。

In early July 2018, the Centre for Food Safety (CFS) urged the public not to consume several kinds of prepackaged frozen vegetable products produced by the Greenyard Frozen UK Ltd due to possible contamination with *Listeria monocytogenes* (LM). This article provides information on LM including prevention of LM infection, the actions taken by the CFS, and advice for trade and consumers with highlights in frozen vegetables that are not for ready-to-eat (RTE).

## 事件

歐洲食物安全局與歐洲疾病預防及控制中心於二零一八年七月三日發表報告，指歐洲有五個國家自二零一五年起持續爆發的李斯特菌疫情與冷藏粟米有關，其他冷藏蔬菜亦可能與此有關。匈牙利一所冷凍廠房被發現為污染源頭後，匈牙利主管當局於二零一八年六月二十九日禁止銷售該廠生產的所有冷藏蔬菜產品，並下令即時回收相關產品。二零一八年七月五日，英國食物標準局就自願回收可能受李斯特菌污染的多種冷藏蔬菜產品發出通告。隨後愛爾蘭、澳洲及新西蘭當局亦發出有關回收冷藏蔬菜產品的通告。英國食物標準局建議，大部分冷藏蔬菜，包括甜粟米，必須加以煮熟才可食用，如加入沙律、沙冰或蘸料中亦同樣應該煮熟。

## The Incident

According to the European Food Safety Authority and European Centre for Disease Prevention and Control report dated 3 July 2018, an outbreak of LM linked to frozen corn and possibly other frozen vegetables had been ongoing in five European countries since 2015. After a Hungarian freezing plant was found to be the source of contamination, the Hungarian competent authority banned marketing of all frozen vegetable products produced by that plant and ordered immediate withdrawal and recall on 29 June 2018. On 5 July 2018, the Food Safety Agency of the United Kingdom (FSA) issued a notice regarding a voluntary recall of various frozen vegetable products due to possible LM contamination. Subsequently, authorities in Ireland, Australia, and New Zealand also issued notices on recalls of frozen vegetable products. The FSA advised that most frozen vegetables, including sweetcorn, need to be cooked before eating, including when adding them to salads, smoothies or dips.

包裝上標明這些冷藏蔬菜要煮熟啊。  
The package indicates that these frozen vegetables have to be cooked.

我們按着包裝上的指示來煮吧。  
Let's follow the instructions on the package.



按照包裝上的指示烹煮/調製食物。

Follow the cooking/ preparation instructions on the package.

## 李斯特菌病

李斯特菌病是由李斯特菌引致的傳染病，主要分為兩種型態：非入侵性與入侵性。非入侵性型態通常影響一向健康人士，症狀為腹瀉、發燒、頭痛及肌肉疼痛等。入侵性型態則通常影響高危人士，包括孕婦、免疫力較低人士、長者及嬰兒。其感染可蔓延至血液及腦部，而死亡率高達百分之二十至三十。孕婦一旦患

## Listeriosis

Listeriosis is an infectious disease caused by the bacterium LM. Listeriosis has two main

types: a non-invasive form and an invasive form. The non-invasive form usually affects otherwise healthy individuals with symptoms such as diarrhoea, fever, headache and muscle pain. The invasive form usually affects certain high risk groups, including pregnant women, individuals with weakened immune systems, elderly people and infants. The infection may spread to the bloodstream and brain and there is a high mortality rate of 20-30%. Listeriosis

焦點個案  
Incident in Focus

上此病可致流產或死胎，初生嬰兒亦可能會出現體重過輕、敗血症及腦膜炎。

### 李斯特菌的出現及預防

李斯特菌在自然環境中存在，在泥土、水、植物及動物的消化腸道中均可找到。進食受污染食物是主要的感染途徑，但亦可透過接觸受感染的動物或人類傳播，以及經由母親傳給胎兒或初生嬰兒。

即食食品在加工過程中可能受污染，細菌亦可在分銷及貯存期間繁殖。蔬菜可能會透過泥土或糞肥受到污染。高風險食物包括凍食肉類和即食產品(例如已煮熟、醃製及/或發酵的肉類和香腸)、軟芝士，以及冷熏魚產品。

