

## 4 How do children learn about food and eating?

Children are great learners! They learn from their parents, their friends and the mass media. They have many goals that they pursue during the various stages of childhood. Like adults, they have strong needs for social approval, cognitive consistency or predictability in life, exploration of novelty, and intimacy (Epstein 1994).

American food psychologist Leann Birch noted that infants learn taste preferences from their exposure to the flavours of the food that their mothers eat in utero (via the amniotic fluid) and from flavours carried by breast milk (Birch 1999; Fisher et al. 1999). Children learn to like new foods through *repeated exposures* to those foods in an encouraging parental environment, through *watching* their parents eating and enjoying food, and through the *reinforcement* that parents and other children give them when they eat new foods (Birch, Johnson and Fisher 1995).

The same processes are at work among toddlers and primary and secondary school children, but peer behaviours and opinions become relatively more important. If a child is given a new food that his or her companions do not like, the child will probably develop a dislike for that food. However, when a food is presented among companions who like that food, the child will probably also like the food. Birch showed that preschool children soon began to eat foods they previously disliked (such as Brussels sprouts) when they were paired with peers who enjoyed these foods (Birch 1980; see also Neumark Sztainer et al. 1999).

Banning foods and other coercive tactics are likely to be counterproductive, often inducing positive preferences for the banned foods or aversions to foods that are forced on the child. Coercion is not the same as repeated presentation of unfamiliar novel foods that the child dislikes at first; so long as the re-presentation is done in a pleasant manner, the more opportunities (within reason) that a child has to taste a new food, the more likely he or she will be to eventually liking it. Preschoolers often 'join in' and eat whatever their peer group eats at preschool, even though they may not eat the same foods at home. Teenagers' adoption of bottled water is another example of this conformity. Once an eating habit becomes socially acceptable (to the peer group), the habit often becomes common place.

In the United Kingdom, the 'Food Dudes' trials provided videotaped fruit and vegetable promotion strategies for parents of preschoolers at home, as well as programs for primary school children (Tapper, Horne and Lowe 2003). Within a few sessions, the use of these tapes successfully induced substantial, long lasting increases in the intake of fruit and vegetables. The tapes employed the following basic principles:

- *Exposure*. Simply exposing children to healthy fruit and vegetables at school (for example) can double their consumption (Tapper, Horne and Lowe 2003). Several

Australian preschool programs (in Western Australia, for example) now employ this principle, encouraging parents to expose their children to new foods on repeated occasions. Birch (1999) has shown that a new food may have to be presented to a child on as many as 10 occasions before the child learns to accept it. A prerequisite of this 'exposure' approach is to not allow the eating occasion to degenerate into a power play between the child and parent or carer: if the child refuses to eat a new food, the parent or carer should not consider the refusal to be a problem, but simply serve the food again at another time.

- *Modelling.* Like adults, children like to observe and emulate people they admire, so adults should eat and enjoy the foods they want their children to eat. Children are great hypocrisy detectors: they soon spot parents who tell them to eat fruit but rarely do so themselves, or schools that tell them to eat fewer cakes and pies but promote those foods in the canteen.

For very young children, parents are often their main 'significant others' who bear the responsibility of modelling healthy eating. For this reason, it is important to focus programs on parents, most of whom share their children's less than healthy eating patterns (Campbell and Crawford 2001; Cutting et al. 1999; Koivisto Hursti, Fellenius and Sjoden 1994; NHMRC 2003). For older preschoolers and primary and secondary school students, peers and teachers become increasingly important (although most Australian secondary school children usually turn to a parent as their main confidant). Preschool and school teachers are adept at setting up social situations in which peers can model desired behaviours. The US CATCH program has successfully employed peers to promote healthy eating in secondary school programs (Luepker et al. 1996).

- *Reinforcement.* When people behave in a desired way, their behaviour can become entrenched through reinforcement, usually the provision of a reward. Reinforcement is part of parenting, whereby parents 'shape' or encourage children to act in certain ways and not others—a process known as 'socialisation' (Parke 2004). Often, when toddlers eat a new food, they are reinforced in some way by their parents—perhaps by a smile, a nod, a hug or some other sign of approval (Birch 1999; Rozin and Vollmecke 1986).

Birch's work and that of Tapper, Horne and Lowe (2003) in the 'Food Dudes' program suggest it is unwise to use food as a reward in itself, either for eating the 'right' food or for any other behaviour (such as sitting still in the baby seat in the car). If a child eats a serving of cabbage, for example, do not reward him or her with a piece of cake or a lolly. Such a reward would undermine the value and enjoyment of the cabbage: the child may view the lolly bribe as a sign that the cabbage *must* taste bad! Non-food

rewards—for example, a smile or kind word, or recognition from one of the ‘Food Dudes’ program’s cartoon characters (perhaps a sticker)—are more effective. Rewards and reinforcement shape behaviours, including eating behaviours, as demonstrated in the ‘Food Dudes’ program.