Baseline Survey for EatSmart@restaurant.hk Campaign

Main Report

Central Health Education Unit
Centre for Health Protection
Department of Health
Government of the Hong Kong Special Administrative Region

August 2007

Centre for Epidemiology and Biostatistics of the Chinese University of Hong Kong was commissioned to conduct the survey

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Summary

Introduction

The Department of Health comissioned the Centre for Epidemiology and Biostatistics of the Chinese University of Hong Kong to conduct a baseline survey for EatSmart@restaurant.hk Campaign. The survey aimed to define the need for and approach of healthy eating promotion in food premises in Hong Kong.

The objectives of the survey are:

(i) to assess people's knowledge of a serving size of fruit and vegetables;
(ii) to examine people's consumption behaviour of fruit, vegetables, high fat food, high salt food and high sugar food;
(iii) to examine people's eating-out habits;
(iv) to solicit people's views on healthy eating promotion in food premises; and
(v) to examine people's awareness of the fruit and vegetable promotional campaign conducted by the Department of Health.

Research Methodology

The survey was an anonymous cross-sectional telephone survey conducted from March 14 to April 2, 2007 between 6:00pm and 10:00pm. Random telephone numbers were selected from an up-to-date telephone directory. The target respondents comprised non-institutional Hong Kong residents aged 12 or above and who speak Cantonese, Putonghua or English (domestic helpers were excluded). A structured bilingual (Chinese and English) questionnaire was used to collect data. In total, 2,005 eligible respondents completed the interview. The response rate was 70.3%.

Statistical analyses were performed to examine group differences in relevant variables and factors associated with selected outcome variables. A p-value <0.05 was taken as statistically significant.

Key Findings of the Survey

Demographic Characteristics of Respondents

Of the respondents, 52% were females; 53.4% aged 35-64; 63.3% were currently married; 55.1% had secondary level of education; 50.9% were working persons; 35.7% self-reported having a monthly personal income of HK$10,000 or more and 26.4% a monthly household income of HK$30,000 or more.

Knowledge of serving sizes and health benefits of fruit and vegetable consumption

The knowledge of serving sizes of fruit and vegetables was low. Except for the serving size of a woman-fist sized apple (52% gave a correct answer), less than one-third of the respondents answered correctly the serving sizes of a cup of grapes (17.9%), a rice bowl of cooked vegetables (21.6%) and a rice bowl of raw leafy vegetables (32%). Further, a substantial proportion (17% to 22%) gave a "don't know" answer.

Respondents with monthly personal income of $10,000-$19,999 (OR=1.75, 95% CI: 1.28-2.40) or $30,000 or above (OR=1.64, 95% CI: 1.04-2.58), and those who were aware of the '2 Plus 3 A Day' campaign (OR=1.49, 95% CI: 1.08-2.05) were more likely than others to have better knowledge of serving sizes of fruit and vegetables.

The majority (85.6%) of respondents perceived that adequate consumption of fruit and vegetables would prevent cancers of the gut, whereas they were less certain about the health benefits with respect to prevention of heart diseases (67.7%), stroke (60.7%) and diabetes (51.9%).

Consumption behaviour of fruit, vegetables, high fat food, high salt food and high sugar food

Of all respondents, only 20.5% and 8.5% respectively met the recommended amounts of daily consumption of fruit (≥2 servings) and vegetables (≥3 servings). A number of factors were found to be associated with adequate daily consumption of fruit and vegetables. For example, perception that adequate fruit and vegetable consumption has the health benefits of disease prevention and awareness of the '2 Plus 3 A Day' campaign were associated with adequate fruit and vegetable consumption, whereas the reverse was true for eating out for lunch frequently (5 to 7 times in the past week). Other variables including marital status, education level and behaviour of choosing or requesting food with more fruit/vegetable when eating out were also found to be significant factors.

Of all respondents, 27.9%, 5.1% and 17.9% respectively consumed high fat food, high salt food and high sugar food 4 to 7 days per week.

Barriers of fruit and vegetable consumption

The main perceived barriers for eating more fruit and vegetables were "too busy to buy/eat" (15.6%), "not commonly available when eating out" (9.8%) and "no one serve them to me/lazy" (9.7%). About one-third (35%) stated no particular reason for not more eating fruit and vegetables.

Eating out habits

Of all respondents, 26.5%, 43.8% and 5.9% respectively ate breakfast, lunch and dinner outside of home 5 to 7 times in the past week. Among those who ate out in the past week, the majority of them patronized Chinese restaurants including Hong Kong style tea restaurants (62% to 67.1%) and fast food shops (9.5% to 30.3%). The eating-out habits (especially eating out for lunch) were found to be associated with consumption of less fruit and vegetables.

Food selection practices when eating out

Overall, 36.9% of the respondents always or often chose or requested food with more fruit and vegetables when eating out, while 37.9%, 27.3% and 29.8% respectively always or often chose or requested food with less fat/oil, less salt and less sugar. In addition to some demographic characteristics such as age group, marital status and education level, perceived health benefits of fruit and vegetable consumption, perceived low fruit/vegetable or high fat/oil/salt/sugar ingredients in food provided by food premises and awareness of the '2 Plus 3 A Day' campaign were associated with making healthier food selection practices.

Perception of ingredients in food provided by food premises

Of all respondents, 84.5% and 53.9% respectively perceived that fruit and vegetable ingredients were too little in food provided by food premises. On the other hand, 60.1%, 40.9% and 27.2% respectively perceived that fat/oil, salt and sugar ingredients were too much in food provided by food premises.

Expectation for food premises about ingredients in food

The majority (93%) of the respondents would like food premises to provide food with more fruit/vegetables, less fat/oil, less salt and less sugar in ingredients.

Suggestions for food premises on increasing fruit and vegetable consumption

The common suggestions for food premises on increasing consumption of fruit and vegetables when eating out were: "more choices" (40%), followed by "free/cheaper" (22%) and "delicious" (12.1%).

Perceived effectiveness of healthy eating promotion in food premises

Most respondents perceived the measures of healthy eating promotion in food premises to be effective or very effective: labeling clearly in menu those dishes with more fruit/vegetables, less fat/oil, less salt or less sugar (84.1%); providing more food choices with more fruit/vegetables, less fat/oil, less salt or less sugar in food premises (90.6%); offering cash/discount coupons for dishes with fruit/vegetables, less fat/oil, less salt or less sugar (74%); and advertising or promoting in food premises (79.5%).

Awareness of the '2 Plus 3 A Day' fruit and vegetable promotional campaign

Overall, 72.2% of the respondents were aware of the '2 Plus 3 A Day' campaign conducted by the Department of Health. Female respondents and younger respondents were more likely to be aware of the campaign.

Recommendations

1. Promotion of knowledge of serving sizes of fruit and vegetables and relevant health benefits is warranted and may increase the consumption of fruit and vegetables in the general population. The magnitude of any changes resulted, however, may not be very large.

2. Given a significant proportion of respondents had frequent eating out habit, its association with less healthy eating habit, general perception of inadequate healthier choices and overwhelming request for provision of healthier choices in food premises, the prospective campaign should encourage food premises to provide more food choices that include more fruit and vegetables, less fat/oil, less salt and less sugar in ingredients.

3. The campaign may target at lunch provided by food premises and special attention may be given to lunch items provided by fast food shops.

4. The campaign should be sensitive to socio-demographic characteristics of the target population (e.g. those who are less educated).

5. The campaign may collaborate with other health promotion efforts on prevention of specific diseases (e.g. cancer, heart diseases and diabetes) or other healthy diet campaigns which include less fat/oil, salt and sugar contents.

6. Inadequate consumption of fruit and vegetables is a habit for many people and sustained efforts are required to make an improvement.

7. The stage of change model helps understand the process of adopting to maintaining health behaviors. Future studies should investigate the stage of change among those who are not eating adequate amounts of fruit and vegetables, as well as factors leading to changes.

Chapter 1 Introduction

1.1 Background

Like many other cities in the world, Hong Kong is burdened by the increasing social and economic cost from diet-related diseases such as diabetes, cardiovascular diseases, stroke and cancers. The Department of Health (DH) has recorded a steady rise in the prevalence of overweight and obese adults which increased from 36% in April 2005 to 39.5% in October 2005 and 41% in April 2006.

A qualitative study in 2004 by DH found that despite possessing the knowledge on healthy eating, Hong Kong people's dietary practices remain unhealthy as a result of 'barriers' such as business meals, frequent eat-out, peer influence, temptations and tastiness of unhealthy food and snack consumption. Further, the Behavioral Risk Factor Survey in 2005 showed that 52.8% of the population had their eat-out lunch 5 or more times a week. Similar figures for eat-out breakfast and dinner are 32.2% and 11.3% respectively. The increasing popularity of eating out has made away-from-home food a key source of nutrients. In light of this, food premises are among the most promising and influential partners for making a difference in people's diet.

With making healthy choice an easier choice in mind, it is proposed that a campaign to be launched in 2007 to engage the catering industry in promoting consumption of fruit and vegetables and adopting healthier preparation using less fat/oil, salt and sugar.

DH has commissioned the Centre for Epidemiology and Biostatistics of the Chinese University of Hong Kong to conduct a baseline survey for EatSmart@restaurant.hk Campaign.

1.2 Aim

The aim of the survey is to define the need for and approach of healthy eating promotion in food premises in Hong Kong.

1.3 Objectives

The objectives of the survey are:

(i) to assess people's knowledge of a serving size of fruit and vegetables;

(ii) to examine people's consumption behaviour of fruit, vegetables, high fat food, high salt food and high sugar food;

(iii) to examine people's eating-out habits;

(iv) to solicit people's views on healthy eating promotion in food premises; and

(v) to examine people's awareness of the fruit and vegetable promotional campaign conducted by the Department of Health.

Chapter 2 Research Methodology

2.1 Target Respondents

The target respondents comprised non-institutional Hong Kong residents aged 12 or above and who speak Cantonese, Putonghua or English (domestic helpers were excluded from the survey).

2.2 Sampling and Data Collection

An anonymous cross-sectional telephone survey was conducted from March 14 to April 2, 2007. Random telephone numbers were selected from an up-to-date telephone directory. Telephone calls were made from 6:00 p.m. to 10:00 p.m., in order to avoid over-representation of household members who are not employed.

Of each household contacted, interviewers firstly briefed the individual answering the phone on the purpose and background of the survey. The interviewers then asked about whether there were any household members of aged 12 or above. If so, the household member aged 12 or above and whose past birthday closest to the date of interview (the 'last birthday' method) was invited to participate in the survey. These prospective respondents were briefed in the aforementioned manner and invited to join the survey. In the case that the eligible respondents were not currently available, attempts were made to make an appointment with them or the interviewers called again later (at least another five attempts were made on the same day and on separate evenings).

For unanswered calls, at least three other independent calls were made at different hours and on different days before considering the number to be non-contacted. Residential numbers without eligible respondents, commercial numbers and fax numbers were excluded from the survey.

Verbal informed consent was obtained from the respondents before the interview commenced. For those eligible respondents aged below 18, parental/guardian informed consent was also obtained before the interview. All respondents were assured of anonymity and confidentiality of the survey. Ethics approval was obtained from the ethics committee of the Chinese University of Hong Kong.

In total, 2,005 eligible respondents completed the interview (99.5% were interviewed in Cantonese, 0.1% in Putonghua and 0.4% in English). The questionnaire, on average, took

about 10 minutes to complete. The response rate, defined as the number of successfully completed interviews divided by the sum of successfully completed interviews, drop-out cases and refusal cases, was 70.3%.

2.3 Questionnaire Design

A structured bilingual (Chinese and English) questionnaire was designed for the survey. Feedbacks from the pilot study were used to modify and finalise the questionnaire. The final questionnaire consisted of 36 questions and covered the following areas (Appendix 1):

(i) knowledge of serving sizes of fruit and vegetables and health benefits of fruit and vegetable consumption;
(ii) consumption behaviour of fruit, vegetables, high fat food, high salt food and high sugar food;
(iii) barriers of fruit and vegetable consumption;
(iv) eating-out habits;
(v) behaviour of choosing or requesting food with more fruit/vegetables and less fat/oil/salt/sugar;
(vi) perception of ingredients in food provided by food premises;
(vii) expectation for food premises about ingredients in food;
(viii) suggestions for food premises on increasing fruit and vegetable consumption;
(ix) perceived effectiveness of healthy eating promotion in food premises;
(x) awareness of the fruit and vegetable promotional campaign conducted by the Department of Health; and
(xi) demographic characteristics: gender, age, marital status, education level, occupation, personal income and household income.

2.4 Measures to Increase Response Rate

To increase the response rate of the survey, its significance was explained to prospective respondents and it was specified at the beginning of the survey that it only included a certain number of simple questions. A contact history was filed for each of the contacted cases in the event of unsuccessful contacts or incomplete interviews which would be followed up by senior supervisors. Senior supervisors would make polite follow-up phone calls to those who declined to participate in an attempt to convert some of these refusal cases into respondents.

2.5 Quality Control

All interviewers were well trained about the rationale and objectives of the survey, data collection procedures, skills to deal with refusals and queries from respondents, and other important skills in carrying out the survey. A pilot study was conducted to test the questionnaire design and the survey operations on March 8, 2007. To ensure the quality of data collected, field editing was done every night by field supervisors and follow-up calls were made when necessary. Logical consistency checks were also conducted. Further, independent checks (on demographic characteristics including gender, age, marital status, education level and occupation) of 307 (15.3%) completed questionnaires were performed. No problems were detected in this exercise.

2.6 Statistical Analyses

The overall frequencies of all questions in the questionnaire were tabulated. The distributions of the variables on knowledge, consumption behaviour, eating-out habits, healthy eating promotion in food premises and awareness were cross-tabulated by gender, age group and education level of the respondents. Chi-square tests were performed to test significance of group differences in relevant variables. For selected outcome variables, factors in association with these variables were identified firstly by univariate odds ratios (OR). Those variables with significant univariate OR were used as independent variables for stepwise multivariate logistic regression analyses. All statistical analyses were performed using SPSS for Windows version 14.0 and a p-value <0.05 was taken as statistically significant.

Chapter 3 Findings of the Survey

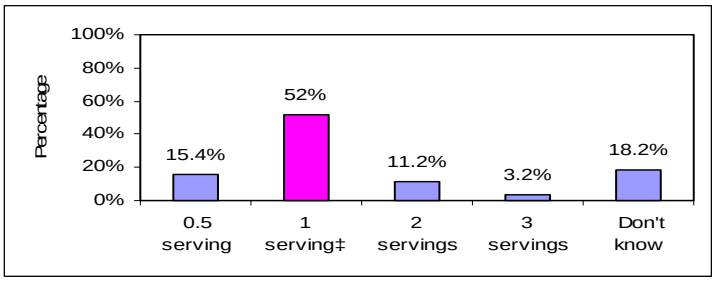
3.1 Demographic Characteristics of Respondents

The demographic characteristics of all respondents are summarized in Table 1. It is noted that 52% of the respondents were females; 53.4% aged 35-64; 63.3% were currently married; 55.1% had secondary level of education; 50.9% were working persons; 35.7% self-reported having a monthly personal income of HK$10,000 or above and 26.4% a monthly household income of HK$30,000 or above.

3.2 Knowledge of Serving Sizes of Fruit and Vegetables

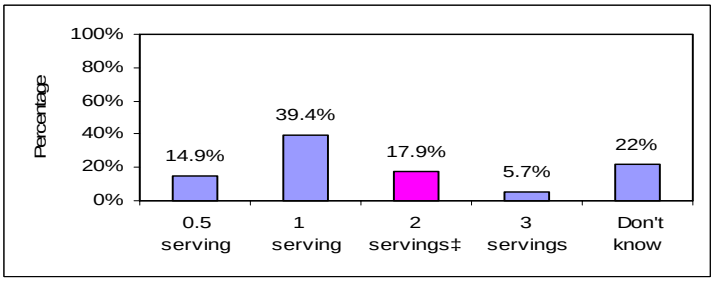
With respect to the four questions about the equivalent serving sizes for a woman-fist sized apple (1 serving), a cup of grapes (2 servings), a rice bowl of cooked vegetables (2 servings) and a rice bowl of raw leafy vegetables (1 serving), the percentages of respondents giving correct answers were 52%, 17.9%, 21.6% and 32% respectively (Table 2; Figures 1 to 4). The percentages of respondents giving a "don't know" answer for these four questions ranged from 17.1% to 22%. Most of the comparisons by gender, age group and education level were of statistical significance (Tables 3 to 5).

Figure 1 Serving size of a woman-fist sized apple



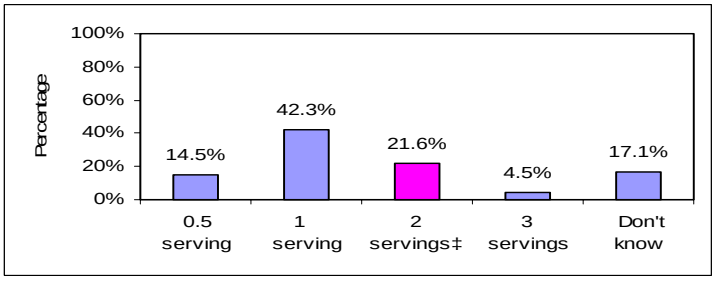
‡ Correct answer
Base = 2,005

Figure 2 Serving size of a cup of grapes



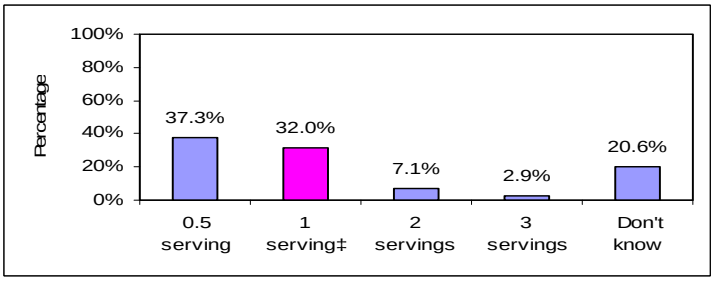
‡ Correct answer
Base = 2,005 (exclude 1 case (<0.1%) answering '4 servings')

Figure 3 Serving size of a rice bowl of cooked vegetables



‡ Correct answer
Base = 2,005 (exclude 1 case (<0.1%) answering '4 servings')

Figure 4 Serving size of a rice bowl of raw leafy vegetables



‡ Correct answer
Base = 2,005 (exclude 1 case (<0.1%) answering '0 serving')

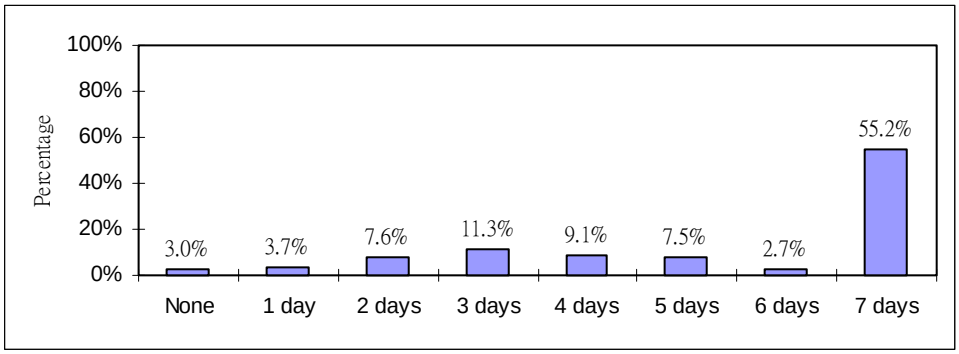
3.3 Knowledge of Health Benefits of Adequate Fruit and Vegetable Consumption

Of all respondents, 85.6%, 67.7%, 60.7% and 51.9% respectively perceived that adequate consumption of fruit and vegetables would prevent cancers of the gut, heart diseases, stroke and diabetes (Table 2). The percentages of respondents giving a "don't know" answer for these 4 items ranged from 6.1% to 11.5%. Age group and education level differences but not gender differences were of statistical significance (Tables 3 to 5).

3.4 Consumption Behaviour of Fruit and Vegetables

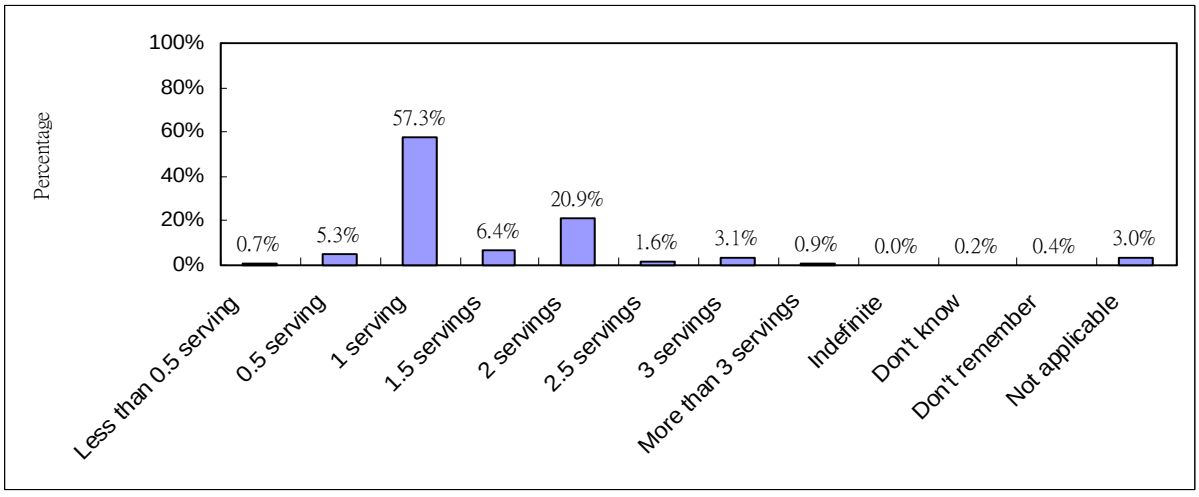
Of all respondents, 55.2% and 81.3% respectively reported eating fruit and vegetables everyday (Table 6; Figure 5 to 8). Furthermore, only 20.5% and 8.5% of all respondents ate adequate amounts of fruit (≥2 servings) and vegetables (≥3 servings) respectively on a daily basis (Figures 9 to 10). Fruit and vegetable consumption behavior breakdowns by gender, age group and education level are summarized in Tables 7 to 9.

