

# ***Healthy Eating Habits at School***

***Assisting schools to develop school practices  
which promote healthy eating habits.***



***A collection of simple yet effective strategies  
which have been successfully implemented  
in a number of primary schools in NSW***

***Supporting the Student Welfare Policy***



NSW HEALTH DEPARTMENT  
Health Promotion Unit  
Northern Rivers Area Health Service

This work is copyright. It may be reproduced in whole or in part for study training purposes subject to the inclusion of an acknowledgement of the source and no commercial usage or sale.

Written by: Libby Holden  
Assistance from: Jillian Adams, Anna Huddy

State Health Publication No: (NRAHS) 01 0013  
ISBN: 0 7347 3259 7

For further information please contact:  
Health Promotion Unit  
Northern Rivers Area Health Service  
PO Box 498  
Lismore NSW 2480

Phone: (02) 66 202742  
Fax: (02) 66 222151  
Email: [ahudd@nrhs.health.nsw.gov.au](mailto:ahudd@nrhs.health.nsw.gov.au)



February 2001



## Contents

*Acknowledgements*

*Introduction*

### **Ideas for the Classroom**

<i>Fruit &amp; vegie break .....</i>	<i>Page 1</i>
<i>Nutrition education integrated into the curriculum .....</i>	<i>Page 2</i>
<i>Students cooking classes at school with parent instructors .....</i>	<i>Page 3</i>
<i>Students grow vegies and fruit at school.....</i>	<i>Page 4</i>
<i>Using healthy rewards for good behaviour .....</i>	<i>Page 5</i>
<i>List of teacher resources for including nutrition education in curriculum.....</i>	<i>Page 14</i>

### **Ideas for the School Environment**

<i>Canteens increase sales of healthy food items .....</i>	<i>Page 6</i>
<i>Conducting and supporting healthy fundraising alternatives .....</i>	<i>Page 7</i>
<i>Structured sit down and eat time .....</i>	<i>Page 8</i>
<i>Lunchbox checks during playground duty .....</i>	<i>Page 9</i>
<i>Schools provide cut up fruit at sports carnivals and as regular treats .....</i>	<i>Page 10</i>
<i>Smaller schools use school fridge &amp; microwave for students lunches.....</i>	<i>Page 11</i>

### **Ideas for Food From Home**

<i>Ideas on healthy lunches and snacks are provided to new parents.....</i>	<i>Page 12</i>
<i>Schools compile cookbook of healthy recipes as school fundraisers.....</i>	<i>Page 13</i>

**Resources**..... *Page 14*

**References**..... *Page 15*



## **Acknowledgements**

*The ideas included in this booklet have been successfully adopted by schools involved in the Tooty Fruity Vegie (TFV) Project, a two year health promotion project initiated by the Northern Rivers Area Health Service, Health Promotion Unit. Through collaboration with the Department of Education, schools were invited to participate in the project. Some schools were only involved in the evaluation aspect of the project, acting as 'control' schools for comparison to the schools actually implementing the program. Each school implementing the program formed a school project management team. This team comprised of representatives and volunteers from the following groups: teachers, parents, students, canteen staff, the principal, a TFV project officer, and a community nutritionist. These project teams adapted the project strategies to suit the school community and it's available resources. The project relied on volunteers from the school community to implement and sustain these initiatives.*

*The Tooty Fruity Vegie Project would like to acknowledge the special contribution made by the following ten school who implemented the project: Murwillumbah Public, Ellangowan Public, Larnook Public, Kyogle Public, Albert Park Public, Cabage Tree Island, Goolmangar Public, Harwood Island Public, Tuntable Creek Public, St Joseph's at MacLean.*

*Special thanks also to the schools that agreed to act as 'control school to assist with evaluating the effectiveness of the program. These schools were: Gilwinga Public, Bilambil Public, Crabbes Creek, Crystal Creek, Dungay Public, and St. John's at Mullumbimby.*

*The Tooty Fruit Vegie Project would like to thank the many parents and friends of the schools involved in implementing the project, whose contributions of time, energy, ideas and produce, have helped to successfully implement the strategies outlined in this booklet.*



## Promoting Healthy Eating Habits at School

### Introduction

*Schools have an opportunity to positively influence the eating habits of children. A number of simple yet effective strategies have been used in schools to improve the healthy eating habits of school children. Some of these are included in this booklet.*

#### **Some Questions to ask about healthy eating:**

How has the school encouraged students to eat healthy meals and snacks? What healthy and unhealthy habits has the school developed related to food and health? How could the school provide more positive messages and role modeling to students and parents about healthy eating habits?

