食物安全焦點
Food Safety Focus

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食物環境衞生署 Food and Environmental Hygiene Department

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Truthful Nutrition Labels Help Make Informed Food Choice

食物安全中心 風險評估組 科學主任何國偉先生報告

Reported by Mr. Nicky HO, Scientific Officer, Risk Assessment Section, Centre for Food Safety

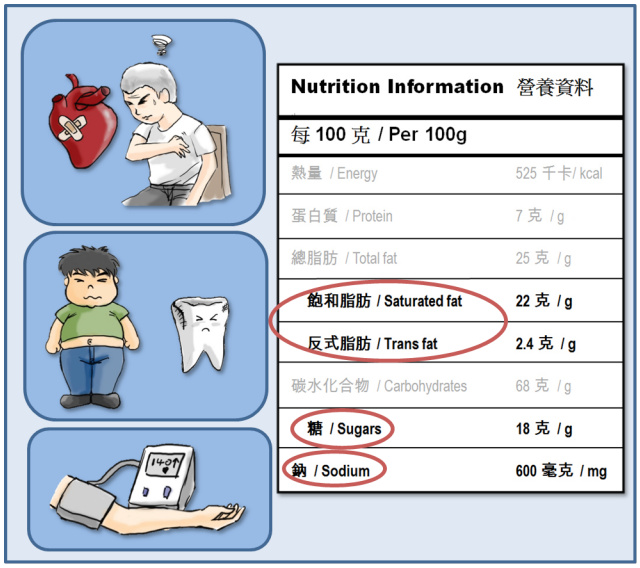
最近市面上有食品被發現不符合營養資料標籤制度的規定。營養資料標籤制度自二零一零年七月一日實施以來，逾98%的預先包裝食物均符合規定。不符合規定的產品大都是營養標籤資料不全或實際營養素含量與營養標籤所示的含量有差異。本文將探討營養資料標籤制度對公眾健康的重要性及消費者選購食物的知情權。

營養資料標籤制度

為幫助消費者作出知情的食物選擇，並鼓勵食物製造商提供符合營養準則的食品，政府於二零一零年七月一日起實施營養資料標籤制度，強制規定一般預先包裝食物必須加上標準格式及內容的營養標籤。除法定豁免外，食物標籤上須提供有關能量及七種指定營養素（即所謂“1+7”）的資料。

七種指定營養素分別是蛋白質、碳水化合物、總脂肪、飽和脂肪、反式脂肪、鈉及糖。當中蛋白質、碳水化合物及脂肪屬於三大常量營養素，可提供能量和構成人體組織。飽和脂肪及反式脂肪屬於總脂肪項下的兩個細類，過量攝入會增加罹患冠心病和中風的風險。糖是碳水化合物項下的細類，可為身體提供能量，但過量攝入可引致蛀牙和肥胖症，而肥胖症是糖尿病、心血管疾病和癌症等多種慢性疾病的主要成因。鈉是人體必需的礦物質，是神經傳送和肌肉收縮的必需元素，但過量攝入可引致高血壓，甚至可致命的心血管疾病。

準確無誤的營養標籤有助消費者選



食物中的營養素及相關的健康問題
Nutrients in food and their associated health problems

Recently, certain products were found non-compliant with the nutrition labelling scheme. Since the nutrition labelling scheme came into force on 1 July 2010, the compliance rate of the nutrition labelling of prepackaged food is over 98%. Among the non-compliant products, most of them were found to contain incomplete nutrition label or were identified to have discrepancies between the nutrient contents and the declared value on their nutrition labels. This article talks about the public health importance of the nutrition labelling scheme and consumers' right to make informed healthy choice.

Nutrition Labelling Scheme

To assist consumers in making informed food choices and encourage food manufacturers to apply sound nutrition principles in formulation of foods, a mandatory nutrition labelling scheme had been developed and came into force on 1 July 2010. This scheme defines the need for general prepackaged food to provide nutrition labels, with standardised format and content. Subject to statutory exemptions, information on energy and seven specified nutrients (i.e. "1+7") are required on food labels.

