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

二零一二年三月・第六十八期 March 2012・68th Issue

由食物環境衞生署食物安全中心於每月第三個星期三出版
Published by the Centre for Food Safety, Food and Environmental Hygiene Department on every third Wednesday of the month

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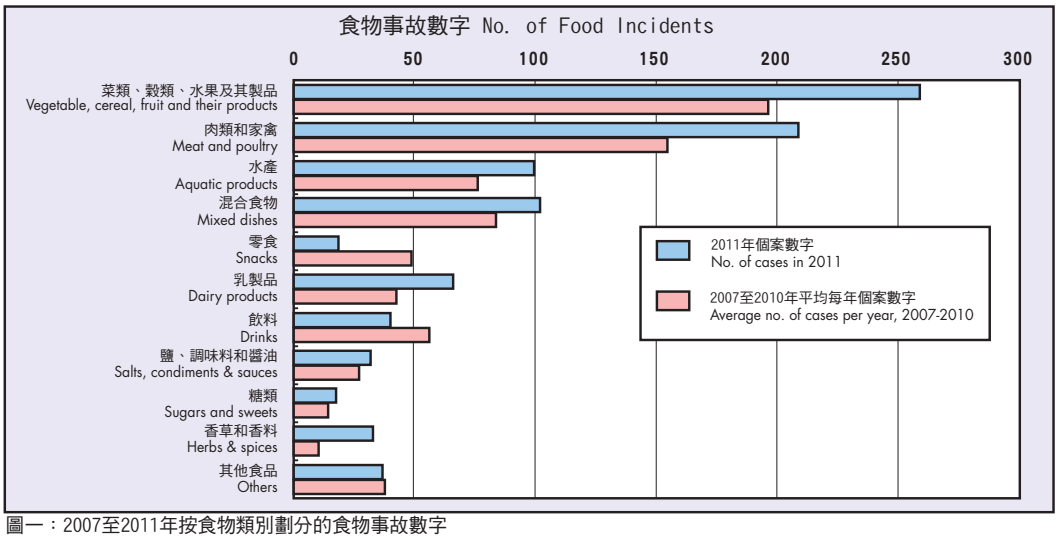
食物安全中心
風險管理組
舒寶兒醫生報告

Reported by Dr. Bo-yee SHU, Medical & Health Officer, Risk Management Section, Centre for Food Safety

國際間的食品貿易蓬勃發展，意味著食物安全問題可在短短數小時內從世界的一端蔓延至另一端。為確保供應本港的食物安全，食物安全中心(中心)每天都密切監察於本地及海外發生的食物事故。

An ever-increasing international food trade means food safety problems could spread within hours from one part of the world to another. In order to ensure the safety of food supplies to Hong Kong, the Centre for Food Safety (CFS) monitors local and overseas food incidents on a daily basis.



圖一：2007至2011年按食物類別劃分的食物事故數字
Figure 1. Number of food incidents by food commodity, 2007-2011.

二零一一年的食物事故

食物事故是指可能影響食物安全的事故或事件。中心通過監察各主要資料來源，包括各大海外食物規管當局及海內外傳媒報道等，掌握各地發生的食物事故。二零一一年，中心一共監察到915宗食物事故，數目比二零零七至一零年平均每年約750宗略高。一如以往，非本地個案依然佔大多數(佔98.4%)。台灣及美國公布的食物事故比過往多出了逾150宗，致使二零一一年的食物事故總數有所增加。

在監察到的食物事故中，以涉及菜類、穀類、水果及其製品的增幅最大，其次為肉類和家禽(見圖一)。大部分事故與化學物質(如除害劑、獸藥殘餘)或有害微生物(如李斯特菌、沙門氏菌和大腸桿菌)超標有關(見圖二)。雖然事故總數有所上升，但整體分布情況與往年相若。

中心採取的行動

中心每次發現食物事故，都會評估該事故對市民健康的影響，以決定最適當的跟進行動，包括聯絡有關當局索取更多資料，向業界發出快速警報，派員到市面巡查以了解有關產品有否在本港出售，抽取樣本進行測試，發出新聞公報，以及發起回收行動或頒布禁止令等。二零一一年，中心因應食物事故發出了大約400則業界警報和超過40則新聞公報。另外，中心還發出了26則食物警報及啟動了

Food Incidents in 2011

Food incidents refer to incidents or events which have potential food safety implications and are regularly detected by monitoring of key information sources including both overseas major food authorities and media agencies, and local media reports. In 2011, a total of 915 food incidents were identified by the CFS. This was slightly higher than the annual figure of about 750 from 2007 to 2010. As in past years, non-local cases accounted for the majority at 98.4 per cent. Cases reported from Taiwan and the United States increased by over 150 in 2011 contributing to the increase in the overall statistics.