李斯特菌可在一般烹煮溫度下消滅，但能在冷藏低溫下生存和繁殖。雖然李斯特菌不能在結冰環境生長，但冷藏蔬菜除非標明可供即食，否則應徹底煮熟後才食用。業界應主動在非即食冷藏蔬菜產品的標籤上提供相關的調製/烹煮指示。

### 所採取的行動

中心透過食物事故監察系統得悉有關事件，並同時接獲歐洲聯盟委員會食品和飼料快速預警系統的通報。中心隨即展開調查。根據所得資料，中心發現有受影響批次產品進口本港，並已發出指令，要求有關的本地進口商停售並回收數款受影響產品。

中心就此事發出了食物警報(包括更新資料)，呼籲市民不要食用受影響產品，並促請業界停止使用或出售有關產品。中心亦透過Facebook等社交媒體向市民提供相關建議。

in pregnant women can result in miscarriage or stillbirth and the newborn may also have low birth weight, septicaemia and meningitis.

### Occurrence and Prevention of LM

LM is widely distributed in nature and can be found in soil, water, vegetation and animal digestive tracts. Whilst eating contaminated food is the main route, infection can also occur through contact with infected animals or humans and from mother to foetus or newborn.

RTE foods can be contaminated during processing and the bacteria can multiply during distribution and storage. Vegetables may be contaminated through soil or the use of manure as fertiliser. High risk foods include deli meat and RTE products (e.g. cooked, cured and / or fermented meats and sausages), soft cheese and cold smoked fishery products.

LM can be destroyed by cooking but can survive and multiply at refrigerator temperature. Although it is not able to grow under freezing condition, frozen vegetables, unless clearly labelled as RTE, should be cooked thoroughly before consumption. Traders should take the initiative to provide preparation/ cooking instructions for their non-RTE frozen vegetable products on the food label.

### Actions Taken

The incident was detected through the CFS' Food Incidents Surveillance System and CFS was also notified by the Rapid Alert System for Food and Feed of the European Commission. The CFS immediately conducted investigations. Based on provided information, the CFS found some affected batches of products imported into Hong Kong and ordered the local importers concerned to stop sale and recalled several kinds of affected product.

In response to the incident, the CFS issued a [food alert](#) (with updates) to urge the public not to consume the affected products and the trade to stop using or selling the products concerned. Related advice to public was provided via social media such as Facebook.

#### 注意事項:

1. 冷藏粟米被發現為是次爆發李斯特菌事故的源頭，其他冷藏蔬菜亦可能與此有關。
2. 李斯特菌可在一般烹煮溫度下輕易消滅，但能在冷藏低溫下生存和繁殖。
3. 高危人士可出現較嚴重的併發症。

#### Key Points to Note:

1. Frozen corn and possibly other frozen vegetables were found to be the source of this LM outbreak incident.
2. LM can be easily destroyed by cooking but can survive and multiply at refrigerator temperature.
3. More severe complications can develop in high risk groups.

### 給業界的建議

- 在食物生產廠房、食物業處所及零售店舖奉行良好的衛生習慣及食物處理方法。
- 在預先包裝的非即食冷藏蔬菜標籤上提供烹煮/調製指示。
- 在食物調製過程中把非即食冷藏蔬菜徹底煮熟。

### 給市民的建議

- 按照標籤上的指示烹煮/調製預先包裝的非即食冷藏蔬菜。
- 遵守良好的食物安全守則調製非即食冷藏蔬菜。

### 給高危人士的其他建議

- 高危人士及希望降低患上食源性疾病風險的人士應避免進食生及未經煮熟的食物。
- 在任何情況下，只進食徹底煮熟的食物。

### Advice to the Trade

- Maintain good hygienic and food handling practices in food manufacturing plants, food service and retail establishments.
- Provide cooking/ preparation instructions on the label of prepackaged non-RTE frozen vegetables.
- Unless it is clearly labelled as RTE, cook non-RTE frozen vegetables thoroughly during food preparation.

### Advice to the Public

- Follow the cooking/ preparation instructions on the label of non-RTE prepackaged frozen vegetables.
- Observe good food safety practices when preparing non-RTE frozen vegetables.

### Additional Advice to the Groups at Risk

- Susceptible populations and those who wish to reduce the risk of foodborne illnesses should avoid consuming raw.
- In all circumstances, only consume foods which are thoroughly cooked.

