

7 General principles for promoting healthy eating

The following issues need to be considered before embarking on any interventions.

What is an intervention?

In the present context, an intervention is usually a deliberate change that is made to the child's environment with the purpose of altering the child's feeding (or drinking) behaviours to improve the child's health and nutrition status. This 'deliberate change' can be general (such as the introduction of a preschool food policy) or highly specific (such as a parent smiling when the child eats vegetables).

A key aim of children's healthy eating promotion is to bring about sustainable long term dietary improvements. This usually involves altering the ways in which families, child care organisations or schools operate, thus the importance of food policies. Behavioural change takes time and persistence, and needs to involve the help of many people and agencies. Working out exactly which changes are required and setting a schedule of goals for the child, parents, teachers, schools and other organisations are important steps.

Many parents and community health and education workers are willing to help implement healthy eating programs for children. In any locality or setting, it is important to consult with these stakeholders to decide on the desired outcomes of any healthy eating program and to work out ways in which to evaluate progress towards project goals. A school community, for example, might decide to develop a food policy that will aim to transform the canteen sales to include more fruit and vegetable products. If a policy with goals and responsibilities is written (who does what and when), then the success of the policy can be reviewed from time to time and actions can be taken to either modify the goals or strengthen actions to better meet the goals.

The practitioners' role in healthy eating promotion

The role of practitioners in healthy eating promotion varies according to their occupation (for example, the role of nurses is different from that of teachers) and the settings in which they work (for example, a hospital, a preschool or the community). Setting good examples (that is, 'modelling' healthy behaviours) is an essential role of all practitioners, so it is important for practitioners to set their own healthy eating goals and act to achieve them. An equally important general role is listening to parents' and children's views, needs and wants. Healthy eating should be a natural part of everyone's lives; practitioners have to find ways in which to fit healthy eating into people's lives. The Review of Children's Healthy Eating Interventions found little evidence that the design and implementation of many published interventions had accounted for children's and parents' opinions and life experiences. Yet, children and parents are the *key people* in any healthy eating program, and they should be heavily involved in the

design, implementation and evaluation of any interventions, in keeping with the principles of sound community health promotion (Wass 1994).

For many people, food and eating are moral issues (Coveney 2000)—that is, some ways of eating are perceived as ‘wrong’ and others as ‘right’. Practitioners need to avoid becoming labelled as the ‘diet police’, which can happen if their activities are too prescriptive. There are many ways to eat healthily; the essence of good practice is to enable people (parents and children) to choose their own ways of doing so. In summary, the practitioner’s role is to facilitate children’s, parents’ and professionals’ access to information and food resources to enable children and families to eat in healthy ways; practitioners should not try to ‘own’ the project.

Aiming for small, measurable, sustainable, systemic changes

A key finding of the Review of Children’s Healthy Eating Interventions was that large scale externally funded interventions were often no more effective than small scale interventions, and that very few interventions were sustainable in the long term. Often, when external funding ceased, the programs ceased. Several practitioners interviewed for that review noted that small, systemic but significant changes in daily practice are preferable to one-off ‘gee whiz’ campaigns because they are more likely to be feasible in the long term. Again, this approach is consistent with the local community focus of effective health promotion (Department of Human Services, Victoria 2003a; Wass 1994). It suggests healthy eating promotion should be a normal part of a teacher’s, nurse’s, carer’s or parent’s ‘job’.

The importance of sound information

Although parents and carers do not need to be mini-nutritionists to help children eat healthy, enjoyable foods, there is little doubt that they require sound knowledge of key nutritional and behavioural principles. However, many adults have less than optimal knowledge of nutritional principles (Wardle, Parmenter and Waller 2000), and the distribution of this knowledge appears to be differentiated among social economic groups, with lower socioeconomic status groups having less knowledge (Wardle, Parmenter and Waller 2000). Several stakeholders interviewed for the Review of Children’s Healthy Eating Interventions noted substantial demand for clear information about the feeding of children. Without an understanding of the basic principles of nutrition and child development, parents, teachers and other carers may find it difficult to alter children’s food consumption habits (Worsley 2002).

Good examples of suitable information materials include *What’s there to eat? The practical guide to feeding families* (Department of Human Services, Victoria 2001), the ‘Filling the Gap’ tip sheets (Department of Human Services, Victoria 1997), *The Australian Dietary Guidelines for Children and Adolescents* (NHMRC 2003), publications by Nutrition Australia, the National

Heart Foundation's manual for out-of-school hours carers, and *The Australian Guide to Healthy Eating* (Smith, Kellet and Schmerlaib 1998).

