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焦點個案 Incident in Focus

喜愛與否：

盆菜的微生物風險不可不防

Love It or Loathe It: Poon Choi and Its Microbiological Risks

食物安全中心風險傳達組
衛生總督察蘇志強先生報告

Reported by Mr. Chi Keung SO, Chief Health Inspector,
Risk Communication Section, Centre for Food Safety

近來市民減少外出用膳，而使用網上訂購及上門外送食物服務在家享用美食的人則增多。不論是高級餐廳還是快餐連鎖店，本地各式大小食肆都紛紛加入提供外賣盆菜的行列，讓顧客足不出戶也可在家與家人共享佳餚。然而，與這款地道美食有關的食物中毒個案仍偶有報道。

個案探討

據報大約在二零二一年的農曆新年前兩星期，發生一宗與盆菜有關的懷疑食物中毒個案，受影響的10名人士進食了購自紅磡一間持牌食肆的外賣盆菜及其他熱食。引致食物中毒的病原體懷疑是沙門氏菌。雖然該持牌食肆已經營十多年，但自去年十二月才開始售賣盆菜。

While dining out has become a less popular option lately, home feasts are blooming with the aid of online ordering and door-to-door food delivery services. All walks of local eateries ranging from fine-dining restaurants to fast food chain stores, large or small, have jumped on the bandwagon to offer takeaway Poon Choi as a substitute for holding a family banquet in a restaurant. Occasionally, however, this local delicacy is still reported to be associated with food poisoning.

A Case Study

About two weeks before the 2021 Lunar New Year, one suspected food poisoning case related to Poon Choi was reported. Ten persons were affected after consuming a takeaway Poon Choi and other hot dishes purchased from a licensed eatery in Hung Hom. The suspected causative agent was *Salmonella* species. Although the

