



衛生防護中心
Centre for Health Protection

Non-Communicable Diseases Watch

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Health Tips

Breakfast is an important part of a healthy diet.

Just like other regular meals, a balanced breakfast should contain a variety of healthful foods that are high in nutritive value and dietary fibre, and do not provide excess fat, sugar and energy.

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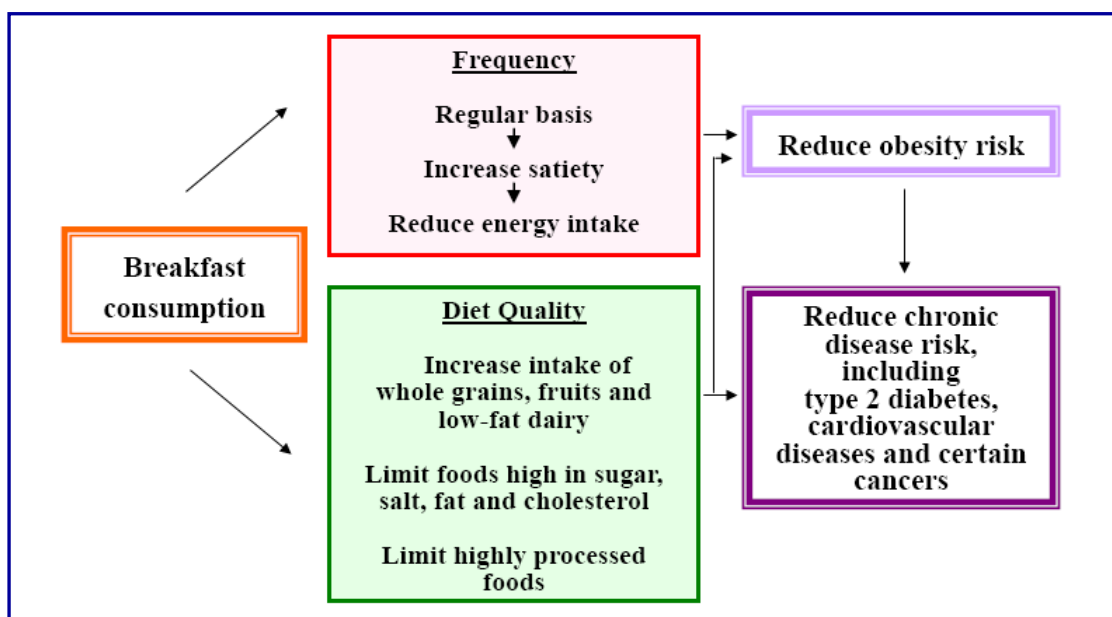
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Breakfast and Health

As the saying goes, 'eat breakfast like a king, lunch like a prince and dinner like a pauper', breakfast is widely regarded as the most important meal of the day. After an overnight fast of 8-12 hours, breakfast "breaks the fast" and jumpstarts our metabolism. It replenishes our supply of glucose to fuel the brain and provides other essential nutrients to keep our energy levels up throughout the day. Besides, habitually eating a nutritious breakfast yields other long-term health benefits.

Breakfast consumption can lead to increased satiety, thereby minimising the risk of excessive energy intake at subsequent meals by eating too much. Eating fibre-rich breakfast foods can also blunt postprandial glycaemic and insulinaemic responses, and thereby reducing the risk of obesity and chronic diseases (Figure 1).¹ For children and adolescents, breakfast consumption is also associated with better cognitive and academic performance^{2, 3} and a reduced risk of becoming overweight or obese.⁴ In contrast, not eating breakfast may lead to up-regulation of appetite, impair insulin sensitivity and lipid metabolism. Studies showed that breakfast skippers had larger waist circumferences, higher levels of fasting or postprandial insulin, higher total and low density lipoprotein cholesterol concentrations than those who ate breakfast.^{5, 6} Over time, breakfast skipping can possibly lead to obesity and subsequent morbidities

Figure 1: Breakfast consumption and risk of obesity and chronic diseases



Note: Adopted and modified from Timlin and Pereira 2007.

such as type 2 diabetes, cardiovascular diseases and certain cancers.¹ In addition, breakfast skipping has been shown to be associated with a reduced intake of various vitamins (such as vitamin A, vitamin B6, vitamin D, riboflavin and folate) and minerals (including calcium, magnesium, phosphorus, zinc and iron).⁷

