食物安全焦點
Food Safety Focus

食物安全中心
Centre for Food Safety

食物環境衞生署
Food and Environmental Hygiene Department

二零二五年五月•第二百二十六期
May 2025•226th Issue
ISSN 2224-6908

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蒟蒻果凍的哽噎風險你要知

Choking Risks Associated with Konjac Jelly: What You Need to Know

食物安全中心風險評估組
科學主任周淑敏女士報告

Reported by Ms. Shuk-man CHOW, Scientific Officer, Risk Assessment Section, Centre for Food Safety

任何食物均有可能引致哽噎，但一些堅硬、細小且不易溶化的食物，如小杯裝蒟蒻果凍，若食用方法不當，便可能會增加哽噎風險，尤其是對幼兒和長者而言。本文旨在概述減低與蒟蒻果凍相關的哽噎風險的措施。

小杯裝蒟蒻果凍的哽噎風險

蒟蒻又稱為魔芋、葡甘露聚醣或以其國際編碼系統編碼[1] 425（E425）表示，是果凍產品的常見配料。食品法典委員會認為蒟蒻是一種安全的食物添加劑，准許在多種食物中用作增稠劑、乳化劑、穩定劑等。然而，與明膠製成的果凍不同，蒟蒻果凍質地較為結實，且不易在口中溶化。

部分蒟蒻果凍裝在中等硬度的半球形小杯，讓消費者可一口將果凍吸出或擠壓小杯將果凍擠入口中，方便進食。高度或寬度為45毫米或以下的小杯讓蒟蒻果凍可整顆食用或從容器中吸食。蒟蒻果凍的表面光滑，當被吸入口中食用時，可滑向口腔後部，或會像一個塞般卡在咽喉，阻塞呼吸道，增加哽噎的風險。

While any food can pose a choking hazard, certain firm, small items that do not dissolve easily, such as mini-cup konjac jellies, may present a higher risk to young children and the elderly if not consumed properly. This article aims to outline measures to mitigate the choking risks associated with konjac jelly.

Choking Risks of Mini-cup Konjac Jellies

Konjac, also known as conjac, konnyaku, yam flour, glucomannan, or by its INS number[1] 425 (E425), is a common ingredient in jelly confectionery. The Codex Alimentarius Commission considers konjac flour a safe additive, permitting its use as a thickener, emulsifier, stabiliser and more in a range of foods. However, unlike gelatin-based jellies, konjac jelly is much firmer and less likely to dissolve in the mouth.

Some konjac jellies are packed in semi-rigid, dome-shaped mini-cups designed for easy consumption, allowing consumers to either suck the jelly out in one bite or squeeze the cup to project it into the mouth. Mini-cups that are 45 mm or less in height or width allow the konjac jelly to be eaten whole or sucked from the containers. With its smooth, slippery surfaces, konjac jelly can slide to the back of the mouth and may become lodged in the throat, acting as a plug that obstructs the airway and increases the risk of choking.

圖1: 蒟蒻果凍有各種大小和形狀
Figure 1: Konjac jellies come in various sizes and shapes

[1] 食品法典委員會為食物添加劑編制了一套國際編碼系統，供國際間採用，以識別各種食物添加劑。
[1] The Codex Alimentarius Commission has prepared the International Numbering System for Food Additives (INS), which provides an agreed international numerical system for identifying food additives.

減低蒟蒻果凍的哽噎風險

蒟蒻果凍的規管建議

為此，食物安全中心（食安中心）建議通過立法規管含有蒟蒻成分果凍產品的銷售。根據修訂建議，若小杯裝果凍產品的高度或寬度為45毫米或以下，不得含有蒟蒻成分。另外，所有預先包裝並含蒟蒻成分的果凍產品的外包裝須以中英文標示預防哽噎風險的警告字句：

注意：勿一口吞食，長者及兒童需在監護下食用。
Caution: Do not swallow whole. Elderly and children must consume under supervision.

