



Child nutrition

Last update: September 2013

Topic Editor:

Myles S. Faith, PhD, University of North Carolina at Chapel Hill, USA

Table of content

Synthesis	4
Feeding skill, Appetite and Feeding Behaviours of Infants and Young Children and Their Impact on Growth and Psychosocial Development MARIA RAMSAY, PHD, SEPTEMBER 2013	7
Feeding Behaviour of Infants and Young Children and Its Impact on Child Psychosocial and Emotional Development YI HUI LIU, MD MPH, MARTIN T. STEIN, MD, SEPTEMBER 2013	8
Helping Children Develop Healthy Eating Habits MAUREEN M. BLACK, PHD, KRISTEN M. HURLEY, PHD, SEPTEMBER 2013	9
Assessment and Treatment of Pediatric Feeding Disorders ¹ SUZANNE M. MILNES, PHD, ¹ CATHLEEN C. PIAZZA, PHD, ² TAMMY CARROLL, PHD, SEPTEMBER 2013	10
Genetic Influences on Child Eating Behaviour CLARE LLEWELLYN, PHD, JANE WARDLE, PHD, SEPTEMBER 2013	11
Television (TV) and TV Advertisement Influences on Children’s Eating Behaviour CHRISA ARCAN, PHD, MEG BRUENING, MPH, RD, MARY STORY, PHD, SEPTEMBER 2013	12
Eating Behaviour in Studies of Child Growth, Development and Health – Measure Precisely, Early and in Context: Commentary on Ramsay, Liu & Stein, Black & Hurley, Milnes, Piazza & Carrol, Llewellyn & Wardle, and Arcan, Bruening and Story MYLES S. FAITH, PHD, SEPTEMBER 2013	13

Synthesis

How important is it?

Oral motor skills such as sucking and chewing develop rapidly during the first year, allowing young children to discover an increasing number of foods and textures. Refinements in fine motor skills also allow infants to develop more autonomy in regards to feeding, and by the end of the second year, most children have acquired good feeding skills. At this age, children become increasingly influenced by external signals such as family, friends, and society, to dictate their hunger.

Feeding problems are common, and touch approximately 25% to 50% of young children. These problems are usually minor and temporary. They tend to be seen when children are exposed to new foods or events during mealtime, or when they are trying to master a new feeding skill. However, 1% to 2% of children experience chronic feeding problems, including overeating, malnutrition, problematic behaviours during meals and atypical eating choices. These problems are especially common in children born prematurely, and those with developmental disabilities. Eating problems can be highly stressful for parents and can result in a strained parent-child relationship.

What do we know?

Early feeding experiences can have long-lasting consequences on eating habits and food preferences later on in life. A healthy diet consisting of ample fruits and vegetables in the first two years may increase future preferences for healthy food. In contrast, unhealthy habits, such as favoring food that is high in fat and sugar tend to persist over time.

Feeding problems are associated with a number of poor developmental, psychological and health outcomes. For instance, children who overeat are more likely to develop medical conditions and potential psychological issues, whereas insufficient calorie intake can result in stunted growth.

Several factors play a role in the development of feeding problems. Feeding difficulties are likely to emerge when feeding has been paired with a painful or unpleasant experience that the child comes to associate with mealtime. Temperament traits such as the inability to self-regulate and

to communicate one's hunger level can make feeding routine challenging. Similarly, a genetic predisposition for big or small appetite can increase the likelihood of feeding problems.

Parents play a central role during feeding throughout the early years. Breastfeeding, for instance, not only protects against contagious diseases, but also allows infants to develop the ability to control their own calorie intake, an important healthy eating habit. Parents also contribute positively to their child's feeding by modeling healthy eating habits and making mealtimes enjoyable.

When feeding problems emerge, mealtimes can become loaded with anxiety and frustration for both children and parents. Misreading the child's signals can further aggravate problematic behaviours. Strategies to encourage eating such as punishment, distractions, and toys can work temporarily, but they tend to worsen problems over time. The most effective approach is responsive feeding, where reciprocal interactions during meals are based on the child's signals, and are age-appropriate.

At a larger scale, culture also contributes to feeding experiences by its influence on feeding choices, behaviours and exposure to different types of food. For instance, children's exposure to advertisements of unhealthy food is related to their preference for this type of food, and this is especially problematic in the African American and Hispanic American communities.

What can be done?

Given that feeding problems most often originate from multiple causes, multidisciplinary approaches that consider cultural and temperamental differences are strongly recommended. Although not all children respond equally well to interventions, several strategies have been successful at promoting a healthy diet, starting with those involving parents. Parents can help reduce overeating by cooking smaller quantity of food per meal, thereby limiting access to oversized portion, and by encouraging their children to slow down their eating speed by putting their utensils down after each bite. Parents can also encourage healthy habits by discussing feelings of satiety, modelling healthy eating habits, and limiting the amount of television watching to 1 to 2 hours a day of quality programming, and only in children over 2 years. Parents who discuss the content of advertisement messages and who regulate the type of food their young child eats are likely to be successful at discouraging unhealthy habits.

In cases of insufficient calorie intake, medications that increase appetite have been shown to positively affect weight gain, and can make psychosocial intervention more efficient. The acceptance of new foods can also be encouraged by pairing the new food with a preferred food until the new food becomes familiar. To make mealtimes pleasant, children should be given enough time to eat (between 10 to 30 minutes) and proper equipment (ex., highchairs, and small utensils). Feeding is an intricate skill that takes time to develop. Parents and professionals can be about the specific impact of problematic feeding behaviour and motivation. Information about healthy habits can be transmitted to parents during regular health check-ups.

At the policy level, several steps can be undertaken to reduce accessibility to unhealthy foods. These include the elimination of vending machines in schools, stricter advertising and menu regulations, quotas assigned to the number of fast food restaurants and changes in supermarket layouts.

Feeding skill, Appetite and Feeding Behaviours of Infants and Young Children and Their Impact on Growth and Psychosocial Development

Maria Ramsay, PhD

McGill University, Canada

September 2013, Éd. rév.

Feeding Behaviour of Infants and Young Children and Its Impact on Child Psychosocial and Emotional Development

Yi Hui Liu, MD MPH, Martin T. Stein, MD

University of California San Diego, USA

September 2013, 2e éd.

Helping Children Develop Healthy Eating Habits

Maureen M. Black, PhD, Kristen M. Hurley, PhD

University of Maryland School of Medicine, USA

September 2013, 2e éd. rév.

Assessment and Treatment of Pediatric Feeding Disorders

¹Suzanne M. Milnes, PhD, ¹Cathleen C. Piazza, PhD, ²Tammy Carroll, PhD

¹Munroe-Meyer Institute, University of Nebraska Medical Center, USA,

²University of Alabama, USA

September 2013, Éd. rév.

Genetic Influences on Child Eating Behaviour

Clare Llewellyn, PhD, Jane Wardle, PhD

Health Behaviour Research Centre, University College London, United Kingdom

September 2013

Television (TV) and TV Advertisement Influences on Children's Eating Behaviour

Chrisa Arcan, PhD, Meg Bruening, MPh, RD, Mary Story, PhD

University of Minnesota, USA

September 2013

Eating Behaviour in Studies of Child Growth, Development and Health - Measure Precisely, Early and in Context: Commentary on Ramsay, Liu & Stein, Black & Hurley, Milnes, Piazza & Carrol, Llewellyn & Wardle, and Arcan, Bruening and Story

Myles S. Faith, PhD

Gillings School of Global Public Health, University of North Carolina at Chapel Hill, USA

September 2013