

Local studies on salt and sugar content in food

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Content

- Studies on nutrients content (including salt and sugar) of food available in the local market
- Contributors to salt and sugar intake of the HK population
- Actions on salt and sugar reduction
- Way Forward



Local studies on salt and sugar content in food by CFS

- A series of risk assessment studies on nutrients (including salt & sugar) to gain an overview of salt and sugar content of food available in the local market
 - ❑ CFS Study / Joint study with Consumer Council
 - ❑ Prepackaged and non-prepackaged items
 - ❑ Laboratory testing and study of nutrition labels to collect information

Nutrients Content in Local Foods

Year	Studies	Nutrients Covered	
		Sodium	Sugar
2015	Nutrient Contents of Children's Meals in Hong Kong (joint study with Consumer Council)	✓	✓
2014	Survey of Condiments & Sauces - sodium content Survey of Non-alcoholic Beverages - sugar content (nutrition labels)	✓	✓
2014	Sugar Content of Some Non-prepackaged Food in Hong Kong		✓
2012	Trans Fatty Acids in Local Foods (2012) (joint study with Consumer Council)	✓	✓
2012	Study on Sodium Content in Local Foods	✓	
2009	Sugar Content of Prepackaged Non-alcoholic Beverages in Hong Kong (joint study with Consumer Council)	✓	✓
2009	Trans Fatty Acids in Local Foods (III)	✓	✓
2009	Nutrient Contents of Common Non-prepackaged Beverages in Hong Kong	✓	✓
2009	Sodium content of savoury snacks in Hong Kong (joint study with Consumer Council)	✓	✓
2007	Nutrient Values of Fruit and Vegetables	✓	✓

Study / joint study

- Sodium content in Local Foods

Savoury snacks in Hong Kong (2009)



- Nearly 60% of the samples were relatively high in sodium (more than 600mg/100g)
- Preserved fruits were relatively high in sodium (the highest contained 13000mg/100g edible portion in a Chinese-styled preserved prune sample)
- Sodium levels varied a lot among samples of some food categories.
 - ❑ ranged from 180mg to 1100mg per 100g in peanuts
 - ❑ ranged from 60mg to 610mg per 100g in almonds



Non-prepackaged & Prepackaged Local Foods (2012)

Non-prepackaged food

- highest average sodium content (5,784mg/100g) : Chinese –styled “Processed vegetable products”
- same food item with a great variation in the average sodium content
 - “Asian foods and dim sum” (e.g. ‘siu mai’)
 - “Western fast food” (e.g. ‘burgers’)



Prepackaged food

- highest average sodium content (3,585mg/100g): “Condiments and sauces (salt excluded)”

Condiments & Sauce (Oct 2014)

– nutrition labels



Food item	Sodium content (mg/100g)					
	n	Mean	Min	50th percentile	75th percentile	Max
Soya sauce						
- “ordinary”	56	6383	1900	6458	7308	8100
- “dark”	10	7128	4140	7610	8030	8517
- “sweet”	7	4754	2130	5040	5680	6380
Soya sauce “low sodium”	5	3600	3287	3560	3780	4000
Chicken powder / cube / Flavour enhancer	11	10361	3190	11224	15481	17500
Oyster sauce	17	4174	2102	4520	4720	5200
Fish sauce	8	8269	2174	8348	10340	11975
Shrimp paste	3	8978	8103	9000	9415	9830

Condiments and Sauces (cont')



Food item	Sodium content (mg/100g)					
	n	Mean	Min	50th percentile	75th percentile	Max
Curry sauce	63	2394	0	1628	3959	9300
Chinese sauces (e.g. Black bean paste, “Hoi-sin” sauce)	79	2983	96	3100	3694	6598
Chinese marinade (e.g. Chicken marinade, Lo Sui marinade)	22	4807	1133	4780	6479	8181
Chinese XO sauce	13	1393	980	1490	1570	1640
Japanese/ Korean sauce (e.g. Teriyaki sauce, Bulgogi sauce)	33	2618	260	2477	3021	5600
South-east Asian Sauce (e.g. Satay sauce, Thai Sweet Chilli sauce)	28	2170	500	1759	2574	6969

Condiments and Sauces (cont')



Food item	Sodium content (mg/100g)					
	n	Mean	Min	50th percentile	75th percentile	Max
Tomato paste / Ketchup	16	1162	459	1055	1201	2500
Spaghetti sauce	87	531	14	400	558	3350
Western sauces (e.g. Worcestershire sauce, Mustard sauce)	66	1722	0	1150	2250	7700
Western flavour enhancer	22	1986	4	44	213	22400
Chilli sauce/paste	34	2582	363	2650	3131	5571