相關規管建議已載於食安中心的專題網頁，歡迎市民和業界於二零二五年六月八日或之前提出意見。

健康教育

食安中心一直透過網站、講座、社交媒體及海報推廣預防食物哽噎的健康教育訊息。此外，食安中心已聯同教育局向學校發信，建議學校的小賣部和食堂等地方停止提供或出售小杯裝蒟蒻果凍，以在建議規管措施實施前，避免可能出現的哽噎風險。

此外，食安中心已製作教育短片及短片廣告，重點提示常見哽噎風險及宣傳安全飲食習慣。食安中心會繼續舉辦學校講座，並在網上發布資訊，提升公眾對預防哽噎的關注，並對少數族裔加強教育。

遵從以下的良好進食習慣，可減少哽噎風險：

- 避免在說話、大笑或跑動時進食。
- 不要直接從包裝吸食小杯裝蒟蒻果凍。
- 應把蒟蒻果凍切成小塊，並用匙羹進食。
- 小口進食，充分咀嚼，並在吃下一口前先吞嚥。

注意事項

- 蒟蒻果凍本身可以安全食用；但是，進食小杯裝蒟蒻果凍時若不小心，或會造成哽噎風險。
- 政府正進行擬議的立法修訂，禁止銷售高度或寬度為45毫米或以下、含蒟蒻成分的小杯裝果凍產品。
- 遵從良好進食習慣，可減少哽噎風險。

給市民的建議

1. 不要讓幼兒或長者進食小杯裝蒟蒻果凍。
2. 監督幼兒及長者進食非小杯裝蒟蒻果凍，確保食用安全。
3. 遵循蒟蒻果凍包裝上的食用建議。

給業界的建議

1. 在擬議的立法修訂實施前停止銷售高度或寬度為45毫米或以下的小杯裝蒟蒻果凍。
2. 在包裝上標示清晰的哽噎風險警告字句，提醒消費者小心進食。

Mitigating Choking Risks of Konjac Jelly

Proposal on regulation of konjac-containing jelly confectionery

To address this concern, the Centre for Food Safety (CFS) has proposed regulating the sale of jelly confectionery products containing konjac through legislative measures. The proposed amendments stipulate that if a mini-cup jelly confectionery product has a height or width of 45 mm or less, it shall not contain konjac. Furthermore, all prepackaged konjac-containing jelly confectionery products are required to be labelled with a warning statement on prevention of choking hazard in both Chinese and English:

注意：勿一口吞食，長者及兒童需在監護下食用。
Caution: Do not swallow whole. Elderly and children must consume under supervision.

The regulatory proposal is available on the CFS's designated webpage. Members of the public and the trade are welcome to visit for more information and offer their views on or before 8 June 2025.

Health education

The CFS has been promoting health education messages on prevention of food choking through its website, seminars, social media and posters. In addition, the CFS in collaboration with the Education Bureau, has issued a letter to schools, advising them to stop providing or selling mini-cup konjac jellies, such as in tuck shops and school canteens, to prevent potential choking risks before the implementation of the proposed regulatory measures.

Moreover, the CFS has produced an educational video and a video advertisement to highlight common choking hazards and promote safe eating habits. The CFS will continue to organise school talks and disseminate information online to raise public awareness about choking prevention and strengthen education among ethnic minorities.

Choking risks can be reduced by adopting the following safe eating habits:

- Avoid eating while talking, laughing or running.
- Do not suck mini-cup konjac jelly directly from the packaging.
- Cut konjac jelly into smaller pieces and use a spoon.
- Take small bites, chew well, and swallow between bites.

Key Points to Note

- Konjac jellies are safe for consumption; however, improper consumption of mini-cup konjac jellies may pose a choking risk.
- The Government is proceeding with the proposed legislative amendments to prohibit the sale of mini-cup jelly confectionary products containing konjac with a height or width of 45 mm or less.
- Practicing good eating habits can reduce the risk of choking.

Advice to the Public

1. Do not give mini-cup konjac jellies to young children or the elderly.
2. Supervise young children and the elderly while they are eating non-mini-cup konjac jellies to ensure safe consumption.
3. Follow the consumption advice on the packaging of konjac jellies.