Figure 5 Average number of days eating fruit each week



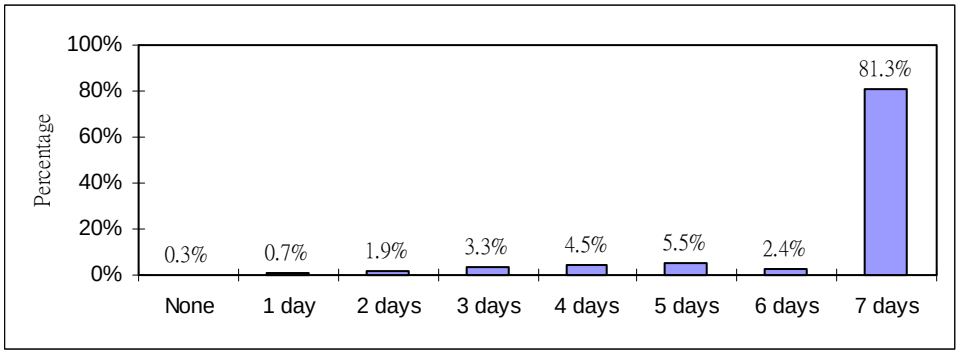
Base=2,005

Figure 6 Average number of servings of fruit consumed (on one of those days eating fruit)



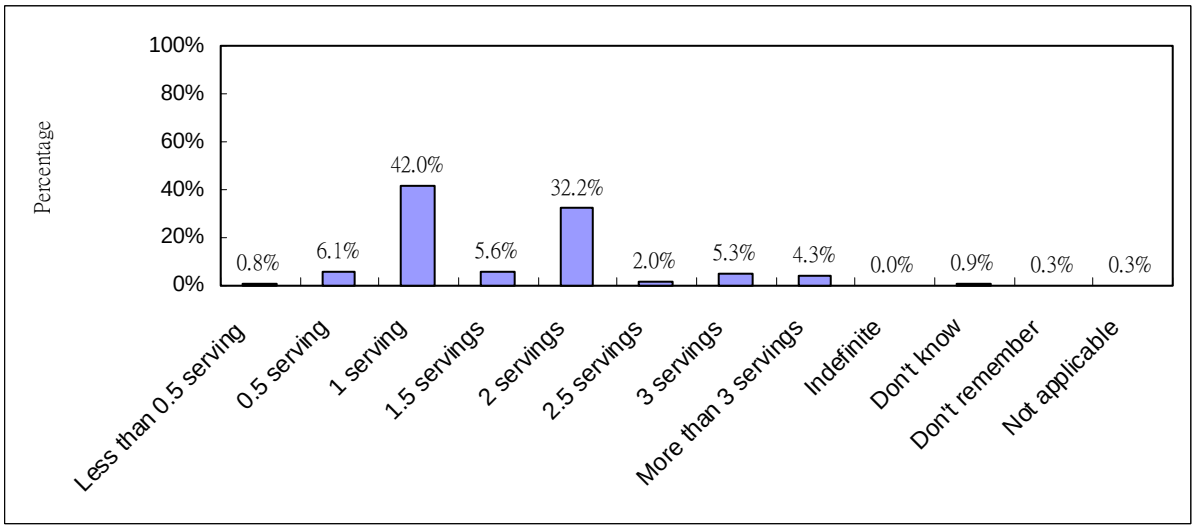
Base=2,005

Figure 7 Average number of days eating vegetables each week



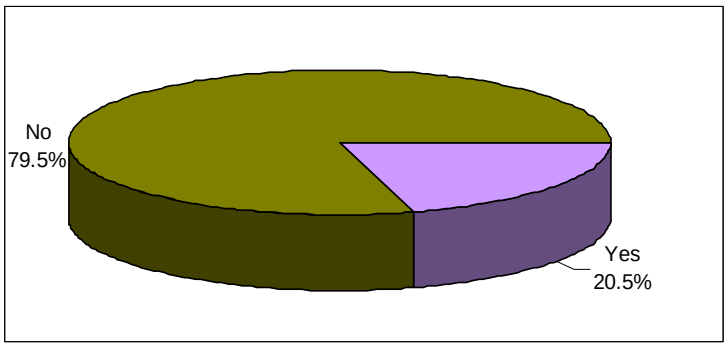
Base=2,005

Figure 8 Average number of servings of vegetables consumed (on one of those days eating vegetables)



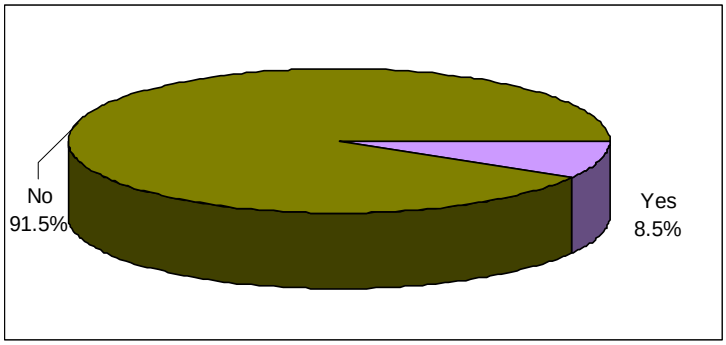
Base=2,005

Figure 9 Consumption of ≥2 servings of fruit per day



Base=2,005

Figure 10 Consumption of ≥3 servings of vegetables per day

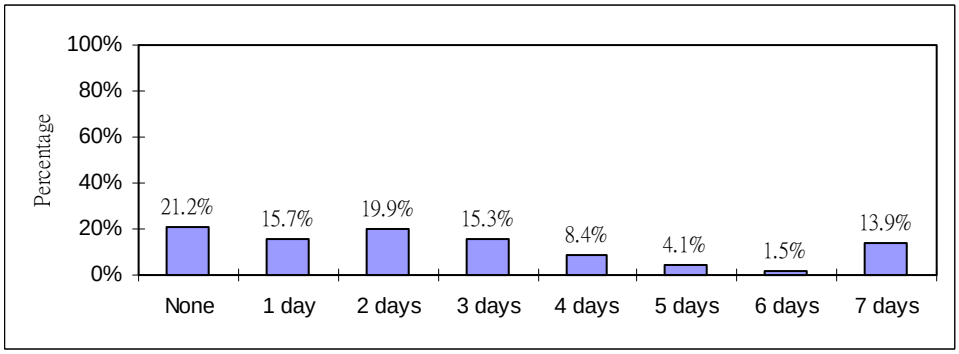


Base=2,005

3.5 Consumption Behaviour of High Fat Food, High Salt Food and High Sugar Food

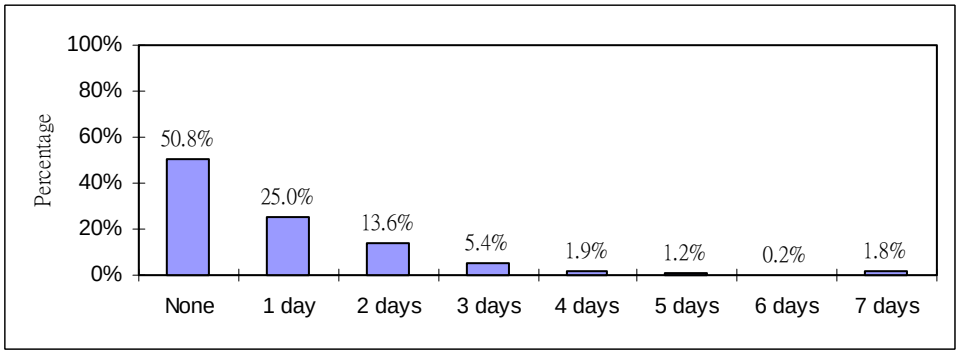
Of all respondents, 21.2%, 50.8% and 31.9% respectively reported not eating food with high fat, high salt or high sugar (Table 6; Figures 11 to 13); 27.9%, 5.1% and 17.9% ate food with these contents 4 to 7 days per week on average. Comparisons of differences by gender, age group and education level are summarized in Tables 7 to 9.

Figure 11 Average number of days eating high fat food each week



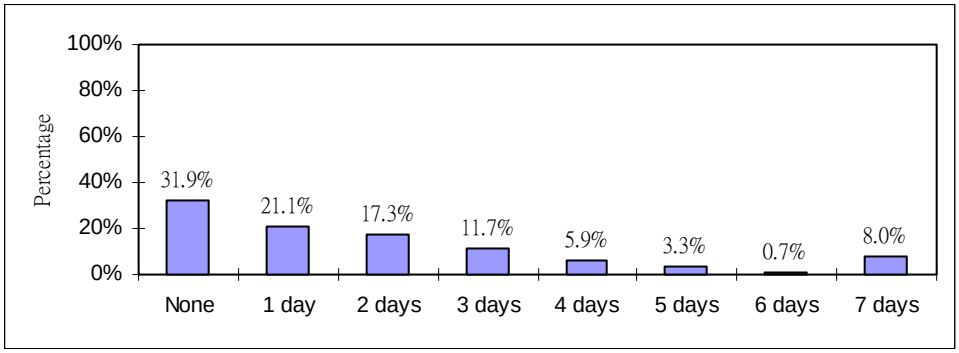
Base = 2,005

Figure 12 Average number of days eating high salt food each week



Base = 2,005 (exclude 1 case (<0.1%) answering 'indefinite')

Figure 13 Average number of days eating high sugar food each week



Base = 2,005 (exclude 1 case (<0.1%) answering 'indefinite')

3.6 Barriers for Eating More Fruit and Vegetables

The main perceived barriers for eating more fruit and vegetables were "too busy to buy/eat" (15.6%), "not commonly available when eating out" (9.8%) and "no one serve them to me/lazy" (9.7%) (Table 10). Of all respondents, 35% stated that there was "no reason" for not taking more fruit and vegetables. Breakdowns by gender, age group and education level are summarized in Tables 11 to 13.

3.7 Eating Out Habits

Of all respondents, 53% had eaten their breakfast outside of home in the past week, with 26.5% eating out 1 to 4 times and 26.5% 5 to 7 times (Table 14). Those eating out for breakfast in the past week were most likely to have eaten in Chinese restaurants (including Hong Kong style tea restaurants) (62%) or fast food shops (30.3%).

Of all respondents, 71.7% had eaten their lunch outside of home in the past week, with 27.9% eating out 1 to 4 times and 43.8% 5 to 7 times (Table 14). Those eating out for lunch in the past week were most likely to have eaten in Chinese restaurants (including Hong Kong style tea restaurants) (63.5%) or fast food shops (23.8%).

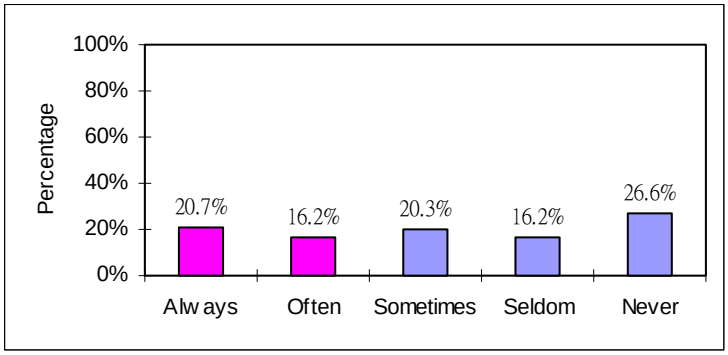
Of all respondents, 52.5% had eaten their dinner outside of home in the past week, with 46.6% eating out 1 to 4 times and 5.9% 5 to 7 times (Table 14). Those eating out for dinner in the past week were most likely to have eaten in Chinese restaurants (including Hong Kong style tea restaurants) (67.1%) or non-Chinese restaurants (19.4%).

Comparisons of the eating out habits for breakfast, lunch and dinner by gender, age group and education level are summarized in Tables 15 to 17.

3.8 Food Selection Practices When Eating Out

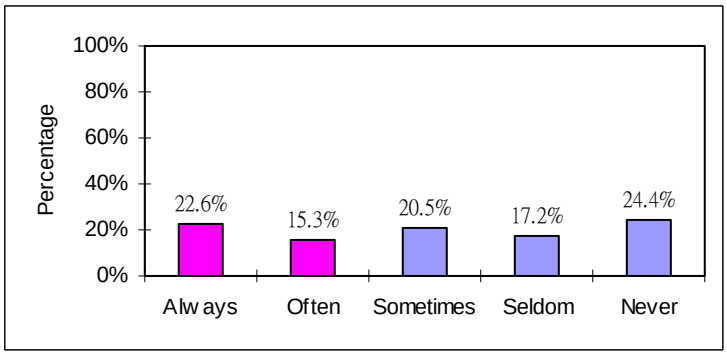
The percentages of respondents who always or often chose or requested food with more fruit/vegetables, less fat/oil, less salt and less sugar when eating out were 36.9%, 37.9%, 27.3% and 29.8% respectively, whereas the percentages of respondents who never did so were 26.6%, 24.4%, 33.5% and 30.9% respectively (Table 18; Figures 14 to 17). Gender, age group and education level comparisons are summarized in Tables 19 to 21.

Figure 14 Choosing or requesting food with more fruit/vegetables when eating out



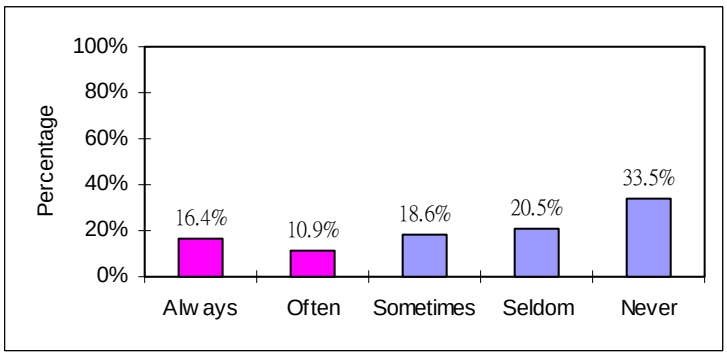
Base=2,005

Figure 15 Choosing or requesting food with less fat/oil when eating out



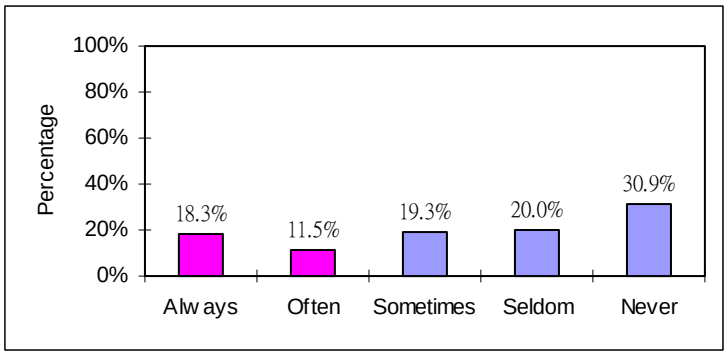
Base=2,005

Figure 16 Choosing or requesting food with less salt when eating out



Base=2,005

Figure 17 Choosing or requesting food with less sugar when eating out

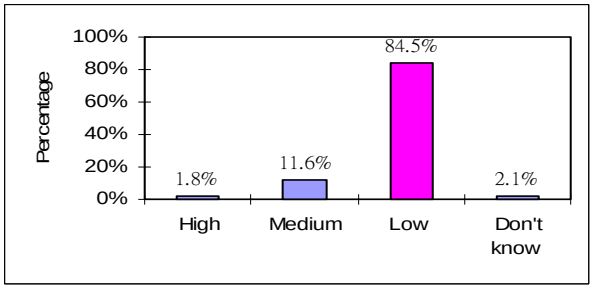


Base=2,005

3.9 Perception of Ingredients in Food Provided by Food Premises

Of all respondents, 84.5% and 53.9% respectively perceived that the food premises they usually visited provided little amount of fruit and vegetables. On the other hand, 60.1%, 40.9% and 27.2% respectively perceived that such food premises provided food which contained much amount of fat/oil, salt and sugar (Table 22; Figures 18 to 22). Gender, age group and education level differences are summarized in Tables 23 to 25.

Figure 18 Perceived fruit ingredient in food provided by food premises



Base=2,005

Figure 19 Perceived vegetable ingredient in food provided by food premises

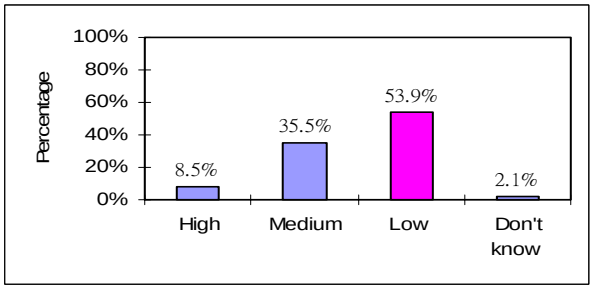


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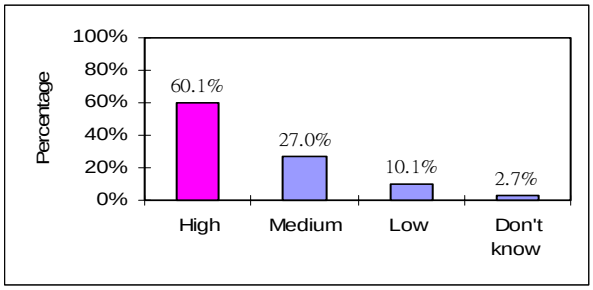
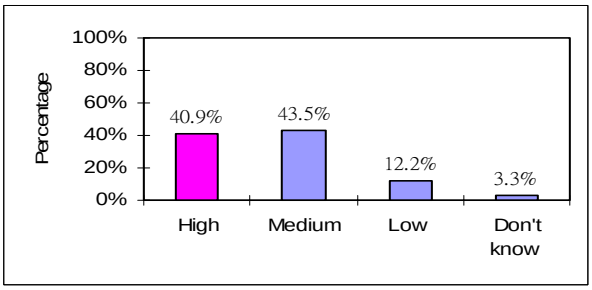
Figure 20 Perceived fat/oil ingredient in food provided by food premises



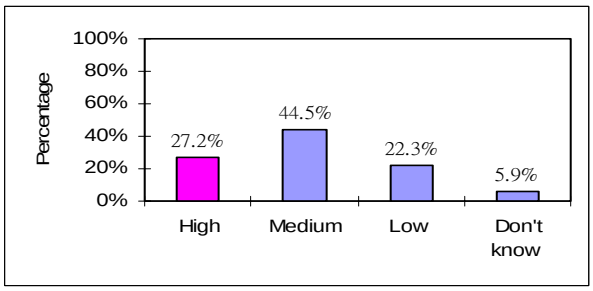
Base=2,005

Figure 21 Perceived salt ingredient in food provided by food premises



Base=2,005

Figure 22 Perceived sugar ingredient in food provided by food premises

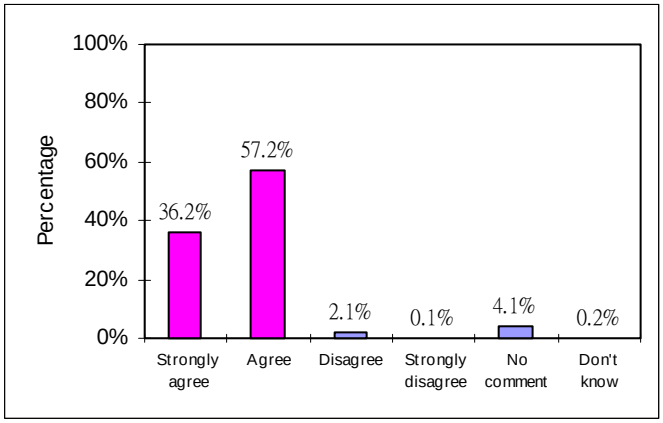


Base=2,005

3.10 Expectation for Food Premises about Ingredients in Food

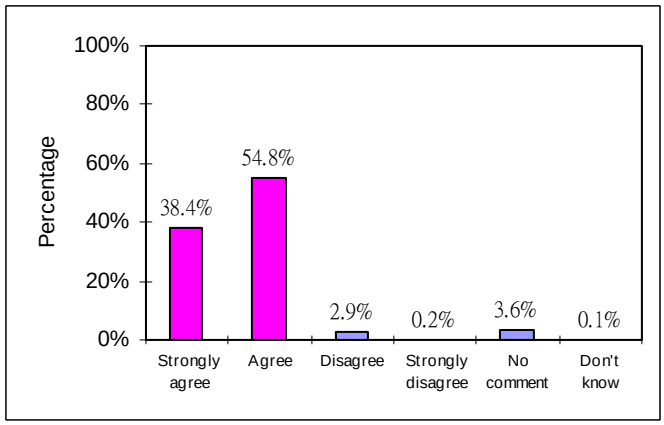
The majority of the respondents agreed or strongly agreed that food premises should provide food with more fruit/vegetables in ingredients (93.4%) and food with less fat/oil, less salt and less sugar in ingredients (93.2%) (Table 26; Figures 23 to 24). Gender, age group and education level comparisons are summarized in Tables 27 to 29.

Figure 23 Agreement with the statement "I hope that food premises can provide food with more fruit/vegetables in ingredients"



Base=2,005

Figure 24 Agreement with the statement "I hope that food premises can provide food with less fat/oil, less salt and less sugar in ingredients"



Base=2,005

3.11 Suggestions for Food Premises on Increasing Fruit and Vegetable Consumption

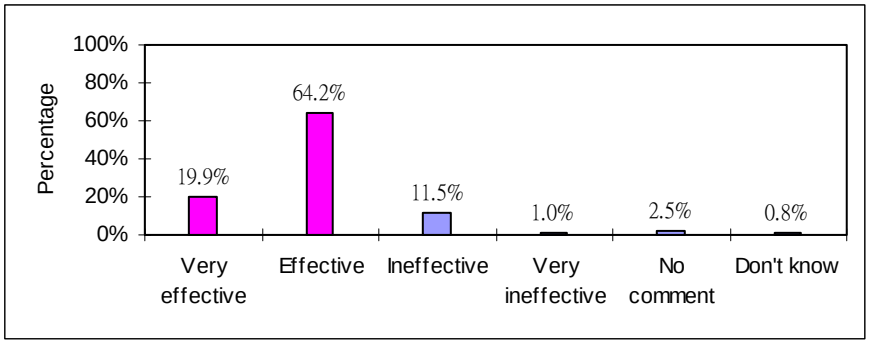
The common suggestions for food premises on increasing consumption of fruit and vegetables when eating out were that food premises should provide more choices for customers (40%), followed by offering free/cheaper fruit/vegetable dishes (22%) and making such dishes delicious (12.1%) (Table 30). Gender, age group and education level comparisons are summarized in Tables 31 to 33.

3.12 Perceived Effectiveness of Healthy Eating Promotion in Food Premises

Four measures of healthy eating promotion in food premises were mentioned to the respondents. The majority of the respondents perceived these measures to be effective or very effective: labeling clearly in menu those dishes with more fruit/vegetables, less fat/oil, less salt or less sugar (84.1%); providing more food choices with more fruit/vegetables, less fat/oil, less

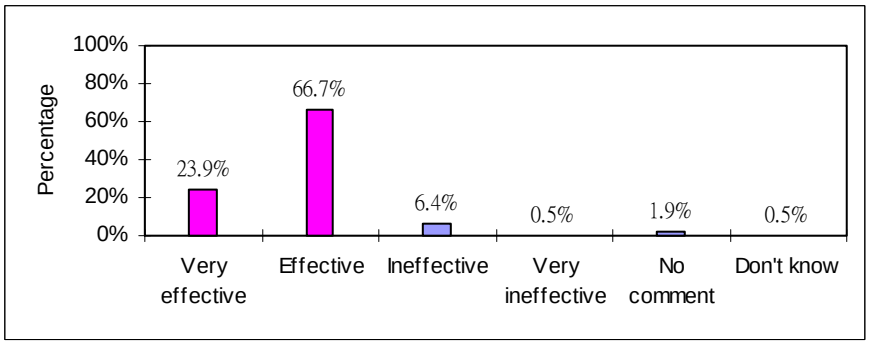
salt or less sugar in food premises (90.6%); offering cash/discount coupons for dishes with fruit/vegetables, less fat/oil, less salt or less sugar (74%); and advertising or promoting in food premises (79.5%) (Table 34; Figures 25 to 28). Gender, age group and education level comparisons are summarized in Tables 35 to 37.