The seven specified nutrients are protein, carbohydrates, total fat, saturated fat, trans fat, sodium and sugars. Protein, carbohydrates, and fats are the three main groups of macro-nutrients that provide energy and are the building blocks of human body. Saturated fat and trans fat are two sub-sets of total fat, excessive consumption of which may increase the risks of developing coronary heart disease and strokes. Sugars (sub-sets of carbohydrates) provide energy for the body, but excessive intake can lead to dental caries and obesity, which is a major risk factor for a number of chronic diseases, including diabetes, cardiovascular diseases (CVDs) and cancer. Sodium is a mineral required for nerve transmission and muscle contraction, but excessive intake can lead to hypertension, and possibly life-threatening CVDs.

Accurate and truthful nutrition labels help consumer choose food with lower saturated fat, trans fat, sodium and sugars

焦點個案
Incident in Focus

擇飽和脂肪、反式脂肪、鈉和糖含量較低的食物，從而防止身體出現相關的健康問題(見圖)。

為規管具誤導性或具欺騙性的聲稱，營養資料標籤制度還規定營養聲稱必須符合一些特定條件。營養聲稱可分為三大類：營養素含量聲稱、營養素比較聲稱及營養素功能聲稱。

對嬰幼兒配方產品和食物的規管

為加強保障嬰幼兒的健康，擴大規管範圍的《2014年食物及藥物(成分組合及標籤)(修訂)(第2號)規例》已於二零一六年六月十三日起全面生效，涵蓋嬰兒配方產品的營養成分組合，以及嬰兒配方產品、較大嬰兒及幼兒配方產品及預先包裝嬰幼兒食物的營養標籤。

確保營養標籤準確無誤

業界可透過對食物樣本進行直接化學分析或通過計算方法進行間接營養素分析去取得食物的營養資料。有時食物的營養資料亦可從食物製造商或供應商方面得悉。

如業界選用間接營養素分析來估算食品的營養素含量，應首先對這種方法的局限有所了解。業界有責任採取恰當的分析方法，以確保營養標籤上的數據準確無誤。當局會根據化驗分析結果，評定營養標籤是否符合有關規例。因此，業界宜進行化驗分析來核證營養標籤上的數值。

注意要點：

1. 營養資料標籤制度規管範圍廣泛，涵蓋嬰兒至成人階段的食品。
2. 營養標籤提供食物的營養資料，讓消費者在選購食物時能作出知情的選擇。
3. 準確無誤的營養標籤有助消費者選擇飽和脂肪、反式脂肪、鈉和糖含量較低的食物，從而防止身體出現相關的健康問題。

給消費者的建議

- 善用營養標籤選擇飽和脂肪、反式脂肪、鈉和糖含量較低的預先包裝食物。
- 營養聲稱只可作快速參考之用，消費者應查看營養標籤去了解食品的整體營養成分，從而選擇較健康的食物。

給業界的建議

- 在食物標籤上提供準確的資料。
- 確保食物製造商和供應商所提供的營養資料準確無誤。
- 考慮進行化驗分析以驗證營養標籤上的資料是否準確。

contents, so as to prevent developing associated health problems (see Figure).

In order to regulate misleading or deceptive claims, the nutrition labelling scheme also stipulates specified conditions for nutrition claims. There are three main types of nutrition claims: nutrient content claim, nutrient comparative claim, and nutrient function claim.

Regulation for Formula Products and Foods for Infants and Young Children

To better protect the health of infants and young children, the Food and Drugs (Composition and Labelling) (Amendment) (No. 2) Regulation 2014 (the Amendment Regulation) expanded its scope and came into force on 13 June 2016. The Amendment Regulation comprises requirements on nutritional composition of infant formula and nutrition labelling of infant formula, follow-up formula and prepackaged foods for infants and young children.

Accurate and Truthful Nutrition Label

The nutrition information of foods can be obtained by either direct chemical analysis of food samples or indirect nutrient analysis based on calculation. Sometimes, the nutrition information of foods may be obtained from manufacturers or suppliers.

If members of the trade choose to use indirect nutrient analysis to estimate the content of nutrients in the food products, they should be aware of the limitations of indirect nutrient analysis. The trade has the onus to ensure the accuracy and suitability of the data and the method used. Compliance with the regulation on nutrition labelling would be assessed by laboratory analysis. So, the trade is encouraged to engage laboratory testing to verify their nutrition label declarations.

Key Points to Note:

1. Nutrition labelling scheme covers the whole range of food from infants to adults.
2. Nutrition label provides nutrition information of food products and assists consumers in making informed food choices.
3. Accurate and truthful nutrition labels help consumers choose food with lower saturated fat, trans fat, sodium and sugars contents, so as to prevent developing associated health problems.

