

Bridge



Department of Health

This Newsletter aims to promote communication between schools and the Student Health Service of the Department of Health

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It's June again when beautiful summer returns to us. School children in their growing stage need various kinds of nutrient to boost their immunity for happy and healthy growth.

So what is indispensable to growth and development as well as the boosting of immunity? It is healthy eating practice; and fruit and vegetables are essential in a healthy diet, giving us nutrition as well as preventing certain kinds of chronic illnesses. According to experts from the World Health Organization, eating 400g of fruit and vegetables daily helps prevent chronic illnesses such as heart disease, cancer, diabetes and obesity.

As development of healthy eating habits should be started when we are young, the Central Health Education Unit (CHEU) of the Department of Health have launched the '2+3' trial project to the local primary school students since June, 2005. It aims to promote the concept of healthy eating, encouraging more students to eat at least 2 servings of fruit and 3 servings of vegetables every day.

In this issue's feature article, colleagues of CHEU will report on the achievement and the room for improvement of the project. In addition, they provide positive suggestions to enhance the promotion of the importance of healthy eating in the 2006-2007 school year 'EatSmart@school.hk' campaign.

For enquiries of student's health problem,
please write to 'Health Box'

Please write your
Name & address:
Contact Tel. No:
in the letter

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Road, Kwun Tong,
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From the Editor

2+3 on Fruit and Vegetables

Paves Good Path for Health

Department of Health, Central Health Education Unit

Introduction

To promote the concept of healthy eating among local students, we have launched the ‘2+3’ project since June, 2005, encouraging more students to eat at least 2 servings of fruit and 3 servings of vegetables (80 g for 1 serving) daily. Prior to the full launching of this project, we have conducted a trial run to assess the effects and feasibility of the promotion project. In addition to conventional way of education, this project is also fitted with environmental modification to study the impact on primary schoolchildren’s knowledge, attitude and actual behaviour regarding eating fruit and vegetables, of which the result will be applied to future promotion projects.

It has already been a year since the launching of the ‘2+3’ project. What kind of achievement has been made? How do students view it? What kind of change has been found with teachers’ and parents’ perception? Is there any room for improvement? These are where our probe goes with this issue. Let’s go!

‘The Actions’

In April 2005, fourteen whole-day primary schools from Wong Tai Sin and Kwun Tong districts joined this trial project on a voluntary basis upon invitation by Department of Health (DH). These schools were randomly and evenly assigned to two groups of seven, namely experimental group and control group. Both groups were exposed to common education on healthy eating and the territory-wide ‘2+3’ publicity campaigns, while only the experimental group was exposed to a number of environmental modifications. About 4,100 students, 9,000 parents and 400 teachers took part in this trial.



Interventions common for experimental group and control group	Interventions for experimental group only
<ul style="list-style-type: none"> - Poster promotion for schools - Teaching materials for students (pamphlets) - Educational materials for parents (pamphlets and recipes) - Guidelines on healthy snack and lunch 	<ul style="list-style-type: none"> - Open declaration of ‘2+3’ programme (‘2+3’ pledges for schools and students) - Implementation of school food policies to create a supportive school environment for healthy eating - Point-of-decision prompt materials for tuck shops and vending machines - Training for teachers and parents on healthy school lunch - Interactive learning for students (worksheets)



'The Students'

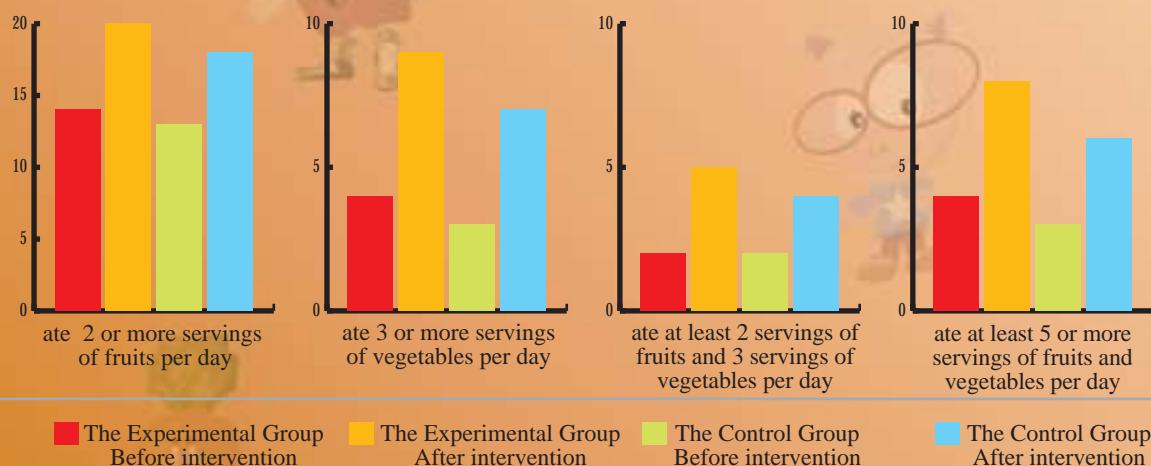
The welcomed choices on fruit and vegetables