As for the food concerned, those involving vegetables, cereal, fruits and their products had the greatest increase, followed by those concerning meat and poultry (Figure 1). Most cases were related to unsatisfactory level of chemical agents such as pesticides and veterinary drugs, or microbiological hazards such as *Listeria*, *Salmonella* and *E.coli* (Figure 2). The distribution on the whole remained similar to the past years.

Actions Taken by CFS

For each of these food incidents, the CFS assessed its public health significance and took appropriate follow up actions, ranging from contacting the relevant authorities for more information, issuing rapid trade alert, conducting sales check, and taking food samples for testing, making public announcement and initiating recall or issuing prohibition order. In 2011, the CFS issued about 400 trade alerts and over 40 press releases related to these incidents. Another 26 food alerts were issued and seven food recalls were initiated. The latter involved invoking Section 78B Order of Public Health and Municipal Services Ordinance (Cap. 132) to order the

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焦點個案
Incident in Focus

七次食品回收行動。後者是根據當時的《公眾衞生及市政條例》(第132章)第78B條命令行使權力，下令業界回收並停止售賣問題食品。

trade to recall and stop selling of the concerned products .

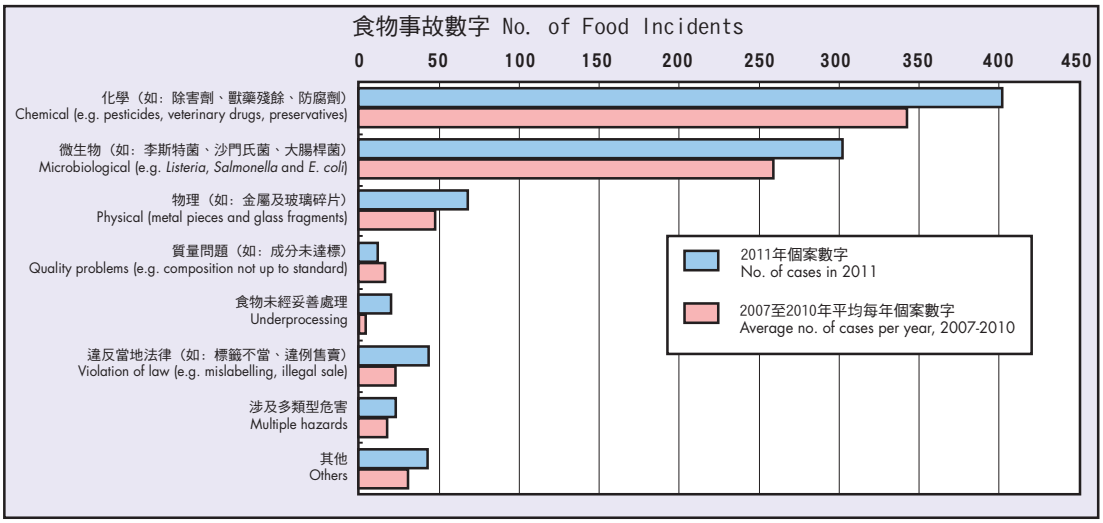
重大食物事故

二零一一年，中心監察到不少引起公眾關注的重大食物事故，現撮述數宗如下：

1. 日本食品受輻射污染

自日本在二零一一年三月十一日發生地震並引發福島核電站事故後，中心加強了對日本進口食品的輻射檢測。

二零一一年三月二十三日，中心檢出三個蔬菜樣本的碘－131含量高於食品法典委員會的指引限值。中心遂下令由二零一一年三月二十四日正午起，禁止進口及供應日本五個縣的指定食品。其後再檢出七個蔬菜及茶葉／茶粉樣本含微量輻射，但未超出食品法典委員會的指引限值。上述樣本的批次已全部被銷毀，沒有流入市面。



圖二：2007至2011年按危害／問題類別劃分的食物事故數字
Figure 2. Number of food incidents by type of hazards/problems, 2007-2011.