Figure 25 Perceived effectiveness of "labeling clearly in menu those dishes with more fruit/vegetables, less fat/oil, less salt or less sugar"



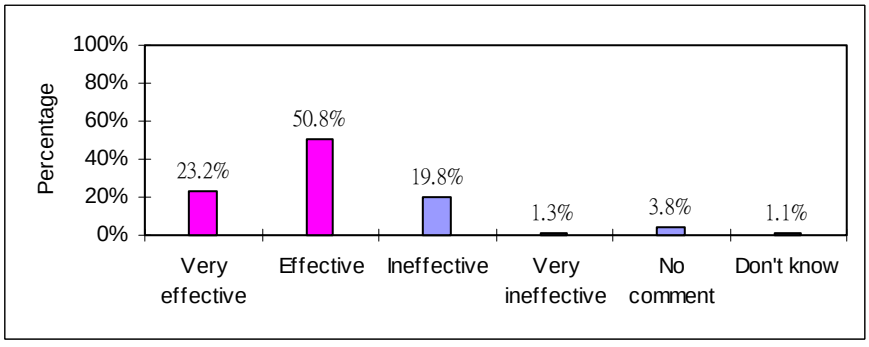
Base=2,005

Figure 26 Perceived effectiveness of "providing more food choices with more fruit/vegetables, less fat/oil, less salt or less sugar in food premises"



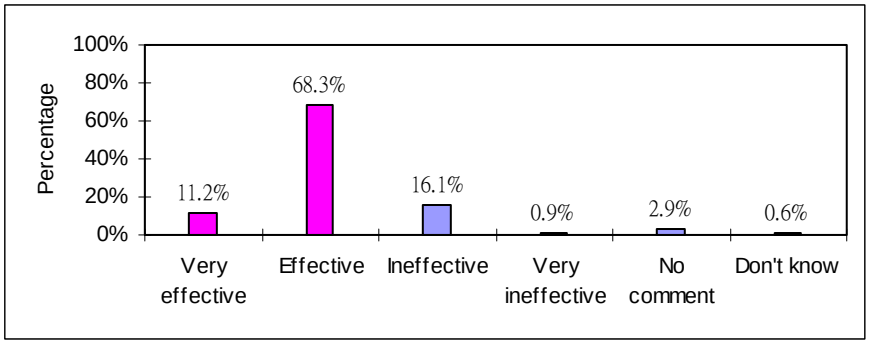
Base=2,005

Figure 27 Perceived effectiveness of "offering cash/discount coupons for dishes with fruit/vegetables, less fat/oil, less salt or less sugar"



Base=2,005

Figure 28 Perceived effectiveness of "advertising or promoting in food premises"

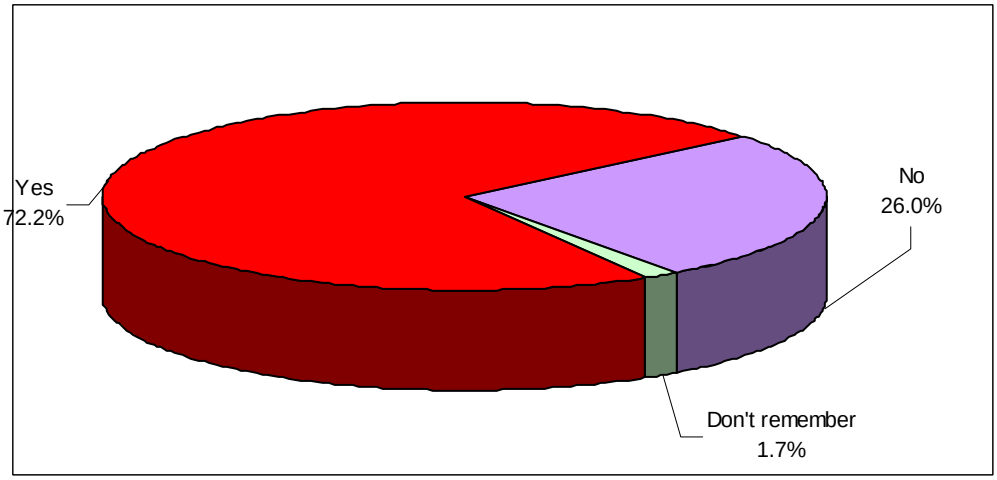


Base=2,005

3.13 Awareness of the '2 Plus 3 A Day' Fruit and Vegetable Promotional Campaign

Of all respondents, 72.2% were aware of the '2 Plus 3 A Day' fruit and vegetable promotional campaign conducted by the Department of Health (Table 38; Figure 29). Gender, age group and education level comparisons are summarized in Tables 39 to 41.

Figure 29 Awareness of the '2 Plus 3 A Day' fruit and vegetable promotional campaign



Base=2,005

Chapter 4 Factors Associated with Selected Questions

4.1 Factors Associated with Knowledge of Serving Sizes of Fruit and Vegetables

Respondents were divided into two groups according to their knowledge of serving sizes of fruit and vegetables, those giving ≥3 correct answers versus those giving <3 correct answers to the four questions about serving sizes of fruit and vegetables (listed in Table 2). The results of

the univariate odds ratio (OR) analyses for this outcome variable are summarized in Table 42. It showed that non-working persons, those with monthly personal income of $10,000-$19,999 or $30,000 or above, and those who were aware of the '2 Plus 3 A Day' campaign were significant in predicting better knowledge of serving sizes in the univariate analyses (OR=0.66 to 1.77).

In the multivariate OR analyses (Table 42), those with monthly personal income of $10,000-$19,999 (OR=1.75, 95% CI: 1.28-2.40) or $30,000 or above (OR=1.64, 95% CI: 1.04-2.58), and those who were aware of the '2 Plus 3 A Day' campaign (OR=1.49, 95% CI: 1.08-2.05) were more likely than others to have better knowledge of serving sizes of fruit and vegetables.

4.2 Factors Associated with Adequate Daily Fruit Consumption (≥2 Servings)

The results of the univariate OR analyses for the outcome variable, whether respondents consumed 2 or more servings of fruit per day, are summarized in Table 43. It showed that female respondents, non-working persons, those who perceived that adequate consumption of fruit and vegetables would prevent diabetes, and those who 'always/often/sometimes' chose or requested more fruit/vegetables when eating out were more likely than others to consume an adequate amount (≥2 servings) of fruit per day (OR=1.30 to 1.64), while the reverse was true for currently single respondents, those with monthly personal income of $10,000-$19,999, those with monthly household income of $20,000-$29,999, those who consumed high fat food, high salt food or high sugar food 4 to 7 days each week, and those who ate out for breakfast, lunch or dinner 5 to 7 times in the past week (OR=0.34 to 0.74).

In the multivariate OR analysis (Table 43), those who perceived that adequate consumption of fruit and vegetables would prevent diabetes (OR=1.35, 95% CI: 1.08-1.69), and those who 'always/often/sometimes' chose or requested food with more fruit/vegetables when eating out (OR=1.27, 95% CI: 1.01-1.60) were more likely than others to consume an adequate amount (≥2 serving) of fruit per day, while the reverse was true for currently single respondents (OR=0.76, 95% CI: 0.59-0.98), those who consumed high fat food 4 to 7 days each week (OR=0.57, 95% CI: 0.43-0.76), and those who ate out for lunch (OR=0.64, 95% CI: 0.50-0.82) or dinner (OR=0.46, 95% CI: 0.24-0.91) 5 to 7 times in the past week.

4.3 Factors Associated with Adequate Daily Vegetable Consumption (≥3 Servings)

Similar univariate OR analyses were conducted for the outcome variable, whether respondents consumed 3 or more servings of vegetables per day (Table 44). It showed that respondents

who attained tertiary or above level of education, those who answered correctly about the serving size of a woman-fist sized apple, those who perceived that adequate consumption of fruit and vegetables would prevent heart diseases, those who 'always/often/sometimes' chose or requested food with more fruit/vegetables when eating out, and those who were aware of the '2 Plus 3 A Day' campaign were more likely than others to consume an adequate amount (≥3 servings) of vegetables per day (OR=1.41 to 1.81), while the reverse was true for service workers, those who refused to answer about personal income, those who consumed high salt food 4 to 7 days each week, and those who ate out for breakfast or lunch 5 to 7 times in the past week (OR= 0.12 to 0.64).

In the multivariate OR analysis (Table 44), those who attained tertiary or above level of education (OR=1.73, 95% CI: 1.03-2.92), those who perceived that adequate consumption of fruit and vegetables would prevent heart diseases (OR=1.64, 95% CI: 1.12-2.41), those who 'always/often/sometimes' chose or requested food with more fruit/vegetables when eating out (OR=1.47, 95% CI: 1.05-2.06), and those who were aware of the '2 Plus 3 A Day' campaign (OR= 1.53, 95% CI: 1.03-2.28) were more likely than others to consume an adequate amount (≥3 serving) of vegetables per day, while the reverse was true for those who ate out for lunch 5 to 7 times in the past week (OR=0.52, 95% CI: 0.37-0.74).

4.4 Factors Associated with Behaviour of Choosing or Requesting Food with More Fruit/Vegetables When Eating Out

The results of the univariate OR analyses for the outcome variable, whether respondents 'always/often/sometimes' chose or requested food with more fruit/vegetables when eating out, are summarized in Table 45. It showed that gender, age group, marital status, education level, occupation, monthly personal income, monthly household income, knowledge of serving size of a rice bowl of cooked vegetables, perceived health benefits of adequate fruit and vegetable consumption in preventing cancers of the gut, heart diseases and stroke, number of days eating high fat, high salt and high sugar food each week, and perceived fruit and vegetable ingredients in food provided by food premises usually visited were significant in the univariate analyses in predicting the behaviour of choosing or requesting food with more fruit/vegetables when eating out (OR=0.45 to 2.42).

The multivariate OR analysis (Table 45) showed that those aged 18 and above (aged 18-34: OR=1.93, 95% CI: 1.29-2.89; aged 35-64: OR=2.22, 95% CI: 1.53-3.24; aged ≥65: OR=1.62, 95% CI: 1.01-2.58), those who attained secondary or above level of education (secondary: OR=1.62, 95% CI: 1.21-2.17; tertiary or above: OR=2.03, 95% CI: 1.46-2.83), those who answered correctly on the serving size of a rice bowl of cooked vegetables (OR=1.41, 95% CI:

1.12-1.77), those who perceived that adequate consumption of fruit and vegetable would prevent stroke (OR=1.32, 95% CI: 1.09-1.61) were more likely than others to 'always/often/ sometimes' choose or request food with more fruit/vegetables when eating out, while the reverse was true for those who consumed high fat food (OR=0.67, 95% CI: 0.54-0.83) or high sugar food (OR=0.59, 95% CI: 0.46-0.77) 4 to 7 days each week, and those who perceived that vegetable ingredient was little in food provided by food premises usually visited (OR=0.46, 95% CI: 0.38-0.56).

4.5 Factors Associated with Behaviour of Choosing or Requesting Food with Less Fat/Oil When Eating Out

The results of the univariate OR analyses for the outcome variable, whether respondents 'always/often/sometimes' chose or requested food with less fat/oil when eating out, are summarized in Table 46. It showed that gender, marital status, education level, occupation, monthly personal income, monthly household income, knowledge of serving size of a rice bowl of raw leafy vegetables, perceived health benefits of adequate fruit and vegetable consumption in preventing cancers of the gut, heart diseases, stroke and diabetes, consumption of ≥2 servings of fruit per day, consumption of ≥3 servings of vegetables per day, number of days eating high fat, high salt and high sugar food each week, perceived fat/oil ingredients in food provided by food premises usually visited, and awareness of the '2 Plus 3 A Day' campaign were significant in the univariate analyses in predicting the behaviour of choosing or requesting food with less fat/oil when eating out (OR=0.48 to 1.70).

The multivariate OR analysis (Table 46) showed that those who attained tertiary or above level of education (OR=1.58, 95% CI: 1.17-2.14), those who perceived that adequate consumption of fruit and vegetable would prevent heart diseases (OR=1.31, 95% CI: 1.02-1.67) or stroke (OR=1.33, 95% CI: 1.05-1.68), those who consumed ≥2 servings of fruit per day (OR=1.29, 95% CI: 1.01-1.63), and those who were aware of the '2 Plus 3 A Day' campaign (OR=1.55, 95% CI: 1.26-1.91) were more likely than others to 'always/often/sometimes' choose or request food with less fat/oil when eating out, while the reverse was true for currently single respondents (OR=0.78, 95% CI: 0.64-0.95), those who answered correctly on the serving size of a rice bowl of raw leafy vegetables (OR=0.80, 95% CI: 0.66-0.98), those who consumed high fat food (OR=0.57, 95% CI: 0.46-0.70) or high sugar food (OR=0.58, 95% CI: 0.45-0.75) 4 to 7 days each week, and those who perceived that fat/oil ingredient was much in food provided by food premises usually visited (OR=0.80, 95% CI: 0.66-0.96).

4.6 Factors Associated with Behaviour of Choosing or Requesting Food with Less Salt When Eating Out

The results of the univariate OR analyses for the outcome variable, whether respondents 'always/often/sometimes' chose or requested food with less salt when eating out, are summarized in Table 47. It showed that age group, marital status, occupation, monthly personal income, monthly household income, perceived health benefits of adequate fruit and vegetable consumption in preventing cancers of the gut, heart diseases, stroke and diabetes, consumption of ≥2 servings of fruit per day, consumption of ≥3 servings of vegetables per day, number of days eating high fat, high salt and high sugar food each week, and awareness of the '2 Plus 3 A Day' campaign were significant in the univariate analyses in predicting the behaviour of choosing or requesting food with less salt when eating out (OR=0.42 to 1.80).

The multivariate OR analysis (Table 47) showed that those with monthly personal income of $20,000-$29,999 (OR=1.50, 95% CI: 1.06-2.13) and those who refused to answer about personal income (OR=1.63, 95% CI: 1.00-2.67), those who perceived that adequate consumption of fruit and vegetable would prevent stroke (OR=1.32, 95% CI: 1.07-1.62) or diabetes (OR=1.37, 95% CI: 1.12-1.67), those who consumed ≥3 servings of vegetables per day (OR=1.53, 95% CI: 1.11-2.13), and those who were aware of the '2 Plus 3 A Day' campaign (OR=1.37, 95% CI: 1.12-1.69) were more likely than others to 'always/often/sometimes' choose or request food with less salt when eating out, while the reverse was true for those who consumed high fat food (OR=0.50, 95% CI: 0.40-0.63), high salt food (OR=0.57, 95% CI: 0.35-0.92) or high sugar food (OR=0.70, 95% CI: 0.54-0.90) 4 to 7 days each week.

4.7 Factors Associated with Behaviour of Choosing or Requesting Food with Less Sugar When Eating Out

The results of the univariate OR analyses for the outcome variable, whether respondents 'always/often/sometimes' chose or requested food with less sugar when eating out, are summarized in Table 48. It showed that gender, age group, marital status, education level, occupation, monthly personal income, monthly household income, perceived health benefits of adequate fruit and vegetable consumption in preventing cancers of the gut, heart diseases, stroke and diabetes, consumption of ≥2 servings of fruit per day, consumption of ≥3 servings of vegetables per day, number of days eating high fat and high sugar food each week, and awareness of the '2 Plus 3 A Day' campaign were significant in the univariate analyses in predicting the behaviour of choosing or requesting food with less sugar when eating out OR=0.45 to 1.85).

The multivariate OR analysis (Table 48) showed that those with monthly personal income of $10,000 or above ($10,000-$19,999: OR=1.34, 95% CI: 1.06-1.71; $20,000-$29,999: OR=2.04, 95% CI: 1.43-2.90; $30,000 or above: OR=1.44, 95% CI: 1.02-2.02), those who perceived that adequate consumption of fruit and vegetable would prevent stroke (OR=1.29, 95% CI: 1.05-1.58) or diabetes (OR=1.40, 95% CI: 1.15-1.72), those who consumed ≥3 servings of vegetables per day (OR=1.49, 95% CI: 1.07-2.08), and those who were aware of the '2 Plus 3 A Day' campaign (OR=1.37, 95% CI: 1.12-1.69) were more likely than others to 'always/often/sometimes' choose or request food with less sugar when eating out, while the reverse was true for those who consumed high fat food (OR=0.64, 95% CI: 0.51-0.79) or high sugar food (OR=0.48, 95% CI: 0.38-0.62) 4 to 7 days each week.

4.8 Demographic Characteristics Associated with Awareness of the '2 Plus 3 A Day' Campaign

The results of the univariate OR analyses for the outcome variable, whether respondents were aware of the '2 Plus 3 A Day' campaign, are summarized in Table 49. It showed that gender, age group, marital status, education level, occupation, and monthly household income were significant in the univariate analyses in predicting the awareness of the campaign (OR=0.26 to 1.90).

In the multivariate OR analysis (Table 49), female respondents (OR=2.00, 95% CI: 1.63-2.45), and older persons (aged 35-64: OR=0.57, 95% CI: 0.37-0.89; aged ≥65: OR=0.25, 95% CI: 0.15-0.40) were significantly associated with the awareness of the campaign.

Chapter 5 Discussion and Recommendations

5.1 Discussion

About three quarters of the respondents were aware of the '2 Plus 3 A Day' campaign. The awareness of the campaign was found to be significantly associated with better knowledge of serving sizes of fruit and vegetables and adequate consumption of vegetables per day in the multivariate analyses. It shows that males and people of middle or higher age (35 or above) were less likely to be aware of the campaign. Future campaigns should therefore be more gender and age sensitive.

One important issue is that high proportions of the respondents did not know the serving sizes of fruit and vegetables - only 17.9% to 52% of the respondents gave correct answers to the four questions about serving sizes. If serving sizes were unknown, the promotion of consumption of '2 servings of fruit and 3 servings of vegetables' would not be meaningful, as people would not know how much fruit and vegetables exactly to consume to meet the '2+3' recommendation. By looking at Table 2, it seems that respondents were more likely to underestimate rather than to overestimate the serving sizes of fruit and vegetables. People may tend to believe that they need to eat more fruit and vegetables than required to meet the recommended amounts. If this is true, some people may find it more difficult to meet the recommended amounts and it may have an impact on their perceived self-efficacy for eating more fruit and vegetables. Those who were aware of the '2 Plus 3 A Day' campaign and those with higher personal income were associated with better knowledge of serving sizes (but education level was not of statistical significance). Again, future campaigns may need to be more sensitive to different socio-demographic groups in the general population.

Although more than half of the respondents perceived that adequate fruit and vegetable consumption would have the health benefits of preventing cancers of the gut (85.6%), heart diseases (67.7%), stroke (60.7%) and diabetes (51.9%), there is still room for improvement. The Health Belief Model prescribes that perception about the benefits of a health-related behaviour is a determinant for adoption of that health behaviour (Rosenstock, 1974[1]). Besides, some of these health benefits were consistently significant in the prediction of consuming adequate amounts of fruit/vegetables and choosing or requesting food with more fruit/vegetables, less fat/oil, less salt and less sugar when eating out. It is therefore important to promote these health beneficial effects.

It is found that only small proportions of the respondents consumed adequate amounts of fruit (≥2 servings: 20.5%) and vegetables (≥3 servings: 8.5%) per day. Though as pointed out, those who were aware of the '2 Plus 3 A Day' campaign were more likely to consume an adequate amount of vegetables, the magnitude of the impact (effect size) is not large enough to make a practical difference (OR=1.53, percent difference of 3.6% for adequate vegetable consumption). It is noted that the magnitude of the impact of other factors that were associated with this outcome variable was also relatively small (e.g. perceived health benefits).

No particularly prevalent reasons for not eating more fruit and vegetables were identified in

[1] Rosenstock IM. The health belief model and preventive health behavior. Health Education Monographs 1974; 2:354–386.

this survey. In fact, the most frequently quoted reason was "no reason", indicating that the low fruit and vegetable diet pattern was more likely to be an old habit than a deliberate choice. This is further supported by the fact that only 6.3% of the respondents did not like eating or did not eat fruit/vegetables and that 9.7% were too lazy to eat more fruit/vegetables. The busy lifestyle also consolidates the habit as 15.6% of the respondents attributed that they were too busy to buy/eat fruit/vegetables. Availability of fruit/vegetables when eating outside may be relevant (mentioned by 9.8% of the respondents).

Other unhealthy eating habits such as eating food with high fat/oil, high salt and high sugar were also very prevalent in our study population. Some ate such unhealthy diets 4 to 7 days in a week. It is noted that those with these unhealthy eating habits were less likely to consume an adequate amount of fruit and to choose or request more fruit/vegetables when eating out. It is expected as the same group of people who are not eating healthy diets was involved. Campaigns for promotion of fruit and vegetable consumption may join force with those promoting consumption of less fat/oil, less salt and less sugar.

Over half of the respondents had eaten out for breakfast (53%), lunch (71.7%) or dinner (52.5%) in the past week. It shows that Chinese restaurants (including Hong Kong style tea restaurants) was the most frequent type of food premises for eating out (over 60% for breakfast, lunch and dinner), which was followed by fast food shops (30.3% for breakfast, 23.8% for lunch and 9.5% for dinner). Over 75% of those who ate out dined in these two particular types of food premises. Eating out frequently for lunch was multivariately significantly associated with inadequate consumption of fruit and vegetables. Premise-based campaign should therefore target at lunch provided by food premises. Again, it should be interpreted carefully as the magnitude of the impact was quite small.

Many respondents perceived that the food premises they usually visited provided little amount of fruit and vegetables, and food with much amount of fat/oil, salt and sugar. The majority of the respondents were supportive of the idea that food premises should cater for food with more fruit/vegetables in ingredients (93.4%) and food with less fat/oil, salt and sugar in ingredients (93.2%). Encouragement of food premises to provide fruit and vegetables is therefore a promising means for promoting fruit and vegetable consumption. In fact, "providing more choices for customers" was the most commonly suggested way of how food premises could promote fruit and vegetable consumption and 90.6% of the respondents considered this as an effective or very effective means to promote healthy eating. This may be the primary means to be adopted in the future premise-based campaigns. Eighty-four percent (84.1%) of the

respondents considered giving labels in menu to be effective or very effective, while 74% considered cash/discount coupons and 79.5% considered advertisement/promotion as effective or very effective means.

