



THE BEST PRACTICE GUIDE FOR  
Early Childhood Education  
and Care Food Environment

# Menu and Meal Quality

MODULE 2



## **The Best Practice Guide for Early Childhood Education and Care Food Environment**

### **Module 2: Menu and Meal Quality**

This Menu and Meal Quality (MMQ) module is one of a series within *The Best Practice Guide (BPG) for Early Childhood Education and Care (ECEC) Food Environment, birth to 5 years*. The MMQ module provides practical, evidence-informed guidance aligned with the Early Years Learning Framework (EYLF) v2.0 and the National Quality Standard.

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#### **Acknowledgement of Country**

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# Foreword

## **'Nurturing Healthy Futures Best Practice Guide' – launching September 2026**

Early childhood is a powerful window for shaping lifelong relationships with food, health, and community. Early Childhood Education and Care (ECEC) services play an essential role in nurturing these foundations – not only by providing meals, but by creating environments where children feel safe, included, curious, and connected. The 'Nurturing Healthy Futures Best Practice Guide' has been developed to support this vital work.

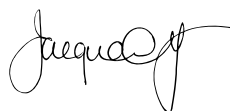
This guide brings together practical, evidence based strategies to help ECEC services reflect and enhance the food environments they offer across metropolitan, regional, and remote communities. Funded by Healthway and delivered by Edith Cowan University, it reflects extensive consultation, research, and collaboration with educators, health professionals, families, and community partners. The result is a resource designed to be both aspirational and achievable – supporting services to embed nourishing, culturally responsive, and sustainable practices in their everyday routines.

The guide is organised into a set of interconnected modules that together form a holistic approach to food provision and learning in ECEC. It provides practical guidance on everyday mealtimes practices, menu planning and meal quality, food safety, and food education, alongside strategies to strengthen partnerships with families and embed best practice into service-wide systems to support consistency, sustainability, and long-term impact.

Together, these modules acknowledge that safe and supportive food environments are not created through single actions, but through everyday choices, relationships, and shared commitments. They recognise the diversity of communities in Australia and the importance of culturally safe, inclusive approaches that honour children's identities and family traditions.

By adopting the practices outlined in this Guide, ECEC services can help build strong foundations for lifelong wellbeing for young children – supporting them to thrive physically, socially, and emotionally.

I hope this resource empowers educators and leaders to continue building safe and supportive food environments where every child feels included and respected, and where everyday food experiences support connection and nourishment. By noticing and responding to children's cues and partnering with families, services can support children's wellbeing as they grow and learn.



**Dr Jacqueline McGowan-Jones**

*Commissioner for Children and Young People (WA)*



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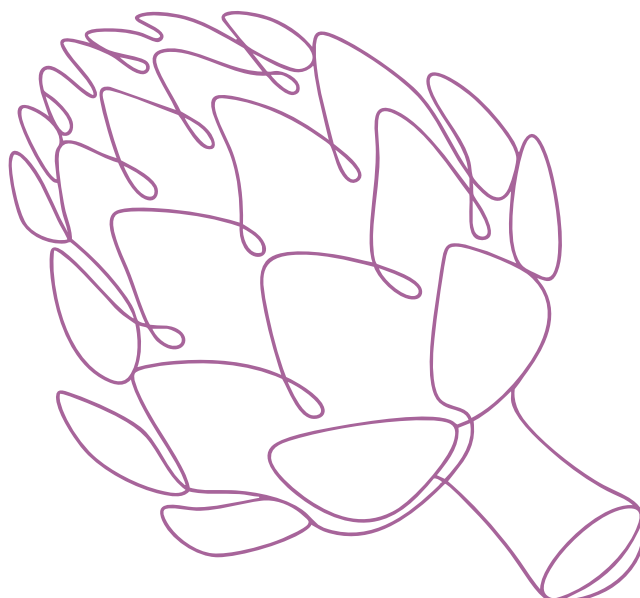
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# Background

Menu and meal quality is central to the role early learning settings play in children's growth, development and wellbeing. The food provided across the day shapes children's nutrient intake, their developing relationship with food, and the eating patterns they carry into later life. At the same time, services must balance nutritional quality with food safety, food allergen management and dietary needs, cultural diversity, family expectations, and practical constraints such as budgets, time and access to supplies.

This Menu and Meal Quality (MMQ) module aims to:

- Support ECEC services to provide menus and meals that align with the Australian Dietary Guidelines and the Infant Feeding Guidelines, across the full age range from birth to five years.
- Provide practical guidance on menu planning, meal provision and recipe quality that is realistic for the conditions in which services operate.
- Support responsive feeding and the provision of breastmilk, infant formula and first foods for infants.
- Strengthen the use of feedback from children, educators and families to review and improve menus and meals.
- Support nutritional adequacy and inclusion for children with food allergies, intolerances, medical, cultural and other dietary needs.

The sections below outline why this guide was developed, how it connects to the Artichoke Model and who it is designed for.

## Why this guide was developed

Many Australian children spend long hours attending ECEC each week, and for many children the food provided in care makes up a substantial share of their daily intake.<sup>1</sup> This creates both a significant responsibility and a genuine opportunity to nourish children well. Australian research consistently shows that many services do not currently meet guidelines for the provision of vegetables, meat and alternatives, and dairy, while discretionary foods are commonly included on menus.<sup>2,3</sup>

The MMQ module was developed to support cooks, educators and service leaders with the knowledge, tools and conditions needed to provide menus and meals that are nourishing, safe and developmentally appropriate. Further detail on why optimal nutrition matters is provided in the *Setting the scene* section.

The MMQ module sits within the Artichoke Model (Figure 1), which guides the overall structure for this Best Practice Guide.

## What is the Artichoke Model?

The Artichoke Model: ECEC Food Environment Model<sup>4</sup> is a visual way of looking at the whole food environment in early learning settings.

Like the layers of an artichoke, the model places children's everyday food experiences at ECEC at the centre, with the people, places, systems and routines that shape those experiences being the 'leaves' surrounding and supporting the child. Each 'leaf' represents a key area of the food environment, and together they show how everyday practices, relationships, curriculum, policies and service systems all work together.

## Where did it come from?

The Artichoke Model was co-designed in 2024 by members of the National Nutrition Network for Early Childhood Education and Care (NNN-ECEC), drawing on their collective experience as researchers, practitioners and policymakers.<sup>4</sup> Through collaborative discussion and visual mapping, the group identified the key components of food environments, creating a simple, sector-owned way of mapping the ECEC food environment that feels recognisable to services and usable in day-to-day practice.

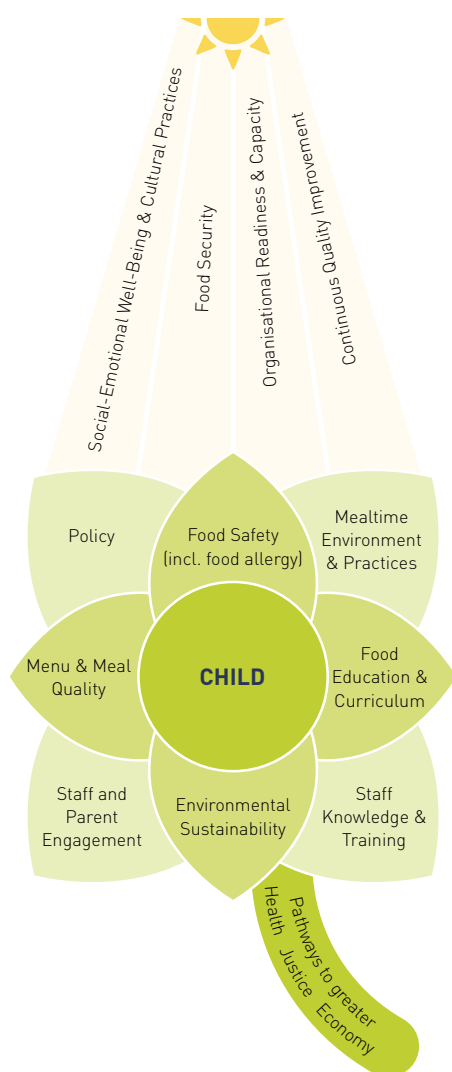
## What does it include and why?