As found in the survey, watermelon, mango, apple and orange were the most favoured kinds of fruit, which were preferred by more than two-third of students; kiwi fruit and pineapple were least chosen fruit (between 41% and 50%). As for vegetables, corn, white cabbage and broccoli were the top three favourite choices among all the students (with preference all greater than 67%). On the other hand, only 34% to 49% of students chose Chinese kale and wax gourd.

Fruit and vegetables became more popular

Reviewing the fruit and vegetable consumption after intervention showed that fruit and vegetable became more popular among students. In both groups of students, a quarter of them ate fruit every day before intervention, whereas the proportion increased to 30% after intervention. The proportion of students who ate vegetable every day showed a similar increase from about 48% to 53% after intervention.

Quantity-wise, the proportions of students who had two or more servings of fruit a day increased from 14% to 20% in the experimental group and from 13% to 18% in the control group; the proportions of students having three or more servings of vegetables per day increased from 4% to 9% in the experimental group and from 3% to 7% in the control group; the proportions of students who consumed at least two servings of fruit and three servings of vegetables per day increased from 2% to 5% in the experimental group and from 2% to 4% in the control group; the proportions of students who consumed five or more servings of fruit and vegetable per day increased from 4% to 8% in the experimental group and from 3% to 6% in the control group.



An increase in the proportion of students buying fruit or dried fruit in school tuck shops

The proportions of students buying fruit or dried fruit in school tuck shops increased after intervention from 0.3% to 2.6% in the control group and from 0.1% to 1.3% in the experimental group.

The practice of buying snacks and drinks in school tuck shops

	The Experimental Group		The Control Group	
	Before intervention	After intervention	Before intervention	After intervention
Fresh fruit / dried fruit	0.1%	1.3%	0.3%	2.6%
Dairy drinks	7.0%	10.9%	7.4%	5.5%
Tea drinks	17.1%	20.5%	16.9%	25.2%
Crispy snacks	36.3%	26.5%	34.3%	24.3%
Confectionery	15.4%	14.2%	22.4%	13.9%
Ice cream	2.4%	2.1%	2.6%	1.0%

'The Parents'**No change in the proportions of parents providing fruit and vegetables**

Before intervention took place, more than 60% of parents in both groups claimed that they provided fruit to their children regularly, while 98% of parents claimed that they provided vegetables to their children at dinner. The proportions did not change after intervention. The most common reasons for parents not providing fruit to their children regularly were:

- (1) children would get fruit by themselves
- (2) children dislike fruit

About half of the parents considered that their children were eating enough fruit and vegetables

Nearly half of the parents thought that their children were having enough fruit and vegetables for both school groups in the pre-intervention survey. No significant change was found after intervention.

More parents thought that eating more fruit and vegetables was needed

In the post-intervention survey, more parents in both groups considered that eating more servings of fruit was required to keep healthy. However, no significant difference was found with the increase in both groups in terms of the proportion of parents who considered two or more servings of fruit was needed, which was around 20% - from 32% to 56% in the experimental group and from 34% to 56% in the control group.

As for vegetables, more parents in both groups considered that eating more servings of vegetable was required to keep healthy. Likewise, no significant difference was found with the increase in both groups. The proportion of parents who considered eating three or more servings of fruit was needed increased from 13% to 30% in the experimental group and from 14% to 31% in the control group.

**More parents were using the food information / fruit and vegetables menu**

There were more parents in the experimental group who would refer to the food information or fruit and vegetable menu provided by DH or dietitian when preparing meals for their children or other family members (the experimental group: 32.3%; the control group: 29.3%)

Parents' high level of awareness of the school promoting the '2+3' programme

A higher proportion of parents in the experimental group reported that they were aware of the fruit and vegetables promotion activities in their children's school (the experimental group: 63%; the control group: 53%). Feedback from parents towards the programme was largely positive. There were even suggestions that more promotion on the advantages of eating fruit and vegetables should be made and more fruit and vegetables of better quality should be added in the lunch provided by school.

'The Teachers'**Teachers' knowledge of fruit and vegetable servings**

About 86% of teachers thought that two or more servings of fruit were enough to keep the body healthy; 68% thought that three or more servings of vegetables were enough for the purpose. There was no significant difference between the two groups in terms of the teachers' response.