Advice to Consumers

- Use nutrition labels to choose prepackaged food with lower saturated fat, trans fat, sodium and sugars contents.
- Nutrition claims are only quick reference. Consumers are encouraged to read the nutrition label to understand the overall nutritional property of the food product for making healthy food choices.

Advice to the Trade

- Provide accurate information on food labels.
- Ensure that the nutrition information obtained from manufacturers and suppliers is accurate and truthful.
- Consider to engage laboratory testing to verify their nutrition label declarations.

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

風險傳達工作一覽（二零一六年五月） Summary of Risk Communication Work (May 2016)	數目 Number
事故/食物安全個案 Incidents / Food Safety Cases	102
公眾查詢 Public Enquiries	140
業界查詢 Trade Enquiries	288
食物投訴 Food Complaints	431
給業界的快速警報 Rapid Alerts to Trade	8
給消費者的食物警報 Food Alerts to Consumers	2
教育研討會/演講/講座/輔導 Educational Seminars / Lectures / Talks / Counselling	44
上載到食物安全中心網頁的新訊息 New Messages Put on the CFS Website	56

食物安全平台
Food Safety Platform

生蠔去或留？
Raw Oysters, Stay or Out?

食物安全中心
風險評估組
科學主任馬嘉明女士報告

Reported by Ms. Janny MA, Scientific Officer,
Risk Assessment Section,
Centre for Food Safety

雖然食物安全中心(中心)一直致力向公眾宣傳進食生蠔的固有風險，但本港仍不時發生與進食生蠔有關的食物中毒事故。最近，有評論指應禁售所有生蠔。我們應該這樣做嗎？

Despite the Centre for Food Safety (CFS)'s ongoing publicity regarding eating raw oysters carries inherent risk, every now and then food poisoning outbreaks linked to raw oysters are reported in Hong Kong. Recently, there are discussions on simply banning the sale of raw oysters. Should we do this?

生蠔的微生物危害

蠔以過濾周遭的水來進食，其體內組織因而有機會積聚有害微生物，包括病毒（例如諾如病毒和甲型肝炎病毒）和細菌（副溶血性弧菌和創傷弧菌）。在二零一三至二零一五年期間，衞生署衞生防護中心共錄得18宗與進食生蠔有關的確診諾如病毒食物中毒個案及兩宗與進食生蠔有關的確診副溶血性弧菌食物中毒個案，共影響140人。雖然進食受污染的生蠔而引起的疾病一般病徵較輕微，但亦可致命，**尤其是高危一族(例如長者、幼兒、孕婦和免疫系統較弱的人士及肝病患者)。**

我應該對生蠔避之則吉嗎？?!
Should I ban myself from eating raw oysters??!

Microbiological Hazards Associated with Raw Oysters

Oysters feed by filtering the surrounding waters and may concentrate harmful microorganisms, including viruses (e.g. norovirus and Hepatitis A virus) and bacteria (e.g. *Vibrio parahaemolyticus* and *Vibrio vulnificus*) in their tissues. During 2013-2015, there were 18 confirmed norovirus food poisoning cases and two confirmed *Vibrio parahaemolyticus* food poisoning cases, affecting a total of 140 people, related to the consumption of raw oysters reported to the Centre for Health Protection of the Department of Health. Whilst illnesses caused by the consumption of contaminated raw oysters are usually mild and self-limiting, they can also be deadly, **especially for the susceptible populations (e.g. elderly, young children, pregnant women and people with weakened immune systems or liver diseases).**

風險管理措施

為控制與生蠔有關的危害，各國政府採取了不同的控制措施以保障公眾健康。由於產蠔的主要危害來自生長水域中的微生物污染，其中一項最常用的管理措施是定期監控採蠔水域或蠔隻的微生物含量，並按結果把地區分級。例如歐盟按蠔隻受糞便污染的程度把產蠔區分為三級。只有採自A級產區的蠔(糞便污染程度最低)才能供人直接食用，而採自其他級別產區的蠔必須經過淨化、暫養或加熱處理後才能使用。其他的管理措施包括在捕撈後確保有適當的溫度控制以防止細菌大量滋生。

Risk Management Options

To control the hazards associated with raw oysters, national authorities are taking various control measures to protect public health. Knowing the main hazard for the production of oysters is microbiological contamination of waters in which they grow, one of the most widely used management options is the regular microbiological monitoring of oyster harvesting areas or oyster tissues and classifying the areas. For instance, in the EU, oyster production areas are classified into three classes according to the level of faecal contamination. Only oysters harvested from Class A areas (with least faecal contamination) can be used for direct human consumption, whereas oysters collected from areas of other classes are to be used only after depuration, relaying or heat processing. Other management options include ensuring appropriate temperature control to prevent out-growth of bacteria after harvesting.

