CFS announces results of risk assessment study on iodine in food

The Centre for Food Safety (CFS) of the Food and Environmental Hygiene Department today (March 7) announced the results of a risk assessment study on iodine in food, which showed that iodine is present in many locally available foods. Members of the public should maintain a healthy and balanced diet by incorporating iodine-rich food, including seaweeds such as kelp; seafood such as fish and prawns; eggs; dairy; and their products, to meet the World Health Organization (WHO)'s daily iodine intake recommendation.

A spokesman for the CFS said, "The objective of this study is to examine the iodine levels in iodine-rich foods available in the local market. Its results supplement the information on iodine content in locally available foods in the Dietary Iodine Intake in Hong Kong Adults, a risk assessment study report published by the CFS in 2011."

A total of 296 prepackaged and non-prepackaged food samples were collected in late 2023 at the retail level for the determination of iodine contents. The study covered 10 food groups, including five known to be high in iodine from the risk assessment study in 2011 and literature, namely plain seaweed; fish and its products; aquatic animals (other than fish) and their products; eggs; and dairy and its products. The other five food groups were foods containing high-iodine ingredients: soup noodles with seaweed (soup excluded); kimbap; soup with seaweed; snacks with seaweed; and miscellaneous.

According to the study results, the iodine contents of the food samples ranged from not detected (i.e. <0.2 micrograms per 100 grams) to 220 000µg/100g. Based on the mean values, almost all food items from the food group of plain seaweed contain iodine more than 600µg/100g, the highest among all food groups. It is followed by the food group of aquatic animals (other than fish) and their products, with nearly half of its food items containing iodine above 200µg/100g. The five food items with the highest iodine contents per 100g are dried kelp (180 000µg); dried seaweed (including seaweed wrapper) (4 000µg); dried crab snack (1 700µg); seasoned seaweed snacks (1 600µg); and seaweed flakes/powder toppings (980µg).

The spokesman said that iodine is an essential micronutrient required for normal thyroid function, growth and development. Both iodine deficiency and excess can adversely affect the thyroid gland and, consequently, overall health. According to the WHO, the recommended daily iodine intake is 120µg for children aged 6 to 12, 150µg for adolescents and adults, and 250µg for pregnant or lactating women.

In Hong Kong, the Iodine Survey and the Population Health Survey 2020-22 by the Department of Health revealed that iodine status was adequate in school-aged children aged 6 to 12, younger people aged 15 to 34, women of childbearing age aged 15 to 44, and pregnant and lactating women who were taking iodine-containing supplements. However, pregnant and lactating women

who were not taking iodine-containing supplements and the general population aged 15 to 84 overall had insufficient iodine intake and mild iodine deficiency.

"Iodine deficiency disorders (IDDs) can cause damage to the developing brain, goitre (an enlarged thyroid gland), and hypothyroidism. Pregnant and lactating women, infants, and young children are particularly vulnerable to IDDs," the spokesman added, urging the public to maintain a healthy and balanced diet. To meet the WHO's daily iodine intake recommendation, adults are advised to consume foods that are rich in iodine, including seaweeds such as kelp; seafood such as fish and prawns; eggs; dairy; and their products, like ready-to-eat seaweed, boiled quail eggs, and dried seafood snacks; as well as foods using seaweeds as ingredients, such as noodle dishes, rice dishes, soup dishes and baked goods. In addition, consumers can use iodised salt instead of ordinary table salt, keeping total salt intake below 5g (one teaspoon) per day.

Moreover, the CFS reminded persons with existing medical conditions or thyroid problems to consult healthcare professionals concerning the intake of iodine.

Details and results of the study are available on the CFS website.