Advice to the Trade

1. Stop the sale of mini-cup konjac jellies with a height or width of 45mm or less before the implementation of the proposed amendments.
2. Provide clear choking warning statements on the packaging to remind consumers to exercise caution.

真空包裝－保持食物安全密封

Vacuum Packaging – Keep Food Airtight and Safe

食物安全中心風險傳達組
科學主任葉景新先生報告

真空包裝自1950年代應用於肉類食品保存以來，現成為現代食物業界中普遍使用的技術。此方法通過將食物密封在包裝內，提供快捷有效的保存食物方法，能減少凍燒現象、防止氣味轉移、便利各種食物分裝，並通過降低食物變壞的情況來延長保質期及減少浪費。商業生產者和家居用家均使用真空包裝。本文將探討以真空包裝保存食物背後的科學原理、與其他食物加工技術的協同效應，以及貯存真空包裝食物時的關鍵注意事項。

真空包裝為何獲廣泛採用？

真空包裝通過抽掉包裝內圍繞食物的空氣（特別是氧氣）來延長食品保質期，此過程通常由真空泵完成。這種食物保存方法用途獲泛，可用於多類食物，包括生鮮、熟食及即食食物。氧氣含量減低（厭氧）的環境會減慢大多數存於食物內微生物的生長，從而減慢腐壞的速度。此外，密封的包裝可防止四周的空氣和水蒸氣與食物表面接觸，減低交叉污染的風險。

真空包裝的一大好處是在沒有使用化學防腐劑的情況下，能保存食物的自然狀態，包括汁液、醬料、味道及新鮮度。化學防腐劑或會改變食物的質感和味道。然而，部分食物如鮮肉可能因缺氧而出現變色，因爲肉類中的肌紅蛋白等天然色素會在真空下會由鮮紅色轉爲紫紅色。儘管這種變化可能影響外觀，但不會影響食物安全，且與空氣接觸後其顏色可恢復。

真空包裝與其他食物加工技術的協同效應

雖然真空包裝可單獨使用來保存食物，但其往往會與其他配製及保存方法結合使用以達最佳效果。真空低温烹煮是指把真空包裝的食物如生肉及魚置於通常在攝氏47度至88度之間的温度中加熱2至48小時的烹煮方法。在危險温度範圍內，食物中的水份和營養素有利細菌生長。真空包裝所形成的物理屏障，可防止四周環境污染食物，對保存經真空低温烹煮的食物起著重要作用。

圖2: 部分真空包裝食物的例子
Figure 2: Vacuum-packed food examples

脫水和凍乾法是把穀類、水果和蔬菜等食物的水分含量減少以保存食物的常見方法。脫水食物比新鮮食物的水分含量為低，不利細菌和真菌滋生。真空包裝阻止脫水食物再次吸收水分及補足上述保存方法，進一步延長這些食物的保質期。

真空包裝食物非無菌，須妥善貯存

部分人以爲真空保存的食物不論貯存温度都是安全的。雖然真空包裝能阻隔外在污染物污染並限制食物接觸氧氣，從而減緩微生物生長，但絕非滅菌方法。因此仍可能需使用額外的冷凍或冷藏等方法來保存真空包裝食物。儘管需氧微生物沒有氧氣無法滋長，一些厭氧致病菌如肉毒桿菌和李斯特菌卻能仍可存活並構成風險。例如，熱熏煙魚類及新鮮冷凍麪食即使已真空包裝，據報也曾發現含有肉毒桿菌，而真空包裝煙魚製品中則曾發現李斯特菌。若需要耐於保存的食物，便須進行入罐（罐、瓶或殺菌軟袋）生產。食物在罐頭生產過程中會經過足夠的熱處理（如在壓力下以蒸汽加工），能消滅細菌和孢子，確保長時間在沒有冷凍的情況下食物仍安全。

真空包裝食物應按照生產商在食物標籤上列明的指示在正確

Reported by Mr. Kenneth YIP, Scientific Officer,
Risk Communication Section, Centre for Food Safety

Vacuum packaging has become ubiquitous in today's food industry since 1950s. This method offers a fast and efficient way to preserve food by sealing it into packets, reducing freezer burn, preventing odour transfer, enabling packaging and portioning of many food types and extending shelf-life while reducing wastage through decreased spoilage. It is used by both commercial producers and domestic users. This article will examine the science behind vacuum packaging for food preservation, its synergistic effects with other food processing methods, and key storage considerations for vacuum packed food.