The Artichoke Model maps **12 connected 'leaves'** across the ECEC food environment, grouped into three layers:

- **What – food provided** (for example: Menu and Meal Quality, Food Safety and Food Allergen Management, Food Education and Curriculum, Environmental Sustainability)
- **How – feeding practices and support** (for example: Mealtime Environment and Practices, Staff Knowledge and Training, Staff and Family Engagement, Policy)
- **Environmental levers – service conditions that shape what's possible** (for example: Social-emotional wellbeing and Cultural Practices, Food Security of the ECEC service, Organisational Readiness and Capacity, Continuous Quality Improvement).

Each leaf includes practical topics and reflection questions that services can use to think about where food and mealtimes already work well, where children might need something different, and what the next small step for improvement could be.

**FIGURE 1:** *The Artichoke Model*



This Best Practice Guide builds on the Artichoke Model. The project team used the 12 'leaves' to scope and streamline key themes and sub-topics, then developed modules that turn the high-level map into practical recommendations, examples and tools for services. Each module zooms in on one or more parts of the Artichoke Model while still keeping sight of the whole service.

### What does the Artichoke Model mean for MMQ?

Within the Artichoke Model, MMQ sits mainly in the 'What – food provided' layer, alongside Food Safety (including food allergy), Food Education and Curriculum, and Environmental Sustainability, with strong links to the 'how' and 'environmental levers' leaves. For MMQ, the Artichoke Model is a reminder that the quality of menus and meals depends not only on what is planned, but on the conditions that make optimal food provision possible: adequate budgets, time for menu planning, access to nutrition expertise, and strong organisational support. The MMQ module turns this part of the model into practical guidance on planning, preparing and reviewing nutritious menus and meals for children from birth to five years.

## Scope of the Menu and Meal Quality (MMQ) module

The MMQ module focuses on:

- The nutritional quality of food and drinks provided to children from birth to five years in ECEC services.
- Menu planning, provision of meals, and recipe quality across the day.
- Feeding and food provision for infants, including support for breastfeeding, infant formula, and the introduction of solid foods.
- Aligning menus and meals with the Australian Dietary Guidelines and the Infant Feeding Guidelines.
- Supporting nutritional adequacy and inclusion for children with food allergy, intolerance, medical, cultural and other dietary needs.
- Using feedback from children, educators and families to review and improve menus and meals.

This module focuses primarily on services that provide food to children. **Services where families provide some or all of the food are supported further in the Staff and Family Engagement module.**

### What is not included?

This module does not:

- Provide detailed guidance on the social, emotional, sensory and cultural aspects of mealtimes or on responsive mealtime interactions (these are covered in the Mealtime Environment and Practices module).
- Replace clinical assessment, diagnosis or treatment for feeding, growth or medical nutrition concerns.
- Replace a child's individual allergy or healthcare/action plan, or advice from a child's treating health team or a dietitian.
- Override existing legislation, regulations, food safety requirements or service policies.
- Focus on outside school hours care (OSHC), although some principles may still be useful in those settings.

ECEC staff and services should use this module alongside relevant regulations, service policies and any clinical advice for individual children.

## Acknowledgements

This Menu and Meal Quality (MMQ) module was developed through a strong, collaborative co-design process. For the purposes of citation and attribution, members of the Best Practice Guide Project Team, the Menu and Meal Quality Working Group and Best Practice Guide Advisory Group, together with those acknowledged under Workshop Development and Facilitation, Meetings Chair, and Additional Consultation, are collectively recognised as the Menu and Meal Quality Consortium. Contributions across the Consortium varied according to individual expertise and involvement and included Conceptualisation, Writing: original draft, and Writing: review and editing, as applicable to each contributor's role.

We sincerely thank the individuals and organisations represented across the Consortium for the breadth and depth of expertise they brought across early learning practice, nutrition and dietetics, public health, government, regulation, peak bodies, training, and service delivery. Their generous time, practical insights, and commitment to improving food environments in early learning settings have directly strengthened the relevance, feasibility, and quality of this guidance.

### Menu and Meal Quality Working Group

Our Working Group (listed alphabetically) brought together a number of cooks with years of experience in ECEC food provision, alongside experts in nutrition and dietetics, food allergen management, and service leadership to shape the Menu and Meal Quality module – with a particular focus on the reality of regional and remote services.

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- **Dr Sandra Vale**  
CEO, National Allergy Council

- **Dr Jill Whelan**  
Principal Project Officer, Early Years Partnership, Strategy and Partnerships, Department of Communities, WA

### Case Studies

The Best Practice Guide Project Team conducted interviews for vignette with the following ECEC staff to provide on-the-ground examples of menu and meal quality practices:

- **Ms Lorraine Hingston**  
Cook, One Tree Wickham Children's Service, very remote, WA

### Best Practice Guide Project Team

The Best Practice Guide Project Team led the evidence review, sector engagement and content development for this resource.

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### Workshop Development and Facilitation, and Meetings Chair

The development of the overall process and associated workshops, as well as the chairing of the Advisory Group meetings and facilitation of Working Group workshops, was completed by **Dr Helen Alexiou** from the Knowledge Brokering Group.

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## Who this module is for

The MMQ module is for people working in ECEC services for children from birth to five years. It applies across centre-based care and family day care. The module is most relevant to services that provide food to children, while remaining useful to services where families provide some or all of the food. Table 1 suggests how this module can be used by each audience.

**TABLE 1:** *How this module can be used by each audience*

| Intended users                                                                                                                 | How they can use this module                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cooks, chefs, food coordinators and kitchen assistants</b>                                                                  | To plan and prepare menus and meals that align with the dietary guidelines, develop and improve standard recipes, manage food safety and food allergy requirements, and adjust food provision to meet individual dietary needs. |
| <b>Service leaders/directors and educational leaders</b>                                                                       | To set and resource expectations for menu and meal quality, support time and budget for menu planning, review menus and the menu cycle, and inform service policies and procedures related to food provision.                   |
| <b>Educators and room leaders (including relief and casual staff)</b>                                                          | To understand how menus and meals support children's nutrition, offer food and drinks across the day in line with the menu, and contribute feedback on how meals are working for children.                                      |
| <b>Family day care educators</b>                                                                                               | To plan and provide nutritious menus and meals for mixed-age groups in a home-based setting, and adapt menu planning principles to smaller numbers of children.                                                                 |
| <b>Approved providers and management teams</b>                                                                                 | To support consistent menu and meal quality across services, align food provision with organisational policies, and identify where staff may benefit from further support or training.                                          |
| <b>Allied health partners (e.g. dietitians, nutritionists, speech pathologists, occupational therapists, physiotherapists)</b> | To align dietary advice and substitutions with the service's menu, support nutritional adequacy for children with additional needs, and use a shared language with cooks, educators and families about menu and meal quality.   |
| <b>Quality and regulatory staff, inclusion support staff and local health promotion officers</b>                               | To inform assessment and rating observations and guidance, support visits, and develop resources related to food provision.                                                                                                     |
| <b>VET and university educators, RTOs and placement supervisors</b>                                                            | To integrate menu and meal quality content into training programs, prepare students for food provision in ECEC, and support reflective conversations during placements.                                                         |

This module supports everyday practice in ECEC and does not replace clinical, medical or dietetic advice. ECEC staff and services should follow their service policies and procedures, food safety requirements, and any individual allergy, healthcare or action plans for each child.