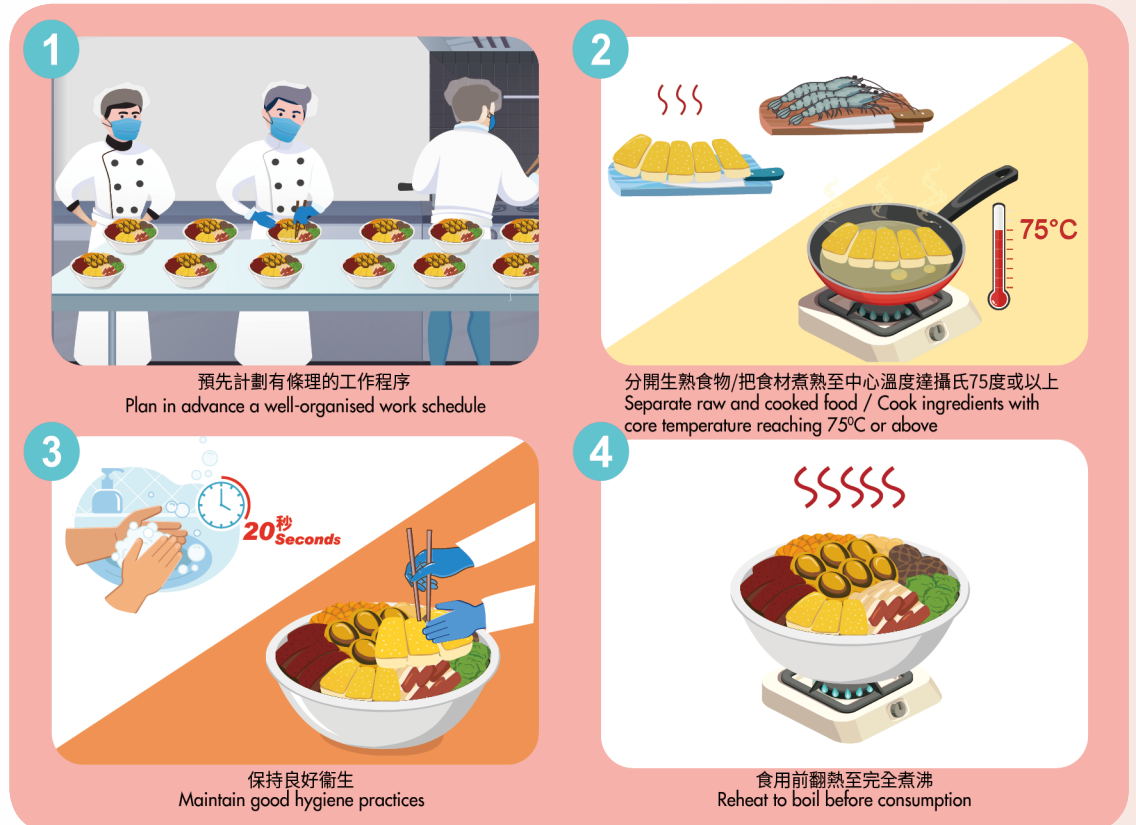


圖1：減低盆菜風險的措施
Figure 1: Measures to reduce the risk of Poon Choi

焦點個案
Incident in Focus

據實地調查發現，食物處理人員在製作盆菜時使用同一雙筷子攪拌未經消毒的生蛋及把煮熟的食材夾到盆菜上，盆菜亦沒有再經過任何熱處理步驟。儘管食物處理人員需要同時處理生熟食物，卻未有留意雙手衛生情況；而食物配製室的洗手盆旁亦無視液，令員工難以時刻保持雙手清潔。盆菜中的雞被食物處理人員及用具交叉污染，加上患者在食用前未有把盆菜充分翻熱，是食物中毒的成因。

為何盆菜存有高風險？

盆菜內有多種食材，如果處理不當，很容易受到污染。此外，在節日期間訂單數目急增，或會導致製作盆菜的過程出現問題。廚房人手不足固然會影響食物安全，而聘用未有接受足夠及適當訓練的臨時員工亦未必會有所幫助。

過早烹製大量不同食材、多番接觸食材(例如斬切白切雞)，以及在送遞或提取前長時間存放在室溫下，都會使盆菜存有交叉污染及滋生細菌的風險。盆菜食用前未經充分翻熱，加上上述各項因素，都是盆菜屬於高風險菜式的原因。

注意事項

1. 盆菜因製作繁複、需要大量人手又耗時，故屬高風險食物。
2. 在短時間內烹製大量不同種類的食物，加上設施及人手不足，使盆菜存有較高的交叉污染風險。
3. 以安全溫度把盆菜徹底煮熟和翻熱，是食物安全的關鍵。

給業界的建議

- 預先仔細計劃，確保有足夠的人手、空間及設備製作盆菜。有條理的工作程序有助預防交叉污染。
- 在製作盆菜前訓練臨時員工，確保他們熟悉工作環境，並遵守安全烹製食物的守則。
- 保持良好衛生，在處理熟食前洗手至少20秒，以減低食物污染的風險。
- 所有食材必須徹底煮熟至中心溫度達攝氏75度或以上至少30秒。
- 提供食用說明書，提醒顧客如非即時食用應如何適當貯存盆菜，熱的盆菜應保持在攝氏60度以上，冷凍的盆菜應貯存在攝氏4度或以下的雪櫃內，並在食用前徹底翻熱。

給消費者的建議

- 向信譽良好的持牌供應商購買盆菜。
- 食用前把盆菜徹底翻熱至中心溫度達攝氏75度或以上，或直至完全煮沸。盆菜的分量越大，所需的翻熱時間便越長。在翻熱的過程中把盆蓋好，使所有食材都徹底熱透。
- 收取盆菜後應盡快食用，翻熱後的盆菜應一次過吃完。

licensed restaurant has been in operation for more than a decade, it was its debut for selling Poon Choi since December last year.

Site investigation revealed that the same pair of chopsticks was used by food handlers for both beating raw eggs and transferring cooked food ingredients onto the Poon Choi, and that there was not any further heat treatment step in preparation of the Poon Choi. While handling cooked and raw food at the same time, the food handlers did not practise proper hand hygiene as no liquid soap was available beside the wash-hand basin in the food preparation room. Cross-contamination of the chicken in the Poon Choi by the food handlers and utensils, together with insufficient reheating of the Poon Choi before consumption by the victims, are contributing factors to the food poisoning.

What Makes Poon Choi High Risk?

Poon Choi contains various kinds of food ingredients which are susceptible to contamination if not properly handled. The sudden increase in number of orders during festive occasions creates capacity issues. While an underpowered kitchen certainly puts food safety into jeopardy, recruiting temporary food workers may not be better off should they not receive adequate and proper training.

Preparing a considerable quantity of different food ingredients too far in advance, repeated handling of ingredients like chopping of poached chicken and prolonged storage at room temperature before delivery or collection can all put Poon Choi to the risk of cross-contamination as well as bacterial growth. Poon Choi inadequately reheated before consumption together with the factors mentioned above, are the perfect recipe that makes Poon Choi a high risk dish.

Key Points to Note

1. Poon Choi is a high-risk food due to its complex, labour-intensive and time-consuming production.
2. Preparing different types of food in bulk within a short period of time, compounded with underequipped facilities and inadequate manpower, render Poon Choi prone to higher risks of cross-contamination.
3. Safe temperatures for thorough cooking and reheating Poon Choi are the key to food safety.