A focus on eating, not just nutrition

Healthy eating should be enjoyable. Unfortunately, there is a widespread perception among children that healthy food *must* be distasteful (Hill 2002). This perception may be related to some parents' and community members' overly constrictive views of food. In contrast, healthy eating involves consuming a wide variety of foods and a more relaxed approach to nutritional principles.

Children can enjoy most foods so long as the foods are well prepared and eaten in a supportive social environment (D Wilson, pers. comm., 2003). Usually, children and parents need to be involved in handling, choosing, preparing and tasting food. Good examples are school gardening and kitchen projects (such as those operated by Collingwood College—www.educationfoundation.org.au/kidsandcommunity/project.asp?projectID=93), the Tooty Fruity program (discussed below) and the classroom-based fruit and vegetable campaigns run annually by the Western Australian Department of Health in conjunction with the horticultural industry (Pollard 2001). These projects emphasise the experiential aspects of food—learning about how food feels, smells and tastes.

Useful guides to healthy, enjoyable eating can also be found in cookery books (Saxelby 2003; Ehrlich and Murkies 2001), the 'slow food' movement's publications (which emphasise the natural, organic production of production and consumption of local foods) and manuals such as the National Heart Foundation's (2003) *Eat smart, play smart* school manual, *FoodPower* (Smith and Schmerlaib 1988) and *What's there to eat? The practical guide to feeding families* (Department of Human Services, Victoria 2001).

Nutritional outcomes such as prevention of obesity and adequate nutrition status are desirable consequences of healthy eating; however, if people do not make healthy food choices in the first place, their nutrition status will be poor. The Review of Children's Healthy Eating Interventions showed that interventions during the 1980s placed little emphasis on eating behaviours and focused too much on biomedical outcomes (such as low plasma cholesterol levels). These goals have now been shown to be overly narrow and limited predictors of health status (Stanton 1999; Trichopoulou et al. 2003). An emphasis on ways of enjoying a wide variety of foods from the standard food groups (the first guideline in NHMRC 2003) avoids the risk of changes in nutritional fashions and does not confuse people.

Goal setting

To change their behaviours, people need to have a clear picture of what they should change; they need clear goals and strategies to achieve those goals. This simple principle applies just

as much to practitioners' work programs as it does to parents' and children's eating behaviours.

Several interventions have employed self-monitoring schemes in which children set their own eating goals, then try to meet them; if children meet their goals, they are rewarded with praise or something tangible, such as a gold star (see the discussion on 'Food Dudes' below). In moderation, such schemes are useful behavioural strategies because they focus everyone's minds on a task and they build in feedback and positive reinforcement. Again, there are useful guides to this approach (Maynard et al. 1987; Cullen, Baranowski and Smith 2000). For this approach, the collection of baseline information about eating is important so any changes can be evaluated and fed back to the participants to motivate them. Reinforcement or reward of desired behaviours is a key principle of behaviour change. It does not have to be given on every occasion; often, mere recognition that the person has achieved the goal can be highly effective in maintaining the behaviour change.

Several researchers, however, have warned about the dangers of using food 'treats' to reward children for 'good' behaviour (such as eating vegetables or sitting quietly in their car seat). This type of reward usually makes the treat more desirable in the child's eyes (Birch 1999; Tapper, Horne and Lowe 2003).

A focus on children's and carers' needs and wants

Practitioners can easily concentrate only on healthy eating goals. However, parents and children may not perceive healthy eating as a highly valuable goal. They may want to do other things instead, such as quit smoking, work longer hours to earn essential household income or, in the case of children, retain the approval of their friends, who may regard healthy eating as 'sissy'. This recognition of other goals (some of which conflict with healthy eating goals) does not prevent practitioners from adopting other strategies to reach healthy eating goals.

FoodCent\$ is an excellent example of the flexible thinking required (Foley 1998; Foley and Pollard 1998; Foley, Pollard and McGuinness 1997). This Western Australian program operates for low income households. The designers of FoodCent\$ were aware that many of their clients suffered from major financial hardships that tended to make nutritional considerations relatively less relevant to them. The practitioners thus used the dietary pyramid as a way of saving money, rather than as a way of talking about the healthiness of foods. As a result, most participants adopted healthier food patterns after only a few group sessions and maintained them for up to four years (section 6). In other words, the practitioners focused on the clients' expressed wants (ways of saving money) rather than solely on their professional orientation (health and nutrition).