## How to use this guide

### Eight sections

The guide is divided into eight separate sections covering the following topics:

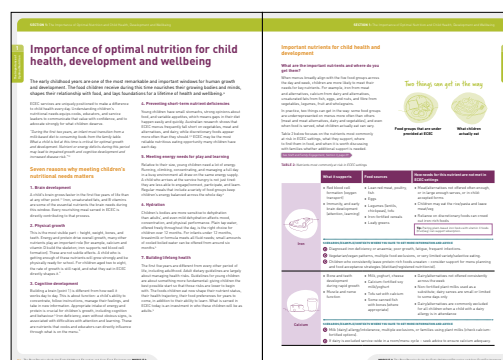
1. The Importance of Optimal Nutrition and Child Health, Development and Wellbeing
2. Australian Dietary Guidelines
3. Australian Infant Feeding Guidelines
4. Introduction of Solid Foods (First Foods)
5. Effective Menu and Meal Planning
6. Menu Planning in Practice
7. Menu and Meal Feedback
8. Food Allergy and Food Safety

### Elements found across sections

| Elements | Examples |
|----------|----------|
|----------|----------|

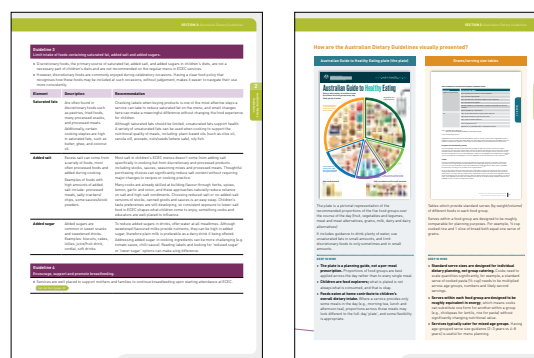
#### Background

Supporting background information summarising current evidence and providing context to practical strategies and tools used in the guide.



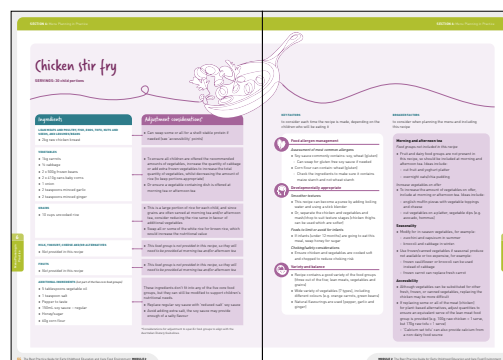
#### Overview of National Guidelines

Summarising of and sign posting to relevant National Guidelines.



#### Practical tools

Practical tools underpinned by evidence and aligning to best practice with suggestions for continuous quality improvement.



#### Reflection questions

To consider in relation to information covered in each section.

#### Reflective questions

- How confident are our educators, cooks, and leaders in understanding the nutritional needs of infants, toddlers and kindy aged children?
- What assumptions or beliefs about food, nutrition and children's eating behaviours may be influencing our menu planning and mealtime practice?
- Are all 5 food groups represented consistently across our menu cycle, including vegetable, dairy and alternatives and meat/meat alternatives?

# Setting the scene

## The importance of optimal nutrition for child health, development and wellbeing

The early childhood years are one of the most remarkable and important windows for human growth and development. The food children receive during this time nourishes their growing bodies and minds, shapes their relationship with food, and lays foundations for a lifetime of health and wellbeing.<sup>5,6</sup> While the Mealtime Environment and Practices module recommends not describing foods as 'healthy/unhealthy', 'good/bad' when speaking with children about food, the provision of nutritious foods that support children's health, development and wellbeing remains a core responsibility of ECEC services.

ECEC services are uniquely positioned to make a difference to child health every day. Understanding children's nutritional needs equips cooks, educators, and service leaders to communicate that value with confidence, and to advocate strongly for what children deserve.

## ECEC services have both a significant responsibility and a genuine opportunity

Like hospitals, aged care facilities, and other settings where an organisation holds responsibility for feeding people who cannot independently choose or prepare their own food, ECEC services have both a significant responsibility and a genuine opportunity to shape what children eat during their most important developmental years.<sup>6</sup> Although some ECEC services request families provide food for their children in lunchboxes, this Menu and Meal Quality module will focus primarily on services that provide food. The Staff & Family Engagement module of the Best Practice Guide covers 'lunchbox services' in more detail.

Australia's ECEC sector reaches a very large number of children each quarter through Child Care Subsidy (CCS) approved services. For example, in the September quarter 2025, 904,760 children attended a CCS-approved long day care or family day care service.<sup>1</sup> On average, these children spend 30 hours per week in care, with many attending up to 50 hours per week.<sup>1</sup>

This represents an extraordinary collective opportunity to nourish children well, strengthen families, and invest in long-term community health. Australian research consistently shows that most services do not currently meet guidelines for vegetables, meat and alternatives, and dairy, while discretionary foods are commonly included on menus.<sup>2,3</sup> Research in Western Australian services has found that even a modest increase in food expenditure of \$0.50 per child per day would meaningfully improve core food group provision, highlighting the strong relationship between resourcing and nutritional quality.<sup>7</sup>

Every improvement in ECEC food provision is ultimately about children, helping them grow well, learn well, feel well, and build eating patterns that support lifelong health. To achieve this consistently, cooks, educators and service leaders need the right conditions to do the job properly: adequate food budgets, allocated time for menu planning, access to nutrition expertise, and strong organisational support, so children receive food provision that is nourishing, safe, and developmentally appropriate.<sup>2,8</sup>

**NATIONAL QUALITY STANDARD**  
QA2, QA4, QA7

## Australian Dietary Guidelines & Australian Infant Feeding Guidelines

The guidance in this Best Practice Guide is based on the best available evidence at the time of development, including the Australian Dietary Guidelines (ADGs) (published 2013) and the Infant Feeding Guidelines (published 2012). Both guidelines are necessary when considering early childhood (e.g. birth to four years and older) nutrition:

- The Australian Dietary Guidelines provide guidance for children aged two years and older (including information around the five food groups, and minimum recommended amounts from each group). [See Section 2, page 20](#)
- The Australian Infant Feeding Guidelines provide guidance for infants from birth to two years (including information on breastfeeding, infant formula, and the introduction of solid foods). [See Section 3, page 30](#)

## Expected updates to the Australian Dietary Guidelines

The ADGs are underpinned by Nutrient Reference Values (NRVs).<sup>6,9</sup> These NRVs draw on specific measures which provide the best available benchmarks for planning menus and assessing nutrient adequacy across population groups. However, it is acknowledged that most NRVs were developed some time ago, and that nutrition science continues to evolve. As new evidence emerges and national guidance is reviewed, these benchmarks may be refined over time. The ADGs are currently under review by the National Health and Medical Research Council (NHMRC), with updated guidelines scheduled for delivery in 2027 (timing subject to NHMRC processes), and this Best Practice Guide will be updated to reflect revised guidance as it becomes available.

## Alignment with Mealtime Environment and Practices Module

Guideline 1 of the ADGs states: *'To achieve and maintain a healthy weight, be physically active and choose amounts of nutritious food and drinks to meet your energy needs. Children should eat sufficient nutritious foods to grow and develop normally.'* Since the publication of the ADGs in 2013, a focus on body weight has evolved to a more contemporary approach focusing on responsive feeding and provision of nutritious foods to support children to eat according to their unique growth and development needs. This aligns with the underlying principles of this Best Practice Guide and the Mealtime Environment and Practices (MEP) module in particular.

For further information regarding food choice, child development, and supporting children to listen to their internal hunger and 'had enough' cues.

See Mealtime Environment and Practices, Section 2, page 19

## Additional considerations when menu planning and purchasing foods

### Specific populations

ECEC services work with children and families across a wide range of cultural backgrounds, medical conditions, allergies and intolerances, disabilities and dietary patterns, and the ADGs provide a flexible framework that can accommodate this diversity.

The ADGs recommend applying food group guidance by age and adjusting food choices to meet individual nutrient needs.<sup>6</sup> Where dietary restrictions exist, nutritional adequacy should be maintained through appropriate substitutes.