Advice to the Trade

- Plan carefully in advance to secure adequate manpower, space and equipment for making Poon Choi. A well-organised work schedule can help prevent cross-contamination.
- Train temporary food workers before operation to make sure that they are familiarised with the working environment and adhere to safe food preparation practices.
- Maintain good hygiene practices. Wash hands for at least 20 seconds before handling cooked food to reduce the risk of food contamination.
- Cook all ingredients thoroughly with the core temperature reaching 75°C or above for at least 30 seconds.
- Provide written consumption instructions to remind customers of the proper method of storing Poon Choi if not for immediate consumption, i.e., keep hot Poon Choi at above 60°C and chilled Poon Choi in the refrigerator at 4°C or below, and thorough reheating before consumption.

Advice to Consumers

- Purchase Poon Choi from reputable licensed suppliers.
- Reheat the Poon Choi thoroughly until its core temperature reaches 75°C or above, or to a complete boil before consumption. The required reheating time increases with the size of Poon Choi. Cover the container during reheating to achieve thorough heating of all the ingredients.
- Consume the Poon Choi as soon as possible once received, and finish the reheated Poon Choi in one go.

食物業處所的良好衛生規範

Good Hygiene Practices in Food Premises

食物安全中心風險傳達組
科學主任陳蓉蓉女士報告

Reported by Ms. Melva CHEN, Scientific Officer,
Risk Communication Section, Centre for Food Safety

食物業處所衛生欠佳，不僅會損害其網上評分及聲譽，還可能導致食源性疾病爆發，因而危害消費者及帶來訴訟。本文將討論良好衛生規範，以及守則如何有助食物業經營者確保食物安全，保障消費者的健康。

食物安全五要點

受污染或變壞的食物可導致食源性疾病。過去幾年，引致本地食肆及食物業發生食物中毒個案的病原體主要是細菌，而個案成因則是食物未經徹底煮熟、交叉污染及貯存溫度不當。為了預防食源性疾病，食物業經營者有必要採取有助確保食物衛生良好的食物處理方法。業界可遵循下列食物安全五要點：(1)精明選擇(選擇安全的原材料)；(2)保持清潔(保持雙手及用具清潔)；(3)生熟分開(分開生熟食)；(4)煮熟食物(徹底煮熟食物)；以及(5)安全溫度(把食物存放於安全溫度)。食物安全五要點是確保食物安全的基本指導原則。

良好衛生規範

在食品生產的任何階段，包括在農場、在屠宰及加工過程中、在廚房烹製時，或在貯存及運送期間，食物都可能受到污染。食物業經營者要了解與食品生產、運送、貯存及銷售有關的危害，包括微生物危害(例如細菌)、化學物危害(例如清潔劑)及物理危害(例如玻璃碎片)，以及控制這些危害所需的措施。

保持良好衛生的目的，是為了防止食物出現污染危害，確保所供應的食物最終可安全食用。舉例來說，餐廳的食物業經營者要確保其處所清潔，特別是廚房、用具及接觸食物的設備，並採取措施防治蟲鼠和妥善處理廢物。食物處理人員必須先洗手才處理食物、穿著清潔的衣服，並遵照食物安全五要點工作；如有不適，不應處理食物。要有效控制與業務有關的危害，良好衛生規範是基礎。對於一些食物業處所(例如餐廳)而言，實施良好衛生規範有助加強食物安全。

根據食品法典委員會，良好衛生規範是指為了確保食物安全及適宜食用，就食物鏈各個階段(從初級生產到處理製成品)所需的條件及措施而制定的規範。委員會建議在下列八方面實施良好衛生規範：(一)初級生產(例如種植及畜牧)；(二)設施及設備的設計；(三)培訓及能力；(四)廠房保養、清潔及消毒，以及蟲鼠防治；(五)個人衛生；(六)運作控制；(七)產品資訊及消費者資訊；以及(八)運送。事實上，食品企業各按性質有其適用的具體指引及要求，其中一些是不同司法管轄區的法律規定或牌照條件。

至於食品加工廠或大型餐飲服務企業等若干食品企業，由於食品生產鏈較為複雜，建議採用更高級別的食物安全監控系統，例如「[食物安全重點控制](#)」(HACCP)系統，這是用來確定、評估和控制食品生產過程中(從採購、收貨、運送、貯存、配製、處理、烹煮到食用)各種危害的系統性科學方法。良好衛生規範是HACCP系統的前提計劃。實施了良好衛生規範，便可避免大部分可能對食物造成污染的危害。

Poor hygiene of a food premises will not only damage its online ratings and reputation, but also put it on the verge of foodborne disease outbreaks, resulting in hazards to the consumers as well as litigation. This article will discuss Good Hygiene Practices (GHPs) and how GHPs can help food business operators (FBOs) to ensure food safety and safeguard consumers' health.