Box 2: FoodCent\$

For the FoodCent\$ program, low income participants were encouraged in supermarket tours to work out the cost per kilogram of some of the products they buy (for their children). The program practitioners then pointed out that the whole foods towards the base of Nutrition Australia's Healthy Food Pyramid can be purchased more cheaply and prepared (via short cooking lessons) quickly. Children's taste tests of the parents' cooked products (like homemade muffins) usually showed that the children preferred the homemade cheaper foods to commercial products. Once participants mastered these simple shopping and cooking skills, they carried on using them for up to four years, saving a lot of money and, incidentally, eating more healthily.

The significance of FoodCent\$ for nutrition promotion is that it focused on the participants' needs and wants (saving money) rather than the practitioners' needs (healthy eating). In doing so, it enabled clients and their families to save money and eat more healthily. The promotion of healthy eating, therefore, does not require nutritional preaching or have to focus on health—the participants' needs have priority.

* The Healthy Eating Pyramid is available from www.nutritionaustralia.org.

It is important to focus on the clients' needs, wants and views of health and nutrition. Many primary and secondary school students, for example, associate the concept of 'health' with 'boredom' and other negative connotations (Hill 2002), so some may perceive foods labelled 'healthy' as being unattractive. Some canteen managers identify the foods that children perceive as attractive and market their foods accordingly. At Loreto College in Adelaide, many students thought that Italian trends were attractive, so the canteen manager gave the healthier products (such as salad rolls and chilled water) Italian names to make them more attractive to the children. As a result, salad rolls outsold meat pies and pasties four to one! Marketers do this routinely, associating their products with images that are attractive to their potential customers. Mineral water, for example, is often advertised using images showing 'sophisticated' models sipping the product poolside. While practitioners have to be concerned about health, many children are less concerned. For this reason, practitioners may need to motivate children to eat more healthily by linking healthy foods to the children's social and personal needs, especially their need for social acceptance.

The best settings for interventions

The Review of Children's Healthy Eating Interventions showed that most interventions have been conducted in ante-natal and postnatal centres and in primary schools. These settings are important influences on children's eating, but other settings—for example, preschools, secondary schools and local communities—may be just as important yet have been less

studied by researchers. Interestingly, the greatest percentage of effective interventions was found in secondary schools. This suggests some settings may be more amenable for researchers to study, while others may be better places to conduct effective interventions. It is important to select settings for interventions according to their potential to facilitate healthy eating, rather than because they are convenient settings in which practitioners can work. Part B examines potential settings in detail and provides examples of interventions in particular settings.

The importance of parents

One key problem is access to parents. Parents remain major influences on many children until adulthood (Ambert 1997; Lamb 1997) but it can be difficult to involve them in healthy eating programs. Settings such as preschools, family day care and out-of-school care centres tend to involve more contact with parents (for example, when parents drop off and pick up their child), which may provide opportunities for the promotion of healthy eating (via the imparting of advice about eating, for example). However, other approaches that may be required include: the use of mass media advertising (to raise parental awareness and support for school programs); interventions in work sites, health centres and leisure and sporting settings; school newsletters; mail-outs of booklets and videos to children's homes; and communication via retail outlets.

Parents probably benefit as much as their children from healthy eating interventions, particularly given that over half of them are likely to be overweight or obese (AIHW 2003). Families are thus more likely to adopt programs that target parents' eating habits as well as children's. Most parents decide which foods enter the household (the gatekeeper theory) (Koivisto Hursti and Sjoden 1997), so when they change their purchasing and eating habits, there is a good chance that their children will change accordingly (Koivisto Hursti, Fellenius and Sjoden 1994).

Local community partnerships

While most interventions have been conducted in single settings such as primary schools, most children and parents purchase or consume foods in several settings, such as the home, the supermarket, bakeries, fast food outlets, milk bars, canteens, specialty food shops (for example, greengrocers), cafés, restaurants and so on. Each setting has its own influences on food consumption, so it is important to intervene in those settings in which children (and their parents) purchase or consume food. The formal control of these settings varies, ranging from parental control in the home, to the control of the owner of the local supermarket, corner deli or local café, to local government regulation of the sale of food. This diversity of control suggests the need for local community partnerships between the healthy eating practitioner and a variety of community and commercial groups. The wider and more integrated the partnerships, the more likely children and parents will be enabled to choose healthier foods.

A novel example of a community partnership is the current obesity prevention study in a small regional town in Victoria. Facilitated through the activities of one community development officer (who is funded by the Department of Human Services Victoria), the project aims to build the capacity of the local community to undertake obesity prevention activities—for example, to acquire funding from VicHealth for a walking school bus initiative, to promote the drinking of water at schools, in preschool centres and in public places, to develop lunchbox guidelines for parents and to promote school canteen policies. The development officer does not undertake any interventions, but instead communicates about healthy eating (and other issues) with members of the local community (such as teachers, health officers, retailers and local government officials) so they can conduct interventions of their own design in their own settings.