Despite the substantial health benefits of breakfast consumption, many people skip breakfast for a variety of reasons. For children, they may go without breakfast because of early-morning school bus schedules, or their parents may not have enough time to prepare breakfast because of shifting work hours or long commutes to jobs. While some breakfast skippers claim no appetite in the early morning as a cause of not eating breakfast, others do so because they (especially adolescents) mistakenly believe that skipping breakfast is a way of losing weight. A review of 47 studies found that between 10% and 30% of children and adolescents in the United States and Europe usually skipped breakfast.³ Among American men and women aged 25-74, the prevalence of reporting breakfast consumption declined from 88% and 90% in 1971 to 80% and 84% in 2002 respectively.⁸

Local Situation

Breakfast skipping is relatively common in Hong Kong too. The Child Health Survey 2005/2006 assessed the eating habits of over 6 800 children aged 2-14 and observed that 4.1% of children omitted breakfast some or all of the times. The prevalence increased with age, from 3.2% among children aged 2-5 to 3.6% among children aged 6-10 and 5.2% among children aged 11-14.⁹ Another survey in 2008 on 9 135 Primary 4 and Primary 5 students found that 15.3% of them skipped breakfast on the day of survey. Compared with the results of a similar study in 2006 (13.8%), there was a significant increase of 1.5% points in the proportion of students who skipped breakfast on the day of survey.¹⁰

Besides, an earlier survey on 426 Primary 6 students aged 10-14 in 2005 reported that 30.5% of them skipped breakfast for at least 1 school day in the week before enumeration and 33.7% sometimes skipped breakfast (not restricted to the past week).¹¹ As for adults, the Behavioural Risk Factor Survey (BRFS) April 2010 telephone-interviewed over 2 000 community-dwelling people aged 18-64 in Hong Kong and found that 5.5% of respondents skipped breakfast in the 30 days prior to enumeration. The proportion of breakfast skippers was relatively higher among males (5.8%), those who were never married (5.8%), service workers (7.5%) and non-working persons (7.1%). Besides, the younger and the lower the education attainment of the respondents, the more likely they were to report skipping breakfast (Table 1).¹²

Apart from skipping breakfast, another issue that deserves attention is eating out for breakfast. In Hong Kong, convenience and accessibility of various convenient food outlets provide lots of eating out opportunities for those who have hectic morning schedules for breakfast. Compared with home-cooked foods, however, restaurant meals are often higher in fat, sugar and salt, as well as served in larger portions. Regularly eating unhealthy energy-dense breakfasts in fast food establishments or 'cha chaan ting' may increase the risk of overweight and obesity. As the BRFS April 2010 reported, 28.5% of breakfast eaters aged 18-64 reported that they ate out for breakfast for 5 or more days a week in the 30 days prior to enumeration. Males (35.5%), people aged 45-54 (37.4%), those who were divorced/separated/widowed (40.5%), blue collar workers (47.8%) were more likely than their respective counterparts to report so. In addition, the lower the education attainment of the respondents, the more likely they reported eating out for breakfast 5 or more days a week (Table 2).¹²



Table 1: Demographic characteristics of breakfast skippers aged 18-64, 2010

Demographic characteristic	Rate*
Sex	
Male	5.8
Female	5.2
Age group	
18-24	7.0
25-34	6.5
35-44	5.8
45-54	5.0
55-64	3.6
Marital status	
Never married	5.8
Married	5.5
Divorced/Separated/Widowed	3.6
Level of education attainment	
Had not completed secondary or below	6.2
Completed secondary/Matriculated	5.7
Tertiary or above	4.6
Occupation	
Managerial/Professional worker	3.9
Clerk	3.4
Service worker	7.5
Blue collar worker	4.4
Non-working person (including home-keeper, retiree and student)	7.1

Notes: * Rate per 100 persons in the respective group.
Excluding those respondents with unknown pattern on eating breakfast.

Source: Behavioural Risk Factor Survey, April 2010.