Five Keys to Food Safety

Contaminated or spoiled food can cause foodborne diseases. Over the past few years, the main causative agents of food poisoning outbreaks at local food premises and food businesses are bacteria, contributed by inadequate cooking, cross-contamination and improper storage temperatures of food. To prevent food-borne diseases, FBOs need to introduce ways of handling food that will help ensuring good food hygiene is in place. This can be achieved by following the Five Keys to Food Safety (Five Keys), namely (1) 'Choose' (Choose safe raw materials), (2) 'Clean' (Keep hands and utensils clean), (3) 'Separate' (Separate raw and cooked food), (4) 'Cook' (Cook thoroughly), and (5) 'Safe temperature' (Keep food at safe temperature). The Five Keys are the basic guiding principles for ensuring food safety.

Good Hygiene Practices

Food can become contaminated at any stage during food production, including at the farm, during slaughter and processing, during preparation in kitchens, or during storage and delivery. FBOs need to understand the hazards including microbiological hazards (e.g. bacteria), chemical hazards (e.g. detergents) and physical hazards (e.g. broken glasses) associated with the food they produce, transport, store and sell, and the measures required to control these hazards.

The purpose of practising good hygiene is to prevent contamination hazards in food, making sure that the food served is eventually safe to eat. For example, FBOs of restaurants need to make sure their premises, especially kitchens, utensils and food contact equipment, are clean, and have pest control and proper waste disposal in place. Food handlers should wash their hands before handling food, wear clean clothing, and follow the Five Keys when working; they should be refrained from handling food if they are sick. GHPs are the foundation of any effective control of hazards associated with their businesses. For some food premises such as restaurants, implementation of GHPs can help address food safety effectively.

According to the Codex Alimentarius Commission, GHPs refer to all practices regarding the conditions and measures necessary to ensure the safety and suitability of food at all stages of the food chain from primary production through to handling of the final product. It recommends GHPs be implemented in eight aspects: (i) primary production (e.g. farming and animal husbandry), (ii) design of facilities and equipment, (iii) training and competence, (iv) establishment maintenance, cleaning and disinfection, and pest control, (v) personal hygiene, (vi) control of operation, (vii) product information and consumer information, and (viii) transportation. In practice, depending on the nature of the food businesses, there are specific instructions and requirements applicable to them. Some of those are legal requirements or licensing conditions depending on different jurisdictions.

For certain food businesses, especially food processing plants or large scale catering services where the food production chains are more complicated, a more advanced food safety monitoring system, such as the [Hazard Analysis and Critical Control Point \(HACCP\) system](#), is recommended. HACCP is a scientific and systematic approach to identify, assess and control hazards in the food production process, from purchasing, receiving, transportation, storage, preparation, handling, cooking to serving. GHPs are a prerequisite programme for HACCP. With GHPs implemented, most hazards that may contaminate food can be avoided.

持續培訓是良好衛生規範的重要元素

此外，食物業經營者應注意，良好衛生規範不僅關乎清潔，還強調持續培訓的需要。所有從事食品相關工作的員工如缺乏足夠的衛生培訓及監督，便會對食物安全及食物是否適宜食用構成潛在威脅。食物處理人員，無論是全職、兼職或臨時員工，均應按其從事的工作接受相應程度的食物衛生培訓。食物安全中心一向推廣良好衛生規範的重要，歡迎食物業經營者及食物處理人員參加相關的[食物安全講座](#)，並瀏覽我們的網頁以得知更多詳情。

On-Going Training is an Important Element of GHPs

FBOs should also note that GHPs are not only about cleanliness – GHPs emphasise the need of on-going training. Inadequate hygiene training and supervision of all people involved in food-related activities pose a potential threat to the safety of food and its suitability for consumption. Food handlers, full-time, part-time or temporary, should be trained in food hygiene to a level appropriate to the operations they are to perform. The Centre for Food Safety has been promoting the importance of GHPs. FBOs and food handlers are encouraged to attend relevant [food safety talks](#) and visit our website for more information.