Processed Meat

Food Category	n	Sodium level (mg/100g)		
		Avg	Min	Max
PROCESSED MEAT				
Asian preserved sausages ^{a1} (Canton-style pork sausage/ Liver sausage; Red pork sausage)	5	1,754	870	2,700
Western preserved sausages ^{a1} (Meat; Cheese; Cervelat; Pork; Chicken)	4	933	840	1,000
Ready-to-eat meat balls ^{a1} (Fish ball (fried/boiled); Beef/ Beef tendon ball; Meat stuffed ball; Cuttlefish ball; Shrimp ball)	10	744	420	980
Asian preserved sausages (prepackaged) ^{a2} (Canton-style pork sausage/ Duck liver sausage; Preserved duck thigh)	6	1,670	848	2,863
Western preserved sausages (prepackaged) ^{a2} (Meat; Cheese; Pork; Chicken)	6	775	565	1,058
Chilled/ Frozen meat balls (prepackaged) ^{a2} (Fish ball (fried/boiled); Beef tendon ball; Meat stuffed ball; Cuttlefish ball; Shrimp ball)	8	782	410	1,280
Western preserved meat (prepackaged) ^{a2} (Bacon; Ham)	5	2,353	929	6,800
Canned meat (prepackaged) ^{a2} (Corned beef; Luncheon meat; Sausage)	5	845	696	1,025
Canned luncheon meat ^b	10	956	300	2,230

Soups

Food Category	n	Sodium level (mg/100g)		
		Avg	Min	Max
SOUPS				
Chinese "long-hour" soups ^{a1} (Dried vegetables soup; Carrot maize pork soup; Chayote melon and pork soup; etc.)	15	225	160	380
Chinese "short-hour" soups ^{a1} (Beaten egg soup; Pig stomach pepper soup; Fish maw soup)	15	379	300	640
Western soup/ bisque ^{a1} (Borscht; Oxtail soup; Vegetables soup; Mushroom cream soup; Fish chowder; Cream soup with puff pastry; Pumpkin soup)	15	335	230	460
Other soups ^{a1} (Tom yam soup with seafoods; Soup for Hainanese chicken rice; Hot and sour soup; Miso soup)	15	433	210	810

Study / joint study

- Sugar content in Local Foods

Non-prepackaged Food in Hong Kong (2014)

Dessert products

- Products with high sugar content ($>15\text{g}/100\text{g}$)
 - Macaron (39 g/100g)
 - Molten chocolate cake (19 g/100g)
 - Soufflé (16 g/100g)

Bakery products

- Products with high sugar content (Mean $>15\text{ g}/100\text{g}$)
 - Plain cake (24 g/100g)
 - Spongy cake (20 g/100g)
 - Coconut tart, Muffin (19 g/100g)
 - Cookies, Swiss roll (16 g/100g)



Non-prepackaged Food in Hong Kong (2014) (Cont')

Non-alcoholic beverages

- Icy drinks contained sugar content higher than iced tea or coffee
- Less sweet versions contained less sugar than their regular counterparts
 - 17 – 29% less sugar (mean: 24%)
- Products with high sugar content (mean > 7.5 g/100ml)
 - Red bean icy drink (regular and less sweet versions)
 - Pineapple icy drink (regular and less sweet versions)
 - Hot citron tea



Prepackaged Non-alcoholic Beverages (2009)

- 8 types of common prepackaged non-alcoholic beverages
- For the same type of beverages, the total sugar content has a wide range (e.g. 3.0-13g/100ml) with an average of about 9g/100ml

Prepackaged Beverages*	Ordinary products	
	No. of samples	Sugar range (g/100g)
Carbonated drinks	6	10 - 13
Fruit juice and Juice drinks	9	8.1 - 13
Soya beverages	7	5.3 - 7.2
Milk tea and Coffee (Ready-to-drink)	6	6.4 - 10
Other tea and Herbal drinks	18	3.0 - 13

*Data are from the laboratory testing of individual sample.

Prepackaged Non-alcoholic Beverages (Oct 2014)

- nutrition labels

Types	n	Sugar content (g/100ml)						
		Mean	Min	P10	P50	P75	P90	Max
Carbonated Drinks	71	9.4	0.2	3.8	10.2	11.6	12.4	14.5
Juices/ Juice Drinks	246	9.4	0.6	4.8	10.0	11.3	13.4	20.0
Assorted Drinks	128	7.1	2.0	4.5	6.8	8.7	10.1	13.6
<i>Soybean Beverages</i>	26	5.5	3.8	4.3	5.0	6.0	7.0	9.4
<i>Milk Tea</i>	7	7.7	6.4	6.6	7.6	8.1	8.5	9.2
<i>Others</i>	95	7.5	2.0	4.5	7.6	9.1	10.5	13.6
Total	445	8.8	0.2	4.6	9.2	10.9	12.4	20.0