Supporting children with specific dietary needs is something ECEC services do every day, with considerable skill and care. For straightforward substitutions, the Australian Dietary Guidelines food group framework provides a useful starting point. For example, using calcium-fortified plant-based milks in place of cow's milk (dairy), or utilising legumes and eggs as alternatives where meat is not provided.

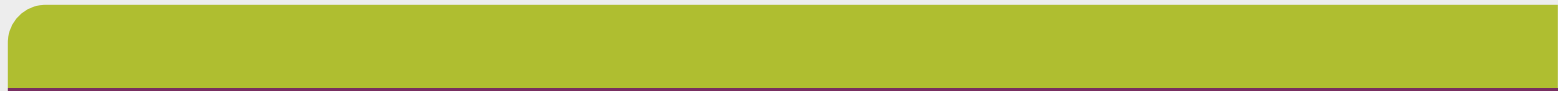
Where a child's needs are more complex – such as multiple food allergies, a medical condition affecting intake, or significant feeding difficulties – seeking guidance, in consultation with families, from a dietitian or the child's treating health team is strongly encouraged. Where a child has a food allergy or other medical dietary services should follow the child's ASCIA Action Plan completed by the child's doctor or nurse practitioner. Services should also complete and follow an individualised anaphylaxis care plan in collaboration with the family. Building culturally inclusive menus that reflect the communities a service works with is equally important and entirely consistent with the Australian Dietary Guidelines.

When planning a substitution, the following prompts support consistent menu quality:

- Does the replacement still contribute to the food group it is replacing?
- Does it provide a similar key nutrient (for example, energy, calcium, iron, or protein)?
- Is the texture appropriate for the child's age and eating skills?
- Is the substitution culturally and practically acceptable to the child and family?
- Has the change been documented and communicated to educators?

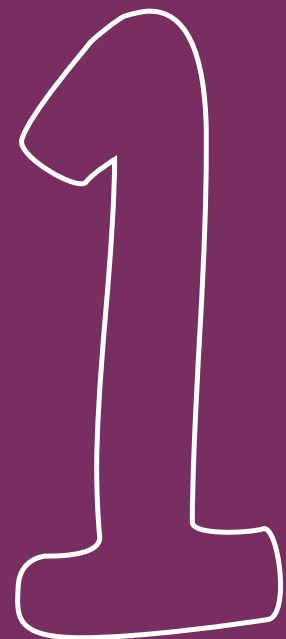
These prompts apply equally to substitutions made for food allergy or intolerance, cultural or religious dietary requirements, dietary patterns such as vegetarian or vegan, medical or developmental needs, and supply or budget constraints.

**NATIONAL QUALITY STANDARD**  
QA2, QA6



SECTION 1

# The Importance of Optimal Nutrition and Child Health, Development and Wellbeing



# Importance of optimal nutrition for child health, development and wellbeing

The early childhood years are one of the most remarkable and important windows for human growth and development. The food children receive during this time nourishes their growing bodies and minds, shapes their relationship with food, and lays foundations for a lifetime of health and wellbeing.<sup>6</sup>

ECEC services are uniquely positioned to make a difference to child health every day. Understanding children's nutritional needs equips cooks, educators, and service leaders to communicate that value with confidence, and to advocate strongly for what children deserve.

*"During the first two years, an infant must transition from a milk-based diet to consuming foods from the family table. What a child is fed at this time is critical for optimal growth and development. Nutrient or energy deficits during this period may lead to impaired growth and cognitive development and increased disease risk."<sup>10</sup>*

## Seven reasons why meeting children's nutritional needs matters

### 1. Brain development

A child's brain grows faster in the first five years of life than at any other point.<sup>11</sup> Iron, unsaturated fats, and B vitamins are some of the essential nutrients the brain needs during this window. Every nourishing meal served in ECEC is directly contributing to that process.

### 2. Physical growth

This is the most visible part – height, weight, bones, and teeth. Energy and protein drive overall growth, many other nutrients play an important role (for example, calcium and vitamin D build the skeleton; iron supports red blood cell formation). These are not subtle effects. A child who is getting enough of these nutrients will grow strongly and be physically ready for school. For children aged two to eight, the rate of growth is still rapid, and what they eat in ECEC directly shapes it.<sup>6</sup>

### 3. Cognitive development

Building a brain (point 1) is different from how well it works day to day. This is about function: a child's ability to concentrate, follow instructions, manage their feelings, and take in new information. Appropriate intake of energy and protein is crucial for children's growth, including cognition and behaviour.<sup>5</sup> Iron deficiency, even without obvious signs, is associated with difficulties with attention and learning. These are nutrients that cooks and educators can directly influence through what is on the menu.<sup>5</sup>

### 4. Preventing short-term nutrient deficiencies

Young children have small stomachs, strong opinions about food, and variable appetites, which means gaps in their diet happen easily and quickly. Australian research shows that ECEC menus frequently fall short on vegetables, meat and alternatives, and dairy, while discretionary foods appear more often than they should.<sup>2,3</sup> ECEC may be the most reliable nutritious eating opportunity many children have each day.

### 5. Meeting energy needs for play and learning

Relative to their size, young children need a lot of energy. Running, climbing, concentrating, and managing a full day in a busy environment all draw on the same energy supply. A child who arrives at the service hungry is not just tired: they are less able to engage/connect, participate, and learn. Regular meals that include a variety of food groups keep children's energy balanced across the whole day.<sup>6</sup>

### 6. Hydration

Children's bodies are more sensitive to dehydration than adults', and even mild dehydration affects mood, concentration, and physical performance. Plain tap water, offered freely throughout the day, is the right choice for children over 12 months. For infants under 12 months, breastmilk or formula meets all fluid needs; small amounts of cooled boiled water can be offered from around six months.<sup>5</sup>

### 7. Building lifelong health

The first five years are different from every other period of life, including adulthood. Adult dietary guidelines are largely about managing health risks. Guidelines for young children are about something more fundamental: giving children the best possible start so that those risks are lower to begin with. The foods children eat now shape their nutrient status, their health trajectory, their food preferences for years to come, in addition to their ability to learn. What is served in ECEC today is an investment in who these children will be as adults.<sup>5</sup>

## Important nutrients for child health and development

### What are the important nutrients and where do you get them?

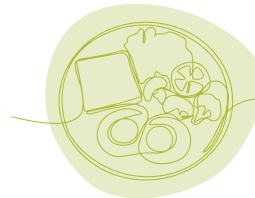
When menus broadly align with the five food groups across the day and week, children are more likely to meet their needs for key nutrients. For example, iron from meat and alternatives, calcium from dairy and alternatives, unsaturated fats from fish, eggs, and nuts, and fibre from vegetables, legumes, fruit and wholegrains.

In practice, two things can get in the way: some food groups are underrepresented on menus more often than others (meat and meat alternatives, dairy and vegetables), and even when food is served, what children actually eat can vary.

Table 2 below focuses on the nutrients most commonly at risk in ECEC settings, what they support, where to find them in food, and when it is worth discussing with families whether additional support is needed.