目前對日本食品實施的加強監察及入口限制令仍然生效。所有檢測結果於每個工作天在中心的“核事故與食物安全”專題網頁上公布。

2. 受塑化劑污染食品

台灣食品藥物管理局於二零一一年五月二十三日宣布，在飲品樣本中檢測出塑化劑，肇因是商人非法使用含塑化劑的起雲劑。

中心隨即採取跟進行動，包括通知業界有關事件，了解有關產品有否在本港出售，並加強對食品塑化劑的檢測。

中心其後共檢出49個不合格食物樣本，最後一個於八月二十四日檢出。當局共發出六項命令，禁止進口及供應受塑化劑污染並可能對健康構成風險的食品，並指示回收該等食品。詳情請瀏覽中心專題網頁“食物中含塑化劑”。由二零一一年十月開始，中心已把塑化劑檢測納入恆常的食物監察計劃內。

3. 牛奶產品受揮發性有機化合物污染

二零一一年十二月初，本地一乳製品生產商從市面上回收可能受揮發性有機化合物污染的牛奶產品。

事件始於二零一一年十一月底，生產商及中心陸續收到關於產品有異味的投訴。中心隨即巡查生產商的廠房，並從投訴人及市面零售點收集相關樣本化驗。

化驗結果顯示，其中10個樣本的牛奶產品，含有在正常情況下不應存在的揮發性有機化合物。其後調查發現，該污染可能是由於在維修倉庫時，不適當使用揮發性有機化合物所導致。中心已指示有關生產商立即回收市面上所有紙包牛奶產品，並採取必須的補救措施。跟進化驗樣本的結果合格。事件詳情請瀏覽中心二零一一年十二月三日的新聞公報及食物警報。

總結

及早對食物事故採取行動，對於控制及消除因食物危害所帶來的潛在風險尤關重要。中心設立的監察及應變系統一直行之有效，使中心能適時監察及處理食物食故。

Important Food Incidents

In 2011, a number of food incidents were detected which sparked significant concerns on food safety in Hong Kong. Some of them are highlighted below.

1. Radiation-Contaminated Food from Japan

Since the Fukushima nuclear power plant incident subsequent to the earthequake on 11 March 2011 in Japan, the CFS has stepped up surveillance of imported Japanese food for radiation testing.

On 23 March 2011, three vegetable samples were found to contain Iodine-131 exceeding the Codex Guideline Levels. An order was made to prohibit import and supply of specified foods from five Japanese prefectures with effect from noon 24 March 2011. Seven other samples of vegetables and tea leaf/powder were found with low radiation levels not exceeding the Codex Guideline Levels. All consignments related to the aforesaid samples were disposed of and did not enter the local market.

To date, the enhanced surveillance on Japanese food and the prohibition order are still in force. The surveillance results are continued to be uploaded onto the CFS website every working day at the designated webpage on Nuclear Event and Food Safety.

2. Plasticisers-tainted Food

The Food and Drug Administration in Taiwan announced on 23 May 2011 that plasticisers had been detected in samples of drinks as a result of illicit use of clouding agents containing plasticisers.

The CFS immediately took follow up actions including alerting relevant traders, conducting sales check, and commencing enhanced food surveillance for plasticisers.

Subsequently, a total of 49 unsatisfactory food samples were found, with the last detected on 24 August. Six orders were issued to prohibit the import and supply as well as to direct recall of plasticisers-tainted products which might pose public health risks. Details can be found at the designated webpage on Plasticisers in Food. Testing of plasticisers had been included in the regular food surveillance programme since October 2011.

3. Milk Products Contaminated with Volatile Organic Compounds

In early December 2011, a local dairy products manufacturer withdrew some of its milk products from the market because of possible contamination with volatile organic compounds.

This action was taken in the wake of several complaints received by the company directly and by CFS since late November 2011 concerning abnormal odour in the products. The CFS immediately inspected the milk factory and took samples from the complainants and the relevant retail outlets for testing.

Test results showed that ten samples contained volatile organic compounds which should not normally exist in any milk products. Subsequent investigation showed that the contamination might be due to improper use of volatile organic compounds in maintenance works of the warehouse. The CFS instructed the manufacturer to immediately recall all paper pack milk products from the market and take necessary remedial actions. Follow up samples were tested with satisfactory results. Details of the incident can be found from CFS's press release and food alert on 3 December 2011.