淨化與暫養的分別

淨化是把蠔放置在乾淨海水箱中一段短時間(如兩天)，以去除蠔體內的污染物。暫養則是把蠔從受微生物污染的生長區域移至水質可接受的區域放養一段較長的時間(如兩個月)，以減低污染水平。

Depuration VS Relaying

Depuration is a process of holding oysters in tanks of clean seawater for a relatively short period of time (e.g. two days) to allow contaminants to be purged. Relaying refers to the removal of oysters from a microbiologically contaminated growing area to an acceptable area for a longer period of time (e.g. two months) to reduce the level of contamination.

在香港，進口商在進口生蠔時應附上來源地有關當局簽發的衞生證明書，以證明進口的生蠔適宜供人食用。食物業處所必須申領限制食物售賣許可證，方可售賣供人直接食用的生蠔。就像其他司法管轄區般，中心已參考食品法典委員會的標準為擬供直接食用的蠔制定微生物限量。

In Hong Kong, importers are encouraged to obtain health certificates issued by relevant authority of the exporting countries to accompany their imports, certifying that the raw oysters concerned are fit for human consumption. Food businesses should also obtain a restricted food permit before selling oysters to be eaten in raw state. Like other jurisdictions, the CFS has made reference to Codex to set microbiological limits for oysters intended for direct consumption.

但是，即使已採取有效措施，仍不能保證生蠔完全沒有微生物風險，例如採自糞便污染程度受監控區域的蠔仍有可能含有諾如

Even though effective measures are in place, there is no guarantee that raw oysters are completely free from microbiological risks, e.g. raw oysters harvested from areas monitored for faecal contamination may still contain norovirus. It is not always possible to detect problems before food poisoning cases due to limitations of the current knowledge and technology including laboratory testing. From June

病毒。目前的知識和科技(包括化驗)仍有不足之處，未必能在發生食物中毒個案前發現問題。由二零一三年六月至二零一六年五月，中心發出了十個禁令，禁止不同捕撈區的生蠔進口及在港銷售(較嚴厲措施)，原因是涉嫌與本地食物中毒個案／事故有關或被海外當局驗出含諾如病毒。

何不索性禁售所有生蠔？

全面禁止擬供直接食用的生蠔進口及出售表面上看來可以一勞永逸地解決問題，但與食用生蠔的風險比較，此舉未免過激，與問題的嚴重性亦不相稱。更有可能驅使愛蠔人士在沒有選擇的情況下，連非供直接食用的蠔也照樣生吃不誤，這樣豈不是更加危險！此外，在沒有充分科學佐證的情況下禁止所有生蠔進口，會對國際貿易造成不必要的障礙，有可能面對世界貿易組織的詰問。

事實上，“零風險”的食物是不存在的。就拿健康飲食必備的葉菜類蔬菜為例，美國在一九九八至二零零八年間，每年約有220萬宗因進食葉菜類蔬菜引起的疾病，佔食源性疾病總數的22%，比軟體動物為多(因進食軟體動物而引起的疾病約為每年28萬宗，佔總數的3%)，亦是所有食物之冠。因此，消費者應根據自己能夠接受的風險程度，作出有依據的食物選擇。

食物安全 人人有責

在政府適當的風險管理和溝通，以及業界的努力下，市民得以在香港這個美食天堂選擇並享用各款美食，但高危一族應時刻注意避免進食生蠔等高風險食物。

2013 to May 2016, the CFS put up 10 import and sale bans (more stringent measures) towards raw oysters harvested from various harvesting sites due to possible link to local food poisoning cases/ outbreaks or tested positive for norovirus by overseas authorities.

Why Not Simply Ban All Raw Oysters?

Superficially, banning the import and sale of oysters intended for raw consumption can solve the problems for good. It is, however, a drastic (also not proportionate to the risk posed to public health) measure to avoid such risk. And oyster lovers may eventually have greater temptation to consume oysters not destined for direct consumption raw, i.e. even riskier! In addition, banning all imported raw oysters without sufficient scientific substantiation would result in unnecessary barriers to international trade, which would be subject to the World Trade Organization challenge.