This approach is quite different from that of the randomised control trial intervention, but it is similar to the type of work done in economic development and in community health promotion (Wass 1999). The aim is to facilitate change by people who work in and control a wide range of settings. It is a much more naturalistic approach than the randomised control trial intervention, relying on social cohesion and the social diffusion of innovations through the community (Rogers 1993). Other examples of the use of community partnerships to change eating behaviours include the Penrith Food Project (Rychetnik. et al. 2002), Eat Well SA (Coveney, Carter and Smith 1999) and California's Leaders Encouraging Activity and Nutrition (LEAN) program, which has succeeded in having soft-drinks banned from sale in Los Angeles schools from 2004. LEAN is a community advocacy program of the California Department of Human Services and the Public Health Institute (www.dhs.ca.gov/lean). The success of this legislative change is likely to depend on the availability of adequate funding for those school activities previously funded through soft-drink sales.

Figure 4: Example of a community advocacy program—the Leaders Encouraging Activity and Nutrition (LEAN) program in California

**Soda pop to be banned in LA schools
LOS ANGELES, 28 August 2002**



The ban's being phased in to help schools like this one—James Monroe High in Los Angeles—cope with the loss of revenue averaging \$39 000 per high school and \$14 000 per middle school. (AP)

QUOTE

A similar ban is in place in the Oakland Unified School District in northern California, and in Texas, the sale of junk food is banned in public schools at lunchtime.

(CBS) Health concerns have prompted school officials in Los Angeles County to vote to phase out the sale of soda pop and sugar-laden soft-drinks to its 748 000 students.

In voting unanimously to end the sale of soda in vending machines and cafeterias by January of 2004, the Los Angeles School Board rejected arguments that its 677 campuses need the money they make from the drinks, saying that students' health should take precedence over fund raising.

But they also voted for a compromise measure that would allow for the superintendent of schools to address the issue of lost revenue in a report to be filed six months from now.

'I find it appalling that we are discussing economics at the risk of our children's health,' said board member Marlene Canter, who sponsored the measure. She argued that schools should not rely on students to subsidize their own educations.

The school district already prohibits carbonated drink sales at elementary schools. The new measure extends the ban to the district's approximately 200 middle and high schools. It only takes effect during school hours.

Still permitted during school hours are water, milk, beverages with at least 50 per cent fruit juice and sports drinks with less than 42 grams of sugar per 20-ounce serving ...

The new policy in Los Angeles will phase out soft-drinks in vending machines and cafeterias, where they will be replaced by water, milk and fruit and sports drinks.

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Source: Web download of CBS media release.

Selecting the best method

Many of the most effective healthy eating interventions have employed combinations of methods to change children's eating behaviours. However, other effective interventions have used only one approach (such as lectures to parents). It is difficult to tell from published reports how intensively various approaches have been pursued, so a comparison of the effectiveness of various change methods is problematic. Nevertheless, multiple methods are likely to be more effective than single methods, because different methods are likely to have different effectiveness among different types of people.

Some of the change approaches used have been based on specific psychological or educational theories, while others have not. The various methods include:

- *Lessons about food and nutrition.* This category includes classroom teaching in schools, as well as lectures to members of the community and counselling sessions in hospitals and clinics. Unfortunately, most published reports do not indicate the type of teaching involved—whether it was didactic or group discovery learning, for example. There is evidence that the latter is very effective in promoting the nutrition learning of primary school children (Johnson and Johnson 1985). Some lessons have been theoretical; others have involved practical cooking skills and taste appreciation (for example, Tooty Fruity and Western Australia's fruit and vegetable campaigns).
- *Parental involvement.* This category covers many types of activity. It may simply require parents to monitor children's homework, but more usually requires them to work with children at home on eating-related tasks (such as cooking and eating healthy meals several times per week). Alternatively, programs may be directed mainly towards parents—for example, the use of videotaped lessons to teach parents how to include more fruit and vegetables in their children's diets in appealing ways. The 'Food Dudes' program in the United Kingdom (Tapper, Horne and Lowe 2003) (box 6) more than doubled children's fruit and vegetable intake as a result of this type of approach. Generally, few programs have involved parents at all. This is unfortunate because parents are probably the main influence on many children's eating habits (Birch 1999; Contento et al. 1993; Michela and Contento 1986; Tapper, Horne and Lowe 2003).
- *Changes to the food supply.* Several school studies have shown that the types of food served in the school canteen influence children's eating. French et al. (2001) showed that changes in the content (and the pricing) of vending machine foods in Minnesota schools had marked effects on students' purchasing of those foods (box 13). Students preferred low fat snacks, especially if the snacks were sold at reduced prices (French et al. 2001). It is common knowledge among catering companies that the positioning and

price of foods in school canteens affects their sales. Children tend to choose foods that are close to the edge of the counter and that are lower in price than similar products (D Wilson, pers. comm., 2003).