See Staff and Family Engagement, Section 3, page 39

### Two things can get in the way

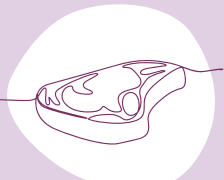
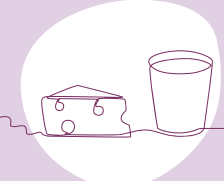


Food groups that are underprovided at ECEC



What children actually eat

**TABLE 2:** Nutrients most commonly at risk in ECEC settings

|                                                                                                       | What it supports                                                                                                                                                                                                                                                                                                                                                                                                        | Food sources                                                                                                                                                                                                | How needs for this nutrient are not met in ECEC settings                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br><b>Iron</b>    | <ul style="list-style-type: none"> <li>Red blood cell formation (oxygen transport)</li> <li>Immunity, and early brain development (attention, learning)</li> </ul>                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>Lean red meat, poultry, fish</li> <li>Eggs</li> <li>Legumes (lentils, chickpeas), tofu</li> <li>Iron-fortified cereals</li> <li>Leafy greens</li> </ul>              | <ul style="list-style-type: none"> <li>Meat/alternatives not offered often enough, or in large enough serves, or in child-accepted forms</li> <li>Children may eat the rice/pasta and leave meat/veg</li> <li>Reliance on discretionary foods can crowd out iron-rich foods</li> </ul> <p><b>Tip:</b> Pairing plant-based iron foods with vitamin C foods (fruit/veg) can support absorption.</p> |
| <b>SCENARIOS/EXAMPLE/CONTEXTS WHERE YOU HAVE TO GET MORE INFORMATION AND ADVICE</b>                   |                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                       | <ul style="list-style-type: none"> <li>Diagnosed iron deficiency or anaemia; poor growth, fatigue, frequent infections.</li> <li>Vegetarian/vegan patterns, multiple food exclusions, or very limited variety/selective eating.</li> <li>Children who consistently leave protein-rich foods uneaten – consider support for menu planning and food acceptance strategies (dietitian/registered nutritionist).</li> </ul> |                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                   |
| <br><b>Calcium</b> | <ul style="list-style-type: none"> <li>Bone and teeth development during rapid growth</li> <li>Muscle and nerve function</li> </ul>                                                                                                                                                                                                                                                                                     | <ul style="list-style-type: none"> <li>Milk, yoghurt, cheese</li> <li>Calcium-fortified soy milk/yoghurt</li> <li>Tofu set with calcium</li> <li>Some canned fish with bones (where appropriate)</li> </ul> | <ul style="list-style-type: none"> <li>Dairy/alternatives not offered consistently across the week</li> <li>Non-fortified plant milks used as a substitute; dairy serves are small or limited to some days only</li> <li>Dairy/alternatives are commonly excluded for all children when a child with a dairy allergy is in attendance</li> </ul>                                                  |
| <b>SCENARIOS/EXAMPLE/CONTEXTS WHERE YOU HAVE TO GET MORE INFORMATION AND ADVICE</b>                   |                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                       | <ul style="list-style-type: none"> <li>Milk (dairy) allergy/intolerance, multiple exclusions, or families using plant milks (check calcium-fortified options).</li> <li>If dairy is excluded service-wide in a room/menu cycle – seek advice to ensure calcium adequacy.</li> </ul>                                                                                                                                     |                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                   |



Unsaturated fats

- Energy for growth; omega-3 fat for brain and eye development
- Absorption of fat-soluble vitamins

- Olive/canola oils, avocado
- Nut/seed pastes (where safe)
- Oily fish (e.g., salmon/sardines)
- Eggs
- Chia/flax (used appropriately)

### How needs for this nutrient are not met in ECEC settings

- "Fat" is sometimes avoided altogether so menus become very low in unsaturated fats
- Fats come mostly from discretionary foods (often higher in saturated fat) rather than unsaturated sources
- Limited inclusion of omega-3-rich foods across the menu cycle

### SCENARIOS/EXAMPLE/CONTEXTS WHERE YOU HAVE TO GET MORE INFORMATION AND ADVICE

- ⌚ Children with very restricted diets or low overall intake (may not get enough unsaturated fats in the diet).
- ⌚ Food allergy considerations (nuts/seeds) or choking risk considerations – need safe, appropriate alternatives.
- ⌚ If menus rely heavily on processed products (e.g. biscuits, muesli bars, etc), seek support to shift towards unsaturated fat sources.



Fibre

- Gut health and bowel regularity
- Helps children feel they have had enough
- Supports balanced eating patterns

- Vegetables and legumes
- Fruit
- Wholegrain/high-fibre breads/cereals
- Oats
- Brown rice/wholegrain pasta

- Vegetables/legumes are under-provided or left uneaten
- Refined grains dominate
- Discretionary foods at morning and afternoon tea crowd out fibre-rich foods

### SCENARIOS/EXAMPLE/CONTEXTS WHERE YOU HAVE TO GET MORE INFORMATION AND ADVICE

- ⌚ Ongoing constipation, abdominal discomfort.
- ⌚ Very low fruit/veg intake.
- ⌚ Children with sensory/selective eating who avoid vegetables/wholegrains.
- ⌚ If fibre intake increases, ensure children are encouraged to drink more water to support their digestion.

### Reflective questions



- How confident are our educators, cooks, and leaders in understanding the nutritional needs of infants, toddlers and kindy aged children?
- What assumptions or beliefs about food, nutrition and children's eating behaviours may be influencing our menu planning and mealtime practice?
- Are all 5 food groups represented consistently across our menu cycle, including vegetable, dairy and alternatives and meat/meat alternatives?

SECTION 2

# Australian Dietary Guidelines



# Australian Dietary Guidelines

**Note:** The Australian Dietary Guidelines are currently under review at time of publication. Content may change.

2

Australian Dietary Guidelines

## What are dietary guidelines/food based dietary guidelines?

Food-based dietary guidelines are evidence-informed recommendations that translate nutritional science into clear, practical guidance about food choices. They equip populations, governments, health professionals, and institutional food service providers with the knowledge to support health, ensure appropriate nutrition, and build the foundations for long, well-nourished lives.<sup>12</sup> Dietary Guidelines are also intended to guide public food and nutrition, health and agricultural policies, as well as nutrition education programs.<sup>12,13,14</sup>

## Why are they developed, what are the underpinning intentions?

In Australia, the 2013 Australian Dietary Guidelines were developed by the National Health and Medical Research Council to equip Australians with the knowledge to nourish themselves well from the five core food groups, with specific focus on reducing the burden of chronic conditions including cardiovascular disease, type 2 diabetes, and certain cancers.<sup>6</sup>

The guidelines for children are fundamentally different from the guidelines for adults. For young children, the guidelines aim to support physical growth, brain development, and the establishment of eating patterns that serve long-term health and wellbeing.<sup>13,14</sup> Whereas the focus for adults is primarily on prevention of chronic disease.

The ADGs provide a strong foundation for food provision in settings that are responsible for feeding children. For ECEC services, a commonly used menu-planning recommendation is that menus should provide enough food to meet at least 50% of children's recommended daily food group serves, over morning tea, lunch, and afternoon tea (based on an 8-hour ECEC day).

However, many children attend ECEC for 8–12 hours each day and depending on their hours of attendance, require additional food opportunities, such as breakfast and late afternoon tea. When planning menus, it is recommended that these children are offered more than 50% of their total daily recommended daily food group serves.

This is a menu planning recommendation (not a regulatory requirement), and expectations/guidance can vary across States and Territories.<sup>15</sup>

See Section 2, page 26

## How are they developed?

The National Health and Medical Research Council develops the Australian Dietary Guidelines using its established evidence-based guideline development process. This involves prioritising research questions, systematically evaluating new and existing evidence, and applying a structured evidence-to-decision framework to inform recommendations. Multidisciplinary expert committees provide advice throughout the process, with stakeholder and community input incorporated to support transparency and ensure the revised guidelines are relevant and appropriate for Australians.

## What are the Australian Dietary Guidelines?

**Name:** Australian Dietary Guidelines (ADGs)

**Developed by:** National Health and Medical Research Council (NHMRC) in partnership with the Australian Government Department of Health

**Year:** 2013

**Review date:** Currently under review; updated guidelines are anticipated for release in 2027.

See Setting the Scene, page 12

## Five core food groups

The ADGs organise foods into five groups that together provide the full range of nutrients children need to grow and develop:

1. Grain (cereal) foods, mostly wholegrain and/or high-fibre varieties
2. Vegetables and legumes/beans
3. Fruit
4. Lean meats, poultry, fish, eggs, tofu, nuts, seeds, and legumes/beans
5. Milk, yoghurt, cheese and/or alternatives

Discretionary foods are identified as a separate category, those high in saturated fat, added sugar, or salt, which are best kept to small amounts and offered only occasionally.