Table 2: Demographic characteristics of breakfast eaters aged 18-64 who reported eating out for breakfast 5 or more days a week in the 30 days prior to enumeration, 2010

Demographic characteristic	Rate*
Sex	
Male	35.5
Female	22.6
Age group	
18-24	15.2
25-34	25.4
35-44	25.6
45-54	37.4
55-64	32.1
Marital status	
Never married	23.5
Married	30.1
Divorced/Separated/Widowed	40.5
Level of education attainment	
Had not completed secondary or below	38.2
Completed secondary/Matriculated	29.1
Tertiary or above	20.5
Occupation	
Managerial/Professional worker	25.7
Clerk	27.9
Service worker	38.2
Blue collar worker	47.8
Non-working person (including home-keeper, retiree and student)	20.7

Note: * Rate per 100 persons in the respective group.
Source: Behavioural Risk Factor Survey, April 2010.

Shaping Children's Breakfast Eating Behaviour

Lack of a healthy breakfast can put children's health and academic performance at risk. Parents should therefore find a way to overcome barriers to habitual breakfast consumption and make sure their children eat a nutritious breakfast. A systematic review shows that children and adolescents are most likely to eat breakfast in families where adults eat breakfast themselves.¹³ Here are some tips for parents and carers to promote habitual and healthy breakfast consumption among children and adolescents:

- ◆ act as a role model by habitually eating breakfast;
- ◆ join children and adolescents for breakfast as often as possible;
- ◆ educate children and adolescents on the benefits of eating a balanced breakfast, such as eating breakfast can help increase physical energy, sharpen performance at schools and maintain an optimal body weight;
- ◆ have a supply of ready-to-eat and healthy breakfast foods available for children and adolescents to grab and go during the morning rush;
- ◆ involve children and adolescents in planning breakfast menu and shopping breakfast foods;
- ◆ read the nutrition labels when purchasing prepackaged breakfast food items and educate children and adolescents to choose healthier options;
- ◆ guide children and adolescents make wise food choices when eating out for breakfast and pay attention to portion sizes.

Remember, eating breakfast is important for everyone. For those who do not habitually consume breakfast every day, they are urged to get into a good habit. For breakfast eaters, they should choose their breakfast foods wisely for a healthy start of the day!

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News Bites

Not all ready-to-eat breakfast cereals live up to their healthy-eating promises. In fact, many of them may contain substantial amounts of hidden sugar, salt and fat.

The Consumer Council and the Centre for Food Safety conducted a survey on 21 cold-served cereals and 17 hot-served cereals collected in the market between March and mid-June in 2010. Results showed that 80% of cold-served breakfast cereal samples were deemed high in sugars. For hot-served cereals, sugar content of certain oatmeal products were up to 16 grams of sugars per sachet (32 grams), which is equivalent to about 32% of the daily limit for sugar intake.

It is therefore imperative that consumers read the nutrition labels and select products lower in sugars (fat and salt as well).

[Source: Consumer Council. Most breakfast cereals are high in sugar. Choice Magazine, 15 July 2010, No. 405.]



Event Calendar

To continue our efforts in raising public awareness about healthy living and encouraging the public to adopt a healthy lifestyle, DH is now embarking a poster campaign (until 10 March 2011) at multiple bus stops all around Hong Kong, as well as on the bodies of tramcars.



The poster features a Chinese word ‘叻’ [*smart*] that is made up of ‘口’ [*mouth*] and ‘力’ [*effort*]. It signifies that healthy eating along with efforts for more physical activities will make a smart person. This health message is spelt out by the slogan ‘食得健康，出力運動，你好叻’ [*Healthy Eating, More Workout, You're so smart*] as to motivate the public to make changes towards a healthier lifestyle, especially for those who have not made changes in their lifestyle in the past.

So, try to plan for a healthier start in the Year of the Rabbit and make efforts in eating healthier and becoming more active. Be proud of yourself and tell others ‘我好叻’ [*I'm so Smart*].

For more information on promotional activities relating to healthy diet and physical activity participation, please visit our new ‘Change for Health’ website at www.change4health.gov.hk.

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Non-Communicable Diseases (NCD) WATCH is dedicated to promote public's awareness of and disseminate health information about non-communicable diseases and related issues, and the importance of their prevention and control. It is also an indication of our commitments in responsive risk communication and to address the growing non-communicable disease threats to the health of our community.

The Editorial Board welcomes your views and comments. Please send all comments and/or questions to so_dp3@dh.gov.hk.