# 對抗食物中的超級細菌

## Tackling Superbugs in Foods

食物安全平台

Food Safety Platform

食物安全中心 風險傳達組  
科學主任莊梓傑博士報告

Reported by Dr Ken CHONG, Scientific Officer,  
Risk Communication Section, Centre for Food Safety

上一期我們討論了抗藥性細菌如何經人及食用動物傳播。不時有傳媒報道在食物或食用動物中找到抗藥性細菌，傳媒將之俗稱為「超級細菌」，即泛指產生了抗菌素耐藥性的微生物。大家或會擔心從食物中感染到不同種類的超級細菌，在此系列的第二篇文章中，我們會了解一下何謂超級細菌，以及在處理食物時有何相關的防菌措施。

### 何謂超級細菌？

不同的超級細菌見於報道，往往因為它們對多種抗菌素甚或一些僅存有效的抗菌素具有耐藥性，意味着治療失效的威脅浮現。它們通常以其耐藥性基因或特徵加上微生物的名稱來命名。「超廣譜乙內酰胺酶(ESBL)耐藥腸桿菌科細菌」便是其中一種備受關注的超級細菌，乙內酰胺是一大類常用抗生素，而ESBL這種酶可以分解幾乎所有乙內酰胺，令治療失效。

超級細菌未必是病原體，它們也可以是具耐藥性基因的共生菌。共生菌是指存在於人體從而得益，但通常對人無害的生物。屬於共生菌的超級細菌同樣令人關注，因為諸如大腸桿菌及腸球菌屬的共生菌是耐藥性基因的來源，可把耐藥性基因傳給通過腸道的人類病原體。此外，共生菌有時也可以是人类病原體，例如天然存在於腸道中的大腸桿菌亦是尿道感染及敗血病的常見病因。

The spread of antimicrobial resistance (AMR) bacteria in both humans and food-producing animals was discussed in the [last issue](#). From time-to-time, there are media reports on the finding of AMR bacteria in foods or food-producing animals. AMR bacteria are usually highlighted in media report as "superbugs" which generally refer to microorganisms that have developed AMR. People may worry about contracting different types of superbugs in foods. In the second article of this series, we will look into superbugs and relevant preventive measures in relation to food handling.

### What Are Superbugs?

Different superbugs have been reported usually due to their resistance to wide range of antimicrobials or to certain last-resort antimicrobials which suggests the emerging threats of treatment failure. They are usually named for their resistance genes or traits together with the microorganisms. Extended-spectrum  $\beta$ -lactamase (ESBL)-producing Enterobacteriaceae is one of the superbugs of concern.  $\beta$ -lactam is a large class of commonly used antibiotics. ESBLs are enzymes that can break down nearly all  $\beta$ -lactams and make them ineffective for treatment.

Superbugs are not necessarily pathogens, and they can also be commensal organisms have acquired resistance genes. Commensal organisms that derive benefits from their association with humans generally without causing harm. Superbugs of commensal organisms are not of no concern, because commensal organisms like *Escherichia coli* and *Enterococcus* species, serve as reservoirs of resistance genes that can be transferred to human pathogens transiting the intestinal tract. In addition, commensal organisms sometimes can also be human pathogens, e.g. *E. coli* is naturally present in our gut but is also a common cause of urinary tract infection and blood stream infection.

**超級細菌與惡菌的傳播途徑 Spread of Superbugs and Bad Bugs**

動物產品  
Animals products

因水質受污染而帶菌的農產品及貝類  
Produce and shellfish through contaminated water

處理食物的環境  
Food processing environments

受污染的器具及接觸面  
Contaminated utensils and surfaces

食物處理者  
Food handlers

惡菌 Bad bugs

超級細菌 Superbugs

**消滅細菌五要點 Knocking Off the Bugs with Five Keys**

**精明選擇 Wise choice**  
選擇新鮮安全、染菌風險較低的食材  
Choosing fresh and safe raw materials which have a lower risk of finding superbugs

**保持清潔 Keep clean**  
保持雙手及用具清潔是防止播菌的最佳方法  
Keeping hands and utensils clean is the best way to stop the spread of superbugs