Each standard serve within a food group provides approximately equivalent energy, defined by weight or volume. For example, half a cup of cooked vegetables and a full cup of salad vegetables both count as one serve.

## Visual presentation

The ADGs are accompanied by the Australian Guide to Healthy Eating, a plate-shaped graphic that illustrates the proportions of each food group to be enjoyed across the day, helping users visualise balance without prescribing exact amounts at each meal.

## Age groups and serves

The ADGs and associated 'Educator Guide' specify recommended daily serves per food group for different age groups. With the exception of infants under 12 months, the size of a serve remains the same as children age, the recommended number of serves is what changes. For ECEC settings, the most relevant age groups are:

- 1–2 years
- 2–3 years
- 4–8 years.

## Special dietary requirements

Where children have special dietary requirements (e.g., food allergies, cultural preferences, vegetarian/vegan), menu planning should support both inclusion and nutritional adequacy (e.g., ensuring enough energy and protein in addition to crucial nutrients such as iron, calcium, unsaturated fats, and fibre).

Working with families can support services in successfully supporting children with special dietary requirements, as they may already be seeking professional support which can then be embedded in the service, if appropriate to do so.

**TABLE 3:** Australian Dietary Guidelines

### Guideline 1

To achieve and maintain a healthy weight, be physically active and choose amounts of nutritious food and drinks to meet your energy needs. Children should eat sufficient nutritious foods to grow and develop normally.

- Children are generally able to regulate the amount of food they eat in alignment with their bodies' needs. It is important to create a supportive food environment which allows children to respond to their internal cues.

See *Mealtime Environment and Practices*, Section 2, page 20

## How are the Australian Dietary Guidelines organised

The ADGs are structured as five overarching guidelines, supported by tools that help people apply them in practice (e.g., the Australian Guide to Healthy Eating plate graphic and serve size tables by age group).<sup>6</sup>

The ADGs are underpinned by the Nutrient Reference Values (NRVs) for Australia and New Zealand, which inform nutrient adequacy benchmarks across life stages.<sup>16</sup>

Current global trends indicate increasing attention to environmental sustainability and sociocultural factors in guideline development and messaging.<sup>9,15</sup>

**NATIONAL QUALITY STANDARD  
QA2**

**Guideline 2**

Enjoy a wide variety of nutritious foods from these five food groups every day and drink plenty of water.

| Element                                          | Description                                                                                                                                            | Recommendation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Vegetables</b>                                | Provide fibre, vitamins and minerals that support growth, gut health and long-term health.                                                             | <p>Examples of 1 serve of vegetables (about 75g):</p> <ul style="list-style-type: none"> <li>• ½ cup cooked vegetables (e.g. carrot, broccoli, pumpkin)</li> <li>• ½ cup cooked dried legumes/beans (e.g. lentils, chickpeas)</li> <li>• 1 cup salad vegetables (e.g. leafy greens, carrots, tomato)</li> <li>• ½ medium potato</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Fruit</b>                                     | Provide fibre, vitamins, minerals and energy to support long-term health.                                                                              | <p>Examples of 1 serve of fruit (about 150g):</p> <ul style="list-style-type: none"> <li>• 1 medium piece (e.g., apple, banana, orange)</li> <li>• 2 small pieces (e.g., apricots, kiwi fruit)</li> <li>• 1 cup diced/canned fruit (no added sugar)</li> <li>• ½ cup fruit juice (note: juice is not preferred, whole fruit is recommended)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Grains</b>                                    | <p>Grain foods provide energy for active children plus fibre and B-group vitamins.</p> <p>Prioritise mostly wholegrain/high-fibre choices.</p>         | <p>Examples of 1 serve of grains:</p> <ul style="list-style-type: none"> <li>• 1 slice bread (40g)</li> <li>• ½ medium roll (40g)</li> <li>• ½ cup cooked rice/pasta/noodles</li> <li>• ½ cup cooked porridge</li> <li>• ¾ cup breakfast cereal flakes</li> <li>• ¼ cup muesli</li> <li>• 1 small (about 35g) tortilla/flat bread</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Lean meats and meat alternatives</b>          | Supports growth, muscle development, iron status and immunity through protein, iron, zinc and other nutrients.                                         | <p>Examples of 1 serve of meat and meat alternatives:</p> <ul style="list-style-type: none"> <li>• 65g cooked (or 100g raw) lean red meat (e.g. beef, lamb, kangaroo)</li> <li>• 80g cooked (or 100g raw) poultry</li> <li>• 100 g cooked (or 115g raw) fish</li> <li>• 2 large eggs</li> <li>• 1 cup (150g) cooked/canned legumes/beans (e.g. lentils, chickpeas)</li> <li>• 170g tofu</li> <li>• 30g nuts/seeds (only where safe and consistent with allergy/choking guidance)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Milk, yoghurt, cheese and/or alternatives</b> | Supports bone health and growth through calcium, protein and iodine.                                                                                   | <p>Examples of 1 serve of dairy:</p> <ul style="list-style-type: none"> <li>• 1 cup (250mL) milk</li> <li>• ¾ cup (200g) yoghurt</li> <li>• 2 slices (40g) cheese</li> <li>• ½ cup ricotta</li> <li>• 1 cup (250mL) calcium-fortified alternative milk (e.g. soy milk, oat milk)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Water</b>                                     | <p>Proper hydration supports children's energy, mood, attention and physical play.</p> <p>The key focus is water as the main drink across the day.</p> | <ul style="list-style-type: none"> <li>• The ADGs recommend water as the main drink for children over 12 months of age, and limiting drinks high in sugar, such as soft drinks, cordial, and juices.</li> <li>• Water should be freely available and encouraged throughout the day (Regulation 78 of the Education and Care Services National Regulation). This involves making it visually accessible and appealing throughout the day (including during outdoor play and in hot weather). Additionally, water should be at all mealtimes.</li> <li>• This supports children to stay hydrated with water without needing to be prompted.</li> <li>• For many services, this is already part of routine practice. If drinks such as juice or cordial have become normalised at mealtimes, transition gradually towards water only whilst communicating the change to families.</li> </ul> |

**Guideline 3****Limit intake of foods containing saturated fat, added salt and added sugars.**

- Discretionary foods, the primary source of saturated fat, added salt, and added sugars in children's diets, are not a necessary part of children's diets and are not recommended on the regular menu in ECEC services.
- However, discretionary foods are commonly enjoyed during celebratory occasions. Having a clear food policy that recognises how these foods may be included at such occasions, without judgement, makes it easier to navigate their use more consistently.

| Element               | Description                                                                                                                                                                                                                        | Recommendation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Saturated fats</b> | Are often found in discretionary foods such as pastries, fried foods, many processed snacks, and processed meats.<br>Additionally, certain cooking staples are high in saturated fats, such as butter, ghee, and coconut oil.      | Checking labels when buying products is one of the most effective steps a service can take to reduce saturated fat on the menu, and small changes here can make a meaningful difference without changing the food experience for children.<br><br>Although saturated fats should be limited, unsaturated fats support health. A variety of unsaturated fats can be used when cooking to support the nutritional quality of meals, including: plant-based oils (such as olive oil, canola oil), avocado, nuts/seeds (where safe), oily fish.                                                                                                                                                                                                                                                                                                   |
| <b>Added salt</b>     | Excess salt can come from a variety of foods, most often processed foods and added during cooking.<br>Examples of foods with high amounts of added salt include: processed meats, salty crackers/chips, some sauces/stock powders. | Most salt in children's ECEC menus doesn't come from adding salt specifically in cooking but from discretionary and processed products including stocks, sauces, seasoning mixes and processed meats. Thoughtful purchasing choices can significantly reduce salt content without requiring major changes to recipes or cooking practice.<br><br>Many cooks are already skilled at building flavour through herbs, spices, lemon, garlic and onion, and these approaches naturally reduce reliance on salt and high-salt condiments. Choosing reduced-salt or no-added-salt versions of stocks, canned goods and sauces is an easy swap. Children's taste preferences are still developing, so consistent exposure to lower-salt food in ECEC shapes what children come to enjoy, something cooks and educators are well placed to influence. |
| <b>Added sugar</b>    | Added sugars are common in sweet snacks and sweetened drinks.<br>Examples: biscuits, cakes, lollies, juice/fruit drink, cordial, soft drinks.                                                                                      | To reduce added sugars in drinks, offer water at all mealtimes. Although sweetened flavoured milks provide nutrients, they can be high in added sugar, therefore plain milk is preferable as a dairy drink if being offered.<br><br>Addressing added sugar in cooking ingredients can be more challenging (e.g. tomato sauce, chilli sauce). Reading labels and looking for 'reduced sugar' or 'lower sugar' options can make a big difference.                                                                                                                                                                                                                                                                                                                                                                                               |