Teachers' way of encouraging students to eat more fruit and vegetables

95% of teachers in the experimental group claimed that they would encourage students to eat more fruit and vegetables (the experimental group: 95%; the control group: 89%). The most common ways of encouragement in both groups included:

- (1) including the topic in the curriculum
- (2) working through extra-curricular activities
- (3) reminding students during lunch time

On the other hand, having a busy teaching schedule and other more important topics were common reasons why teachers failed to encourage students to eat more fruit and vegetables.

Teachers' perception of the effectiveness of the fruit and vegetable promotion programme in school

86% of the teachers opined that the programme helped enhance students' knowledge of the amount of fruit and vegetable intake. 92% of the teachers even considered the programme helped students understand the benefits of fruit and vegetables to health. There was no significant difference in teachers' perception between the two groups.

Moreover, it is worth noting that: 29% of the teachers in the experimental group gave positive comments on the programme or thought that the programme was carried out successfully, compared to only 7.3% of the teachers having same remarks in the control group; both groups had 13-20% of the teachers who thought that the programme could increase students' interest and knowledge about eating fruit and vegetables and suggested the holding of more activities, competitions or talks. Besides, 6.2% of the teachers in the experimental group reported that there were too many promotional leaflets.

Nearly one-third of teachers reported that they encountered difficulties or barriers when conducting the fruit and vegetable promotion programme in school. The two most common barriers quoted were:

- (1) parents' indifference
- (2) students' disinterest

Teachers' awareness of the fruit and vegetable promotion programme in school

98% of the teachers claimed that they were aware of the fruit and vegetable promotion programme in their school in the 2005/2006 academic year. There was no significant difference in teachers' awareness of the programme between the two groups.

'The Effectiveness'

The benefits resulting from environmental modification:

- (1) Reduction in the proportion of students' who brought snacks from tuck shop
- (2) Raise in parents' awareness of the promotion programme
- (3) Increase in parents' use of dietary materials in preparing meals for their children
- (4) Enhancement in teachers' sense of satisfaction and participation in the course of the promotion programme

Room for improvement in the knowledge of the appropriate amount of fruit and vegetables required

Students, parents and teachers generally knew the importance of eating fruit and vegetables; but there was room for improvement in parents' and teachers' knowledge of the appropriate amount of fruit and vegetables required. The amount that students actually ate was still far behind target when comparing to the recommended standard of at least five servings per day. Most students liked eating fruit and vegetables and parents would generally provide them at home.

Barriers to the promotion of fruit and vegetable consumption in primary schools were

- (1) many parents were not aware that their children did not have enough fruit and vegetables
- (2) a laissez-faire attitude adopted by parents
- (3) parents' and students' indifference
- (4) busy teaching schedule and competing priorities in school

'The Recommendations'

1. Environmental modification is worth adopting. It could be used to involve teachers and parents more effectively so as to build rapport, trust, ownership, sense of participation and satisfaction in promoting healthy eating in school. Also, the common communication channel used by teachers and parents for promoting school based campaign should be strengthened to facilitate the promotion of the campaign.

2. Schools have the obligation to create an environment which allows students to make healthy choices easily. Some parents and teachers pointed out that lunch suppliers provided too little fruit and vegetables, while snacks sold in tuck shop are largely unhealthy. Therefore, demand should be made to food suppliers to call for healthier options such as fruit, dried fruit, milk and high-fiber snacks.

3. To encourage students to eat in a healthier way by a multitude of programmes / activities / incentives. Examples include making use of children's birthday parties, festive celebrations and gatherings to promote the eating of fruit and vegetables, broadcasting nutritional value of food, music and slogans during meal time, commending openly the students who brought fruit to school.

4. Conventional education and publicity materials are very effective, and the promotion of fruit and vegetables should continue to be enhanced, in particular on the definition of adequate intake and serving size. Conventional education and publicity materials are very effective in raising overall intake, changing purchasing pattern and enhancing knowledge of fruit and vegetables, and are also easy to administer. Besides, more promotional materials such as posters, leaflets, recipes, teaching materials and guidelines could be provided to students, parents, teachers and lunch suppliers for easy reference.

Concluding note

With the full support from Education and Manpower Bureau and various organizations such as Home-School Co-operation Committee and associations of head of primary schools, the 'EatSmart@school.hk' campaign was formally kicked off in the 2006/07 academic year to improve students' dietary habits, so as to let them grow up healthily and enhance their learning efficiency. It is sincerely wished that the importance of maintaining a balanced diet will be thoroughly understood by all, and please do not forget to eat at least two servings of fruit and vegetables a day!

For more information, please call the health education hotline at 28330111 or visit our 'EatSmart@school.hk' website at <http://www.eatsmart.gov.hk>.