**生熟分開 Handle separately**  
分開處理生熟食物可避免交叉污染  
Separating raw and cooked food can avoid cross-contamination by superbugs

**煮熟食物 Cook well**  
把食物徹底煮熟至中心溫度達75°C可以殺菌  
Cooking thoroughly until the core temperature of food reaches 75°C can kill superbugs

**安全溫度 Safe temperature**  
將食物存放於安全溫度可抑制細菌在受污染熱食中繁殖  
Keeping food at safe temperature can control the multiplication of superbugs in contaminated cooked food

圖：遵從食物安全五要點，抵抗超級細菌與惡菌。  
Figure: Combating superbugs, as other bad bugs, with 5 Keys to Food Safety.

### 在食物中找到超級細菌

病人感染超級細菌即受到逼切的威脅，而在食用動物或動物產品(例如家禽肉類)中找到超級細菌則表示抗菌素耐藥性有所擴散。本地有報告指出，在食用動物(即牛、豬、雞)的糞便樣本中發現的ESBL大腸桿菌多於貓、狗、鼠類。不過，基於數據所限，難以比較超級細菌經食用動物傳播給人及人傳人的程度。話雖如此，在食用動物中出現的超級細菌增多，便有可能對人構成風險。因此，監測食物樣本、食用動物樣本及人類樣本中的超級細菌至為重要。食品法典委員會重新成立了跨政府專責小組，以制定抗菌素耐藥性綜合監測指引。對人類及動物/動物產品進行抗菌素耐藥性綜合監測，有助辨識超級細菌的傳播趨勢及所帶來的潛在威脅。

### Finding Superbugs in Food

While infection with superbugs in patients indicates an imminent threat, the finding of superbugs in food-producing animals or animal products (e.g. poultry meat) suggests indicates the spread of AMR. Locally, it was reported that more ESBL-producing *E. coli* was found in faecal samples from food-producing animals (i.e. cattle, pigs and chickens) than those from cats, dogs and wild rodents. However, it is difficult to compare between the extent of superbugs transmitted via food-producing animals to humans and that via humans to humans due to limited data. That said, the increase in the occurrence of superbugs in food-producing animals is likely to have an influence on human risk. Hence, the monitoring of superbugs in food samples and samples from food-producing animals, in addition to human specimens, is important. The Codex Alimentarius Commission re-established the Intergovernmental Task Force to set guidelines for integrated AMR surveillance. An integrated surveillance on AMR in both humans and animals/animal products can help to identify the trends of and potential threats due to superbugs.

### 利用食物安全五要點消滅超級細菌

食源性致病細菌(即惡菌)可令人患病,若是超級細菌則更為危險,因為治療方案有限。在食物中發現超級細菌,令人關注所食用的食物是否不安全,應否將之丟掉。其實,只要我們把食物煮熟至中心溫度達75°C,便可殺死大部分細菌,包括惡菌與超級細菌。此外,遵守良好的衛生守則都可以盡量減少受到超級細菌與惡菌交叉污染的機會。因此,在日常生活中處理食物時遵從「食物安全五要點」(見圖),對於抵抗超級細菌與惡菌是非常重要的。此外,高危人士及希望進一步降低患上食源性疾病風險的人士應避免進食生及未經煮熟的食物,因為這些食物較徹底煮熟的食物更大可能帶有微生物,包括超級細菌。

### Knocking Off Superbugs with Five Keys to Food safety

Foodborne pathogenic bacteria, i.e. bad bugs, can make you sick while those that are superbugs are more dangerous as treatment options will be limited. Detecting superbugs in foods may raise concern on whether we are having unsafe food or these foods should be thrown away. In fact, cooking food until the core temperature reaching 75°C can kill most bacteria, including both bad bugs and superbugs. Furthermore, observance of good hygienic practices can minimise cross-contamination by both superbugs and bad bugs. That's why following the [5 Keys to Food Safety](#) (Figure) in daily life for food handling is important for combating superbugs, as well as other bad bugs. In addition, susceptible populations and those who wish to further reduce the risk of foodborne illnesses should avoid consuming raw and undercooked foods which are more likely to carry microorganisms, including superbugs than thoroughly cooked foods.