*Eating an unhealthy diet has been proven to be a major contributor to developing a wide range of cancers<sup>(1)</sup>, in fact it is estimated that over one third of all cancer deaths are related to poor diet; particularly poor intake of fruit and vegetables<sup>(2-6)</sup>.*

*A healthy diet of fruit and vegetables is also essential to prevent heart disease<sup>(7-10)</sup> and to maintain normal body functioning of the brain, muscles, organs and bones. Adequate fruit and vegetables in the diet has also been linked to improved bone mineral density, visual acuity and all-cause mortality rates, suggesting it may have a protective role against an even wider array of health problems<sup>(11, 12)</sup>.*

*Adults need a minimum of two serves of fruit and five serves of vegetables daily. Children can need slightly less depending on their age/size. The amount that Australians actually eat is far less than this recommended minimum. One NSW survey found that less than 10% of people surveyed ate the recommended minimum amount<sup>(13)</sup>. Studies have also found that dietary habits formed early in life tend to continue into adulthood<sup>(14)</sup>, with 80% of obese adolescents becoming obese adults<sup>(15)</sup>. For these reasons it is important to promote a healthy eating habits from an early age, including promoting a diet which includes adequate fruit and vegetables.*







## Ideas for the Classroom

### Fruit & vegie break

*A number of schools have successfully introduced a fruit break during the first block of classes. Students are able to get a snack of fruit or vegetables from their bag, to eat while working at their desk. Parents have been sending suitable food and children have been very appreciative.*

#### Benefits:

- *Many students spend a considerable amount of time on public transport to get to and from school, as a result they can be very hungry by morning recess time, yet ...*
- *Students are often so keen to play with their friends at recess that they will choose not to eat rather than be left out of play, as a result they can be extremely hungry by lunch time.*
- *Hungry people find it harder to concentrate on the work at hand.*
- *A structured fruit break provides an easy and practical solution to encouraging healthy eating practices at school, while providing children with the necessary sustenance to keep them alert and energetic through the entire lesson block.*
- *Children are more likely to eat fruit and vegetables when alternatives such as packaged snack foods are not available as an alternative.*
- *Children are more likely to think that eating fruit and vegies is cool if all their classmates are doing it.*

#### **Good Practice:**

A five minute fruit & vegie break during the first block of classes.

This structured break during class enables students to get a piece of fruit or vegetables (only) from their bag and eat quietly while continuing with their work.





## Planning to Encourage Healthy Eating

### Nutrition education integrated into the curriculum

*A range of resources have been developed to assist teachers to include nutrition education in a cross curriculum approach. (Check the list of resources at the back of this booklet). Nutrition can be taught as part of science, English, maths, social sciences, PDHPE, computers and languages. Classroom learning activities related to nutrition can also be linked to canteen activities, school gardens and school events.*

#### **Good Practice:**

Teachers include nutrition education in class curriculum wherever possible; linking lessons with examples from daily life such as cooking, eating, shopping and growing food.