Acknowledgements

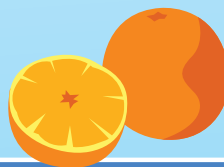
We would like to express our gratitude to all teaching and administrative staff, students and parents of the 14 primary schools below for their participation in the study (in alphabetical order):

Baptist Rainbow Primary School
 Canossa Primary School
 G.C.E.P.S.A. Kwun Tong Primary School
 H.K.T.A. Chan Lui Chung Tak Memorial School
 Man Kiu Association Primary School
 Our Lady of China Catholic Primary School
 Po Leung Kuk Stanley Ho Sau Nan Primary School
 SKH St. John's Primary School
 SKH Kei Lok Primary School
 SKH Yat Sau Primary School
 St. Bonaventure Catholic Primary School
 St. Edward's Catholic Primary School
 St. Matthew's Lutheran School (Sau Mau Ping)
 St. Patrick's Catholic Primary School (Po Kong Village Rd)



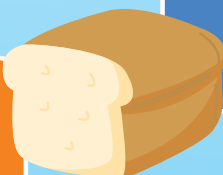
Childhood and adolescence are important stages of development. Early establishment of healthy eating habit facilitates the absorption of balance nutrients, which is also a milestone to build up good health. The topic for 'My view, your view' of this issue is "My views on eating fruits and vegetables...". We have gathered the information that students wrote on the 'My view, your view' Board and it showed that students have good understanding about the importance of healthy eating. Let's share their points of view underneath.

1. We should eat more fruits and vegetables and decrease the amount of snack because fruits and vegetables contain lots of vitamins and minerals



2. To be a good model at lunch time, I eat up all vegetables. I hope that all of you will become good model too

3. For people who like meat only, I suggest they eat meat together with vegetable so that the vegetable may taste better



4. I think fruits and vegetables are beneficial to our eyesight

5. I think eating fruits and vegetables make you strong and healthy



6. Eating more fruits and vegetables help us absorb vitamin, increase immunity and prevent constipation

7. I think that fruits and vegetables are good, we should eat at least 2 servings of fruits and 3 servings of vegetables every day



Interesting Knowledge Q&A



Q

One serving of vegetables is defined as

1. 1/2 bowl of cooked leafy vegetables
2. 1/2 bowl of cooked gourds
3. 1/2 bowl of cooked mushrooms
4. all of above

(Answer: Please check within this Newsletter)

Most adolescents are concerned about their appearance rather than having a healthy lifestyle, enriching their knowledge and inner beauty. Healthy lifestyle includes taking a balanced diet, doing moderate physical activity, having adequate rest and keeping a happy mood. In addition, expanding your knowledge and participating in appropriate group activities also contribute to growth and good health. The following correspondence is an illustration of how adolescents are concerned about their body image and weight.

Health Box:

Hi! I was found overweight in the annual check-up at Student Health Service Centre last year. I am 13 years old. My body height is 160 cm and body weight is 130 pounds. I wonder why I am so fat despite I do not like dessert and meat. Is it due to hereditary factor as my mother is also very fat? My mother prepares deep-fried food everyday. I do not want to take these kinds of food as I am afraid of gaining weight. I would like to have some physical exercise but I do not know which type of sport is suitable for me. Recently I have read a book about keep fit. It introduces all sorts of methods for losing weight such as saline bath, foot bath, massage and diet food. Please tell me the effective way to keep fit!

Mei Mei



Dear Mei Mei :

Thank you very much for writing to us.

We are pleased to find that you are a health-conscious girl as you are trying to find the solution for weight problem.

If body weight is 130 pounds (59.1 kg) and body height is 160 cm, you are not yet obese, but you should have to a balanced diet and do moderate physical activity to prevent gaining too much weight. You can refer to the food pyramid: eat most grains and cereals (e.g. rice, noodles, congee, rice noodles), more vegetables and fruit, adequate protein (e.g. pork, fish, chicken, bean curd) with least salt and sugar. You are right to avoid fried food and candies. You said your mother always prepares fried food and you worry about adding weight. In fact, you can plan some healthy recipes and cook together with your mother. This will also help to improve your relationship with your mother! In fact, other than poor eating habit and lack of physical activity, heredity is also a factor influencing the body weight. Therefore, please do not aim for a 'perfect' body weight or shape. This is often unrealistic and may never be achieved. It is vital to keep a healthy lifestyle and hence maintain good health.

Regarding the weight reduction methods discussed in your letter, there is yet no scientific evidence verifying their effectiveness. Please do not try them by yourself. Instead, moderate physical activity is important to keep you healthy and fit. We suggest that you have 30 minutes of moderate physical activity for at least three days a week. Choose one type of physical activity that you like and is suitable for your physical condition, then you can keep on doing it regularly.

Your Friends
Health Box

HEALTH TIPS

It is not right to take fruits only as the main meal because although we may get enough calories from fruits, there is not enough protein or fat.



without added sugar.
Vegetables include leafy vegetables, gourds, beans, mushrooms, seaweeds, sprouts and fresh vegetable juices

Answer: 4