About one-third of the respondents indicated that they always or often chose or requested food with more fruit/vegetables when eating out. The figure was not high and was in line with the habit of not consuming adequate amounts of fruit/vegetables. Better educated people tended to be more selective and therefore campaigns targeting at less educated people are warranted. Such behaviour was also associated with knowledge of serving sizes, perceived health benefits of adequate fruit and vegetable consumption on stroke prevention and less consumption of high fat and high sugar food, which was in line with the findings about consuming adequate amounts of fruit/vegetables. These results further support that promotion of knowledge and benefits of eating fruit and vegetables may be fruitful.

Similarly, around one-third of the respondents always or often chose or requested food with less fat/oil, less salt or less sugar when eating out. The figures were not high. Those who reported more days eating high fat, high salt and high sugar food per week were less likely to do so. Perceived health benefits of adequate fruit and vegetable consumption on disease prevention and adequate consumption of fruit and vegetables were associated with the behaviour of choosing or requesting food with less fat/oil, less salt or less sugar when eating out. It is likely that health conscious people act consistently in their pursuit of healthy lifestyle.

The survey is limited in some ways. First, the demographic characteristics of the respondents in this survey were slightly different from those of the end-2006 by-census distribution (refer to footnotes of Table 1) and hence it should take note on this difference when applying the results to the general population. Second, households without a residential telephone, new or unlisted residential telephone numbers were not included in the survey, though residential telephone coverage is high in Hong Kong. Also, institutional individuals were not included in the study population. Besides, data were self-reported and may subject to reporting bias. Recall bias may also occur in retrospective questions. Further, no causal relationship between studied variables can be drawn in this cross-sectional survey. Finally, the survey is subjected to the disadvantages pertained to telephone surveys.

5.2 Recommendations

Benchmark data have been provided by this survey. The proportions of respondents consuming adequate amounts of fruit and vegetables were very low, whereas those eating high fat, high salt and high sugar food were prevalent. The future campaign to be launched in food premises should pay attention to the following points:

1. Promotion of knowledge of serving sizes of fruit and vegetables and relevant health benefits is warranted and may increase the consumption of fruit and vegetables in the general population. The magnitude of any changes resulted, however, may not be very large.

2. Given a significant proportion of respondents had frequent eating out habit, its association with less healthy eating habit, general perception of inadequate healthier choices and overwhelming request for provision of healthier choices in food premises, the prospective campaign should encourage food premises to provide more food choices that include more fruit and vegetables, less fat/oil, less salt and less sugar in ingredients.

3. The campaign may target at lunch provided by food premises and special attention may be given to lunch items provided by fast food shops.

4. The campaign should be sensitive to socio-demographic characteristics of the target population (e.g. those who are less educated).

5. The campaign may collaborate with other health promotion efforts on prevention of specific diseases (e.g. cancer, heart diseases and diabetes) or other healthy diet campaigns which include less fat/oil, salt and sugar contents.

6. Inadequate consumption of fruit and vegetables is a habit for many people and sustained efforts are required to make an improvement.

7. The stage of change model helps understand the process of adopting to maintaining health behaviors. Future studies should investigate the stage of change among those who are not eating adequate amounts of fruit and vegetables, as well as factors leading to changes.

Table 1 Demographic characteristics of respondents

		This Survey	
		%	(n)
Gender	Male	48.0	962
	Female	52.0	1043
Age group	12 – 17	7.4	148
	18 – 24	11.3	226
	25 – 34	15.4	308
	35 – 44	22.3	448
	45 – 54	20.0	401
	55 – 64	11.1	222
	65 or above	12.4	248
	Refuse to answer	0.2	4
Marital status	Never married	33.4	670
	Now married	63.3	1269
	Widowed	1.2	24
	Divorced/separated	1.4	29
	Refuse to answer	0.6	13
Education level	No schooling/kindergarten	3.5	70
	Primary	13.0	261
	Secondary	55.1	1105
	Tertiary or above	27.9	559
	Refuse to answer	0.5	10
Occupation	Employers/managers & administrators	4.1	82
	Professionals	6.1	122
	Associate professionals	6.9	138
	Clerks	14.4	288
	Service workers & shop sales workers	9.2	185
	Craft & related workers	1.4	29
	Plant & machine operators & assemblers	5.0	100
	Elementary occupations	3.5	71
	Skilled agricultural & fishery workers, & occupations not classifiable	0.3	6
	Students	14.5	290
	Homemakers	17.0	340
	Retired persons	14.1	283
	Unemployed persons	2.5	51
	Refuse to answer	1.0	20

Table 1 Demographic characteristics of respondents (cont'd)

		This Survey	
		%	(n)
Monthly personal income	None	45.0	903
	Below HK$ 2,000	1.0	20
	HK$2,000 – $4,999	2.7	55
	HK$5,000 – $9,999	11.2	224
	HK$10,000 – $14,999	13.0	260
	HK$15,000 – $19,999	6.7	134
	HK$20,000 – $24,999	5.8	117
	HK$25,000 – $29,999	2.0	41
	HK$30,000 – $39,999	3.3	67
	HK$40,000 or above	4.9	98
	Refuse to answer	4.3	86
Monthly household income	None	5.7	115
	Below HK$ 2,000	0.4	8
	HK$2,000 – $4,999	1.5	31
	HK$5,000 – $9,999	5.9	118
	HK$10,000 – $14,999	11.4	229
	HK$15,000 – $19,999	8.1	162
	HK$20,000 – $24,999	10.8	217
	HK$25,000 – $29,999	4.5	90
	HK$30,000 – $39,999	7.8	156
	HK$40,000 or above	18.6	373
	Refuse to answer	6.9	139
	Don't know	18.3	367

Base = 2,005.

According to the provisional end-2006 by-census population data, the gender distribution of those aged 12 and above was 47.1% for males and 52.9% for females; the age distribution of those aged 12 and above was 8.3% for age group 12-17, 10.3% for age group 18-24, 17% for age group 25-34, 20% for age group 35-44, 19.4% for age group 45-54, 11.1% for age group 55-64, and 13.9% for age group 65 or above (by pro-rata calculation).

Table 2 Knowledge of serving sizes of fruit and vegetables and health benefits of adequate fruit and vegetable consumption

		%	(n)
***Serving sizes of fruit and vegetables*:**			
A woman-fist sized apple	0.5 serving	15.4	(309)
	1 serving‡	52.0	(1042)
	2 servings	11.2	(225)
	3 servings	3.2	(64)
	Don't know	18.2	(365)
A cup of grapes	0.5 serving	14.9	(298)
	1 serving	39.4	(790)
	2 servings‡	17.9	(359)
	3 servings	5.7	(115)
	4 servings	<0.1	(1)
	Don't know	22.0	(442)
A rice bowl of cooked vegetables	0.5 serving	14.5	(290)
	1 serving	42.3	(849)
	2 servings‡	21.6	(433)
	3 servings	4.5	(90)
	4 servings	<0.1	(1)
	Don't know	17.1	(342)
A rice bowl of raw leafy vegetables	0 serving	<0.1	(1)
	0.5 serving	37.3	(747)
	1 serving‡	32.0	(642)
	2 servings	7.1	(143)
	3 servings	2.9	(58)
	Don't know	20.6	(414)
***Health benefits of adequate fruit and vegetable consumption*:**			
Prevent cancers of the gut	Yes	85.6	(1716)
	No	8.3	(167)
	Don't know	6.1	(122)
Prevent heart diseases	Yes	67.7	(1358)
	No	23.8	(478)
	Don't know	8.4	(169)
Prevent stroke	Yes	60.7	(1217)
	No	28.2	(565)
	Don't know	11.1	(223)
Prevent diabetes	Yes	51.9	(1040)
	No	36.6	(734)
	Don't know	11.5	(231)

‡ Correct answer.
Base = 2,005

Table 3 Knowledge of serving sizes of fruit and vegetables and health benefits of adequate fruit and vegetable consumption by gender

		Gender		
		Male %	**Female** %	χ^2 test *p*-value
***Serving sizes of fruit and vegetables*:**				
A woman-fist sized apple	0.5 serving	15.3	15.5	*0.05*
	1 serving‡	49.3	54.5	
	2 servings	12.0	10.5	
	3 servings	4.1	2.4	
	Don't know	19.4	17.1	
A cup of grapes	0.5 serving	17.2	12.8	*0.03*
	1 serving	37.3	41.3	
	2 servings‡	16.6	19.1	
	3 servings	5.6	5.8	
	4 servings	0.1	0.0	
	Don't know	23.2	21.0	
A rice bowl of cooked vegetables	0.5 serving	16.6	12.5	*<0.01*
	1 serving	38.8	45.6	
	2 servings‡	20.5	22.6	
	3 servings	4.6	4.4	
	4 servings	0.1	0.0	
	Don't know	19.4	14.9	
A rice bowl of raw leafy vegetables	0 serving	0.1	0.0	*<0.01*
	0.5 serving	32.8	41.3	
	1 serving‡	34.6	29.6	
	2 servings	7.5	6.8	
	3 servings	3.3	2.5	
	Don't know	21.6	19.8	
***Health benefits of adequate fruit and vegetable consumption*:**				
Prevent cancers of the gut	Yes	86.6	84.7	*0.47*
	No	7.7	8.9	
	Don't know	5.7	6.4	
Prevent heart diseases	Yes	67.4	68.1	*0.73*
	No	24.5	23.2	
	Don't know	8.1	8.7	
Prevent stroke	Yes	59.9	61.5	*0.21*
	No	29.8	26.7	
	Don't know	10.3	11.9	
Prevent diabetes	Yes	53.1	50.7	*0.47*
	No	35.2	37.9	
	Don't know	11.6	11.4	

‡ Correct answer.
Base = 2,005.

Table 4 Knowledge of serving sizes of fruit and vegetables and health benefits of adequate fruit and vegetable consumption by age group

		Age group				
		12 – 17	18 – 34	35 – 64	≥ 65	χ^2 test
		%	%	%	%	*p*-value
***Serving sizes of fruit and vegetables*:**						
A woman-fist sized apple	0.5 serving	24.3	18.0	14.8	7.3	<0.001
	1 serving‡	52.7	59.9	51.0	38.7	
	2 servings	10.1	10.9	12.6	6.9	
	3 servings	4.7	3.2	3.2	2.0	
	Don't know	8.1	8.1	18.4	45.2	
A cup of grapes	0.5 serving	24.3	19.9	13.2	5.6	<0.001
	1 serving	48.6	44.6	39.0	24.6	
	2 servings‡	14.2	19.1	19.5	10.5	
	3 servings	5.4	5.6	6.2	4.4	
	4 servings	0.0	0.0	0.0	0.4	
	Don't know	7.4	10.9	22.1	54.4	
A rice bowl of cooked vegetables	0.5 serving	12.2	18.5	14.2	8.5	<0.001
	1 serving	47.3	48.1	43.3	22.6	
	2 servings‡	29.1	21.0	21.1	21.0	
	3 servings	6.1	4.9	4.7	1.6	
	4 servings	0.0	0.0	0.1	0.0	
	Don't know	5.4	7.5	16.6	46.4	
A rice bowl of raw leafy vegetables	0 serving	0.0	0.2	0.0	0.0	<0.001
	0.5 serving	36.5	39.1	40.2	20.2	
	1 serving‡	40.5	39.5	29.5	22.2	
	2 servings	11.5	7.5	6.6	6.0	
	3 servings	4.7	2.8	2.8	2.4	
	Don't know	6.8	10.9	20.8	49.2	
***Health benefits of adequate fruit and vegetable consumption*:**						
Prevent cancers of the gut	Yes	86.5	91.9	85.0	74.6	<0.001
	No	6.1	5.6	10.1	7.7	
	Don't know	7.4	2.4	4.9	17.7	
Prevent heart diseases	Yes	69.6	72.1	68.8	52.8	<0.001
	No	23.6	24.3	23.2	25.8	
	Don't know	6.8	3.6	8.0	21.4	
Prevent stroke	Yes	54.1	63.1	62.8	50.4	<0.001
	No	36.5	29.4	26.1	29.4	
	Don't know	9.5	7.5	11.0	20.2	
Prevent diabetes	Yes	55.4	55.6	50.9	46.4	<0.001
	No	34.5	37.6	37.8	30.2	
	Don't know	10.1	6.7	11.3	23.4	

‡ Correct answer.

Base = 2,001 (4 cases who refused to answer their age were excluded.)

Table 5 Knowledge of serving sizes of fruit and vegetables and health benefits of adequate fruit and vegetable consumption by education level

		Education level			
		Primary or below	Secondary	Tertiary or above	χ^2 test
		%	%	%	*p*-value
***Serving sizes of fruit and vegetables*:**					
A woman-fist sized apple	0.5 serving	10.3	16.3	17.0	<0.001
	1 serving‡	40.2	53.3	56.5	
	2 servings	9.1	11.6	11.8	
	3 servings	3.0	3.5	2.7	
	Don't know	37.5	15.3	12.0	
A cup of grapes	0.5 serving	8.5	16.4	15.9	<0.001
	1 serving	26.0	40.9	44.9	
	2 servings‡	14.5	18.6	18.4	
	3 servings	4.5	6.4	5.2	
	4 servings	0.3	0.0	0.0	
	Don't know	46.2	17.7	15.6	
A rice bowl of cooked vegetables	0.5 serving	9.4	15.1	16.5	<0.001
	1 serving	29.6	43.6	47.8	
	2 servings‡	19.9	22.0	22.0	
	3 servings	3.3	5.2	3.6	
	4 servings	0.0	0.1	0.0	
	Don't know	37.8	13.9	10.2	
A rice bowl of raw leafy vegetables	0 serving	0.0	0.0	0.2	<0.001
	0.5 serving	25.7	39.8	39.4	
	1 serving‡	22.7	32.6	36.9	
	2 servings	7.3	7.6	6.3	
	3 servings	3.9	2.8	2.5	
	Don't know	40.5	17.2	14.8	
***Health benefits of adequate fruit and vegetable consumption*:**					
Prevent cancers of the gut	Yes	73.1	86.2	92.5	<0.001
	No	12.1	8.8	5.2	
	Don't know	14.8	5.1	2.3	
Prevent heart diseases	Yes	53.5	68.8	74.4	<0.001
	No	25.7	24.7	20.9	
	Don't know	20.8	6.5	4.7	
Prevent stroke	Yes	48.0	61.1	68.0	<0.001
	No	29.9	29.9	23.6	
	Don't know	22.1	9.0	8.4	
Prevent diabetes	Yes	44.4	54.7	51.2	<0.001
	No	34.4	35.5	40.1	
	Don't know	21.1	9.9	8.8	

‡ Correct answer.

Base = 1,995 (10 cases who refused to answer their education level were excluded.)

Table 6 Consumption behaviour of fruit, vegetables, high fat food, high salt food and high sugar food

		%	(n)
Average number of days eating fruit each week	None	3.0	(60)
	1 day	3.7	(75)
	2 days	7.6	(152)
	3 days	11.3	(226)
	4 days	9.1	(182)
	5 days	7.5	(150)
	6 days	2.7	(54)
	7 days	55.2	(1106)
Average number of servings of fruit consumed (on one of those days eating fruit)	Less than 0.5 serving	0.7	(15)
	0.5 serving	5.3	(106)
	1 serving	57.3	(1149)
	1.5 servings	6.4	(129)
	2 servings	20.9	(419)
	2.5 servings	1.6	(32)
	3 servings	3.1	(63)
	More than 3 servings	0.9	(18)
	Indefinite	<0.1	(1)
	Don't know	0.2	(4)
	Don't remember	0.4	(9)
	Not applicable	3.0	(60)
Average number of days eating vegetables each week	None	0.3	(7)
	1 day	0.7	(14)
	2 days	1.9	(39)
	3 days	3.3	(66)
	4 days	4.5	(90)
	5 days	5.5	(110)
	6 days	2.4	(49)
	7 days	81.3	(1630)
Average number of servings of vegetables Consumed (on one of those days eating vegetables)	Less than 0.5 serving	0.8	(17)
	0.5 serving	6.1	(122)
	1 serving	42.0	(843)
	1.5 servings	5.6	(112)
	2 servings	32.2	(645)
	2.5 servings	2.0	(41)
	3 servings	5.3	(106)
	More than 3 servings	4.3	(87)
	Indefinite	<0.1	(1)
	Don't know	0.9	(18)
	Don't remember	0.3	(6)
	Not applicable	0.3	(7)

Table 6 Consumption behaviour of fruit, vegetables, high fat food, high salt food and high sugar food (cont'd)

		%	n
Average number of days eating high fat food each week	None	21.2	(426)
	1 day	15.7	(314)
	2 days	19.9	(398)
	3 days	15.3	(306)
	4 days	8.4	(169)
	5 days	4.1	(83)
	6 days	1.5	(30)
	7 days	13.9	(279)
Average number of days eating high salt food each week	None	50.8	(1018)
	1 day	25.0	(501)
	2 days	13.6	(273)
	3 days	5.4	(109)
	4 days	1.9	(38)
	5 days	1.2	(24)
	6 days	0.2	(4)
	7 days	1.8	(37)
	Indefinite	<0.1	(1)
Average number of days eating high sugar food each week	None	31.9	(640)
	1 day	21.1	(423)
	2 days	17.3	(347)
	3 days	11.7	(234)
	4 days	5.9	(119)
	5 days	3.3	(66)
	6 days	0.7	(14)
	7 days	8.0	(161)
	Indefinite	<0.1	(1)

Base = 2,005

Table 7 Consumption behaviour of fruit, vegetables, high fat food, high salt food and high sugar food by gender

		Gender		
		Male	**Female**	χ^2 test
		%	%	*p*-value
Average number of days eating fruit each week	None	2.9	3.1	<0.01
	1 day	5.0	2.6	
	2 days	8.9	6.3	
	3 days	12.4	10.3	
	4 days	9.1	9.0	
	5 days	7.6	7.4	
	6 days	2.8	2.6	
	7 days	51.2	58.8	
Average number of servings of fruit consumed (on one of those days eating fruit)	Less than 0.5 serving	0.9	0.6	0.17
	0.5 serving	5.1	5.5	
	1 serving	58.8	55.9	
	1.5 servings	5.4	7.4	
	2 servings	20.1	21.7	
	2.5 servings	1.7	1.5	
	3 servings	3.3	3.0	
	More than 3 servings	0.6	1.2	
	Indefinite	0.0	0.1	
	Don't know	0.3	0.1	
	Don't remember	0.8	0.1	
	Not applicable	2.9	3.1	
Average number of days eating vegetables each week	None	0.5	0.2	<0.001
	1 day	1.1	0.3	
	2 days	2.6	1.3	
	3 days	4.9	1.8	
	4 days	6.0	3.1	
	5 days	5.9	5.1	
	6 days	3.1	1.8	
	7 days	75.8	86.4	
Average number of servings of vegetables consumed (on one of those days eating vegetables)	Less than 0.5 serving	0.9	0.8	<0.001
	0.5 serving	7.8	4.5	
	1 serving	45.1	39.2	
	1.5 servings	5.6	5.6	
	2 servings	27.9	36.1	
	2.5 servings	1.6	2.5	
	3 servings	4.5	6.0	
	More than 3 servings	4.3	4.4	
	Indefinite	0.1	0.0	
	Don't know	1.2	0.6	
	Don't remember	0.5	0.1	
	Not applicable	0.5	0.2	

Table 7 Consumption behaviour of fruit, vegetables, high fat food, high salt food and high sugar food by gender (cont'd)

		Gender		
		Male	**Female**	χ^2 test
		%	%	*p*-value
Average number of days eating high fat food each week	None	15.8	26.3	<0.001
	1 day	14.4	16.8	
	2 days	19.9	19.8	
	3 days	16.1	14.5	
	4 days	9.7	7.3	
	5 days	5.2	3.2	
	6 days	2.5	0.6	
	7 days	16.4	11.6	
Average number of days eating high salt food each week	None	46.0	55.1	<0.001
	1 day	25.5	24.5	
	2 days	15.0	12.4	
	3 days	6.4	4.5	
	4 days	2.9	1.0	
	5 days	1.7	0.8	
	6 days	0.4	0.0	
	7 days	2.0	1.7	
	Indefinite	0.1	0.0	
Average number of days eating high sugar food each week	None	28.3	35.3	<0.001
	1 day	20.0	22.1	
	2 days	17.7	17.0	
	3 days	10.8	12.5	
	4 days	7.2	4.8	
	5 days	4.6	2.1	
	6 days	1.2	0.2	
	7 days	10.2	6.0	
	Indefinite	0.1	0.0	

Base = 2,005

Table 8 Consumption behaviour of fruit, vegetables, high fat food, high salt food and high sugar food by age group

		Age group				
		12 – 17	18 – 34	35 – 64	≥ 65	χ^2 test
		%	%	%	%	*p*-value
Average number of days eating fruit each week	None	1.4	2.8	2.8	5.2	<0.001
	1 day	1.4	6.6	3.4	0.4	
	2 days	7.4	10.5	6.9	4.4	
	3 days	13.5	16.5	9.9	4.8	
	4 days	10.8	12.0	8.2	5.2	
	5 days	8.1	8.4	7.6	4.8	
	6 days	4.7	3.2	2.6	0.4	
	7 days	52.7	40.1	58.6	74.6	
Average number of servings of fruit consumed (on one of those days eating fruit)	Less than 0.5 serving	0.0	1.1	0.7	0.4	<0.001
	0.5 serving	4.1	4.7	5.5	6.5	
	1 serving	55.4	62.4	56.2	52.4	
	1.5 servings	5.4	5.1	6.6	8.5	
	2 servings	26.4	18.4	21.3	21.8	
	2.5 servings	2.7	2.4	1.3	0.4	
	3 servings	4.1	1.7	4.1	1.6	
	More than 3 servings	0.0	0.9	1.1	0.4	
	Indefinite	0.0	0.0	0.1	0.0	
	Don't know	0.0	0.4	0.1	0.4	
	Don't remember	0.7	0.2	0.1	2.4	
	Not applicable	1.4	2.8	2.8	5.2	
Average number of days eating vegetables each week	None	2.0	0.4	0.2	0.0	<0.001
	1 day	0.7	0.4	0.9	0.4	
	2 days	2.7	2.1	2.0	1.2	
	3 days	4.1	3.7	3.5	0.8	
	4 days	2.7	5.6	4.4	3.2	
	5 days	5.4	9.0	5.0	0.0	
	6 days	7.4	2.8	2.0	0.8	
	7 days	75.0	76.0	82.0	93.5	
Average number of servings of vegetables consumed (on one of those days eating vegetables)	Less than 0.5 serving	0.7	0.2	1.1	1.2	<0.001
	0.5 serving	4.7	5.6	6.6	5.6	
	1 serving	45.9	45.1	40.0	41.9	
	1.5 servings	6.1	5.1	5.9	5.2	
	2 servings	32.4	31.1	33.1	29.8	
	2.5 servings	0.7	2.2	2.2	1.6	
	3 servings	4.1	6.9	4.9	4.4	
	More than 3 servings	2.7	3.2	4.9	5.2	
	Indefinite	0.0	0.0	0.1	0.0	
	Don't know	0.7	0.2	0.7	3.2	
	Don't remember	0.0	0.0	0.2	1.6	
	Not applicable	2.0	0.4	0.2	0.0	

Table 8 Consumption behaviour of fruit, vegetables, high fat food, high salt food and high sugar food by age group (cont'd)

		Age group				
		12 – 17	18 – 34	35 – 64	≥ 65	χ^2 test
		%	%	%	%	*p*-value
Average number of days eating high fat food each week	None	7.4	12.0	20.3	53.2	<0.001
	1 day	9.5	12.7	18.0	15.3	
	2 days	25.7	19.3	20.9	12.9	
	3 days	20.9	19.7	14.1	7.7	
	4 days	14.2	11.8	7.4	2.4	
	5 days	8.1	6.9	2.8	1.6	
	6 days	1.4	1.7	1.7	0.4	
	7 days	12.8	15.9	14.8	6.5	
Average number of days eating high salt food each week	None	35.1	43.1	53.0	66.9	<0.001
	1 day	31.8	29.0	24.5	14.9	
	2 days	20.9	13.7	13.1	11.3	
	3 days	8.8	6.4	4.8	4.0	
	4 days	0.7	3.0	1.6	1.6	
	5 days	0.7	2.8	0.7	0.0	
	6 days	0.0	0.2	0.2	0.4	
	7 days	2.0	1.9	2.1	0.8	
	Indefinite	0.0	0.0	0.1	0.0	
Average number of days eating high sugar food each week	None	8.1	16.1	35.0	66.9	<0.001
	1 day	16.9	18.9	24.6	13.3	
	2 days	24.3	19.7	16.5	11.3	
	3 days	16.2	15.9	11.1	2.4	
	4 days	10.8	9.6	4.4	2.0	
	5 days	9.5	5.2	2.2	0.0	
	6 days	0.0	2.1	0.3	0.0	
	7 days	14.2	12.5	5.8	4.0	
	Indefinite	0.0	0.0	0.1	0.0	

Base = 2,001 (4 cases who refused to answer their age were excluded.)