Conclusion

Early intervention of food incidents is vital in controlling and aborting the potential risks associated with food hazards. The effective food incident surveillance and response system put in place has enabled the CFS to detect and manage food incidents in a timely manner.

食物安全平台
Food Safety Platform

牛海綿狀腦病(俗稱瘋牛症)與食物安全
Bovine Spongiform Encephalopathy (BSE) and Food Safety

食物安全中心
獸醫公共衛生組
B. M. HWANG獸醫報告

Reported by Dr. B.M. HWANG, Veterinary Officer,
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上一期我們介紹了禽流感，這次讓我們談談另一種同樣令人關注的人畜共患病——牛海綿狀腦病(俗稱瘋牛症)。

人畜患病的情況

瘋牛症是一種牛隻所患的致命疾病，發病部位一般在腦部和脊髓。該病由變異的普里昂蛋白(prion protein)所引致。這種異常蛋白很難被破壞或變性，因此屠場裡曾被受感染牛隻組織污染的物件包括工具等很難徹底清潔。瘋牛症在牛身上的潛伏期很長，由30個月至八年不等，染病的牛隻多在四至五歲時始發病。所有品種的牛都有染病的可能。研究顯示，瘋牛症的病原主要存在於受感染牛隻的腦部、脊髓和視網膜等組織。這些部位被指定為“高風險部位”，在屠宰過程中必須予以清除或銷毀，以免進入人類及動物的食物鏈。

人類若進食受瘋牛症污染的牛肉產品，可能會患非典型克雅二氏症。該病的潛伏期不詳，患者很可能在多年甚至數十年後才病發。非典型克雅二氏症病發初期，會有逐漸失智的現象，隨着病程進展症狀會持續惡化，患者會出現走路不穩、行動困難、視力衰退、肌肉抽搐，以及其他神經方面的症狀。非典型克雅二氏症是致命疾病，目前尚未有證明行之有效的治療或預防方法。

非典型克雅二氏症與瘋牛症的關係使進食受瘋牛症病原污染的食品成為公共衛生關注事宜。

以往瘋牛症的爆發情況

瘋牛症於一九八六年在英國首次被發現，肇因是英國農民把病牛的肉骨粉作為補充劑加入飼料中餵飼牛犢。在這場疫症中，以英國和歐洲各國的疫情最為嚴重，亞洲國家及美國僅有零星個案(圖一)。在瘋牛症肆虐最烈的英國，有超過18萬頭牛染病，440萬頭牛在撲殺行動中被宰殺。

全球的瘋牛症個案數目，與英國比起來也不過是小巫見大巫。在一九九二年疫症高峰期，英國發現的個案逾37 000宗，與歐盟多國、美國、加拿大及日本等24個國家合共數百宗相比，英國瘋牛症發病率之高令人為之咋舌。

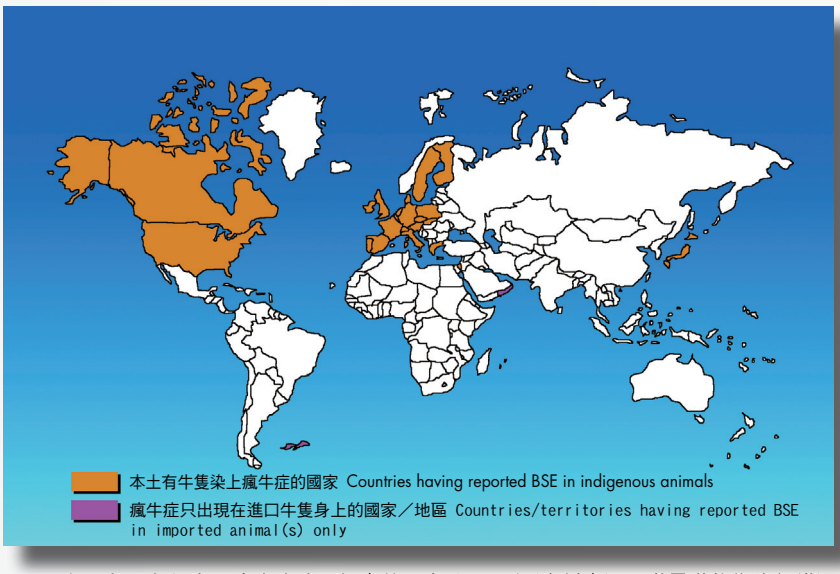

圖1：自一九八九年出現瘋牛症確認個案的國家地理分布(資料來源：世界動物衛生組織)

Figure 1. Geographical distribution of countries that reported BSE confirmed cases since 1989 (adapted from World Organization for Animal Health (OIE)).