#### *Benefits:*

- *Children develop knowledge, skills and positive attitudes to self-care that will assist them for the rest of their life.*
- *Teachers are able to relate topics normally covered in the curriculum to real life situations using examples that are of interest to children, such as eating and cooking.*
- *Students learn better when they are interested in what they are learning; everyone likes to eat.*
- *Schools need to include nutritional education activities linked to the canteen in their classroom curriculum to achieve accreditation from the NSW School Canteen Association.*







## Planning to Encourage Healthy Eating

### Students cooking classes at school with parent instructors

*Cooking classes at school, using healthy recipes, have been extremely successful with both students and teachers. The classes are usually organised with parent helpers, a ratio of one parent to 5 or 6 students enables all students to get a turn. The classes have been so popular that increased attendance and extremely good behaviour have been consistently reported on cooking days.*

#### *Benefits*

- *Cooking classes have been a very popular with students and parents; children enjoy it when their parents come to help at school*
- *Teachers have reported that students are better behaved during these classes, they are enthusiastic and co-operative*
- *Parents have reported that children are eating and asking for more healthy food at home since doing cooking classes at school*
- *Children have been cooking at home the recipes they learned at school, as well as asking parents to prepare these foods for them*
- *Children learn skills in cooking, food hygiene and table manners as part of the cooking classes*
- *Parents get more involved in school based activities.*

#### **Good Practice:**

Parents and volunteers come to the school to teach the students how to cook. Students prepare healthy food and usually eat the food they cook.





## Ideas for the Classroom

### Students grow vegies and fruit at school

Many schools are successfully growing vegetables and fruit on school grounds. Students have opportunities to learn how to plant and care for a vegetable garden, fruit trees and sprouts. The gardens have proven very popular in all schools that have trailed them. Teachers can link the garden to the class curriculum, fitting into a number of subjects easily. The gardens also produce very tasty vegetables and fruit. Many of the schools find that the vegetables do not reach full size before they are picked and eaten by students. Even the less popular vegetables are gobbled up quickly!

#### Good Practice:

Schools plant vegetable gardens and fruit trees in school grounds. Children help to care for and grow fruit and vegetables.

#### Benefits:

- Children gain a greater understanding of where food comes from
- Children gain practical skills and knowledge in gardening
- Children have access to a variety of healthy foods
- School canteens and school fete stalls can sell excess produce
- Food scraps can be composted, thereby helping the environment
- Decorative gardens on school grounds can improve the aesthetics of the school while providing food for the canteen and students e.g. garden borders of parsley and cherry tomatoes, are both attractive and easy to maintain
- Garden vegies are used for a vegie snack break during class
- Garden vegies can be used to teach students about food science.





## Ideas for the Classroom

### Using healthy rewards for good behaviour

*Schools can influence the future habits of children in the way they reward students. Many adults today have developed the unhealthy habit of eating 'junk' or 'feel-good' food as a way of rewarding or comforting themselves. These habits are developed early in life and are influenced by the example of role models such as parents and teachers. Many teachers have a variety of methods to reward students including praise, merit badges, merit certificates, commendations given at assembly, and giving special privileges such as more computer use. Teachers can choose from this range of healthy alternatives for rewarding students, thereby encouraging healthy habits and providing consistent messages about how to develop healthy eating habits. Using time in the vegie garden as a reward has worked well for students with behaviour problems.*

#### Benefits:

- *Primary school children are highly influenced by the attitudes and ideas presented by teachers and parents; positive role modeling by teachers encourages children to take seriously the messages presented.*
- *Children develop healthy associations with food and are less likely to rely on unhealthy food choices to feel good.*
- *School policies and practices are consistent with the positive messages about healthy eating being promoted in the classroom, canteen, and school community.*

#### **Good Practice:**

Schools refrain from participating in fund-raising activities which promote unhealthy food and lifestyle choices for supporters.





## Ideas for the School Environment

### Canteens increase sales of healthy food items

*School canteens can increase the availability and sales of healthy foods in a variety of ways. By limiting unhealthy choices and providing and promoting more healthy choices; canteens can have a positive impact on students' diets. Some examples of how to achieve this are:*

- *Provide a maximum of 3 or 4 types of lollies and selecting these from the more healthy snack option for example popcorn is healthier than potato crisps.*
- *Limit the times when unhealthy foods can be sold so that lollies are only available to students after they have finished their lunch.*
- *Put a ceiling on how many lollies a child can buy e.g. 20c per child.*

#### **Good Practice:**

Canteens sell healthy food items, providing opportunities for children to develop healthy eating habits for life.