**Guideline 4****Encourage, support and promote breastfeeding.**

- Services are well placed to support mothers and families to continue breastfeeding upon starting attendance at ECEC.

See Section 3, page 32

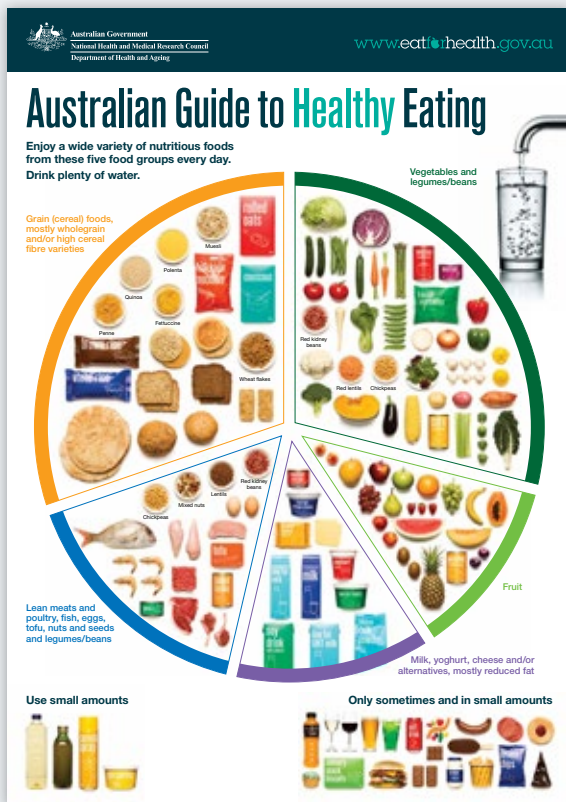
**Guideline 5**  
Care for your food; prepare and store it safely.

| Element                       | Description                                                                                                                                                                                                                                                                                                             | Recommendation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Provision of safe food</b> | <p>Providing safe food in ECEC requires a whole-of-service approach to food safety and food allergen management.</p> <p>By following appropriate procedures, safe food provision prevents foodborne illness and reduces the risk of children with food allergies being accidentally exposed to their food allergen.</p> | <p>The ADGs recommend following safe food handling practices across all stages of food preparation and storage, including cleaning, separation of raw and ready-to-eat foods, cooking to safe temperatures and chilling.</p> <p>In ECEC services, food safety extends to food allergen management, age-appropriate food preparation including choking risk considerations, and documented processes that support consistency across staff.</p> <p>Food safety practice in ECEC is already supported by regulatory requirements (Regulation 77 of the Education and Care Services National Regulation), and most services have strong foundations in place. The aim is to ensure that food safety systems remain consistent during periods of staff change and that food allergen management is integrated into everyday practice rather than treated as a separate process. Clear, documented procedures and regular staff training are the most effective ways to maintain high standards over time. <a href="#">See Section 8, page 80</a></p> |



## How are the Australian Dietary Guidelines visually presented?

### Australian Guide to Healthy Eating plate (the plate)



The plate is a pictorial representation of the recommended proportions of the five food groups over the course of the day (fruit, vegetables and legumes, meat and meat alternatives, grains, milk, dairy and dairy alternatives)

It includes guidance to drink plenty of water, use unsaturated fats in small amounts, and limit discretionary foods to only sometimes and in small amounts.

#### KEEP IN MIND

- **The plate is a planning guide, not a per-meal prescription.** Proportions of food groups are best applied across the day rather than to every single meal.
- **Children are food explorers;** what is plated is not always what is consumed, and that is okay.
- **Foods eaten at home contribute to children's overall dietary intake.** Where a service provides only some meals in the day (e.g., morning tea, lunch and afternoon tea), proportions across those meals may look different to the full-day 'plate', and some flexibility is appropriate.

### Grams/serving size tables

Table 2.6: Standard serve size equivalents for vegetables, legumes/beans and fruit

| Food group                   | Serve sizes (100–350kJ)                                                                                   |
|------------------------------|-----------------------------------------------------------------------------------------------------------|
| Vegetables and legumes/beans | 75g (½ cup) cooked green or brassica or cruciferous vegetables                                            |
|                              | 75g (½ cup) cooked orange vegetables                                                                      |
|                              | 75g (½ cup) cooked dried or canned beans, chickpeas or lentils, no added salt                             |
|                              | 75g (1 cup) raw green leafy vegetables                                                                    |
|                              | 75g starchy vegetables (e.g. ½ medium potato, or equivalent of sweet potato, taro, sweet corn or cassava) |
|                              | 75g other vegetables e.g. 1 medium tomato                                                                 |
| Fruit                        | 150g (1 piece) of medium-sized fruit e.g. apple, banana, orange, pear                                     |
|                              | 150g (2 pieces) of small fruit e.g. apricots, kiwi fruit, plums                                           |
|                              | 150g (1 cup) dried, cooked or canned fruit*                                                               |
|                              | 125ml (½ cup) 100% fruit juice**                                                                          |
|                              | 30g dried fruit** e.g. 4 dried apricot halves, 1½ tablespoons of sultanas                                 |

Notes: \*Preferably with no added sugar

\*\*Only to be used occasionally as a substitute for other foods in the group

Source: Food Modelling System.<sup>4</sup>

Vegetables and fruit should be stored and prepared properly to maintain nutrient status. Vegetables should be washed to remove microbes and surface debris, and overcooking should be avoided. Root vegetables should be peeled or scrubbed (see Chapter 5). Tinned and/or frozen varieties are nutritious alternatives to raw produce.

#### Pregnant and breastfeeding women

Fruit and vegetable consumption before and during pregnancy makes an important contribution to health outcomes for women and their children. Many women may need to increase their current consumption of these valuable foods as a prospective cohort study found that only about half of pregnant women may be consuming the recommended amounts of fruits and vegetables.<sup>403</sup> While fruit and vegetables are valuable foods for pregnant women, pre-prepared or pre-packaged cut fruit and vegetables should be avoided due to risk of listeriosis.<sup>404,405</sup>

#### Infants

Pureed and mashed vegetables, including legumes/beans, and fruit are important in the diets of infants from around 6 months of age. Choices should be varied to ensure adequate energy (kilojoule) and nutrient intake. Fruit juice is not recommended for infants. When additional liquids are required for infants, water is preferable. All acidic drinks, including juices, increase the risk of dental erosion.<sup>401,406</sup> By 12 months of age, infants should be consuming a wide variety of foods consumed by the rest of the family, having progressed from pureed or mashed foods to foods that are chopped into small pieces. Care should be taken early on to choose foods of a suitable texture. Hard pieces of foods, such as some raw vegetables and nuts, should be avoided as they can cause choking. A variety of tastes and textures may be more appealing. As with all foods, some vegetables may need to be introduced more than ten times before being accepted.<sup>407</sup> Whole fruit is preferable to fruit juice due to its higher fibre content.

