

Evidence Summary

Supporting positive food environments in Early Childhood Education and Care Settings

Most children in Australia attend and consequently eat over half of their daily food intake at an Early Childhood Education and Care setting (ECEC). This provides a strong rationale in supporting educators to foster a positive food environment for children [1].

Better Health Network Health Promotion Officers work alongside educators to support food environments at ECEC settings. Our practice integrates a whole-of-service approach and recognises the importance of food environments in influencing children's life-long relationship with food and their bodies.

This evidence summary provides rationale for our approach when supporting food learning and mealtimes at ECEC settings.



The importance of positive food environments

Plain Language Summary:

Early childhood (ages 2-5 years) is recognised as a window of opportunity to support children to develop a positive relationship with food and their bodies [2]. Learning to eat a variety of foods is a skill built over time and each child learns at their own pace.

Positive and developmentally-appropriate food experiences support children to learn to eat and develop a positive relationship with food [2, 3]. While each person's relationship with food is unique, a positive relationship with food generally looks like [2, 4]:

- Having positive attitudes about food and eating. For example, feeling joy when eating (not guilt or negative emotions).
- Food acceptance including feeling comfortable with food, flexible with food choices and able to learn to like new foods.
- Intuitively eating by listening and responding to your body's cues around hunger, satiety and what it needs in that moment.

Research shows:

- Supporting children to develop a positive relationship with food over time leads to more nourishing eating behaviours later in life [2].
- Children aged 3-5 years are aware of dietary restriction as a means to lose weight and they exhibit weight bias [5, 6, 7].
- Children with body dissatisfaction and weight bias are more likely to engage in disordered eating behaviours, with 19% of childcare professionals having seen children reject food because 'it will make them fat' [7].

References:

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- [2] Satter E. (2007). <https://doi.org/10.1016/j.jneb.2007.01.006>
- [3] Mura Paroche et al. (2017). <https://doi.org/10.3389/fpsyg.2017.01046>
- [4] Butterfly Foundation. [Health not weight](#).
- [5] Damiano et al. (2015). <https://doi.org/10.1002/eat.22432>
- [6] Rodgers et al. (2015). <https://doi.org/10.1186/s12966-015-0318-x>
- [7] Professional Association for Childcare and Early Years. (2016). [Guiding Principles](#)
- [8] Teach Food First. [Guiding Principles](#)

In practice positive food environments [8]:*

- Support children to explore food with neutral exposures and foster curiosity, e.g. cooking, growing and sensory games with food. It is important to take into consideration any sensory needs of children and accommodate adaptations where required e.g. using a fork to play with the food rather than their fingers.
- Respect the roles of adults and children in feeding and eating. i.e. parents and educators are responsible for when, where and what food children are provided to eat and children are responsible for how much they eat.
- Embrace that eating looks different to everyone and will depend on many factors including family context and traditions, access, availability, personal taste and texture preferences, allergies, culture, and personal life experiences.
- Celebrate all the ways that food supports not only our physical health, but also our social, mental, and spiritual wellbeing. This means recognising how food is often an important and enjoyable part of social, family, traditional, and cultural gatherings and celebrations.
- Celebrate body trust and support children's body confidence. This recognises that conversations about food are closely tied with thoughts and feelings about bodies and sense of self.
- Connect to children's lived experiences by including food experiences that relate to the local community and food systems.

*Principles adapted from Teach Food First.



Learning about food & nutrition

Early childhood settings can support children to develop a positive relationship with food by providing children developmentally appropriate learning opportunities to explore food.

Plain Language Summary:

Children aged 2-5 years learn best through play-based (or body-based) learning where they can engage with concrete events and objects [9]. They are unlikely to show logical thinking of problem solving and their thinking is considered 'egocentric' which is centered on their own worldview and everything (good or bad) links to self. Nutrition is an abstract concept; we cannot see the nutrients in food. Therefore, learning about nutrition is learnt later once children have developed the cognitive ability to process abstract thought [10, 11].

Research shows:

- Children are more likely to eat foods that they like, and that are familiar to them and their families. Building familiarity with a variety of foods is one of the best ways to support children to feel positive about eating and learn to enjoy a variety of nutritious foods, over time, and at their own pace [3].
- While children may be able to repeat nutrition information, this does not necessarily equate to learning or understanding [12].

In practice appropriate food learning for children at ECEC includes:

Exploring food with neutral exposures to foster curiosity and build familiarity.

It is best practice to allow young children neutral food experiences to explore the colours, shapes, taste, textures, sounds and smells of food and where and how food grows [8]. Activities such as cooking, gardening and sensory activities with food allow children opportunities to build familiarity without pressure to eat it [13].

Discourse about food is mindful of children's cultural and socioeconomic experiences.

Children are not responsible for the food that they are provided to eat or their early food experiences. Many factors influence what food parents and caregivers provide their children including taste, convenience, cost, family dynamics, tradition, culture, celebration, mood and sometimes nutrition.

Name food what it is – an apple is an apple.

- Families define ‘healthy food’ differently, and different children have different dietary needs due to allergies or other health reasons.
- Labelling foods that children may commonly eat at home as ‘unhealthy’ has the potential to undermine the parent in the eyes of the child. Children need to trust that their parents feed them properly.
- Telling a child that certain foods are “healthy” or “unhealthy” or that they must eat a certain way to “be healthy” can lead to stress and anxiety, particularly if they have not yet learned to accept those foods.
- As children’s thinking is egocentric, labelling a food as ‘bad’ internalises the perception that the child is ‘bad’ themselves for eating the ‘bad’ food.