公共衛生管制措施

因應瘋牛症疫情，多國已實施公共衛生管制措施，例如監察、宰殺病牛或禁用“高風險部位”等。曾出現本土瘋牛症確認個案的國家尤其如是，目的是避免可能受瘋牛症感染的組織進入人類的食物鏈中。在眾多管制措施中，最嚴格的莫過於英國實施的《30個月以上規則》。按照該項規定，所有超過30個月大的牛隻都不可供人或牲畜食

Having talked about Avian Influenza in the last issue, we now move on to another zoonotic disease which often catches our attention - Bovine Spongiform Encephalopathy (BSE), commonly known as mad-cow disease.

The Disease in Animals and Humans

BSE is a fatal disease in cattle that causes disease of the brain and spinal cord. It is caused by a prion protein which is difficult to be destroyed or denatured. Materials including equipment used in the abattoir to slaughter cattle that have been in contact with contaminated tissues are difficult to clean. BSE has a long incubation period in cattle, about 30 months to eight years, usually affecting adult cattle at a peak age onset of four to five years. All breeds of cattle can be affected. Research demonstrates the most dangerous tissues of cattle with natural BSE can be found in brain, spinal cord and retina. These are designated as “specified risk materials” and are removed or destroyed during slaughtering to prevent them from entering the food and feed chain.

Humans who have ingested BSE affected food of bovine origin may develop variant-Creutzfeldt-Jakob disease (vCJD). The incubation period is unknown but likely to be many years or decades. The disease usually begins with a progressive mental deterioration that soon becomes associated with progressive unsteadiness and clumsiness, visual deterioration, muscle twitching and a variety of other nervous symptoms and signs. The disease is invariably fatal and there is no proven treatment or prophylaxis.

The link between BSE and vCJD in human and consumption of BSE contaminated food makes it a public health issue.

Past Epidemics in Cattle

In 1986, epidemic of BSE in cattle was first reported in England. It was caused by feeding meat and bone meal made from cattle as a feed supplement to calves. The United Kingdom (UK) and European countries were most affected by the epidemic while only sporadic cases were reported in other Asian countries or the United States (Figure 1). In the UK, the country worst affected, more than 180,000 cattle were infected and 4.4 million slaughtered during the eradication program.

The number of cases of BSE in the world was overshadowed by the astoundingly high incidence of BSE that occurred in the UK, peaking in 1992 with over 37,000 cases, in comparison to the few hundred cases detected in the other 24 countries affected, including numerous countries in the European Union, as well as the United States, Canada and Japan.

Public Health Control Measures

Public health control measures, such as surveillance, killing sick animals, or banning specified risk materials, have been put in place in many countries, particularly in those with indigenous cases of confirmed BSE, in order to prevent potentially BSE-infected tissues from entering the human food supply. The most stringent of these control measures, including a program that excluded all animals over 30 months of age from the human

用。事後證明此舉對遏止瘋牛症收效宏大。隨着英國瘋牛症的個案減少，英國在二零零五年取消《30個月以上規則》，改行瘋牛症檢測計劃。二零零零年六月，歐洲委員會為加強對瘋牛症的管制，要求歐盟成員國自二零零零年十月一日起，禁止“高風險部位”進入人類和動物的食物鏈。

本港在審批進口牛肉時，會評估出口國的公眾衞生措施，確保這些措施在出現瘋牛症疫情的國家行之有效，把瘋牛症的傳播風險減到最低。因此，港人從食物染上非典型克雅二氏症的風險極微。另外，相信牛奶及乳製品不會傳播瘋牛症病原。

food and animal feed supplies (the Over Thirty Month (OTM) rule), was applied in the UK and appeared to be highly effective. With the decrease in British BSE cases, the OTM rule was replaced in 2005 with a BSE testing regime. In June 2000, the European Union Commission on Food Safety and Animal Welfare had strengthened the European Union's BSE control measures by requiring all member states to remove specified risk materials from animal feed and human food chains as of 1 October 2000.