Table 9 Consumption behaviour of fruit, vegetables, high fat food, high salt food and high sugar food by education level

		Education level			
		Primary or below	Secondary	Tertiary or above	χ^2 test
		%	%	%	*p*-value
Average number of days eating fruit each week	None	4.2	3.1	2.0	0.13
	1 day	3.0	3.6	4.5	
	2 days	6.0	8.1	7.7	
	3 days	8.5	11.4	12.7	
	4 days	8.5	9.2	9.3	
	5 days	6.0	7.6	7.9	
	6 days	0.9	3.2	2.9	
	7 days	62.8	53.8	53.1	
Average number of servings of fruit consumed (on one of those days eating fruit)	Less than 0.5 serving	0.6	0.6	1.1	0.67
	0.5 serving	6.3	5.4	4.3	
	1 serving	55.6	58.0	57.1	
	1.5 servings	5.7	5.8	8.1	
	2 servings	22.1	20.6	20.9	
	2.5 servings	1.2	1.7	1.6	
	3 servings	2.7	3.3	3.0	
	More than 3 servings	0.6	1.0	0.9	
	Indefinite	0.0	0.0	0.2	
	Don't know	0.6	0.1	0.2	
	Don't remember	0.3	0.4	0.7	
	Not applicable	4.2	3.1	2.0	
Average number of days eating vegetables each week	None	0.6	0.4	0.2	<0.01
	1 day	0.6	0.8	0.5	
	2 days	0.3	2.0	2.9	
	3 days	1.2	3.6	3.9	
	4 days	3.3	4.4	5.2	
	5 days	2.7	5.0	8.2	
	6 days	2.1	2.7	2.1	
	7 days	89.1	81.1	76.9	
Average number of servings of vegetables consumed (on one of those days eating vegetables)	Less than 0.5 serving	0.9	1.0	0.5	<0.01
	0.5 serving	8.2	5.2	6.8	
	1 serving	40.2	44.8	37.0	
	1.5 servings	5.7	5.3	6.1	
	2 servings	31.4	31.2	34.7	
	2.5 servings	2.7	2.1	1.6	
	3 servings	2.7	4.9	7.7	
	More than 3 servings	4.2	4.3	4.7	
	Indefinite	0.0	0.0	0.2	
	Don't know	2.4	0.7	0.4	
	Don't remember	0.9	0.2	0.2	
	Not applicable	0.6	0.4	0.2	

Table 9 Consumption behaviour of fruit, vegetables, high fat food, high salt food and high sugar food by education level (cont'd)

		Education level			
		Primary or below	Secondary	Tertiary or above	χ^2 test
		%	%	%	*p*-value
Average number of days eating high fat food each week	None	44.1	17.6	14.8	<0.001
	1 day	13.6	15.3	17.9	
	2 days	14.2	22.3	18.6	
	3 days	11.2	15.0	17.9	
	4 days	4.8	9.0	9.3	
	5 days	1.5	3.6	6.8	
	6 days	0.9	1.4	2.0	
	7 days	9.7	15.7	12.7	
Average number of days eating high salt food each week	None	58.0	49.6	48.8	0.06
	1 day	20.8	25.2	27.0	
	2 days	13.9	14.1	12.5	
	3 days	4.5	5.5	5.5	
	4 days	0.9	2.0	2.3	
	5 days	0.3	1.1	2.0	
	6 days	0.6	0.1	0.2	
	7 days	0.9	2.4	1.4	
	Indefinite	0.0	0.0	0.2	
Average number of days eating high sugar food each week	None	58.6	27.8	23.6	<0.001
	1 day	17.8	21.1	23.3	
	2 days	12.1	17.4	20.4	
	3 days	4.5	13.4	12.5	
	4 days	3.6	5.6	8.1	
	5 days	0.6	4.0	3.6	
	6 days	0.0	0.8	0.9	
	7 days	2.7	10.0	7.5	
	Indefinite	0.0	0.0	0.2	

Base = 1,995 (10 cases who refused to answer their education level were excluded.)

Table 10 Barriers for eating more fruit and vegetables‡

	%	(n)
Not delicious	3.3	(67)
Too busy to buy/eat	15.6	(313)
Inconvenient to buy/eat	5.0	(100)
Not commonly available when eating out	9.8	(197)
Not commonly available when eating at home	2.9	(59)
No one serve them to me/lazy	9.7	(194)
Too expensive	1.8	(36)
Too full to eat	4.1	(82)
Dislike to eat/do not eat	6.3	(126)
Eat everyday	14.0	(281)
No reason	35.0	(702)
Others	4.6	(93)
Don't know	1.0	(20)

‡This is an open-ended question and multiple answers were allowed.
Base = 2,005

Table 11 Barriers for eating more fruit and vegetables‡ by gender

	Gender		
	Male %	**Female** %	χ^2 test *p*-value
Not delicious	4.3	2.5	0.03
Too busy to buy/eat	15.4	15.8	0.79
Inconvenient to buy/eat	5.3	4.7	0.54
Not commonly available when eating out	9.0	10.5	0.26
Not commonly available when eating at home	3.4	2.5	0.22
No one serve them to me/lazy	11.3	8.1	0.02
Too expensive	1.7	1.9	0.67
Too full to eat	3.2	4.9	0.06
Dislike to eat/do not eat	7.0	5.7	0.23
Eat everyday	14.2	13.8	0.78
No reason	36.2	33.9	0.30
Others	3.1	6.0	<0.01
Don't know	0.8	1.2	0.47

‡This is an open-ended question and multiple answers were allowed.
Base = 2,005.

Table 12 Barriers for eating more fruit and vegetables‡ by age group

	Age group				
	12 – 17	18 – 34	35 – 64	≥ 65	χ^2 test
	%	%	%	%	*p*-value
Not delicious	13.5	2.8	2.3	2.8	<0.001
Too busy to buy/eat	12.2	19.5	16.8	4.4	<0.001
Inconvenient to buy/eat	3.4	6.0	5.3	2.4	0.13
Not commonly available when eating out	10.8	13.9	9.5	2.0	<0.001
Not commonly available when eating at home	5.4	5.4	2.0	0.4	<0.001
No one serve them to me/lazy	17.6	13.3	8.2	3.6	<0.001
Too expensive	2.0	0.7	1.7	4.4	<0.01
Too full to eat	6.1	4.5	3.9	2.8	0.42
Dislike to eat/do not eat	8.1	8.2	5.2	5.2	0.08
Eat everyday	8.1	9.2	15.3	22.6	<0.001
No reason	22.3	24.5	39.1	46.8	<0.001
Others	2.0	2.2	4.7	11.3	<0.001
Don't know	4.1	1.3	0.5	0.8	<0.01

‡This is an open-ended question and multiple answers were allowed.
Base = 2,001 (4 cases who refused to answer their age were excluded.)

Table 13 Barriers for eating more fruit and vegetables‡ by education level

	Education level			
	Primary or below	Secondary	Tertiary or above	χ^2 test
	%	%	%	*p*-value
Not delicious	3.6	3.7	2.3	0.31
Too busy to buy/eat	5.7	16.0	20.9	<0.001
Inconvenient to buy/eat	3.3	4.3	7.5	<0.01
Not commonly available when eating out	3.3	9.4	14.7	<0.001
Not commonly available when eating out at home	1.8	2.8	3.9	0.18
No one serve them to me/lazy	4.2	11.4	9.7	<0.01
Too expensive	3.3	1.5	1.4	0.08
Too full to eat	3.0	4.1	4.8	0.42
Dislike to eat/do not eat	6.6	6.8	5.0	0.35
Eat everyday	19.9	12.8	12.9	<0.01
No reason	43.5	35.7	28.4	<0.001
Others	8.5	4.3	2.7	<0.001
Don't know	1.5	1.0	0.7	0.52

‡This is an open-ended question and multiple answers were allowed.
Base = 1,995 (10 cases who refused to answer their education level were excluded.)

Table 14 Eating out habits in the past week

		%	(n)
Frequency of eat-out breakfast	Never	44.1	(884)
	Once a week	8.4	(169)
	2-4 times a week	18.1	(362)
	5-6 times a week	8.0	(161)
	7 times a week	18.5	(370)
	Skipped breakfast	2.8	(56)
	Don't remember	0.1	(3)
Place of eat-out breakfast (among respondents who ate out for breakfast)	Chinese restaurants (incl. HK tea restaurants)	62.0	(658)
	Non-Chinese restaurants	5.6	(59)
	Fast food shops	30.3	(322)
	Bars	0.1	(1)
	Other eating & drinking places	1.0	(11)
	Others	0.7	(7)
	Don't remember	0.4	(4)
Frequency of eat-out lunch	Never	27.1	(544)
	Once a week	7.3	(146)
	2-4 times a week	20.6	(414)
	5-6 times a week	24.6	(493)
	7 times a week	19.2	(385)
	Skipped lunch	1.0	(21)
	Don't remember	0.1	(2)
Place of eat-out lunch (among respondents who ate out for lunch)	Chinese restaurants (incl. HK tea restaurants)	63.5	(913)
	Non-Chinese restaurants	8.2	(118)
	Fast food shops	23.8	(342)
	Bars	0.1	(1)
	Other eating & drinking places	1.7	(25)
	Others	2.0	(29)
	Don't remember	0.7	(10)
Frequency of eat-out dinner	Never	47.2	(947)
	Once a week	17.8	(356)
	2-4 times a week	28.8	(578)
	5-6 times a week	3.2	(65)
	7 times a week	2.7	(55)
	Skipped dinner	0.1	(2)
	Don't remember	0.1	(2)
Place of eat-out dinner (among respondents who ate out for dinner)	Chinese restaurants (incl. HK tea restaurants)	67.1	(707)
	Non-Chinese restaurants	19.4	(204)
	Fast food shops	9.5	(100)
	Bars	0.2	(2)
	Other eating & drinking places	2.8	(29)
	Others	0.3	(3)
	Don't remember	0.9	(9)

Base = 2,005

Table 15 Eating out habits in the past week by gender

		Gender		
		Male %	**Female** %	χ^2 test *p*-value
Frequency of eat-out breakfast	Never	37.8	49.9	<0.001
	Once a week	6.8	10.0	
	2-4 times a week	17.9	18.2	
	5-6 times a week	10.8	5.5	
	7 times a week	24.2	13.1	
	Skipped breakfast	2.2	3.4	
	Don't remember	0.3	0.0	
Place of eat-out breakfast (among respondents who ate out for breakfast)	Chinese restaurants (incl. HK tea restaurants)	63.2	60.5	0.65
	Non-Chinese restaurants	5.6	5.5	
	Fast food shops	29.3	31.6	
	Bars	0.0	0.2	
	Other eating & drinking places	0.7	1.4	
	Others	0.9	0.4	
	Don't remember	0.3	0.4	
Frequency of eat-out lunch	Never	18.5	35.1	<0.001
	Once a week	5.7	8.7	
	2-4 times a week	17.5	23.6	
	5-6 times a week	31.4	18.3	
	7 times a week	25.6	13.3	
	Skipped lunch	1.1	1.0	
	Don't remember	0.2	0.0	
Place of eat-out lunch (among respondents who ate out for lunch)	Chinese restaurants (incl. HK tea restaurants)	63.4	63.6	0.79
	Non-Chinese restaurants	8.3	8.1	
	Fast food shops	24.4	23.1	
	Bars	0.0	0.1	
	Other eating & drinking places	1.4	2.1	
	Others	1.9	2.1	
	Don't remember	0.5	0.9	
Frequency of eat-out dinner	Never	44.5	49.8	<0.001
	Once a week	15.4	19.9	
	2-4 times a week	32.1	25.8	
	5-6 times a week	4.3	2.3	
	7 times a week	3.4	2.1	
	Skipped dinner	0.2	0.0	
	Don't remember	0.1	0.1	
Place of eat-out dinner (among respondents who ate out for dinner)	Chinese restaurants (incl. HK tea restaurants)	68.4	65.8	0.75
	Non-Chinese restaurants	17.5	21.2	
	Fast food shops	10.2	8.8	
	Bars	0.2	0.2	
	Other eating & drinking places	2.4	3.1	
	Others	0.4	0.2	
	Don't remember	0.9	0.8	

Base = 2,005

Table 16 Eating out habits in the past week by age group

		Age group				
		12 – 17	18 – 34	35 – 64	≥ 65	χ^2 test
		%	%	%	%	*p*-value
Frequency of eat-out breakfast	Never	60.1	45.7	38.3	56.0	<0.001
	Once a week	8.8	8.8	8.8	5.6	
	2-4 times a week	16.2	19.1	19.7	10.1	
	5-6 times a week	4.1	8.4	9.1	5.2	
	7 times a week	5.4	14.4	21.8	20.6	
	Skipped breakfast	5.4	3.6	2.2	2.0	
	Don't remember	0.0	0.0	0.2	0.4	
Place of eat-out breakfast (among respondents who ate out for breakfast)	Chinese restaurants (incl. HK tea restaurants)	45.1	52.4	63.6	84.5	<0.001
	Non-Chinese restaurants	3.9	5.5	6.3	1.9	
	Fast food shops	41.2	40.6	27.9	13.6	
	Bars	0.0	0.0	0.2	0.0	
	Other eating & drinking places	0.0	1.1	1.3	0.0	
	Others	7.8	0.4	0.3	0.0	
	Don't remember	2.0	0.0	0.5	0.0	
Frequency of eat-out lunch	Never	16.9	14.2	27.6	59.3	<0.001
	Once a week	6.8	5.1	7.6	10.9	
	2-4 times a week	17.6	23.2	20.6	16.5	
	5-6 times a week	35.8	32.0	24.1	4.0	
	7 times a week	22.3	24.7	19.0	6.9	
	Skipped lunch	0.7	0.7	1.0	2.0	
	Don't remember	0.0	0.0	0.1	0.4	
Place of eat-out lunch (among respondents who ate out for lunch)	Chinese restaurants (incl. HK tea restaurants)	50.0	55.5	68.9	74.7	<0.001
	Non-Chinese restaurants	11.5	11.2	6.4	4.2	
	Fast food shops	23.0	30.0	20.8	18.9	
	Bars	0.0	0.0	0.1	0.0	
	Other eating & drinking places	1.6	1.3	2.0	2.1	
	Others	12.3	1.5	0.9	0.0	
	Don't remember	1.6	0.4	0.8	0.0	
Frequency of eat-out dinner	Never	55.4	29.4	47.1	81.9	<0.001
	Once a week	13.5	16.3	20.7	10.5	
	2-4 times a week	26.4	45.1	26.2	6.5	
	5-6 times a week	1.4	5.8	2.8	0.4	
	7 times a week	2.7	3.2	3.1	0.4	
	Skipped dinner	0.0	0.2	0.1	0.0	
	Don't remember	0.7	0.0	0.0	0.4	
Place of eat-out dinner (among respondents who ate out for dinner)	Chinese restaurants (incl. HK tea restaurants)	58.5	55.3	75.1	75.0	<0.001
	Non-Chinese restaurants	20.0	28.2	14.1	11.4	
	Fast food shops	16.9	12.0	7.1	9.1	
	Bars	0.0	0.3	0.2	0.0	
	Other eating & drinking places	1.5	2.7	2.8	4.5	
	Others	0.0	0.3	0.4	0.0	
	Don't remember	3.1	1.3	0.4	0.0	

Base = 2,001 (4 cases who refused to answer their age were excluded.)

Table 17 Eating out habits in the past week by education level

		Education level			χ^2 test
		Primary or below	Secondary	Tertiary or above	
		%	%	%	*p*-value
Frequency of eat-out breakfast	Never	45.0	42.5	46.3	<0.01
	Once a week	5.1	8.3	10.7	
	2-4 times a week	15.7	18.7	18.2	
	5-6 times a week	7.9	8.1	8.2	
	7 times a week	24.2	18.6	14.5	
	Skipped breakfast	1.5	3.6	2.0	
	Don't remember	0.6	0.1	0.0	
Place of eat-out breakfast (among respondents who ate out for breakfast)	Chinese restaurants (incl. HK tea restaurants)	77.1	64.3	48.1	<0.001
	Non-Chinese restaurants	4.6	4.2	9.0	
	Fast food shops	16.6	29.5	40.1	
	Bars	0.6	0.0	0.0	
	Other eating & drinking places	1.1	0.5	2.1	
	Others	0.0	1.0	0.3	
	Don't remember	0.0	0.5	0.3	
Frequency of eat-out lunch	Never	53.8	23.9	17.2	<0.001
	Once a week	9.7	7.5	5.4	
	2-4 times a week	16.3	20.4	23.8	
	5-6 times a week	9.4	26.6	29.9	
	7 times a week	7.9	20.7	23.3	
	Skipped lunch	2.7	0.8	0.5	
	Don't remember	0.3	0.1	0.0	
Place of eat-out lunch (among respondents who ate out for lunch)	Chinese restaurants (incl. HK tea restaurants)	72.0	65.9	56.5	<0.01
	Non-Chinese restaurants	3.5	7.1	11.5	
	Fast food shops	20.3	22.4	27.6	
	Bars	0.7	0.0	0.0	
	Other eating & drinking places	1.4	1.6	2.0	
	Others	2.1	2.3	1.5	
	Don't remember	0.0	0.7	0.9	
Frequency of eat-out dinner	Never	77.9	47.7	27.5	<0.001
	Once a week	12.1	18.2	20.6	
	2-4 times a week	7.6	27.9	43.5	
	5-6 times a week	1.5	3.0	4.8	
	7 times a week	0.6	3.1	3.4	
	Skipped dinner	0.3	0.1	0.0	
	Don't remember	0.0	0.1	0.2	
Place of eat-out dinner (among respondents who ate out for dinner)	Chinese restaurants (incl. HK tea restaurants)	79.2	69.6	61.6	0.08
	Non-Chinese restaurants	9.7	16.7	24.8	
	Fast food shops	8.3	9.4	9.9	
	Bars	0.0	0.2	0.2	
	Other eating & drinking places	1.4	3.3	2.0	
	Others	0.0	0.2	0.5	
	Don't remember	1.4	0.7	1.0	

Base = 1,995 (10 cases who refused to answer their education level were excluded.)

Table 18 Food selection practices when eating out

		%	(n)
***Choosing or requesting food with*:**			
More fruit/vegetables	Always	20.7	(415)
	Often	16.2	(325)
	Sometimes	20.3	(407)
	Seldom	16.2	(324)
	Never	26.6	(534)
Less fat/oil	Always	22.6	(453)
	Often	15.3	(306)
	Sometimes	20.5	(412)
	Seldom	17.2	(345)
	Never	24.4	(489)
Less salt	Always	16.4	(329)
	Often	10.9	(219)
	Sometimes	18.6	(373)
	Seldom	20.5	(412)
	Never	33.5	(672)
Less sugar	Always	18.3	(367)
	Often	11.5	(231)
	Sometimes	19.3	(386)
	Seldom	20.0	(401)
	Never	30.9	(620)

Base = 2,005

Table 19 Food selection practices when eating out by gender

		Gender		
		Male	**Female**	χ^2 test
		%	%	*p*-value
***Choosing or requesting food with*:**				
More fruit/vegetables	Always	18.1	23.1	<0.01
	Often	15.1	17.3	
	Sometimes	20.9	19.8	
	Seldom	15.9	16.4	
	Never	30.0	23.5	
Less fat/oil	Always	19.6	25.3	<0.001
	Often	13.5	16.9	
	Sometimes	21.7	19.5	
	Seldom	17.2	17.3	
	Never	28.0	21.1	
Less salt	Always	16.0	16.8	0.16
	Often	9.4	12.4	
	Sometimes	19.1	18.1	
	Seldom	20.2	20.9	
	Never	35.3	31.8	
Less sugar	Always	16.4	20.0	<0.01
	Often	9.8	13.1	
	Sometimes	20.4	18.2	
	Seldom	19.8	20.2	
	Never	33.7	28.4	

Base = 2,005.

Table 20 Food selection practices when eating out by age group

		Age group				
		12 – 17	35 – 34	35 – 64	≥ 65	χ^2 test
		%	%	%	%	*p*-value
***Choosing or requesting food with*:**						
More fruit/vegetables	Always	10.1	16.5	25.2	16.5	<0.001
	Often	6.1	14.0	17.0	23.0	
	Sometimes	23.0	27.9	18.7	9.7	
	Seldom	27.7	16.3	15.0	14.1	
	Never	33.1	25.3	24.1	36.7	
Less fat/oil	Always	7.4	18.7	27.1	21.0	<0.001
	Often	13.5	12.0	15.7	21.8	
	Sometimes	35.1	23.2	18.9	12.5	
	Seldom	20.3	19.7	16.4	13.3	
	Never	23.6	26.4	21.9	31.5	
Less salt	Always	5.4	14.0	19.3	15.3	<0.001
	Often	4.7	7.9	11.9	16.9	
	Sometimes	23.6	22.7	16.7	14.9	
	Seldom	28.4	23.0	19.6	14.9	
	Never	37.8	32.4	32.5	37.9	
Less sugar	Always	9.5	13.3	22.8	15.3	<0.001
	Often	11.5	7.7	12.5	14.9	
	Sometimes	22.3	24.3	17.5	14.1	
	Seldom	22.3	22.8	19.0	17.3	
	Never	34.5	31.8	28.3	38.3	

Base = 2,001 (4 cases who refused to answer their age were excluded.)