食物事故點滴 Food Incident Highlight

素食被譽為健康之選，但市民甚少注意到素食中的鈉及總脂肪含量。食物安全中心最近公布了與消費者委員會就本地素食進行[聯合研究](#)的結果。雖然整體上樣本的鈉及總脂肪含量不高，但少數樣本所含的鈉及總脂肪較其他樣本為多。醬汁會添加額外的鈉，而油炸等烹調方法則會增加菜式的總脂肪含量。有些人或會認為素漢堡包是較健康的選擇，但其鈉含量其實高於牛肉漢堡包。

為了減少素食中的鹽及總脂肪，業界可選用鈉及總脂肪含量較低的原材料，醬汁也可另上。消費者點菜時可要求食物少鹽少油，並減少食物的分量。食物蘸上醬汁前宜先試一試食物的味道，如有需要，蘸上少量便可。

素食的鈉及總脂肪含量

Sodium and Total Fat Contents of Vegetarian Food



圖2：端上食物時醬汁可另上
Figure 2: Sauces can be served on the side when serving food

Vegetarian diet is acclaimed as a healthy option, and seldom do the public notice the sodium and total fat contained in vegetarian dishes. The Centre for Food Safety has recently released the results of a [joint study](#) with the Consumer Council on local vegetarian dishes. Although samples were **not high in sodium and total fat** in general, few had more sodium and total fat compared with others. Sauces add extra sodium, and cooking methods like deep frying will increase the total fat contents of dishes. While some may consider vegetarian burgers as healthier options, they actually contained higher sodium than beef burgers.

To reduce salt and total fat in vegetarian food, the trade can choose raw ingredients with lower sodium and total fat. Sauces can be served on the side. Consumers can ask for less salt and less oil options of the food when ordering, and reduce the portion size of intake. Before dipping food into a sauce, it is advised to taste the food first and dip lightly if desired.

「甘銜金黃色」 – 烹製焗炸澱粉類菜式的準則

'Go for Gold' When Preparing Baked and Fried Starchy Dishes

隨着電焗爐及空氣炸鍋等小型家用煮食電器日漸普及，加上在2019冠狀病毒病大流行下須保持社交距離，越來越多人躍躍欲試在家中廚房炮製新菜式。

在烹製馬鈴薯、糕餅、曲奇及麵包等澱粉類食物時，烹煮的高溫（通常是攝氏120度或以上）有利存在於食物中的氨基酸天門冬胺與還原糖（例如葡萄糖及果糖）產生反應，形成**丙烯胺**。丙烯胺是一種在烹煮過程中產生的**污染物**，可損害基因，因此應盡可能減少攝入。在烹煮澱粉類食物時，按照「**甘銜金黃色**」的準則便可減低風險。一般來說，把澱粉類菜式煮至呈金黃色或淺黃色即可，因為只要不太高溫及太長時間烹煮食物，便能減少丙烯胺的含量。雖然消費者無法完全避免從食物攝入丙烯胺，但保持健康均衡的飲食，包括進食大量蔬果，有助降低風險。

With the rising popularity of small home cooking appliances like electric ovens and air fryers, more aspiring home cooks try to prepare new dishes at their own kitchens while upholding social distancing during the COVID-19 pandemic.



圖3：澱粉類菜式煮至呈金黃色即可
Figure 3: Go for a golden-yellow colour when cooking starchy dishes

When preparing starchy foods such as potatoes, pastries, cookies and bread, the high cooking temperature, usually 120°C or above, favours the formation of **acrylamide** in the presence of the amino acid asparagine and reducing sugars like glucose and fructose. Acrylamide is a **contaminant arising** from the cooking process. This substance can harm genes and therefore its intake should be kept as low as possible. One can reduce the risk by **'going for gold'** when cooking starchy foods. Generally, go for a golden-yellow or lighter colour when cooking starchy dishes, as acrylamide can be reduced by not cooking food at too high a temperature for too long. While it is impractical for consumers to completely avoid acrylamide in food, maintaining a healthy, balanced diet that includes plenty of fruits and vegetables can help reduce the risk.



風險傳達工作一覽（二零二一年二月）

Summary of Risk Communication Work (February 2021)

事故／食物安全個案 Incidents/ Food Safety Cases: 164	公眾查詢 Public Enquiries: 75	業界查詢 Trade Enquiries: 139	食物投訴 Food Complaints: 242	給業界的快速警報 Rapid Alerts to Trade: 2
給消費者的食物警報 Food Alerts to Consumers: 1	懷疑食物中毒個案通報 Suspected Food Poisoning Alerts: 0	教育研討會／演講／講座／輔導 Educational Seminars/ Lectures/Talks/ Counselling: 7	上載到食物安全中心網頁的新訊息 New Messages Put on the CFS Website: 19	