Why is Vacuum Packaging Widely Adopted?

Vacuum packaging prolongs the shelf life of food by removing air, especially oxygen, around the food in the package, which is commonly achieved by vacuum pumps. This food preservation method is versatile, applicable to a wide range of food including raw, cooked and ready-to-eat ones. The reduced-oxygen (anaerobic) environment slows down the growth of most microorganisms present in food and hence reduces the rate of deterioration. Besides, the airtight sealed packages prevent atmospheric air and water vapour from contacting the food surface, thus reducing the risk of contamination.

One major benefit is that vacuum packaging retains food in its natural state including juices, sauces, flavour and freshness without the use of chemical preservatives. Chemical preservatives may alter the texture or taste of the food. However, some food likes fresh meat may undergo colour changes due to the absence of oxygen as natural pigments like myoglobin in meat will turn from bright red to purple red in vacuum conditions. While this may affect the appearance, it poses no food safety concern, and the original colour returns upon contact with air.

Synergy of Vacuum Packaging with Other Food Processing Methods

While vacuum packaging can be used as a single means to preserve food, it is often combined with other preparation and preservation methods to achieve optimal results. Sous vide is a method of cooking vacuum-packaged products such as raw beef and fish at temperatures usually from 47°C - 88°C, and with the heating time ranges from 2 to 48 hours. The vacuum pack plays an important role in preserving sous vide food by establishing a physical barrier to avoid contamination from the surroundings to the food in which its water content and nutrients could favour the bacterial growth in the Temperature Danger Zone.

Dehydration and freeze drying are common food preservation methods by decreasing the moisture of food like cereals, fruits and vegetables to low levels. As dehydrated food has lower water content than fresh varieties, bacterial and fungal growth become unfavourable. Vacuum packing complements these methods by preventing re-absorption of moisture in the dehydrated food, further extending the shelf life of these foods.

Vacuum-Packed Foods are Not Sterile and Should be Stored Properly

Some believe that food kept in vacuum is safe irrespective to the storage temperature. However, while vacuum packaging protects food from external contaminants and limits oxygen exposure, thereby slowing microbial growth, it is definitely not a sterilisation method. Therefore, additional food preservation methods including refrigeration or freezing may be required. Although most aerobic microorganisms cannot thrive without oxygen, certain anaerobic pathogens, such as *Clostridium botulinum* and *Listeria monocytogenes*, can still survive and pose risks. For example, hot smoked fish and fresh chilled pasta have been reported to have *Clostridium botulinum* even when vacuum packed, whereas *Listeria monocytogenes* has been found in vacuum-packed smoked fish products. If a shelf-stable food product is desired, canning (in jars, cans or retort pouches) is required. The food is subject to adequate heat treatment such as processing with steam under pressure during canning, which destroys bacteria and spores and ensures long term food safety without refrigeration.

的安全温度貯存，例如於攝氏4度或以下冷凍或於攝氏零下18度或以下冷藏，並應在食用前查看保質期。即使是真空密封的食物，損壞的包裝也會增加其受環境污染和腐壞的風險。如對包裝的狀況有所懷疑，把食物棄掉是最安全的做法。

冷凍和冷藏真空包裝食物
Refrigerate and freeze vacuum-packed food

進食前查看保質期
Check the expiry date before consumption

Vacuum-packed food should be stored at proper safe temperatures according to manufacturers' instructions as listed on the food labels like refrigeration at 4°C or below and freezing at -18°C or below, and their expiry dates should be checked before consumption. Damaged packaging increases the risk of environmental contamination and spoilage, even for vacuum-sealed products. When in doubt about a package's condition, it would be safest to discard the product.