Table 21 Food selection practices when eating out by education level

		Education level			
		Primary or below	Secondary	Tertiary or above	χ^2 test
		%	%	%	*p*-value
***Choosing or requesting food with*:**					
More fruit/vegetables	Always	17.8	18.7	26.7	<0.001
	Often	19.0	16.5	14.0	
	Sometimes	10.6	21.7	23.3	
	Seldom	15.4	17.1	14.5	
	Never	37.2	26.0	21.6	
Less fat/oil	Always	21.8	20.0	28.6	<0.001
	Often	19.6	13.3	16.3	
	Sometimes	15.1	22.4	19.9	
	Seldom	16.3	18.1	15.7	
	Never	27.2	26.2	19.5	
Less salt	Always	16.0	15.2	19.3	0.02
	Often	13.3	10.0	11.1	
	Sometimes	14.5	19.0	19.7	
	Seldom	17.2	21.5	20.6	
	Never	39.0	34.2	29.3	
Less sugar	Always	16.9	17.6	20.9	<0.01
	Often	15.7	11.0	10.0	
	Sometimes	12.4	19.8	22.4	
	Seldom	19.6	20.2	19.1	
	Never	35.3	31.5	27.5	

Base = 1,995 (10 cases who refused to answer their education level were excluded.)

Table 22 Perception of ingredients in food provided by food premises usually visited

		%	(n)
Fruit	High	1.8	(37)
	Medium	11.6	(232)
	Low	84.5	(1694)
	Don't know	2.1	(42)
Vegetables	High	8.5	(170)
	Medium	35.5	(712)
	Low	53.9	(1081)
	Don't know	2.1	(42)
Fat/oil	High	60.1	(1206)
	Medium	27.0	(542)
	Low	10.1	(202)
	Don't know	2.7	(55)
Salt	High	40.9	(821)
	Medium	43.5	(873)
	Low	12.2	(244)
	Don't know	3.3	(67)
Sugar	High	27.2	(546)
	Medium	44.5	(893)
	Low	22.3	(448)
	Don't know	5.9	(118)

Base = 2,005

Table 23 Perception of ingredients in food provided by food premises usually visited by gender

		Gender		
		Male	**Female**	χ^2 test
		%	%	*p*-value
Fruit	High	1.7	2.0	0.57
	Medium	12.3	10.9	
	Low	83.7	85.2	
	Don't know	2.4	1.8	
Vegetables	High	7.9	9.0	0.24
	Medium	35.0	36.0	
	Low	54.4	53.5	
	Don't know	2.7	1.5	
Fat/oil	High	58.0	62.1	0.04
	Medium	29.3	24.9	
	Low	9.4	10.7	
	Don't know	3.3	2.2	
Salt	High	39.7	42.1	0.31
	Medium	43.9	43.2	
	Low	12.4	12.0	
	Don't know	4.1	2.7	
Sugar	High	25.9	28.5	0.50
	Medium	45.2	43.9	
	Low	23.3	21.5	
	Don't know	5.6	6.1	

Base = 2,005

Table 24 Perception of ingredients in food provided by food premises usually visited by age group

		Age group				
		12 – 17	18 – 34	35 – 64	≥65	χ^2 test
		%	%	%	%	*p*-value
Fruit	High	2.7	0.7	2.2	2.0	<0.001
	Medium	21.6	11.2	10.1	12.5	
	Low	75.0	87.3	85.8	78.6	
	Don't know	0.7	0.7	1.9	6.9	
Vegetables	High	8.8	7.3	9.0	8.9	<0.01
	Medium	36.5	40.1	34.1	31.5	
	Low	54.1	52.2	54.4	54.8	
	Don't know	0.7	0.4	2.5	4.8	
Fat/oil	High	56.1	57.3	63.9	52.4	<0.001
	Medium	31.8	33.0	23.5	27.0	
	Low	11.5	9.2	9.4	13.7	
	Don't know	0.7	0.6	3.2	6.9	
Salt	High	38.5	38.2	44.0	35.1	<0.01
	Medium	45.9	47.2	41.6	42.7	
	Low	13.5	12.9	10.7	15.7	
	Don't know	2.0	1.7	3.6	6.5	
Sugar	High	20.9	25.5	29.1	26.6	<0.01
	Medium	52.7	47.0	43.2	40.7	
	Low	25.0	24.2	20.4	24.2	
	Don't know	1.4	3.4	7.2	8.5	

Base = 2,001 (4 cases who refused to answer age were excluded.)

Table 25 Perception of ingredients in food provided by food premises usually visited by education level

		Education level			
		Primary or below	Secondary	Tertiary or above	χ^2 test
		%	%	%	*p*-value
Fruit	High	3.6	1.6	1.3	<0.001
	Medium	11.5	11.8	11.3	
	Low	79.8	84.6	87.1	
	Don't know	5.1	2.0	0.4	
Vegetables	High	11.5	7.8	8.2	<0.01
	Medium	29.0	36.1	38.5	
	Low	55.6	54.1	52.2	
	Don't know	3.9	2.0	1.1	
Fat/oil	High	58.3	61.2	59.2	<0.001
	Medium	21.5	26.5	31.1	
	Low	13.6	10.4	7.5	
	Don't know	6.6	1.9	2.1	
Salt	High	35.6	43.1	39.9	0.03
	Medium	43.2	42.3	46.2	
	Low	16.0	11.4	11.4	
	Don't know	5.1	3.3	2.5	
Sugar	High	26.6	27.2	27.4	0.02
	Medium	38.7	45.1	47.6	
	Low	25.4	22.0	20.8	
	Don't know	9.4	5.7	4.3	

Base = 1,995 (10 cases who refused to answer their education level were excluded.)

Table 26 Expectation for food premises about ingredients in food

		%	(n)
I hope that food premises can provide food with:			
More fruit/vegetables in ingredients	Strongly agree	36.2	(726)
	Agree	57.2	(1147)
	Disagree	2.1	(43)
	Strongly disagree	0.1	(2)
	No comment	4.1	(83)
	Don't know	0.2	(4)
Less fat/oil, less salt and less sugar in ingredients	Strongly agree	38.4	(769)
	Agree	54.8	(1099)
	Disagree	2.9	(58)
	Strongly disagree	0.2	(4)
	No comment	3.6	(72)
	Don't know	0.1	(3)

Base = 2,005

Table 27 Expectation for food premises about ingredients in food by gender

		Gender		
		Male	**Female**	χ^2 test
		%	%	*p*-value
I hope that food premises can provide food with:				
More fruit/vegetables in ingredients	Strongly agree	33.3	38.9	0.04
	Agree	59.1	55.4	
	Disagree	2.5	1.8	
	Strongly disagree	0.2	0.0	
	No comment	4.8	3.5	
	Don't know	0.1	0.3	
Less fat/oil, less salt and less sugar in ingredients	Strongly agree	32.0	44.2	<0.001
	Agree	58.5	51.4	
	Disagree	4.2	1.7	
	Strongly disagree	0.2	0.2	
	No comment	5.0	2.3	
	Don't know	0.1	0.2	

Base = 2,005.

Table 28 Expectation for food premises about ingredients in food by age group

		Age group				
		12 – 17	18 – 34	35 – 64	≥ 65	χ^2 test
		%	%	%	%	*p*-value
I hope that food premises can provide food with:						
More fruit/vegetables in ingredients	Strongly agree	28.4	33.9	40.5	27.0	<0.001
	Agree	65.5	61.4	52.9	61.7	
	Disagree	1.4	2.4	2.1	2.0	
	Strongly disagree	0.0	0.2	0.1	0.0	
	No comment	4.7	2.1	4.0	8.9	
	Don't know	0.0	0.0	0.3	0.4	
Less fat/oil, less salt and less sugar in ingredients	Strongly agree	25.7	35.8	42.2	34.7	<0.01
	Agree	65.5	58.6	51.5	54.4	
	Disagree	6.1	2.6	2.4	3.6	
	Strongly disagree	0.0	0.0	0.4	0.0	
	No comment	2.7	3.0	3.3	6.9	
	Don't know	0.0	0.0	0.2	0.4	

Base = 2,001 (4 cases who refused to answer their age were excluded.)

Table 29 Expectation for food premises about ingredients in food by education level

		Education level			
		Primary or below	**Secondary**	**Tertiary or above**	χ^2 test
		%	%	%	*p*-value
I hope that food premises can provide food with:					
More fruit/vegetables in ingredients	Strongly agree	27.8	34.5	44.9	<0.001
	Agree	59.5	60.5	49.0	
	Disagree	2.4	1.8	2.7	
	Strongly disagree	0.3	0.0	0.2	
	No comment	9.1	3.2	3.2	
	Don't know	0.9	0.1	0.0	
Less fat/oil, less salt and less sugar in ingredients	Strongly agree	34.4	37.5	42.9	<0.01
	Agree	55.9	56.4	50.8	
	Disagree	3.0	2.6	3.2	
	Strongly disagree	0.3	0.1	0.4	
	No comment	5.4	3.4	2.7	
	Don't know	0.9	0.0	0.0	

Base = 1,995 (10 cases who refused to answer their education level were excluded.)

Table 30 Suggestions for food premises on increasing consumption of fruit and vegetables when eating out

	%	(n)
Convenient	4.6	(93)
Delicious	12.1	(243)
More choices	40.0	(802)
Free/cheaper	22.0	(441)
Others	10.8	(216)
No comment	19.7	(395)
Don't know	6.4	(128)

Base = 2,005

Table 31 Suggestions for food premises on increasing consumption of fruit and vegetables when eating out by gender

	Gender		
	Male	**Female**	χ^2 test
	%	%	*p*-value
Convenient	4.9	4.4	0.61
Delicious	12.7	11.6	0.46
More choices	38.3	41.6	0.13
Free/cheaper	23.7	20.4	0.08
Others	10.0	11.5	0.27
No comment	20.5	19.0	0.40
Don't know	5.5	7.2	0.12

Base = 2,005

Table 32 Suggestions for food premises on increasing consumption of fruit and vegetables when eating out by age group

	Age group				
	12 – 17	18 – 34	35 – 64	≥ 65	χ^2 test
	%	%	%	%	*p*-value
Convenient	2.7	5.6	4.9	2.8	0.23
Delicious	13.5	14.6	11.9	7.3	0.03
More choices	39.9	40.8	42.7	27.0	<0.001
Free/cheaper	24.3	27.3	20.7	14.9	<0.01
Others	15.5	12.9	10.3	5.6	<0.01
No comment	10.1	12.4	20.3	38.3	<0.001
Don't know	6.1	4.7	6.5	9.3	0.11

Base = 2,001 (4 cases who refused to answer their age were excluded.)

Table 33 Suggestions for food premises on increasing consumption of fruit and vegetables when eating out by education level

	Education level			
	Primary or below	Secondary	Tertiary or above	χ^2 test
	%	%	%	*p*-value
Convenient	2.7	4.5	6.1	0.07
Delicious	9.1	12.5	13.4	0.14
More choices	29.3	40.5	46.2	<0.001
Free/cheaper	15.4	22.0	25.8	<0.01
Others	7.9	11.0	12.2	0.13
No comment	32.3	18.7	13.6	<0.001
Don't know	10.6	6.3	3.8	<0.001

Base = 1,995 (10 cases who refused to answer their education level were excluded.)

Table 34 Perceived effectiveness of various measures on encouraging to eat healthier when eating out

		%	(n)
Label clearly in menu those dishes with more fruit/vegetables, less fat/oil, less salt or less sugar	Very effective	19.9	(399)
	Effective	64.2	(1288)
	Ineffective	11.5	(231)
	Very ineffective	1.0	(20)
	No comment	2.5	(51)
	Don't know	0.8	(16)
Provide more food choices with more fruit/vegetables, less fat/oil, less salt or less sugar in food premises	Very effective	23.9	(480)
	Effective	66.7	(1338)
	Ineffective	6.4	(128)
	Very ineffective	0.5	(11)
	No comment	1.9	(38)
	Don't know	0.5	(10)
Offer cash/discount coupons for dishes with fruit/vegetables, less fat/oil, less salt or less sugar	Very effective	23.2	(466)
	Effective	50.8	(1018)
	Ineffective	19.8	(397)
	Very ineffective	1.3	(26)
	No comment	3.8	(76)
	Don't know	1.1	(22)
Advertise or promote in food premises	Very effective	11.2	(225)
	Effective	68.3	(1369)
	Ineffective	16.1	(323)
	Very ineffective	0.9	(18)
	No comment	2.9	(58)
	Don't know	0.6	(12)

Base = 2,005

Table 35 Perceived effectiveness of various measures on encouraging to eat healthier when eating out by gender

		Gender		
		Male	**Female**	χ^2 test
		%	%	*p*-value
Label clearly in menu those dishes with more fruit/ vegetables, less fat/oil, less salt or less sugar	Very effective	18.7	21.0	0.06
	Effective	63.4	65.0	
	Ineffective	13.6	9.6	
	Very ineffective	1.2	0.8	
	No comment	2.2	2.9	
	Don't know	0.8	0.8	
Provide more food choices with more fruit/vegetables, less fat/oil, less salt or less sugar in food premises	Very effective	22.0	25.7	0.01
	Effective	67.3	66.3	
	Ineffective	8.0	4.9	
	Very ineffective	0.7	0.4	
	No comment	1.8	2.0	
	Don't know	0.2	0.8	
Offer cash/discount coupons for dishes with fruit/vegetables, less fat/oil, less salt or less sugar	Very effective	21.4	24.9	<0.001
	Effective	49.2	52.3	
	Ineffective	23.3	16.6	
	Very ineffective	2.0	0.7	
	No comment	3.3	4.2	
	Don't know	0.8	1.3	
Advertise or promote in food premises	Very effective	9.5	12.8	<0.01
	Effective	66.8	69.6	
	Ineffective	19.2	13.2	
	Very ineffective	1.1	0.7	
	No comment	2.8	3.0	
	Don't know	0.5	0.7	

Base = 2,005

Table 36 Perceived effectiveness of various measures on encouraging to eat healthier when eating out by age group

		Age group				
		12 – 17	18 – 34	35 – 64	≥ 65	χ^2 test
		%	%	%	%	*p*-value
Label clearly in menu those dishes with more fruit/vegetables, less fat/oil, less salt or less sugar	Very effective	16.2	14.4	23.5	18.1	<0.001
	Effective	71.6	70.0	61.1	61.3	
	Ineffective	10.1	13.7	11.5	7.7	
	Very ineffective	0.7	0.6	1.2	1.2	
	No comment	0.7	1.1	2.2	8.1	
	Don't know	0.7	0.2	0.5	3.6	
Provide more food choices with more fruit/vegetables, less fat/oil, less salt or less sugar in food premises	Very effective	20.9	20.2	27.5	18.5	<0.001
	Effective	70.9	71.0	64.4	64.9	
	Ineffective	7.4	8.6	5.4	5.2	
	Very ineffective	0.0	0.0	0.8	0.8	
	No comment	0.0	0.2	1.6	8.1	
	Don't know	0.7	0.0	0.3	2.4	
Offer cash/discount coupons for dishes with fruit/vegetables, less fat/oil, less salt or less sugar	Very effective	25.0	24.3	24.2	16.1	<0.001
	Effective	60.8	52.2	47.5	55.2	
	Ineffective	12.2	21.0	21.7	14.1	
	Very ineffective	0.7	0.7	1.7	1.2	
	No comment	0.7	1.3	3.8	10.5	
	Don't know	0.7	0.4	1.1	2.8	
Advertise or promote in food premises	Very effective	6.8	9.7	12.8	10.5	<0.001
	Effective	60.8	68.9	69.5	65.7	
	Ineffective	29.1	20.0	13.8	10.1	
	Very ineffective	2.7	0.4	0.7	1.6	
	No comment	0.7	0.9	2.5	10.1	
	Don't know	0.0	0.0	0.7	2.0	

Base = 2,001 (4 cases who refused to answer their age were excluded.)

Table 37 Perceived effectiveness of various measures on encouraging to eat healthier when eating out by education level

		Education level			
		Primary or below	**Secondary**	**Tertiary or above**	χ^2 test
		%	%	%	*p*-value
Label clearly in menu those dishes with more fruit/vegetables, less fat/oil, less salt or less sugar	Very effective	19.0	20.6	19.3	<0.001
	Effective	61.3	65.5	63.7	
	Ineffective	7.9	11.0	14.5	
	Very ineffective	0.9	0.9	1.3	
	No comment	7.9	1.5	1.3	
	Don't know	3.0	0.5	0.0	
Provide more food choices with more fruit/vegetables, less fat/oil, less salt or less sugar in food premises	Very effective	23.0	23.6	25.6	<0.001
	Effective	64.7	67.5	66.7	
	Ineffective	4.5	7.1	5.9	
	Very ineffective	0.6	0.5	0.7	
	No comment	5.7	1.0	1.1	
	Don't know	1.5	0.4	0.0	
Offer cash/discount coupons for dishes with fruit/vegetables, less fat/oil, less salt or less sugar	Very effective	19.0	25.2	22.2	<0.001
	Effective	54.4	50.4	49.2	
	Ineffective	12.4	20.8	22.2	
	Very ineffective	1.5	0.7	2.3	
	No comment	10.3	2.1	3.0	
	Don't know	2.4	0.7	1.1	
Advertise or promote in food premises	Very effective	11.5	11.4	10.9	<0.001
	Effective	69.8	69.0	66.0	
	Ineffective	9.1	16.4	19.9	
	Very ineffective	1.2	0.8	0.9	
	No comment	6.6	2.1	2.0	
	Don't know	1.8	0.4	0.4	

Base = 1,995 (10 cases who refused to answer their education level were excluded.)

Table 38 Awareness of the '2 Plus 3 A Day' fruit and vegetable promotional campaign conducted by the Department of Health

		%	(n)
Aware of the '2 Plus 3 A Day' campaign	Yes	72.2	(1448)
	No	26.0	(522)
	Don't remember	1.7	(35)

Base = 2,005

Table 39 Awareness of the '2 Plus 3 A Day' fruit and vegetable promotional campaign conducted by the Department of Health by gender

		Gender		
		Male	**Female**	χ^2 test
		%	%	*p*-value
Aware of the '2 Plus 3 A Day' campaign	Yes	65.6	78.3	<0.001
	No	33.4	19.3	
	Don't remember	1.0	2.4	

Base = 2,005.

Table 40 Awareness of the '2 Plus 3 A Day' fruit and vegetable promotional campaign conducted by the Department of Health by age group

		Age group				
		12 – 17	18 – 34	35 – 64	≥ 65	χ^2 test
		%	%	%	%	*p*-value
Aware of the '2 Plus 3 A Day' campaign						<0.001
	Yes	81.8	78.1	72.5	53.6	
	No	18.2	21.0	26.3	39.5	
	Don't remember	0.0	0.9	1.2	6.9	

Base = 2,001 (4 cases who refused to answer their age were excluded.)

Table 41 Awareness of the '2 Plus 3 A Day' fruit and vegetable promotional campaign conducted by the Department of Health by education level

		Education Level			
		Primary or below	**Secondary**	**Tertiary or above**	χ^2 test
		%	%	%	*p*-value
Aware of the '2 Plus 3 A Day' campaign	Yes	61.6	74.1	75.3	<0.001
	No	32.9	24.8	24.0	
	Don't remember	5.4	1.1	0.7	

Base = 1,995 (10 cases who refused to answer their education level were excluded.)

Table 42 Factors associated with knowledge of serving sizes of fruit and vegetables

		≥3 correct answers on serving sizes [ξ]			
		%	(n)	Univariate OR	Multivariate OR (95% CI)
Overall		*12.8*	*(256)*		
Gender	Male	12.0	(115)	1.00	---
	Female	13.5	(141)	1.15	
Age group[§]	12 – 17	12.8	(19)	1.00	---
	18 – 34	14.6	(78)	1.16	
	35 – 64	12.3	(132)	0.95	
	65 or above	10.9	(27)	0.83	
Marital status[§]	Now married	12.3	(156)	1.00	---
	Now single	13.7	(99)	1.13	
Education level[§]	Primary or below	10.3	(34)	1.00	---
	Secondary	12.8	(141)	1.28	
	Tertiary or above	14.3	(80)	1.46	
Occupation[§]	Managerial/professional workers	15.2	(52)	1.00	NS
	Clerk	17.7	(51)	1.20	
	Service workers	10.3	(19)	0.64	
	Blue collar workers	13.1	(27)	0.84	
	Students	11.7	(34)	0.74	
	Non-working persons	10.5	(71)	0.66*	
Monthly personal income	Below $10,000 (incl. None)	11.1	(133)	1.00	1.00
	$10,000 - $19,999	18.0	(71)	1.77***	1.75(1.28,2.40)**
	$20,000 - $29,999	10.1	(16)	0.91	0.89(0.52,1.55)
	$30,000 or above	16.4	(27)	1.57*	1.64(1.04,2.58)*
	Refuse to answer	10.5	(9)	0.94	0.94(0.44,2.00)
Monthly household income	Below $10,000 (incl. None)	12.9	(35)	1.00	---
	$10,000 - $19,999	13.0	(51)	1.02	
	$20,000 - $29,999	12.7	(39)	0.99	
	$30,000 or above	14.9	(79)	1.19	
	Refuse to answer/Don't know	10.3	(52)	0.78	
Aware of '2 Plus 3 A Day' campaign	No/Don't remember	9.9	(55)	1.00	1.00
	Yes	13.9	(201)	1.47*	1.49(1.08,2.05)*

[ξ] The outcome variable was dichotomized into "≥ 3 correct answers on serving sizes of fruit and vegetables" and "else responses (including <3 correct answers on serving sizes and don't know)".
§ Those who refused to answer the question were excluded.
***p<0.001; **p<0.01; *p<0.05.
--- Univariately not significant and was not considered in the stepwise multivariate logistic regression analysis.
NS: Not significant.