- **Sugar content:** Assorted Drinks < Carbonated Drinks or Juices/Juice Drinks
 - Consuming milk tea, sweetened tea may contribute to sugar intake significantly

*Data are from the nutrition labelling of individual samples

Joint study

- *Children's Meals (dining out)*

Nutrient Contents of Children's Meals in Hong Kong (2015)

- Energy level and nutrient content (including sugar and sodium) varies greatly among children's meals from different restaurants and also among meals from the same restaurant.
- Some of the children's meals contain large amount of sodium and sugar
 - ❑ exceed the DRIs/recommendations for 3-11 years old children proportion to a meal [1/3 of the DRIs/recommendations]
 - ❑ some even exceeded the DRIs/recommendations for these age groups the whole day



Nutrient Testing of School Lunch in Primary Schools in Hong Kong 2013

- Examined the energy and major nutrient content of lunchboxes served to junior primary school students
- In spite of improvements in some nutrient content, the lunchboxes of junior primary school students are yet to meet all nutrition recommendations



Source: Department of Health

Nutrient Testing of School Lunch in Primary Schools in Hong Kong 2013 (Cont')

- Compared with a similar survey in 2007, the amount of sodium in the samples (per 100 grams) had decreased 19 per cent
- However, the sodium content in almost all samples (99 per cent) still exceeded the recommended intake
- Four lunch samples exceeded the recommended intake of sugar and they all contained sweet and sour sauces

Source: Department of Health

Observations:

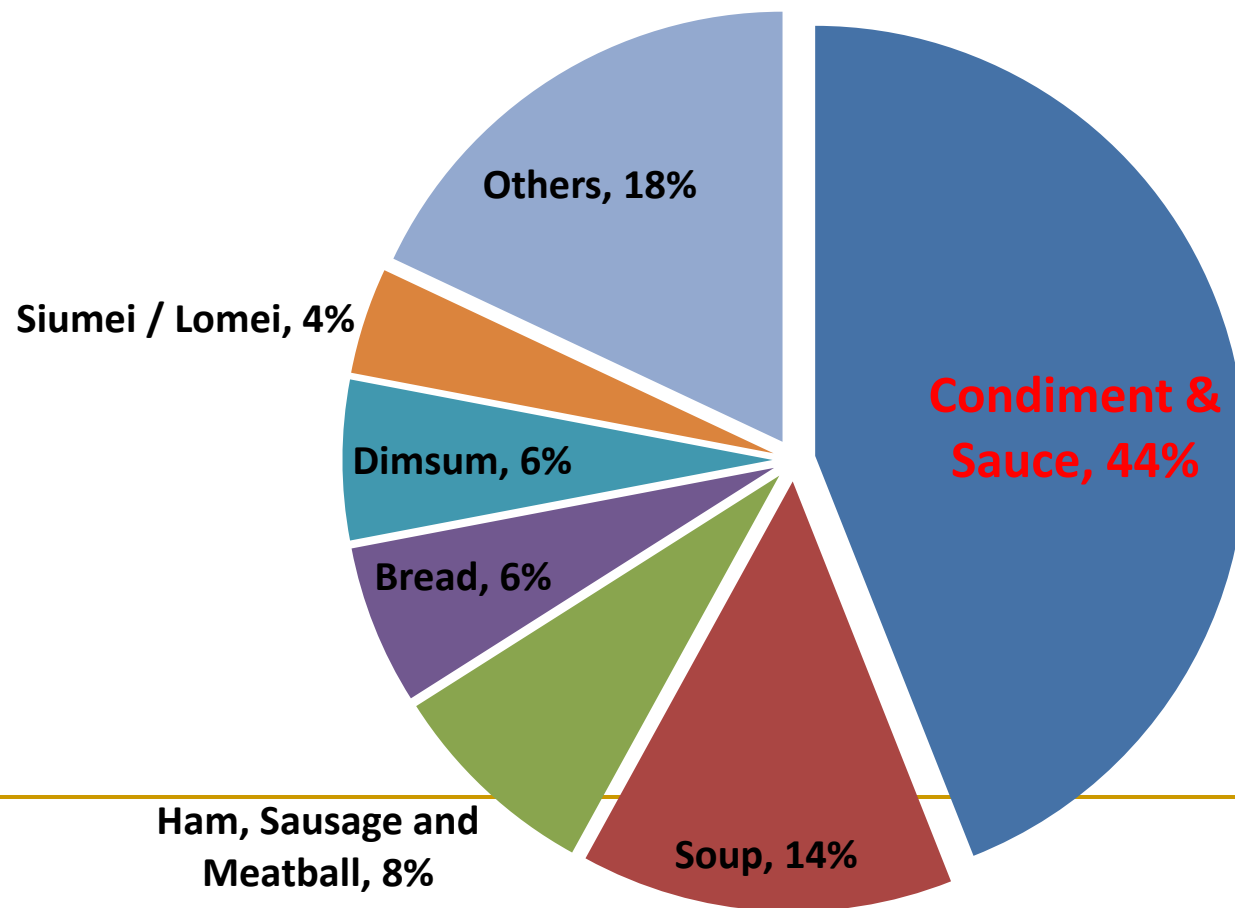
- Sodium and sugar contents vary across different kinds of food
- Sodium/ sugar content could be very high in different kinds of local foods
- Within the same kind of food, large difference was found