Considerations to remember:

- Fussy or picky eating behaviours are common among pre-school aged children. Choosing what to eat, or what not to eat, is part of a child’s development [14].
- It is normal for a child’s appetite to fluctuate from day to day, and for children to like a food one day and reject it the next [14].
- Children who are neurodiverse, such as autism spectrum disorder (ASD) and ADHD or who have other developmental delays are more likely to display picky eating behaviours compared to children who are typically developing [15].
- Sensory overstimulation or changes in routine and structure can make it more challenging for neurodiverse children to engage in mealtimes [15].
- Food activities, such as cooking and gardening, may also be more challenging for neurotypical children [15].
- Providing a positive meal environment is important for all children, including neurodiverse children.

References:

- [9] Australian Education Research Organisation (2023). [Play-based learning and intentionality](#).
- [10] Contento I. (1981). [https://doi.org/10.1016/S0022-3182\(81\)80017-9](https://doi.org/10.1016/S0022-3182(81)80017-9)
- [11] Ares et al. (2023). <https://doi.org/10.1093/nutrit/nuad072>
- [12] Tsao & Ramsay (2016). <http://doi.org/10.6000/1929-4247.2016.05.04.3>
- [13] Cormack et al. (2020). <http://doi.org/10.1016/j.jneb.2020.02.005>
- [14] Raising Children. (2022). [Fussy eating](#).
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Mealtimes

Children's eating behaviours are influenced by the “feeding practices” that parents and caregivers (including ECEC educators) engage in.

Plain Language Summary:

Children are born intuitive eaters; they instinctively know how much food they need to eat for their growth, learning, and play. If fostered by parents and caregivers (including educators), the strength of this intuitive self-regulation of food remains and supports mindful eating practices into adulthood. Children are more likely to develop positive eating behaviours when parents and caregivers engage in feeding practices that provide structure and support autonomy [16, 17].

Research shows:

- Educators feeding practices are influenced by their own experiences with food and educators have reported challenges adopting responsive feeding practices [18].
- Parents and educators desire more practical information about supporting their child's relationship with food and their body [19].
- Parental feeding practices that control or restrict their children's food intake may contribute to disordered eating later in life [17].
- Young adults report retrospectively that the foods that they dislike as adults were those that they were pressured to eat as children [20].



In practice positive mealtimes apply the division of responsibility:

The Division of Responsibility (DoR) in Feeding is a recognised approach to support children to be confident and competent eaters. The DoR was developed by Ellyn Satter and can be applied in early childhood settings as follows [21]:

Adults' responsibilities in feeding	Children's responsibilities in feeding
<p>ECEC settings are responsible for what food is provided by the service.</p> <p>Parents are responsible for what food is in the lunchbox.</p> <p>Educators decide when children will be offered food to eat (a set mealtime routine).</p> <p>Educators decide where children will have their food at mealtimes.</p> <p>Educators help children practice new food skills and role-model good table manners.</p>	<p>Children decide what they will eat out of the food that is offered.</p> <p>Children decide how much they will eat.</p> <p>Children decide whether they will eat anything at all.</p>



It is important to recognise that while we strive to achieve the above at mealtimes, for some children this is not possible or practical. For some children, mealtimes and eating can be difficult with adjustments often required to support them through the mealtime.

We can support children who may find mealtimes challenging by:

- Easing into the mealtime by transitioning from playtime to the mealtime. This may include a 10-minute warning, some deep breathing exercises, blowing bubbles or physical activity [22].
- Offering opportunities to eat and drink regularly that follows normal patterns of hunger and fullness (DoR) as children with neurodiversity can have difficulty in recognising when they are hungry or full [23].
- Managing sensory input. Children may require headphones, use of a fidget toy, music or to step away from the table and eat on their own if they are feeling overwhelmed [22, 23].
- Allowing children who become restless during the mealtime to wander around. Schedule a 'wriggle break' halfway through meals or incorporate movement before the meal during the transition [23].

It is important to work with the family to support the child while at your service.

References:

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- [17] Fisher et al. (2009). <https://doi.org/10.1037/11860-001>
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- [21] Satter. (2024). [Division of Responsibility in Feeding](#).
- [22] Boyd-Ford & Dix. (2024). [Mealtimes can be tough when your child is autistic or has ADHD. Here are 5 tips to try](#)
- [23] Grow & Go Toolbox. (2024). [Tips for feeding Neurodivergent Kids](#)

Myth busting

Sugar leads to hyperactivity...or does it?

It is common discourse amongst parents that sugar causes children to become hyperactive and as a result heavily restrict them from consuming sugar. Research shows that sugar does not lead to increased hyperactivity or disrupt the behaviour of children [24]. In fact, when eating sweet foods, the brain's reward system gets activated and releases a chemical called dopamine which can be linked with increased activity [25]. Hence, why sugar and hyperactivity are often linked. By restricting sugar, it causes children to want it more, leading them to obsess over it as they are drawn to what they can't have [26].

To support children to develop a positive relationship with food, it is important to not demonise particular foods, in this case, sugar. By removing the morality placed on sugar, it allows it to be just another food in a child's life and not something that they should obsess over [26]. Our bodies require a variety of foods and this includes sugar. It is important that we not only eat foods that nourish our bodies, but that we also eat foods that brings us pleasure or enjoyment.

References:

- [24] Wolraich et al. (1995). <https://doi:10.1001/jama.1995.03530200053037>
- [25] Reichelt. (2024). [No, sugar doesn't make your kids hyperactive](#)
- [26] McNamee. (2024). [How to stress less about sugar](#)