Table 43 Factors associated with adequate daily fruit consumption (≥2 servings)

		≥2 servings of fruit consumption per day[ξ]			
		%	(n)	Univariate OR	Multivariate OR (95% CI)
Overall		*20.5*	*(411)*		
Gender	Male	18.3	(176)	1.00	NS
	Female	22.5	(235)	1.30*	
Age group[§]	12 – 17	20.3	(30)	1.00	---
	18 – 34	14.4	(77)	0.66	
	35 – 64	22.9	(245)	1.17	
	65 or above	23.8	(59)	1.23	
Marital status[§]	Now married	22.8	(289)	1.00	1.00
	Now single	16.5	(119)	0.67**	0.76(0.59,0.98)*
Education level[§]	Primary or below	22.7	(75)	1.00	---
	Secondary	20.1	(222)	0.86	
	Tertiary or above	20.0	(112)	0.86	
Occupation[§]	Managerial/professional workers	17.8	(61)	1.00	NS
	Clerk	18.8	(54)	1.06	
	Service workers	16.2	(30)	0.89	
	Blue collar workers	16.0	(33)	0.88	
	Students	17.6	(51)	0.98	
	Non-working persons	26.3	(177)	1.64**	
Monthly personal income	Below $10,000 (incl. None)	22.6	(272)	1.00	NS
	$10,000 - $19,999	15.7	(62)	0.64**	
	$20,000 - $29,999	17.1	(27)	0.71	
	$30,000 or above	21.2	(35)	0.92	
	Refuse to answer	17.4	(15)	0.72	
Monthly household income	Below $10,000 (incl. None)	23.2	(63)	1.00	NS
	$10,000 - $19,999	17.4	(68)	0.70	
	$20,000 - $29,999	16.3	(50)	0.65*	
	$30,000 or above	23.8	(126)	1.04	
	Refuse to answer/Don't know	20.6	(104)	0.86	
Serving size of a woman-fist sized apple	Else responses	19.3	(186)	1.00	---
	1 serving‡	21.6	(225)	1.15	
Serving size of a cup of grapes	Else responses	19.7	(325)	1.00	---
	2 serving‡	24.0	(86)	1.28	
Serving size of a rice bowl of cooked vegetables	Else responses	19.8	(311)	1.00	---
	2 serving‡	23.1	(100)	1.22	
Serving size of a rice bowl of raw leafy vegetables	Else responses	21.4	(292)	1.00	---
	1 serving‡	18.5	(119)	0.84	
Adequate fruit and vegetable consumption can prevent cancers of the gut	No/Don't know	18.7	(54)	1.00	---
	Yes	20.8	(357)	1.14	
Adequate fruit and vegetable consumption can prevent heart diseases	No/Don't know	19.0	(123)	1.00	---
	Yes	21.2	(288)	1.15	

Table 43 Factors associated with adequate daily fruit consumption (≥2 servings) (cont'd)

		≥2 servings of fruit consumption per day[ξ]			
		%	(n)	Univariate OR	Multivariate OR (95% CI)
Adequate fruit and vegetable consumption can prevent stroke	No/Don't know	19.3	(152)	1.00	---
	Yes	21.3	(259)	1.13	
Adequate fruit and vegetable consumption can prevent diabetes	No/Don't know	18.2	(176)	1.00	1.00
	Yes	22.6	(235)	1.31*	1.35(1.08,1.69)**
Average number of days eating high fat food each week	0 – 3 days	23.4	(338)	1.00	1.00
	4 – 7 days	13.0	(73)	0.49***	0.57(0.43,0.76)***
Average number of days eating high salt food each week	0 – 3 days	20.9	(398)	1.00	NS
	4 – 7 days	12.6	(13)	0.55*	
Average number of days eating high sugar food each week	0 – 3 days	21.5	(353)	1.00	NS
	4 – 7 days	16.1	(58)	0.70*	
Frequency of eat-out breakfast in the past week	0 - 4 times a week	21.8	(320)	1.00	NS
	5 - 7 times a week	17.1	(91)	0.74*	
Frequency of eat-out lunch in the past week	0 - 4 times a week	24.9	(280)	1.00	1.00
	5 - 7 times a week	14.9	(131)	0.53***	0.64(0.50,0.82)***
Frequency of eat-out dinner in the past week	0 - 4 times a week	21.2	(400)	1.00	1.00
	5 - 7 times a week	8.3	(10)	0.34**	0.46(0.24,0.91)*
Choose or request food with more fruit/vegetables when eating out	Seldom/Never	17.6	(151)	1.00	1.00
	Always/Often/Sometimes	22.7	(260)	1.37**	1.27(1.01,1.60)*
Perceived fruit ingredient in food provided by food premises usually visited	High/Medium/Don't know	21.9	(68)	1.00	---
	Low	20.2	(343)	0.91	
Perceived vegetable ingredient in food provided by food premises usually visited	High/Medium/Don't know	21.1	(195)	1.00	---
	Low	20.0	(216)	0.93	
Aware of '2 Plus 3 A Day' campaign	No/Don't remember	18.0	(100)	1.00	---
	Yes	21.5	(311)	1.25	

[ξ] The outcome variable was dichotomized into "≥2 servings of fruit consumption per day" and "else responses (including <2 servings per day, don't remember, don't know and others)".

§ Those who refused to answer the question were excluded.

‡Correct answer.

***p<0.001; **p<0.01; *p<0.05.

--- Univariately not significant and was not considered in the stepwise multivariate logistic regression analysis.

NS: Not significant.

Table 44 Factors associated with adequate daily vegetable consumption (≥3 servings)

		≥3 servings of vegetable consumption per day[ξ]			
		%	(n)	Univariate OR	Multivariate OR (95% CI)
Overall		*8.5*	*(171)*		
Gender	Male	7.4	(71)	1.00	---
	Female	9.6	(100)	1.33	
Age group[§]	12 – 17	6.1	(9)	1.00	---
	18 – 34	9.0	(48)	1.53	
	35 – 64	8.5	(91)	1.43	
	65 or above	9.3	(23)	1.58	
Marital status[§]	Now married	8.4	(107)	1.00	---
	Now single	8.9	(64)	1.06	
Education level[§]	Primary or below	6.9	(23)	1.00	1.00
	Secondary	7.7	(85)	1.12	1.14(0.70,1.87)
	Tertiary or above	11.3	(63)	1.70*	1.73(1.03,2.92)*
Occupation[§]	Managerial/professional workers	9.9	(34)	1.00	NS
	Clerk	8.7	(25)	0.86	
	Service workers	4.9	(9)	0.46*	
	Blue collar workers	5.3	(11)	0.51	
	Students	6.9	(20)	0.67	
	Non-working persons	10.7	(72)	1.08	
Monthly personal income	Below $10,000 (incl. None)	8.7	(104)	1.00	NS
	$10,000 - $19,999	8.9	(35)	1.03	
	$20,000 - $29,999	8.2	(13)	0.95	
	$30,000 or above	10.9	(18)	1.29	
	Refuse to answer	1.2	(1)	0.12*	
Monthly household income	Below $10,000 (incl. None)	8.1	(22)	1.00	---
	$10,000 - $19,999	7.9	(31)	0.98	
	$20,000 - $29,999	8.5	(26)	1.05	
	$30,000 or above	11.5	(61)	1.48	
	Refuse to answer/Don't know	6.1	(31)	0.74	
Serving size of a woman-fist sized apple	Else responses	7.2	(69)	1.00	NS
	1 serving‡	9.8	(102)	1.41*	
Serving size of a cup of grapes	Else responses	8.3	(137)	1.00	---
	2 serving‡	9.5	(34)	1.15	
Serving size of a rice bowl of cooked vegetables	Else responses	8.0	(125)	1.00	---
	2 serving‡	10.6	(46)	1.38	
Serving size of a rice bowl of raw leafy vegetables	Else responses	9.0	(122)	1.00	---
	1 serving‡	7.6	(49)	0.84	
Adequate fruit and vegetable consumption can prevent cancers of the gut	No/Don't know	5.5	(16)	1.00	---
	Yes	9.0	(155)	1.69	
Adequate fruit and vegetable consumption can prevent heart diseases	No/Don't know	5.7	(37)	1.00	1.00
	Yes	9.9	(134)	1.81**	1.64(1.12,2.41)*

Table 44 Factors associated with adequate daily vegetable consumption (≥3 servings) (cont'd)

		≥3 servings of vegetable consumption per day[ξ]			
		%	(n)	Univariate OR	Multivariate OR (95% CI)
Adequate fruit and vegetable consumption can prevent stroke	No/Don't know	7.2	(57)	1.00	---
	Yes	9.4	(114)	1.33	
Adequate fruit and vegetable consumption can prevent diabetes	No/Don't know	7.5	(72)	1.00	---
	Yes	9.5	(99)	1.31	
Average number of days eating high fat food each week	0 – 3 days	9.2	(133)	1.00	---
	4 – 7 days	6.8	(38)	0.72	
Average number of days eating high salt food each week	0 – 3 days	8.8	(168)	1.00	NS
	4 – 7 days	2.9	(3)	0.31*	
Average number of days eating high sugar food each week	0 – 3 days	9.0	(148)	1.00	---
	4 – 7 days	6.4	(23)	0.69	
Frequency of eat-out breakfast in the past week	0 - 4 times a week	9.4	(138)	1.00	NS
	5 - 7 times a week	6.2	(33)	0.64*	
Frequency of eat-out lunch in the past week	0 - 4 times a week	10.4	(117)	1.00	1.00
	5 - 7 times a week	6.2	(54)	0.57**	0.52(0.37,0.74)***
Frequency of eat-out dinner in the past week	0 - 4 times a week	8.8	(166)	1.00	---
	5 - 7 times a week	4.2	(5)	0.45	
Choose or request food with more fruits/vegetables when eating out	Seldom/Never	6.5	(56)	1.00	1.00
	Always/Often/Sometimes	10.0	(115)	1.60**	1.47(1.05,2.06)*
Perceived fruit ingredient in food provided by food premises usually visited	High/Medium/Don't know	11.3	(35)	1.00	---
	Low	8.0	(136)	0.69	
Perceived vegetable ingredient in food provided by food premises usually visited	High/Medium/Don't know	9.1	(84)	1.00	---
	Low	8.0	(87)	0.88	
Aware of '2 Plus 3 A Day' campaign	No/Don't remember	5.9	(33)	1.00	1.00
	Yes	9.5	(138)	1.67*	1.53(1.03,2.28)*

[ξ] The outcome variable was dichotomized into "≥3 servings of vegetable consumption per day" and "else responses (including <3 servings per day, don't remember, don't know and others)".
§ Those who refused to answer the question were excluded.
‡Correct answer.
***p<0.001; **p<0.01; *p<0.05.
--- Univariately not significant and was not considered in the stepwise multivariate logistic regression analysis.
NS: Not significant.

Table 45 Factors associated with behaviour of choosing or requesting food with more fruit/vegetables when eating out

		'Always/often/sometimes' choose or request food with more fruit/vegetables [ξ]			
		%	(n)	Univariate OR	Multivariate OR (95% CI)
Overall		*57.2*	*(1147)*		
Gender	Male	54.1	(520)	1.00	NS
	Female	60.1	(627)	1.28**	
Age group[§]	12 – 17	39.2	(58)	1.00	1.00
	18 – 34	58.4	(312)	2.18***	1.93(1.29,2.89)**
	35 – 64	60.9	(652)	2.42***	2.22(1.53,3.24)***
	65 or above	49.2	(122)	1.50	1.62(1.01,2.58)*
Marital status[§]	Now married	58.9	(748)	1.00	NS
	Now single	54.4	(393)	0.83*	
Education level[§]	Primary or below	47.4	(157)	1.00	1.00
	Secondary	56.9	(629)	1.47**	1.62(1.21,2.17)**
	Tertiary or above	63.9	(357)	1.96***	2.03(1.46,2.83)***
Occupation[§]	Managerial/professional workers	64.9	(222)	1.00	NS
	Clerk	66.7	(192)	1.08	
	Service workers	57.8	(107)	0.74	
	Blue collar workers	50.5	(104)	0.55**	
	Students	45.2	(131)	0.45***	
	Non-working persons	56.4	(380)	0.70**	
Monthly personal income	Below $10,000 (incl. None)	54.5	(655)	1.00	NS
	$10,000 - $19,999	56.6	(223)	1.09	
	$20,000 - $29,999	69.6	(110)	1.91***	
	$30,000 or above	69.1	(114)	1.87***	
	Refuse to answer	52.3	(45)	0.92	
Monthly household income	Below $10,000 (incl. None)	49.6	(135)	1.00	NS
	$10,000 - $19,999	54.2	(212)	1.20	
	$20,000 - $29,999	60.3	(185)	1.54*	
	$30,000 or above	65.8	(348)	1.95***	
	Refuse to answer/Don't know	52.8	(267)	1.13	
Serving size of a woman-fist sized apple	Else responses	56.3	(542)	1.00	---
	1 serving‡	58.1	(605)	1.08	
Serving size of a cup of grapes	Else responses	56.2	(925)	1.00	---
	2 serving‡	61.8	(222)	1.26	
Serving size of a rice bowl of cooked vegetables	Else responses	55.5	(873)	1.00	1.00
	2 serving‡	63.3	(274)	1.38**	1.41(1.12,1.77)**
Serving size of a rice bowl of raw leafy vegetables	Else responses	56.1	(764)	1.00	---
	1 serving‡	59.7	(383)	1.16	
Adequate fruit and vegetable consumption can prevent cancers of the gut	No/Don't know	49.5	(143)	1.00	NS
	Yes	58.5	(1004)	1.44**	
Adequate fruit and vegetable consumption can prevent heart diseases	No/Don't know	51.5	(333)	1.00	NS
	Yes	59.9	(814)	1.41***	

Table 45 Factors associated with behaviour of choosing or requesting food with more fruit/vegetables when eating out (cont'd)

		'Always/often/sometimes' choose or request food with more fruit/vegetables [ξ]			
		%	(n)	Univariate OR	Multivariate OR (95% CI)
Adequate fruit and vegetable consumption can prevent stroke	No/Don't know	51.1	(403)	1.00	1.00
	Yes	61.1	(744)	1.50***	1.32(1.09,1.61)**
Adequate fruit and vegetable consumption can prevent diabetes	No/Don't know	55.3	(534)	1.00	---
	Yes	58.9	(613)	1.16	
Average number of days eating high fat food each week	0 – 3 days	60.7	(877)	1.00	1.00
	4 – 7 days	48.1	(270)	0.60***	0.67(0.54,0.83)***
Average number of days eating high salt food each week	0 – 3 days	57.8	(1099)	1.00	NS
	4 – 7 days	45.6	(47)	0.61*	
Average number of days eating high sugar food each week	0 – 3 days	60.0	(986)	1.00	1.00
	4 – 7 days	44.4	(160)	0.53***	0.59(0.46,0.77)***
Frequency of eat-out breakfast in the past week	0 - 4 times a week	57.6	(847)	1.00	---
	5 - 7 times a week	56.3	(299)	0.95	
Frequency of eat-out lunch in the past week	0 - 4 times a week	58.1	(654)	1.00	---
	5 - 7 times a week	56.2	(493)	0.92	
Frequency of eat-out dinner in the past week	0 - 4 times a week	56.9	(1072)	1.00	---
	5 - 7 times a week	61.7	(74)	1.22	
Perceived fruit ingredient in food provided by food premises usually visited	High/Medium/Don't know	66.6	(207)	1.00	NS
	Low	55.5	(940)	0.63***	
Perceived vegetable ingredient in food provided by food premises usually visited	High/Medium/Don't know	66.9	(618)	1.00	1.00
	Low	48.9	(529)	0.48***	0.46(0.38,0.56)***
Aware of '2 Plus 3 A Day' campaign	No/Don't remember	56.2	(313)	1.00	---
	Yes	57.6	(834)	1.06	

[ξ] The outcome variable was dichotomized into "always/often/sometimes" and "seldom/never".
§ Those who refused to answer the question were excluded.
‡Correct answer.
***p<0.001; **p<0.01; *p<0.05.
--- Univariately not significant and was not considered in the stepwise multivariate logistic regression analysis.
NS: Not significant.

Table 46 Factors associated with behaviour of choosing or requesting food with less fat/oil when eating out

		'Always/often/sometimes' choose or request food with less fat/oil ξ			
		%	(n)	Univariate OR	Multivariate OR (95% CI)
Overall		*58.4*	*(1171)*		
Gender	Male	54.9	(528)	1.00	NS
	Female	61.6	(643)	1.32**	
Age group§	12 – 17	56.1	(83)	1.00	---
	18 – 34	53.9	(288)	0.92	
	35 – 64	61.6	(660)	1.26	
	65 or above	55.2	(137)	0.97	
Marital status§	Now married	60.8	(772)	1.00	1.00
	Now single	54.1	(391)	0.76**	0.78(0.64,0.95)*
Education level§	Primary or below	56.5	(187)	1.00	1.00
	Secondary	55.7	(616)	0.97	1.07(0.82,1.40)
	Tertiary or above	64.8	(362)	1.42*	1.58(1.17,2.14)**
Occupation§	Managerial/professional workers	65.2	(223)	1.00	NS
	Clerk	62.5	(180)	0.89	
	Service workers	60.0	(111)	0.80	
	Blue collar workers	49.5	(102)	0.52***	
	Students	50.7	(147)	0.55***	
	Non-working persons	58.5	(394)	0.75*	
Monthly personal income	Below $10,000 (incl. None)	56.9	(684)	1.00	NS
	$10,000 - $19,999	55.1	(217)	0.93	
	$20,000 - $29,999	67.7	(107)	1.59*	
	$30,000 or above	69.1	(114)	1.69**	
	Refuse to answer	57.0	(49)	1.00	
Monthly household income	Below $10,000 (incl. None)	55.1	(150)	1.00	NS
	$10,000 - $19,999	55.5	(217)	1.01	
	$20,000 - $29,999	57.3	(176)	1.09	
	$30,000 or above	65.8	(348)	1.56**	
	Refuse to answer/Don't know	55.3	(280)	1.01	
Serving size of a woman-fist sized apple	Else responses	59.1	(569)	1.00	---
	1 serving‡	57.8	(602)	0.95	
Serving size of a cup of grapes	Else responses	58.0	(954)	1.00	---
	2 serving‡	60.4	(217)	1.11	
Serving size of a rice bowl of cooked vegetables	Else responses	58.5	(919)	1.00	---
	2 serving‡	58.2	(252)	0.99	
Serving size of a rice bowl of raw leafy vegetables	Else responses	60.1	(819)	1.00	1.00
	1 serving‡	54.8	(352)	0.81*	0.80(0.66,0.98)*
Adequate fruit and vegetable consumption can prevent cancers of the gut	No/Don't know	51.6	(149)	1.00	NS
	Yes	59.6	(1022)	1.38*	
Adequate fruit and vegetable consumption can prevent heart diseases	No/Don't know	50.2	(325)	1.00	1.00
	Yes	62.3	(846)	1.64***	1.31(1.02,1.67)*

Table 46 Factors associated with behaviour of choosing or requesting food with less fat/oil when eating out (cont'd)

		'Always/often/sometimes' choose or request food with less fat/oil [ξ]			
		%	(n)	Univariate OR	Multivariate OR (95% CI)
Adequate fruit and vegetable consumption can prevent stroke	No/Don't know	51.1	(403)	1.00	1.00
	Yes	63.1	(768)	1.63***	1.33(1.05,1.68)*
Adequate fruit and vegetable consumption can prevent diabetes	No/Don't know	55.1	(532)	1.00	NS
	Yes	61.4	(639)	1.30**	
Consumed ≥2 servings of fruit per day	Else response	56.4	(899)	1.00	1.00
	Yes	66.2	(272)	1.51***	1.29(1.01,1.63)*
Consumed ≥3 servings of vegetables per day	Else response	57.4	(1052)	1.00	NS
	Yes	69.6	(119)	1.70**	
Average number of days eating high fat food each week	0 – 3 days	63.2	(913)	1.00	1.00
	4 – 7 days	46.0	(258)	0.50***	0.57(0.46,0.70)***
Average number of days eating high salt food each week	0 – 3 days	59.2	(1125)	1.00	NS
	4 – 7 days	44.7	(46)	0.56**	
Average number of days eating high sugar food each week	0 – 3 days	61.7	(1014)	1.00	1.00
	4 – 7 days	43.6	(157)	0.48***	0.58(0.45,0.75)***
Frequency of eat-out breakfast in the past week	0 – 4 times a week	58.6	(862)	1.00	---
	5 – 7 times a week	57.8	(307)	0.97	
Frequency of eat-out lunch in the past week	0 – 4 times a week	59.2	(666)	1.00	---
	5 – 7 times a week	57.4	(504)	0.93	
Frequency of eat-out dinner in the past week	0 – 4 times a week	58.5	(1102)	1.00	---
	5 – 7 times a week	55.8	(67)	0.90	
Perceived fat/oil ingredient in food provided by food premises usually visited	Low/Medium/Don't know	61.5	(491)	1.00	1.00
	High	56.4	(680)	0.81*	0.80(0.66,0.96)*
Aware of '2 Plus 3 A Day' campaign	No/Don't remember	51.2	(285)	1.00	1.00
	Yes	61.2	(886)	1.51***	1.55(1.26,1.91)***

[ξ] The outcome variable was dichotomized into "always/often/sometimes" and "seldom/never".
§ Those who refused to answer the question were excluded.
‡Correct answer.
***p<0.001; **p<0.01; *p<0.05.
--- Univariately not significant and was not considered in the stepwise multivariate logistic regression analysis.
NS: Not significant.