*Some schools rely on canteen sales to provide financial support to the school, as a result concerns about loss of income can be remedied with the following suggestions:*

- *Increase the cost of unhealthy items such as lollies and charge cost price for health items, especially the less popular ones.*
- *Special meal deals and promotional activities have been extremely popular and have significantly increase sales of healthy foods*
- *Giving a raffle ticket, sticker or other prize with each fruit/veg item sold has also greatly increased the sales of healthy food items.*

#### *Benefits:*

- *By removing many of the unhealthy temptations students are more likely to eat a healthy diet when purchasing from the canteen*
- *Schools have found that increasing the availability of healthy food items at canteen actually increases canteen sales as parents are more willing to allow children to buy lunch from the canteen*
- *Some students may rely on the canteen for their nutritional needs, as they may not always receive adequate nourishment at home.*





## Ideas for the School Environment

### Conducting and supporting healthy fundraising alternatives

*Fundraising is often required by individual schools to support the financial needs of the school. For many principals this is an ongoing struggle. At times chocolate and lamington drives can seem like an easy way out. However chocolates are unhealthy and reinforce unhealthy eating habits in both children and their adult role models. A range of alternatives are available, some are listed below.*

- *School fetes with stalls, raffles, and competitions*
- *Social BBQ's, morning teas, shared lunches*
- *School concerts, trivia nights*
- *School cookbook sales*
- *School auctions parents and local businesses donate goods*
- *Charity of the month at the Markets or other local businesses who support local charities e.g. Farmer Charlie's*
- *Free clothes or dress up days – fine paid to dress up*

#### **Good Practice:**

Schools provide consistent messages about healthy eating by using healthy fund raising activities

#### *Benefits:*

- *Consistent messages about the importance of healthy eating habits*
- *Greater support from P & C's and parents for fundraising activities*
- *Better health for children and families*
- *Families sharing more fun and interactive activities.*





## Ideas for the School Environment

### Structured sit down and eat time

*Many schools have structured the lunch break into two segments, eating and playing times. Usually students are required to sit down in designated areas to quietly eat their lunch until the second bell rings for play-time.*

#### *Benefits:*

- *Providing adequate time to eat lunch will ensure that students get the time required to eat the food provided for them rather than running off to play with friends without finishing all their lunch.*
- *Teachers are able to better supervise children during lunch when they are sitting quietly in designated areas.*
- *Teachers are more able to monitor that all students are provided with food during school hours when a sit down and eat habit is adopted.*
- *Quiet time during and after eating will enable better digestion of food.*

#### **Good Practice:**

For sit down & eat time during lunch, students are required to sit and eat quietly until the play bell signals that playtime has begun.





## Ideas for the School Environment

### Lunchbox checks during playground duty

*Praising children for eating healthy lunches has resulted in a considerable increase in the number of children eating fruit and veggies for lunch. This has worked particularly well with the younger age groups (K-4).*

#### *Benefits:*

- *As playground duty for Teachers includes watching over the children as they eat, it takes minimal effort to praise good eating habits as they supervise the children.*
- *Praise has the effect of reinforcing desired habits and inadvertently discourages undesirable habits.*
- *Teachers are more able to monitor that all students are provided with adequate food during these informal lunch box checks*

#### **Good Practice:**

Teachers on playground duty check students lunches and praise students eating healthy lunches.





## Ideas for the School Environment

### Schools provide cut up fruit at sports carnivals and as regular treats

*Cut up fruit has always been popular with children and adults. A number of schools have reported that serving cut up fruit at sports days and open days has been very successful. With minimal effort fruit such as oranges can be cut up and frozen prior to the event, or cut up on the day and served to the children. Parents and children can bring fruit to contribute on the day. In addition some schools have organised cut up fruit days on a regular basis, in some cases daily in other cases monthly. Schools have noticed a great increase in the number of children bringing fruit on these days.*

**Good Practice:**

Schools prepare trays of cut up fruit and vegies for students at school sports carnival as regular treats. Parents send in fruit & veg to be cut up