Contributors to salt and sugar intake of the HK population

- Food Consumption Survey (FCS)
 - collect information on food consumption patterns of the general public
 - provides data for the evaluation of risks associated with food
- Total Diet Study
 - combine analytical results of food chemicals or nutrients with food consumption information of Hong Kong Population-based FCS to obtain the dietary exposures
 - estimate dietary exposures to food chemicals or nutrients for various population groups and to assess their associated health risks

Contributors to salt intake of the HK population

- Major contributors to the total sodium intake of the adult population in HK (CFS First Total Diet Study)



Contributors to sugar intake of the HK population

- Major contributors to the total sugar intake of the adult population in HK (CFS First Total Diet Study)
 - Total sugar (fructose, galactose, glucose, lactose, maltose and sucrose)
 - 32% of total sugar intake is from non-alcoholic beverages, which consist of carbonated drink, tea and fruit and vegetable juice/juice drink

Types of Non-alcoholic Beverages	% Contribution to Total Sugar Intake
Tea (including Chinese Herb Tea and Milk Tea)	9.2
Carbonated Drink	7.7
Fruit and Vegetable Juice and Juice Drink	4.9
Others	4.9
Coffee / Coffee Substitute	3.6
Sport / "Healthy" Drink	1.1
Sugar intake from NABs	31.5

Hong Kong's Action on Salt and Sugar Reduction



- Promote healthy eating with less salt and sugar to the general public and the food trade
- Centre for Food Safety (CFS), Food and Environmental Hygiene Department launched:

Restaurants:

“Reduce salt, sugar, oil. We do!減鹽、糖、油，我做！” Campaign

General public:

- Designated webpage “Reduction of Dietary Sodium and Sugar” launched on 15 December 2014
 - Provide the most updated information on CFS activities about the Action to trade and public
- Dedicated Facebook launched on 16 January 2015
 - Actively promote salt and sugar reduction through different platforms

“Reduction of Dietary Sodium and Sugar” Homepage

Reduction of Dietary Sodium and Sugar

Reduction of Dietary Sodium and Sugar

Dietary sodium and sugar intakes are closely related to health. Excessive sodium intake will increase the risk of developing hypertension, fatal stroke and coronary heart disease while dietary sugar intake is a determinant of body weight and dental caries.

The Centre for Food Safety (CFS) of the Food and Environmental Hygiene Department has been striving to safeguard food safety and promote healthy eating in Hong Kong, including conducting relevant [risk assessment studies](#), implementing [nutrition labelling scheme](#) in prepackaged foods and preparing trade guidelines on reducing dietary [sodium](#), [sugar](#) and [fats](#).

To know more about [Sodium \(Salt\) Reduction](#) and [Sugar Reduction](#), click the below links.



International Advisory Panel (IAP) on Reduction of Dietary Sodium and Sugar

http://www.cfs.gov.hk/english/programme/programme_rdss/programme_rdss.html

“Hong Kong’s Action on Salt and Sugar Reduction” Facebook



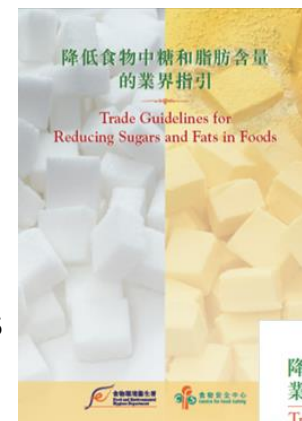
<https://www.facebook.com/HongKongsActiononSaltandSugarsReduction>



- Establishment of the Committee on Reduction of Salt and Sugar in Food by the Government
- Appointment of the International Advisory Panel on Reduction of Salt and Sugar in Food by the Government
- Data
 - inform policy and decision making
 - benchmarks for the trade to adopt when reformulating food products
 - provide information for continuous monitoring of changes in sodium and sugar content

Way Forward

- Continue to carry out studies on salt and sugar contents to cover a wider range of foods in local market
- Encourage the trade to:
 - ❑ actively participate in reducing sodium and sugar in foods
 - ❑ make greater efforts to reformulate food recipes to provide more quality food with less sodium and sugar to consumers
- Promote the reduction of dietary sodium and sugar in Hong Kong for the whole population



Thank You