In fact, there is no such thing as "zero risk" for food. Take leafy vegetables which play an important role in a healthy diet as an example, they accounted for more foodborne illnesses (~2.2 million per year; 22%) than any other commodities including molluscs (~0.28 million per year; 3%) in the US in 1998-2008. Consumers should make informed food choice based on their capacity for risk.

Shared Responsibility for Food Safety

With proper risk management and communication by the government as well as efforts made by the trade, the general public can choose and enjoy a wide range of food in our gourmet paradise while susceptible populations should always avoid eating high risk food including raw oysters.

食物事故點滴
Food Incident Highlight

用完即棄的PET膠樽與食物安全

市面上供人反覆使用的膠水樽和膠器皿林林總總，但仍有不少人為了方便、省錢、環保等各種各樣的緣故重用本應用完即棄的PET(聚對苯二甲酸乙二醇酯)膠樽。用PET膠樽(樽底印有一個以箭咀構成的三角形標誌，三角形裏面有數目字“1”) 盛裝飲品是安全的，但重覆使用時有些情況要注意。

用完即棄的PET膠樽原本只供使用一次，其耐用程度未必及得上供反覆使用的水樽。把用完即棄的PET膠樽再次使用引起的安全問題包括變形、不衞生和化學物遷移。用PET膠樽盛裝逾攝氏70度的熱飲或會令膠樽變形。膠樽如有破損，便不應再用。為免細菌滋生，應徹底清潔膠樽，並確保樽內完全風乾，才可使用。最後，為免化學物遷移量過高，再用膠樽時應以類似原來用途為原則。舉例說，盛水的膠樽在再用時只能用來盛水，不要用作盛載醋或油等其他液體。

Disposable PET Bottles and Food Safety

Plastic water bottles and containers designed for reuse purpose are readily available in the market. Yet, some people may choose to refill disposable PET bottles for the sake of convenience, money saving, environment protection, etc. PET bottles (a triangular arrow symbol around the number 1 printed on the bottom of bottle) are safe for holding beverages but there are quite a few things that the public should pay attention to when refilling them.

Disposable PET bottles, intended for single use, may not be as durable as bottles designed purposely for reuse. Concerns on reusing disposable PET bottles include deformation, hygiene, and chemical migration. PET bottles may be deformed by hot beverages over 70°C. Damaged bottles should not be reused. Moreover, PET bottles should be cleaned and air-dried thoroughly to prevent bacterial growth. Lastly, PET bottles should be refilled on a like-for-like basis to prevent excessive chemical migration. For instance, a PET bottle for water should only be reused for water but not other liquids such as vinegar or oil.

生杏仁含致命氰化物

歐洲食物安全局在四月底發表報告指生杏仁(杏核內的種子)含致命分量的氰化物，估計成人食用半顆生杏仁已有可能急性中毒，出現頭痛、噁心、嘔吐和嗜睡等症狀，嚴重者更可致死。一至三歲幼童進食一小顆杏仁已足以致命。

雖然杏仁天然含有氰化合物，但進食杏的果肉是安全的，因為杏仁有硬殼包着，不會接觸到果肉。消費者切勿進食未經處理的生南北杏及杏仁粉。雖然杏仁經過處理(如在製作中式湯水／飲品時把北杏去皮、浸泡和水煮)後可減少毒素，但只可進食少量。

杏肉及杏核內的生杏仁
Apricot fruit and its raw seed in the stone

Lethal Cyanide in Raw Apricot Kernels

In late April, the European Food Safety Authority released a report regarding the lethal doses of cyanide in raw apricot kernel (the seed(s) inside the stone). It is estimated that adults eating as little as half of a raw apricot seed could have acute health risks, such as headaches, nausea, vomiting, lethargy, etc., and death in extreme cases. Whereas toddlers (aged 1-3 years) consuming one small seed could be fatal.

While cyanide-containing chemicals are naturally present in apricot seeds, eating apricot fruit is safe as the seed inside the hard stone shell has no contact with the fruit. Consumers are advised against eating raw, unprocessed bitter or sweet apricot seeds and their powdered forms. Although processing (e.g. removing skin, soaking and boiling bitter apricot seeds when preparing some Chinese soups/drinks) can reduce the level of toxins in apricot seeds, they should be consumed in strict moderation.