**Benefits:**

- *Children and Adults are more likely to eat fruit if it is cut up for them.*
- *Regular opportunities to eat fruit as treats will encourage children and parents to consider fruit as feel good foods suitable for rewards and treats*
- *Encouraging children to bring in fruit to cut up and share, especially unusual fruits, will increase their interest in and familiarity with different types of fruit.*
- *Parents who normally miss out on supporting school events due to full time work, can make their contribution by sending cut up frozen fruit to school.*
- *Children get dehydrated running around at competing in races at sports carnivals, fruit such as oranges and mandarines can replace vital fluids and as well as providing nutritional goodies*







## Ideas for the School Environment

### Smaller schools use school fridge & microwave for students lunches

*In our hot Australian climate, students are very limited in what foods they can bring to school for lunch. Meats, dairy, and other perishables will not last till lunch time if kept out of the fridge. By making use of the school facilities, teachers in smaller schools spend the first few minutes of the lunch break helping or supervising while children get their lunch from the fridge and use the microwave.*

#### Benefits:

- *Parents can send last night's left-overs for lunch, making lunches easier and healthier*
- *Children can get a greater variety of healthier foods when they can use the fridge to keep foods cold and the microwave to heat up or cook food*
- *Perishable foods such as meat and dairy can be included in lunches without concerns of food poisoning*
- *Vegies such as corn on the cob can be cooked for a healthy snack*
- *Food that is at the correct temperature is more enjoyable therefore there will be less waste*

#### Good Practice:

Small Schools use school fridge and microwave to allow children to bring a greater variety of school lunches.





## Ideas for Food From Home

### **Ideas on healthy lunches and snacks are provided to new parents**

*Preparing healthy and interesting lunches for children takes effort and thought. Children can easily get bored with the same lunches day after day. This can cause them to lose interest and gradually their preferences get more limited. Some children can go through their school life on vegemite sandwiches. By providing information to new parents on healthy lunchbox ideas, schools can encourage healthy eating habits with students.*

#### **Good Practice:**

Schools provide new parents with information on healthy lunch box ideas, as part of the school orientation.

#### **Benefits:**

- *Children have trouble concentrating in class if they are hungry or over-stimulated by too much sugar.*
- *Having a range of healthy lunch ideas to choose from can make preparing lunches more pleasurable and satisfying.*
- *Children are less likely to skip lunch to play if they have an appealing and healthy lunch prepared*
- *It is easy to fall into the habit of doing the same thing because you know your child will eat it, but they can get bored with these foods too. By providing a variety of lunch choices children get used to trying and eating a variety of foods, helping them to be less fussy and easier to feed.*





## Ideas for Food From Home

### Schools compile cookbook of healthy recipes for school fundraisers

*A healthy recipe competition can be used to collect a range of healthy recipes from the school community. These can be compiled easily into a recipe book and sold to raise funds for the school. Organisers need to give clear instructions to families that only healthy recipes will be included in the cookbook. This has proven successful not only for raising funds for the school but also for creating a school environment which provides positive messages about eating healthy foods for healthy growing bodies.*

#### Benefits:

- *A healthy recipes competition with attractive prizes will increase interest and discussion in what healthy eating involves and what are easy ways to prepare healthy foods*
- *Compiling a recipes book of healthy meals provides more alternatives for people who want to eat healthy food but have difficulty thinking up new ideas for variety*
- *Children and families are more likely to want to buy the recipe book because their recipes and their friends' recipes (along with their names) are published in the book*
- *Children and parents are more likely to want to try the recipes when they know the person or family who contributed the recipe.*
- *The school is able to raise funds in healthy ways without reverting to chocolate drives, which give negative messages to children about nutrition and healthy eating.*

#### Good Practice:

Schools make a cookbook of health recipes from parents and students, then sell the cookbooks as fundraisers for the school.