Public health measures in the exporting country are assessed prior to giving permission to the importation of beef to Hong Kong. This ensures confidence in the proper implementation of the applied public health measures in BSE affected countries that minimises the chance of transmission. Consequently the risk of acquiring vCJD from food in Hong Kong is extremely low. Milk and milk products from cows are not believed to pose any risk for transmitting the BSE agent.

食物事故點滴
Food Incident Highlight

進食未經煮熟豬肝可感染戊型肝炎

近日有傳媒報道一些本地戊型肝炎嚴重個案，包括一人需要接受肝臟移植，另一人入院後情況危殆，其後死亡。事件再次令市民關注進食豬肝的安全問題。

近年，本港戊型肝炎呈報個案數字有上升趨勢，由二零零四年的38宗增至二零一一年的119宗。自二零零八年起，戊型肝炎已取代甲型肝炎成為本港最常見的急性病毒性肝炎。

鑑於戊型肝炎可經進食豬肝傳播，食物安全中心(中心)曾發表風險評估研究，探討本港市面供應的新鮮豬肝含戊型肝炎病毒的情況。由於大部分受戊型肝炎病毒感染的豬隻在臨牀上不會出現任何症狀，因此必須透過實驗室化驗才能檢測豬肝是否含有戊型肝炎病毒。研究結果顯示，約有30%的燒種豬(約四月齡)的肝臟樣本對戊型肝炎病毒測試呈陽性反應，而肉豬(約六月齡)的肝臟樣本則全部檢測不到該病毒。此外，部分陽性樣本的病毒與本地人類感染個案檢出的病毒比對，兩者的基因序列相同。這表示未煮熟的豬肝可能是本地戊型肝炎個案的其中一個感染源。由於很多從人類感染個案檢出的病毒基因序列跟那些在豬肝檢出的並不一樣，其他食物感染源亦可能存在，例如介貝類水產。

為提高公眾對預防戊型肝炎及其他食源性疾病的意識，中心在不同刊物強調保持個人及食物衞生，以及進食動物內臟(特別是豬肝)、肉類及介貝類水產前須徹底煮熟等建議，例如切成薄片的生豬肝，視乎厚度和分量，須用沸水烹煮最少三至五分鐘。此外，中心亦分別為業界和消費者編製了《奉行良好食物衞生守則 慎防甲型和戊型肝炎》的指引。

吃未煮熟豬肝易染戊型肝炎

Eating undercooked pig liver may cause hepatitis E.

Consuming Undercooked Pig Liver May Cause Hepatitis E Infection

The safety of eating pig livers has again raised public concern following recent local media reports on some serious hepatitis E cases, including a patient who had liver transplant and another patient admitted to hospital in critical condition who later passed away.

In recent years, there has been a rising trend of hepatitis E case notifications, from 38 in 2004 to 119 in 2011, in Hong Kong. Since 2008, hepatitis E has taken over hepatitis A and has become the most common acute viral hepatitis reported in Hong Kong.

Noting the possible risk of contracting hepatitis E from pig liver, the Centre for Food Safety (CFS) has published a risk assessment study, which provides an overview on the prevalence of hepatitis E virus (HEV) in fresh pig livers available in local market. Since HEV causes subclinical infections in pigs in most cases, laboratory analysis is needed for the detection of HEV in pig livers. Study results showed that about 30 per cent liver samples of roaster pigs (around four months old) were positive for HEV while negative results were found in all porker pig (around six months old) liver samples. In addition, some of the positive samples were found to have the same gene sequences with those in human cases, which suggested that undercooked pig livers could be one of the possible sources for hepatitis E in Hong Kong. As gene sequences of HEV found in many human cases did not match with those found in pig livers, other foodborne sources, such as shellfish, could exist.

To foster public awareness on preventing hepatitis E and other foodborne diseases, health advice such as always observing good personal and food hygiene and cooking animal offal, especially pig liver as well as meat and shellfish thoroughly before consumption have been emphasised in various CFS publications. For example, sliced raw pig liver should be boiled for at least three to five minutes depending on thickness and quantity. Guides on “Practise Food Hygiene to Prevent Hepatitis A and Hepatitis E” have also been prepared for the trade and consumers.

風險傳達工作一覽
Summary of Risk Communication Work

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