圖3: 進食前妥善貯存真空包裝食物並查看標籤
Figure 3: Properly store and check labels of vacuum-packed food before consumption

蜜糖與嬰兒肉毒中毒
Honey and Infant Botulism

近日中國內地報道一宗嬰兒肉毒中毒個案。一名七個月大的嬰兒意外舔到用來餵哺蜜糖給姊姊的湯匙，出現四肢乏力和眼瞼下垂等症狀，須入院接受治療。

嬰兒肉毒中毒是一種罕見的肉毒中毒，起因於嬰兒進食肉毒桿菌孢子後，孢子在其腸道內萌芽繁殖，繼而釋放毒素所致。嬰兒肉毒中毒的病徵包括便秘、面部表情呆滯、吸食困難、哭聲微弱、動作減少及肌肉無力。雖然部分個案症狀輕微，但有些個案可出現嚴重症狀甚至致命的情況。切勿餵哺任何蜜糖給未滿1歲的嬰兒。

Recently, a case of infant botulism was reported in Mainland China, where a seven-month-old infant accidentally licked a spoon that had been used to feed honey to an older sister. The infant suffered from limb weakness and drooping eyelids and was hospitalised for emergency treatment.

Infant botulism is a rare type of botulism caused by the ingestion of *Clostridium botulinum* spores that germinate, grow and release toxins in the intestine of infants. Infant botulism rarely occurs to older persons, as their more developed defences prevent germination and growth of *Clostridium botulinum* in the intestines. Symptoms of infant botulism include constipation, flattened facial expressions, weak sucking, weak crying, reduced movement and muscle weakness. The symptoms can be mild in some cases but can be severe and even fatal in others. Do not give honey of any kind to infants under one year old.

冰凍甜點中的李斯特菌
Listeria in Frozen Confections

2025年3月，英國爆發一宗李斯特菌感染事故，涉及供應給醫院的冰凍甜點。五名因其他健康問題入院留醫的病人因感染李斯特菌而接受治療，當中三人死亡。

李斯特菌可污染多種食物，但大多數感染是由於食用冷凍的即食食物引起的，因爲這些食物長時間貯存於攝氏4度或以下，有利李斯特菌繁殖。雖然身體健康的人在感染李斯特菌後只出現輕微病徵，但是孕婦、嬰幼兒、長者和免疫力弱人士等高危人士，一旦受感染，可能嚴重危害健康。

在本港，食物安全中心的食物監測計劃從不同零售點（包括網上零售點）及食物製造廠抽取即食食物樣本作李斯特菌測試。樣本種類包括芝士、冰凍甜點、凍食肉類、水果、沙律、刺身及煙熏海產等高風險食物。要減低感染李斯特菌的風險，高危人士應避免進食高風險食物，並確保食物徹底煮熟。

In March 2025, a *Listeria* outbreak linked to frozen confections supplied to hospitals was reported in the United Kingdom. Five patients admitted to hospitals for other health issues were treated for *Listeria* infections. Three of them died.

Listeria monocytogenes (LM) can contaminate a wide range of foods, but most infections are caused by eating chilled, ready-to-eat food as these foods are stored at 4°C or below for extended periods, which facilitates the multiplication of LM. While symptoms are mild for healthy people, susceptible populations, including pregnant women, infants and young children, the elderly and the immunocompromised, can suffer serious health consequences when infected.

In Hong Kong, the Food Surveillance Programme of the Centre for Food Safety collects samples of ready-to-eat food from different retail outlets, including online retailers and food factories, for testing of LM. The samples include high-risk foods such as cheeses, frozen confections, cold cuts, fruits, salads, sashimi and smoked seafood. To reduce the risks from LM, susceptible populations should avoid high-risk foods and ensure food is thoroughly cooked.

風險傳達工作一覽（二零二五年五月）
Summary of Risk Communication Work (May 2025)

事故/ 食物安全個案 Incidents/ Food Safety Cases: 359	公眾查詢 Public Enquiries: 116	業界查詢 Trade Enquiries: 202	食物投訴 Food Complaints: 621	給業界的快速警報 Rapid Alerts to Trade: 3
給消費者的食物警報 Food Alerts to Consumers: 2	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: 39	上載到食物安全中心網頁的新訊息 New Messages Put on the CFS Website: 52	