## Resources

### List of teacher resources for including nutrition education in the curriculum:

- *'Tuckerbox - Connecting Text & Grammar': teacher resource for nutrition education, available through ABC bookshops*
- *'Sing along, Move along': songs, dances, & activities with fruit & vegies, available through the Children's Health Development Foundation, South Australia.*
- *Kids in the Kitchen resources (& snack n pack cookbook), available through Health Department, Western Australia; cookbooks available from newsagents*
- *National Nutrition Education in Schools, information through Department of Education Queensland.*
- *Web sites for fruit & vegetable education for example <http://www.dole5aday.com>*
- *Blooming Ideas for Schools from the Australian Gardening Industry*
- *The Colourful World of Vegies – curriculum resources for teachers of primary school children, available from the Queensland Fruit & Vegetable Growers*
- *The Wonderful World of Vegies - curriculum resources for teachers of secondary school children, available from the Queensland Fruit & Vegetable Growers*



## References

1. Doll R et al. *The causes of cancer: quantitative estimates of avoidable risks of cancer in the United States today.* *J Natl Cancer Inst* 1981;66:1193-308.
2. Block G et al. *Fruit vegetables, & cancer prevention: a review of the epidemiological evidence.* *Nutr Cancer* 1992;18:1-29.
3. Steinmetz KA et al. *Vegetables, fruit & cancer: II - Mechanisms.* *Cancer Causes & Control* 1991;2:427-41.
4. Cohen JH et al. *Fruit and vegetable intakes and prostate cancer risk.* *J Natl Cancer Inst* 2000;92(1):61-8.
5. Gandini S et al. *Meta-analysis of studies on breast cancer risk & diet. The role of fruit & vegetable consumption & the intake of associated micronutrients.* *Eur J Cancer* 2000;36(5):636-46.
6. La Vecchia C et al. *Fruit & vegetables, & human cancer.* *Eur J Cancer Prev* 1998;7(1):3-8.
7. Ness AR. *Fruit and vegetables and cardiovascular disease: a review.* *Int J Epidemiol* 1997;26:1-13.
8. Stafford H. *A Case for Promoting an Increase in the Consumption of Fruit and Vegetables in NSW.* Sydney: NSW Health; 1997.
9. Segasothy M et al. *Vegetarian diet: panacea for modern lifestyle diseases?* *QJM* 1999;92(9):531-44.
10. Joshipura KJ et al. *Fruit & vegetable intake in relation to risk of ischemic stroke.* *JAMA* 1999;282(13):1233-9.
11. Tucker KL et al. *Potassium, magnesium, & fruit & vegetable intakes are associated with greater bone mineral density in elderly men & women.* *Am J Clin Nutr* 1999;69:727-36.
12. Strandhagen E et al. *High fruit intake may reduce mortality among middle-aged & elderly men. The study of men born in 1913.* *Eur J Clin Nutr* 2000;54(4):337-41.
13. Stickney B. *Food and nutrition in NSW: a catalogue of data.* NSW Health 1994.
14. Gutlin B. *Blood pressure - fitness and fatness in 5 and 6 year old children.* *JAMA* 1990;264:1123-7.
15. Auld GW et al. *School health interventions for adolescents at nutritional risk: a survey of health teachers, nurses, and coaches.* *J Nutr Educ* 1988;20(6):319-25.



## Resources

### List of teacher resources for including nutrition education in the curriculum:

- *'Tuckerbox - Connecting Text & Grammar': teacher resource for nutrition education, available through ABC bookshops*
- *'Sing along, Move along': songs, dances, & activities with fruit & vegies, available through the Children's Health Development Foundation, South Australia.*
- *Kids in the Kitchen resources (& snack n pack cookbook), available through Health Department, Western Australia; cookbooks available from newsagents*
- *National Nutrition Education in Schools, information through Department of Education Queensland.*
- *Web sites for fruit & vegetable education for example <http://www.dole5aday.com>*
- *Blooming Ideas for Schools from the Australian Gardening Industry*
- *The Colourful World of Vegies – curriculum resources for teachers of primary school children, available from the Queensland Fruit & Vegetable Growers*
- *The Wonderful World of Vegies - curriculum resources for teachers of secondary school children, available from the Queensland Fruit & Vegetable Growers*