Table 47 Factors associated with behaviour of choosing or requesting food with less salt when eating out

		'Always/often/sometimes' choose or request food with less salt [ξ]			
		%	(n)	Univariate OR	Multivariate OR (95% CI)
Overall		*45.9*	*(921)*		
Gender	Male	44.5	(428)	1.00	---
	Female	47.3	(493)	1.12	
Age group[§]	12 – 17	33.8	(50)	1.00	NS
	18 – 34	44.6	(238)	1.58*	
	35 – 64	47.9	(513)	1.80**	
	65 or above	47.2	(117)	1.75**	
Marital status[§]	Now married	48.3	(613)	1.00	NS
	Now single	41.5	(300)	0.76**	
Education level[§]	Primary or below	43.8	(145)	1.00	---
	Secondary	44.3	(489)	1.02	
	Tertiary or above	50.1	(280)	1.29	
Occupation[§]	Managerial/professional workers	50.6	(173)	1.00	NS
	Clerk	49.3	(142)	0.95	
	Service workers	50.8	(94)	1.01	
	Blue collar workers	40.8	(84)	0.67*	
	Students	36.9	(107)	0.57**	
	Non-working persons	46.0	(310)	0.83	
Monthly personal income	Below $10,000 (incl. None)	43.5	(523)	1.00	1.00
	$10,000 - $19,999	46.7	(184)	1.14	1.27(1.00,1.61)
	$20,000 - $29,999	51.9	(82)	1.40*	1.50(1.06,2.13)*
	$30,000 or above	52.7	(87)	1.45*	1.37(0.98,1.93)
	Refuse to answer	52.3	(45)	1.43	1.63(1.00,2.67)*
Monthly household income	Below $10,000 (incl. None)	43.8	(119)	1.00	NS
	$10,000 - $19,999	41.4	(162)	0.91	
	$20,000 - $29,999	47.9	(147)	1.18	
	$30,000 or above	51.4	(272)	1.36*	
	Refuse to answer/Don't know	43.7	(221)	1.00	
Serving size of a woman-fist sized apple	Else responses	45.2	(435)	1.00	---
	1 serving‡	46.6	(486)	1.06	
Serving size of a cup of grapes	Else responses	45.6	(751)	1.00	---
	2 serving‡	47.4	(170)	1.07	
Serving size of a rice bowl of cooked vegetables	Else responses	46.2	(727)	1.00	---
	2 serving‡	44.8	(194)	0.94	
Serving size of a rice bowl of raw leafy vegetables	Else responses	46.1	(628)	1.00	---
	1 serving‡	45.6	(293)	0.98	
Adequate fruit and vegetable consumption can prevent cancers of the gut	No/Don't know	38.8	(112)	1.00	NS
	Yes	47.1	(809)	1.41**	
Adequate fruit and vegetable consumption can prevent heart diseases	No/Don't know	39.7	(257)	1.00	NS
	Yes	48.9	(664)	1.45***	

Table 47 Factors associated with behaviour of choosing or requesting food with less salt when eating out (cont'd)

		'Always/often/sometimes' choose or request food with less salt [ξ]			
		%	(n)	Univariate OR	Multivariate OR (95% CI)
Adequate fruit and vegetable consumption can prevent stroke	No/Don't know	39.1	(308)	1.00	1.00
	Yes	50.4	(613)	1.58***	1.32(1.07,1.62)*
Adequate fruit and vegetable consumption can prevent diabetes	No/Don't know	41.0	(396)	1.00	1.00
	Yes	50.5	(525)	1.47***	1.37(1.12,1.67)**
Consumed ≥2 servings of fruit per day	Else response	44.3	(706)	1.00	NS
	Yes	52.3	(215)	1.38**	
Consumed ≥3 servings of vegetables per day	Else response	44.8	(822)	1.00	1.00
	Yes	57.9	(99)	1.69**	1.53(1.11,2.13)*
Average number of days eating high fat food each week	0 – 3 days	50.9	(735)	1.00	1.00
	4 – 7 days	33.2	(186)	0.48***	0.50(0.40,0.63)***
Average number of days eating high salt food each week	0 – 3 days	47.0	(893)	1.00	1.00
	4 – 7 days	27.2	(28)	0.42***	0.57(0.35,0.92)*
Average number of days eating high sugar food each week	0 – 3 days	48.5	(797)	1.00	1.00
	4 – 7 days	34.4	(124)	0.56***	0.70(0.54,0.90)**
Frequency of eat-out breakfast in the past week	0 - 4 times a week	45.7	(672)	1.00	---
	5 - 7 times a week	46.7	(248)	1.04	
Frequency of eat-out lunch in the past week	0 - 4 times a week	46.7	(525)	1.00	---
	5 - 7 times a week	45.1	(396)	0.94	
Frequency of eat-out dinner in the past week	0 - 4 times a week	46.3	(872)	1.00	---
	5 - 7 times a week	40.0	(48)	0.77	
Perceived salt ingredient in food provided by food premises usually visited	Low/Medium/Don't know	47.4	(561)	1.00	---
	High	43.8	(360)	0.87	
Aware of '2 Plus 3 A Day' campaign	No/Don't remember	40.8	(227)	1.00	1.00
	Yes	47.9	(694)	1.34**	1.37(1.12,1.69)**

[ξ] The outcome variable was dichotomized into "always/often/sometimes" and "seldom/never".
§ Those who refused to answer the question were excluded.
‡Correct answer.
***p<0.001; **p<0.01; *p<0.05.
--- Univariately not significant and was not considered in the stepwise multivariate logistic regression analysis.
NS: Not significant.

Table 48 Factors associated with behaviour of choosing or requesting food with less sugar when eating out

		'Always/often/sometimes' choose or request food with less sugar ξ			
		%	(n)	Univariate OR	Multivariate OR (95% CI)
Overall		*49.1*	*(984)*		
Gender	Male	46.6	(448)	1.00	NS
	Female	51.4	(536)	1.21*	
Age group§	12 – 17	43.2	(64)	1.00	NS
	18 – 34	45.3	(242)	1.09	
	35 – 64	52.8	(565)	1.47*	
	65 or above	44.4	(110)	1.05	
Marital status§	Now married	51.1	(648)	1.00	NS
	Now single	45.8	(331)	0.81*	
Education level§	Primary or below	45.0	(149)	1.00	NS
	Secondary	48.3	(534)	1.14	
	Tertiary or above	53.3	(298)	1.40*	
Occupation§	Managerial/professional workers	53.5	(183)	1.00	NS
	Clerk	56.3	(162)	1.12	
	Service workers	54.1	(100)	1.02	
	Blue collar workers	43.7	(90)	0.67*	
	Students	42.1	(122)	0.63**	
	Non-working persons	46.9	(316)	0.77*	
Monthly personal income	Below $10,000 (incl. None)	45.5	(547)	1.00	1.00
	$10,000 - $19,999	51.0	(201)	1.25	1.34(1.06,1.71)*
	$20,000 - $29,999	60.8	(96)	1.85***	2.04(1.43,2.90)***
	$30,000 or above	57.0	(94)	1.59**	1.44(1.02,2.02)*
	Refuse to answer	53.5	(46)	1.38	1.61(0.99,2.63)
Monthly household income	Below $10,000 (incl. None)	44.1	(120)	1.00	NS
	$10,000 - $19,999	47.8	(187)	1.16	
	$20,000 - $29,999	51.1	(157)	1.33	
	$30,000 or above	56.1	(297)	1.62**	
	Refuse to answer/Don't know	44.1	(223)	1.00	
Serving size of a woman-fist sized apple	Else responses	48.2	(464)	1.00	---
	1 serving‡	49.9	(520)	1.07	
Serving size of a cup of grapes	Else responses	48.7	(802)	1.00	---
	2 serving‡	50.7	(182)	1.08	
Serving size of a rice bowl of cooked vegetables	Else responses	48.9	(768)	1.00	---
	2 serving‡	49.9	(216)	1.04	
Serving size of a rice bowl of raw leafy vegetables	Else responses	49.3	(672)	1.00	---
	1 serving‡	48.6	(312)	0.97	
Adequate fruit and vegetable consumption can prevent cancers of the gut	No/Don't know	39.8	(115)	1.00	NS
	Yes	50.6	(869)	1.55**	
Adequate fruit and vegetable consumption can prevent heart diseases	No/Don't know	41.1	(266)	1.00	NS
	Yes	52.9	(718)	1.61***	

Table 48 Factors associated with behaviour of choosing or requesting food with less sugar when eating out (cont'd)

		'Always/often/sometimes' choose or request food with less sugar [ξ]			
		%	(n)	Univariate OR	Multivariate OR (95% CI)
Adequate fruit and vegetable consumption can prevent stroke	No/Don't know	41.9	(330)	1.00	1.00
	Yes	53.7	(654)	1.61***	1.29(1.05,1.58)*
Adequate fruit and vegetable consumption can prevent diabetes	No/Don't know	43.6	(421)	1.00	1.00
	Yes	54.1	(563)	1.53***	1.40(1.15,1.72)**
Consumed ≥2 servings of fruit per day	Else response	47.4	(755)	1.00	NS
	Yes	55.7	(229)	1.40**	
Consumed ≥3 servings of vegetables per day	Else response	48.0	(881)	1.00	1.00
	Yes	60.2	(103)	1.64**	1.49(1.07,2.08)*
Average number of days eating high fat food each week	0 – 3 days	52.7	(761)	1.00	1.00
	4 – 7 days	39.8	(223)	0.59***	0.64(0.51,0.79)***
Average number of days eating high salt food each week	0 – 3 days	49.3	(937)	1.00	---
	4 – 7 days	45.6	(47)	0.86	
Average number of days eating high sugar food each week	0 – 3 days	52.6	(865)	1.00	1.00
	4 – 7 days	33.1	(119)	0.45***	0.48(0.38,0.62)***
Frequency of eat-out breakfast in the past week	0 - 4 times a week	48.6	(715)	1.00	---
	5 - 7 times a week	50.5	(268)	1.08	
Frequency of eat-out lunch in the past week	0 - 4 times a week	49.2	(553)	1.00	---
	5 - 7 times a week	49.1	(431)	1.00	
Frequency of eat-out dinner in the past week	0 - 4 times a week	49.3	(928)	1.00	---
	5 - 7 times a week	45.8	(55)	0.87	
Perceived sugar ingredient in food provided by food premises usually visited	Low/Medium/Don't know	50.2	(733)	1.00	---
	High	46.0	(251)	0.84	
Aware of '2 Plus 3 A Day' campaign	No/Don't remember	43.6	(243)	1.00	1.00
	Yes	51.2	(741)	1.35**	1.37(1.12,1.69)**

[ξ] The outcome variable was dichotomized into "always/often/sometimes" and "seldom/never".
§ Those who refused to answer the question were excluded.
‡Correct answer.
***p<0.001; **p<0.01; *p<0.05.
--- Univariately not significant and was not considered in the stepwise multivariate logistic regression analysis.
NS: Not significant.

Table 49 Demographic characteristics associated with awareness of the '2 Plus 3 A Day' campaign

		Aware of '2 Plus 3 A Day' campaign [ξ]			
		%	(n)	Univariate OR	Multivariate OR (95% CI)
Overall		*72.2*	*(1448)*		
Gender	Male	65.6	(631)	1.00	1.00
	Female	78.3	(817)	1.90***	2.00(1.63,2.45)***
Age group[§]	12 – 17	81.8	(121)	1.00	1.00
	18 – 34	78.1	(417)	0.80	0.80(0.50,1.28)
	35 – 64	72.5	(776)	0.59*	0.57(0.37,0.89)*
	65 or above	53.6	(133)	0.26***	0.25(0.15,0.40)***
Marital status[§]	Now married	69.7	(885)	1.00	NS
	Now single	76.9	(556)	1.45**	
Education level[§]	Primary or below	61.6	(204)	1.00	NS
	Secondary	74.1	(819)	1.78***	
	Tertiary or above	75.3	(421)	1.90***	
Occupation[§]	Managerial/professional workers	76.0	(260)	1.00	NS
	Clerk	78.5	(226)	1.15	
	Service workers	70.3	(130)	0.75	
	Blue collar workers	63.1	(130)	0.54**	
	Students	80.3	(233)	1.29	
	Non-working persons	68.0	(458)	0.67**	
Monthly personal income	Below $10,000 (incl. None)	72.5	(871)	1.00	---
	$10,000 - $19,999	72.6	(286)	1.01	
	$20,000 - $29,999	77.2	(122)	1.29	
	$30,000 or above	68.5	(113)	0.83	
	Refuse to answer	65.1	(56)	0.71	
Monthly household income	Below $10,000 (incl. None)	65.4	(178)	1.00	NS
	$10,000 - $19,999	74.4	(291)	1.54*	
	$20,000 - $29,999	73.9	(227)	1.50*	
	$30,000 or above	76.4	(404)	1.71**	
	Refuse to answer/Don't know	68.8	(348)	1.16	

[ξ] The outcome variable was dichotomized into "yes" and "no/don't remember".
§ Those who refused to answer the question were excluded.
***p<0.001; **p<0.01; *p<0.05.
--- Univariately not significant and was not considered in the stepwise multivariate logistic regression analysis.
NS: Not significant.

Appendix 1

Questionnaire no. :_____

March – April 2007
Baseline Survey for EatSmart@restaurant.hk Campaign

Questionnaire

Interviewer no.:

Date of interview :

Time of interview (start/end) :

Telephone no.:

Introduction

Good evening. I am an interviewer from School of Public Health, The Chinese University of Hong Kong. I am calling on behalf of the Department of Health to conduct a telephone survey on healthy eating promotion in food premises. Through the survey, the Department of Health hopes to define the need for and approach of healthy eating promotion targeting food premises in Hong Kong. We would like to invite your household member aged 12 or above and whose last birthday is the closest to the date of interview to join the survey (exclude domestic helpers). The interview will use an anonymous questionnaire to collect data, and it will take about 10-15 minutes to complete. All information collected from this survey will be kept strictly confidential and used for analysis only. Participation in the survey is voluntary and you can decline to join the study or withdraw at any time you want to. Do you understand and do you have any other questions? We sincerely invite you to join the survey, do you agree? (thanks for your participation).

Should you have any enquiry about the survey, please contact Prof. Lau of School of Public Health, The Chinese University of Hong Kong (Tel: 2637 6606).

<Response>

"Yes" → interview start

"No" → interview end (If the respondent is not available at the moment, interviewer will make an appointment for interview at another time)

Language used: 廣東話 / 普通話 / English

Section 1 – Knowledge

Q1. How many servings of fruit does a woman-fist sized apple equate? You may choose one answer only. (Interviewer: Read out options 1-4)

1) 0.5 serving 2) 1 serving 3) 2 servings 4) 3 servings 5) Don't know

Q2. How many servings of fruit does a cup of grapes equate? You may choose one answer only. (Interviewer: Read out options 1-4. If respondent asks, 1 cup = 240ml.)

1) 0.5 serving 2) 1 serving 3) 2 servings 4) 3 servings 5) Don't know

Q3. How many servings of vegetables does a rice bowl of cooked vegetables equate? You may choose one answer only. (Interviewer: Read out options 1-4)

1) 0.5 serving 2) 1 serving 3) 2 servings 4) 3 servings 5) Don't know

Q4. How many servings of vegetables does a rice bowl of raw leafy vegetables? You may choose one answer only. (Interviewer: Read out options 1-4)

1) 0.5 serving 2) 1 serving 3) 2 servings 4) 3 servings 5) Don't know

Q5. Which of the following is a health benefit of eating an adequate amount of fruit and vegetables? You may choose more than one answer. (Interviewer: Read out options 1-4)

1) Prevent cancers of the gut 2) Prevent heart diseases 3) Prevent stroke
4) Prevent diabetes 5) Don't know

Section 2 – Consumption Behaviour

Q6. On average, how many days do you eat fruit each week? (not including fruit juice)

1) 1 day 2) 2 days 3) 3 days 4) 4 days 5) 5 days 6) 6 days 7) 7 days
8) None (go to Q8)

Q7. On average, how many servings of fruit did you eat on one of those days? (Interviewer: Prompt: One serving of fruit equals to 1 apple/orange, 1 small banana, 2 kiwi fruit/plums, or 1/2 cup of grapes/strawberries)

1) Less than 0.5 serving 2) 0.5 serving 3) 1 serving 4) 1.5 servings
5) 2 servings 6) 2.5 servings 7) 3 servings 8) More than 3 servings
9) Others (please specify) _____ 10) Don't know 11) Don't remember

Q8. On average, how many days do you eat vegetables each week? (not including vegetable juice)

1) 1 day 2) 2 days 3) 3 days 4) 4 days 5) 5 days 6) 6 days 7) 7 days
8) None (go to Q10)

Q9. On average, how many servings of vegetables did you eat on one of those days? (Interviewer: Prompt: One serving of vegetables equals to 1 rice bowl of raw leafy vegetables, or 1/2 bowl of cooked vegetables/sprouts/gourds/mushrooms/beans.)

1) Less than 0.5 serving 2) 0.5 serving 3) 1 serving 4) 1.5 servings
5) 2 servings 6) 2.5 servings 7) 3 servings 8) More than 3 servings
9) Others (please specify) _____ 10) Don't know 11) Don't remember

Q10. On average, how many days do you eat high fat food (e.g. deep-fried food, fatty meat, poultry with skin) each week?

1) 1 day 2) 2 days 3) 3 days 4) 4 days 5) 5 days 6) 6 days 7) 7 days
8) None

Q11. On average, how many days do you eat high salt food (e.g. preserved meat/vegetables, salty egg, salty fish) each week?

1) 1 day 2) 2 days 3) 3 days 4) 4 days 5) 5 days 6) 6 days 7) 7 days
8) None

Q12. On average, how many days do you eat high sugar food (e.g. soft drinks, dessert soups, cakes) each week?

1) 1 day 2) 2 days 3) 3 days 4) 4 days 5) 5 days 6) 6 days 7) 7 days
8) None

Q13. What are the barriers for eating more fruit and vegetables? You may give <u>more than one answer</u>. (Interviewer: Do not read out options)

1) Not delicious 2) Too busy to buy/eat 3) Inconvenient to buy/eat
4) Not commonly available when eating out 5) Not commonly available when eating at home 6) No one serve them to me/lazy
7) Too expensive 8) Too full to eat 9) Dislike to eat
10) Do not eat fruit/vegetables 11) Eat everyday 12) No reason
13) Others (please specify) _____ 14) Don't know

Section 3 – Eating Out

(Interviewer: Read out: **The following questions are related to eating out habits. Eating out is defined as a meal that is not made at home and excludes bread bought from bakery**.)

Q14. How often did you eat out for breakfast in the past week? (Interviewer: Read out options 1-6)

1) Once a week 2) 2-4 times a week 3) 5-6 times a week 4) 7 times a week
5) Never (go to Q16)
6) Skipped breakfast (go to Q16)
7) Don't remember (go to Q16)

Q15. Where did you eat out for breakfast mostly in the past week? You may choose one answer only. (Interviewer: Read out options 1-6. Fill in the exact place if you cannot classify.)

1) Chinese restaurants (incl. HK tea restaurants) 2) Non-Chinese restaurants 3) Fast food shops
4) Bars 5) Other eating & drinking places
6) Others (please specify) _____ 7) Don't remember

Q16. How often did you eat out for lunch in the past week? (Interviewer: Read out options 1-6)

1) Once a week 2) 2-4 times a week 3) 5-6 times a week 4) 7 times a week
5) Never (go to Q18)
6) Skipped lunch (go to Q18)
7) Don't remember (go to Q18)

Q17. Where did you eat out for lunch mostly in the past week? You may choose one answer only. (Interviewer: Read out options 1-6. Fill in the exact place if you cannot classify.)

1) Chinese restaurants (incl. HK tea restaurants) 2) Non-Chinese restaurants 3) Fast food shops
4) Bars 5) Other eating & drinking places
6) Others (please specify) _____ 7) Don't remember

Q18. How often did you eat out for dinner in the past week? (Interviewer: Read out options 1-6)

1) Once a week 2) 2-4 times a week 3) 5-6 times a week 4) 7 times a week
5) Never (go to Q20)
6) Skipped dinner (go to Q20)
7) Don't remember (go to Q20)

Q19. Where did you eat out for dinner mostly in the past week? You may choose one answer only. (Interviewer: Read out options 1-6. Fill in the exact place if you cannot classify.)

1) Chinese restaurants (incl. HK tea restaurants) 2) Non-Chinese restaurants 3) Fast food shops
4) Bars 5) Other eating & drinking places
6) Others (please specify) _____ 7) Don't remember

Q20. How often do you choose or request food with more fruit/vegetables when eating out? You may choose one answer only. (Interviewer: Read out options 1-5)

1) Always 2) Often 3) Sometimes 4) Seldom 5) Never

Q21. How often do you choose or request food with less fat/oil when eating out? You may choose one answer only. (Interviewer: Read out options 1-5)

1) Always 2) Often 3) Sometimes 4) Seldom 5) Never

Q22. How often do you choose or request food with less salt when eating out? You may choose one answer only. (Interviewer: Read out options 1-5)

1) Always 2) Often 3) Sometimes 4) Seldom 5) Never

Q23. How often do you choose or request food with less sugar when eating out? You may choose one answer only. (Interviewer: Read out options 1-5)

1) Always 2) Often 3) Sometimes 4) Seldom 5) Never

Section 4 – Healthy Eating Promotion in Food Premises

Q24. What do you perceive the content of the following ingredients in food provided by food premises you usually visit? You may choose one answer only. (Interviewer: Read out options 1-3)

a. Fruit	1) High	2) Medium	3) Low	4) Don't know
b. Vegetables	1) High	2) Medium	3) Low	4) Don't know
c. Fat/Oil	1) High	2) Medium	3) Low	4) Don't know
d. Salt	1) High	2) Medium	3) Low	4) Don't know
e. Sugar	1) High	2) Medium	3) Low	4) Don't know

Do you agree or disagree with the following statements:

Q25. I hope that food premises can provide food with more fruit/vegetables in ingredients. You may choose one answer only. (Interviewer: Read out options 1-4)

1) Strongly agree 2) Agree 3) Disagree 4) Strongly disagree
5) No comment 6) Don't know

Q26. I hope that food premises can provide food with less fat/oil, less salt and less sugar in ingredients. You may choose one answer only. (Interviewer: Read out options 1-4)

1) Strongly agree 2) Agree 3) Disagree 4) Strongly disagree
5) No comment 6) Don't know

Q27. What can food premises do to increase your consumption of fruit and vegetables when eating out? You may give more than one answer. (Interviewer: Do not read out options)

1) Cheaper 2) Convenient 3) Delicious 4) More choices 5) Free
6) Others (please specify) _____ 7) No comment 8) Don't know

Q28. What do you perceive the effectiveness of the following measures on encouraging you to eat healthier when eating out? You may choose one answer only. (Interviewer: Read out options 1-4)

a. Label clearly in menu those dishes with more fruit/vegetables, less fat/oil, less salt or less sugar	1) Very effective	2) Effective	3) Ineffective	4) Very ineffective	5) No comment	6) Don't know
b. Provide more food choices with more fruit/vegetables, less fat/oil, less salt or less sugar in food premises	1) Very effective	2) Effective	3) Ineffective	4) Very ineffective	5) No comment	6) Don't know
c. Offer cash/discount coupons for dishes with fruit/vegetables, less fat/oil, less salt or less sugar	1) Very effective	2) Effective	3) Ineffective	4) Very ineffective	5) No comment	6) Don't know
d. Advertise or promote in food premises	1) Very effective	2) Effective	3) Ineffective	4) Very ineffective	5) No comment	6) Don't know

Section 5 – Awareness

Q29. Were you aware of the '2 Plus 3 A Day' fruit and vegetable promotional campaign conducted by the Department of Health?

1) Yes 2) No 3) Don't remember

Section 6 – Demographics

Q30. What is your gender? (Interviewer: Do not ask this question unless you are not sure about respondent's gender.)

1) Male 2) Female

Q31. What is your age?

1) 12-17 2) 18-24 3) 25-34 4) 35-44
5) 45-54 6) 55-64 7) 65 or above 8) Refuse to answer

Q32. What is your marital status?

1) Never married 2) Now married 3) Widowed 4) Divorced/separated
5) Refuse to answer

Q33. What is your education level?

1) No schooling/kindergarten 2) Primary 3) Secondary 4) Tertiary or above
5) Refuse to answer

Q34. What is your occupation? (Interviewer: Fill in the exact occupation if you cannot classify.)

1) Employers/managers & administrators 2) Professionals 3) Associate professionals
4) Clerks 5) Service workers & shop sales workers 6) Craft & related workers
7) Plant & machine operators & assemblers 8) Elementary occupations
9) Skilled agricultural & fishery workers, & occupations not classifiable 10) Students
11) Homemakers 12) Retired persons 13) Unemployed persons
14) Others (please specify) _____ 15) Refuse to answer

Q35. What is your monthly personal income including all incomes?

1) Below HK $2,000 2) HK $2,000 – $4,999 3) HK $5,000 – $9,999
4) HK $10,000 – $14,999 5) HK $15,000 – $19,999 6) HK $20,000 – $24,999
7) HK $25,000 – $29,999 8) HK $30,000 – $39,999 9) HK $40,000 or above
10) None 11) Refuse to answer

Q36. What is your monthly household income including all incomes?

1) Below HK $2,000 2) HK $2,000 – $4,999 3) HK $5,000 – $9,999
4) HK $10,000 – $14,999 5) HK $15,000 – $19,999 6) HK $20,000 – $24,999
7) HK $25,000 – $29,999 8) HK $30,000 – $39,999 9) HK $40,000 or above
10) None 11) Refuse to answer 12) Don't know

~ End of Questionnaire, Thank You ~