- *Self-monitoring approaches.* These approaches are based on cybernetic and social cognitive theories of behaviour (Bandura 1986; Carver and Scheier 1982). They are personal change strategies, not unlike food policies that schools and other organisations may adopt to guide their food and nutrition activities. Participants are encouraged to become aware of aspects of their current diet, such as their daily intake of fruit. Then, they are asked to try to change this aspect in a specific way (for example, 'I will eat an apple at morning recess instead of my usual chocolate biscuit'). They record their attempts and, if they succeed (that is, if they reach an agreed target level, such as eating an apple for recess for three days in a row) they are rewarded in some way (perhaps earning a gold star or some non-food treat). This approach is quite effective, so long as it is not carried to extremes. It teaches the learners about the virtues of goal setting, makes them think about the future and can employ powerful reinforcers (such as teacher, parent or peer praise). An early example of self-monitoring is the STAR system (**S**ee, **T**arget, **A**pply yourself, **R**eward yourself) used in the South Australian Body Owner's Program in 1980 (Coonan, Worsley and Maynard 1984). More recently, Luepker et al. (1996) used a form of self-monitoring in the CATCH program.
- *Award and accreditation schemes.* At an organisational level, accreditation and award schemes are good examples of this category. Child care centres, for example, may examine the state of their staff's food and nutrition skills, enter a training scheme, and, when successful, be given a healthy eating award for a period of time, as in Western Australia's Start Right, Eat Right award system (box 4).

Box 3: Summary of general principles for promoting children's healthy eating

- Aim for small, measurable, systemic changes
- Facilitate children's, parents' and professionals' access to sound information.
- Focus on eating, not only nutrition.
- Use goal setting strategies.
- Account for children's and carers' needs and wants.
- Consider interventions in a range of settings in which children and their families purchase or consume foods and beverages.
- Deliver interventions across multiple settings (which may involve community partnerships), because this approach is likely to be more effective than single setting interventions.
- Use multiple method interventions that include family involvement, changes to the food

supply, and education and policy strategies, because this approach is likely to be more effective than single method interventions.

- Establish food policies for all settings in which children and families live and work.

Figure 5: A self-monitoring system—the star plan

The **STAR PLAN** is simple but powerful. It gives you a way of controlling the things you do . . . or of controlling the things you may not want to do. In all cases you remain the boss. It helps you to look at the things you do, to decide if they need a change for the better. It then helps you to help yourself make the changes successfully.

The **STAR PLAN** is very simple and has been developed by psychologists (sy-col-o-gists) to help you solve problems. If you become good at it you should be able to use it in as many ways as you like, in sport, socially or with school work.

THE STAR PLAN



See
Target = STAR
Apply
Reward

Source: Coonan, Worsley and Maynard (1984)

Box 4: Award and accreditation schemes—Start Right, Eat Right

The Health Department and Perth's child care centres have joined forces in a new award scheme to combat poor diet in WA children.

The WA Start Right, Eat Right Award seeks to encourage and recognise centres providing nutritious and varied food for children.

The scheme, the first of its kind in Australia, is designed to target children under the age of 5—the age when life-long eating habits are forming.

Health Department nutritionist Margaret Miller said with nearly 17,000 children attending child care centres in Western Australia, centres had a significant opportunity to promote good eating habits, particularly more fruit, vegetables and milk products.

She said some of the ways child care centres taught children about good eating would be helpful for parents at home.

'There were no specific food and nutrition guidelines for day care centres in WA until the Health Department released its recommendations, which aim to provide at least 50 per cent of the recommended daily intake of nutrients,' she said.

'To assist centres to meet the Health Department recommendations, the Start Right, Eat Right award scheme has been initiated to acknowledge centres providing nutritious and safe food,' Ms Miller said.

The Health Department will award day care centres that have:

- cooks who have undertaken nutrition training
- obtained the FoodSafe certificate and have good food hygiene practices
- had their menus assessed to ensure they provide at least 50 per cent of the recommended daily intake of nutrients for children
- demonstrated the centre program encourages good eating habits.

The Start Right, Eat Right award was developed as part of the Cent\$ible Food Service Project, Curtin University, is funded by Healthway and is administered by the Lady Gowrie Centre.

Source: Start Right Eat Right, HealthyView – The magazine of the Health Department of Western Australia, Winter 1998.