### 食物事故點滴 Food Incident Highlight

## 茶葉及茶飲料中的高氯酸鹽

## Perchlorate in Tea Leaves and Tea Beverages

早前有海外報道指茶葉含有高氯酸鹽,由於長期攝取過量高氯酸鹽可能會導致甲狀腺功能減退,因此引來關注。鑑於茶是本港市民經常飲用的飲料,食物安全中心從市面抽取了超過300個茶類產品樣本(包括茶葉及茶飲料)進行檢測,以評估對健康的風險。

高氯酸鹽是天然存在於環境中的化學物,也是一種環境污染物,在使用含有高氯酸鹽的肥料施肥和製造炸藥等工業產品時產生。由於高氯酸鹽無處不在,食物中難免含有高氯酸鹽。

研究結果顯示,雖然大部分茶類產品樣本都含有微量高氯酸鹽,但本港成年人從茶葉及茶飲料中攝入的高氯酸鹽分量遠低於國際機關制定的健康參考值,故導致健康受損的機會甚微。

Earlier reports from overseas about perchlorate level in tea leaves raised concerns because excessive intake of perchlorate over a prolonged period may cause hypothyroidism. In view of that tea is commonly consumed in Hong Kong, the Centre for Food Safety has collected over 300 samples of tea products (including dried tea leaves and tea beverages) from the market for testing and to assess the associated health risks.

Perchlorate is a chemical found naturally in the environment. It is also an environmental contaminant arising from the use of perchlorate-containing fertilisers and from other industrial uses like processing of explosives products. Due to its ubiquitous nature, its presence in foods is not unexpected.

The study results showed that although perchlorate were present in the majority of samples at low levels, the perchlorate exposure of the Hong Kong adult population from dried tea leaves and tea beverages was well below the health-based guidance value established by international authorities. Therefore, adverse health outcome was remote.

## 蜂蜜不應含有抗生素甲硝唑

## Honey Should Not Contain Antibiotic Metronidazole

二零一八年七月中,某消費者組織就本港市面上多款蜂蜜發表報告,指有樣本未能符合【食品法典委員會蜂蜜標準】包括有關標籤及污染物的要求。在二零一五年至二零一八年六月期間,食物安全中心(中心)透過恆常的食物監察計劃抽取了超過130個蜂蜜樣本作化學及微生物檢測,除一個樣本含抗生素甲硝唑外,其餘樣本的分析結果均全部合格。中心已指令涉事商戶停售受影響的產品。

蜂蜜是蜜蜂採集所得的花蜜或蜜露與其分泌物混合製成的。為了預防細菌感染和醫治受感染的蜜蜂,蜂農可能會使用不同種類的抗生素,一旦使用不當,便會導致抗生素積聚於蜂蜜中。業界應確保所出售的蜂蜜食品適宜供人食用,並符合法例要求。市民宜向可靠的店舖或養蜂場購買蜂蜜。一歲以下嬰兒不應進食蜂蜜,因為他們的消化系統尚未完全發育,進食蜂蜜有肉毒中毒的風險。

In mid-July 2018, a consumer group issued a report on honey samples available in Hong Kong which found that some samples failed to comply with the Codex Standard for Honey, including labelling and contaminants requirements. Between 2015 and June 2018, the Centre for Food Safety (CFS)'s routine Food Surveillance Programme collected over 130 honey samples for chemical and microbiological tests. All samples passed the analysis except for one which contained antibiotic metronidazole. The CFS has instructed the concerned vendor to stop selling the affected product.

Honey is produced by bees collecting nectars in flowers or honeydew, and mixing with their own secretions. In order to prevent and treat bacterial infection in bees, bee farmers may use different types of antibiotics (or antimicrobials). Inappropriate use of antibiotics will lead to accumulation of antibiotic in honey. Traders are advised to ensure that food for sale is fit for human consumption and meets legal requirements. Public are advised to buy honey from reliable shops and apiary. Infants under one year old should not consume honey as their digestive systems are not fully developed and will be at risk of contracting botulism.



## 風險傳達工作一覽 (二零一八年七月)

## Summary of Risk Communication Work (July 2018)

事故/食物安全個案 Incidents/ Food Safety Cases: 128	公眾查詢 Public Enquiries: 150	業界查詢 Trade Enquiries: 213	食物投訴 Food Complaints: 534
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