ENJOY A WIDE VARIETY OF NUTRITIOUS FOODS  
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Tables which provide standard serves (by weight/volume) of different foods in each food group.

Serves within a food group are designed to be roughly comparable for planning purposes. For example, ½ cup cooked rice and 1 slice of bread both equal one serve of grains.

#### KEEP IN MIND

- **Standard serve sizes are designed for individual dietary planning, not group catering.** Cooks need to scale quantities significantly, for example, a standard serve of cooked pasta (½ cup) needs to be multiplied across age groups, numbers and likely second servings.
- **Serves within each food group are designed to be roughly equivalent in energy,** which means cooks can substitute one form for another within a group (e.g., chickpeas for lentils, rice for pasta) without significantly changing nutritional value.
- **Services typically cater for mixed age groups.** Having age-grouped serve size guidance (2–3 years vs 4–8 years) is useful for menu planning.

## How much food should ECEC services provide?

ECEC services are uniquely placed to make a meaningful contribution to children's nutrition every day. Understanding how much food to provide, and for which age groups, is the foundation of a strong food environment.

The ADGs set out the minimum daily serves from each of the five core food groups needed to meet most children's nutritional needs. It excludes discretionary foods and assumes that recommended serves are spread across all eating occasions throughout the day. This relates specifically to Element 2.1.3 of the National Quality Standard.

It is important to note that the ADGs and associated resources apply to children aged one year and over (see Table 4). For children under 12 months of age attending ECEC services, including those transitioning from a breast milk or infant formula based diet to including solid foods, see Sections 3 and 4 which utilise the National Health and Medical Research Council Infant Feeding Guidelines as an evidence base.<sup>5</sup>

The recommended serves differ by age group (see Table 4). Planning menus with these age-specific targets in mind is what allows services to provide food that genuinely meets children's needs, rather than a one-size-fits-all approach.

Figure 2 maps the recommended food groups serves (Table 4) showing the typical distribution of serves between home (breakfast, late afternoon tea, dinner) and ECEC (morning tea, lunch, afternoon tea). The distribution of serves while at ECEC makes up at least half of a child's daily serves. **This is a minimum amount: children who are taller or more active will need bigger serves.** The remaining serves are eaten at home as breakfast, dinner, and during other food opportunities. If a service also provides breakfast or other food opportunities, more serves from each food group are provided at ECEC, with fewer needed at home. The example shown is one of many ways to map serves across a day, and is not meant to be followed exactly.

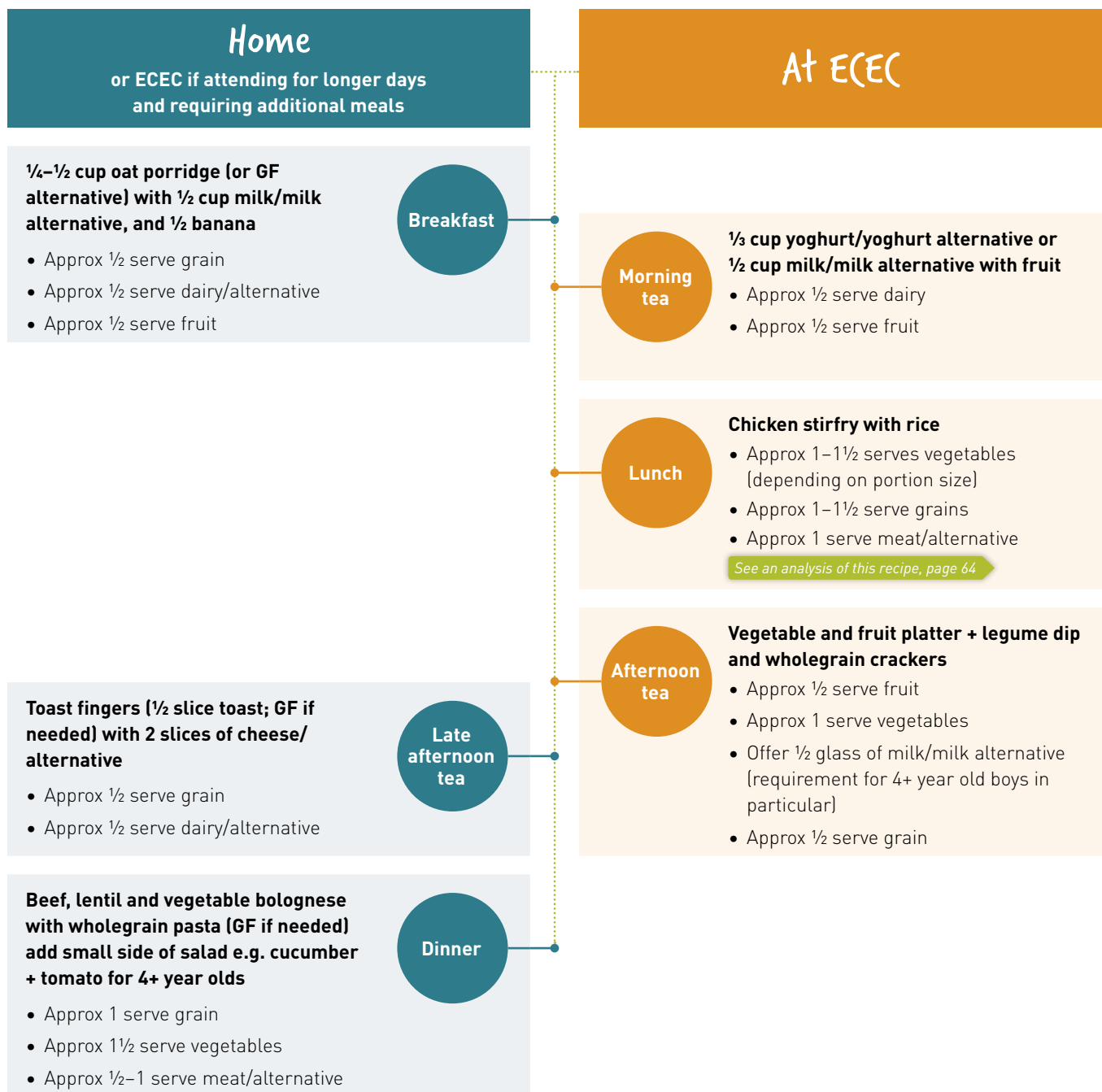
**NATIONAL QUALITY STANDARD**  
**QA2**

**TABLE 4:** Recommended daily serves by age group<sup>6</sup>

|                                                                             | 1-2 years           |                                | 2-3 years           |                                | 4-8 years                 |                                |
|-----------------------------------------------------------------------------|---------------------|--------------------------------|---------------------|--------------------------------|---------------------------|--------------------------------|
|                                                                             | Serves for full day | Minimum serves whilst at ECEC* | Serves for full day | Minimum serves whilst at ECEC* | Serves for full day       | Minimum serves whilst at ECEC* |
| <b>FOOD GROUP</b> Vegetables and legumes/beans                              | 2-3                 | 1/2-1 1/2                      | 2 1/2               | 1.25                           | 4 1/2                     | 2 1/4                          |
| Fruit                                                                       | 1/2                 | 1/4                            | 1                   | 1/2                            | 1 1/2                     | 3/4                            |
| Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties  | 4                   | 2                              | 4                   | 2                              | 4                         | 2                              |
| Lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans | 1                   | 1/2                            | 1                   | 1/2                            | 1 1/2                     | 3/4                            |
| Milk, yoghurt cheese and/or alternatives                                    | 1-1 1/2             | 1/2-3/4                        | 1 1/2               | 3/4                            | 2 (boys)<br>1 1/2 (girls) | 1 (boys)<br>3/4 (girls)        |

Services should meet at least 50% of a child's total daily recommended serves from each food group across morning tea, lunch and afternoon tea.

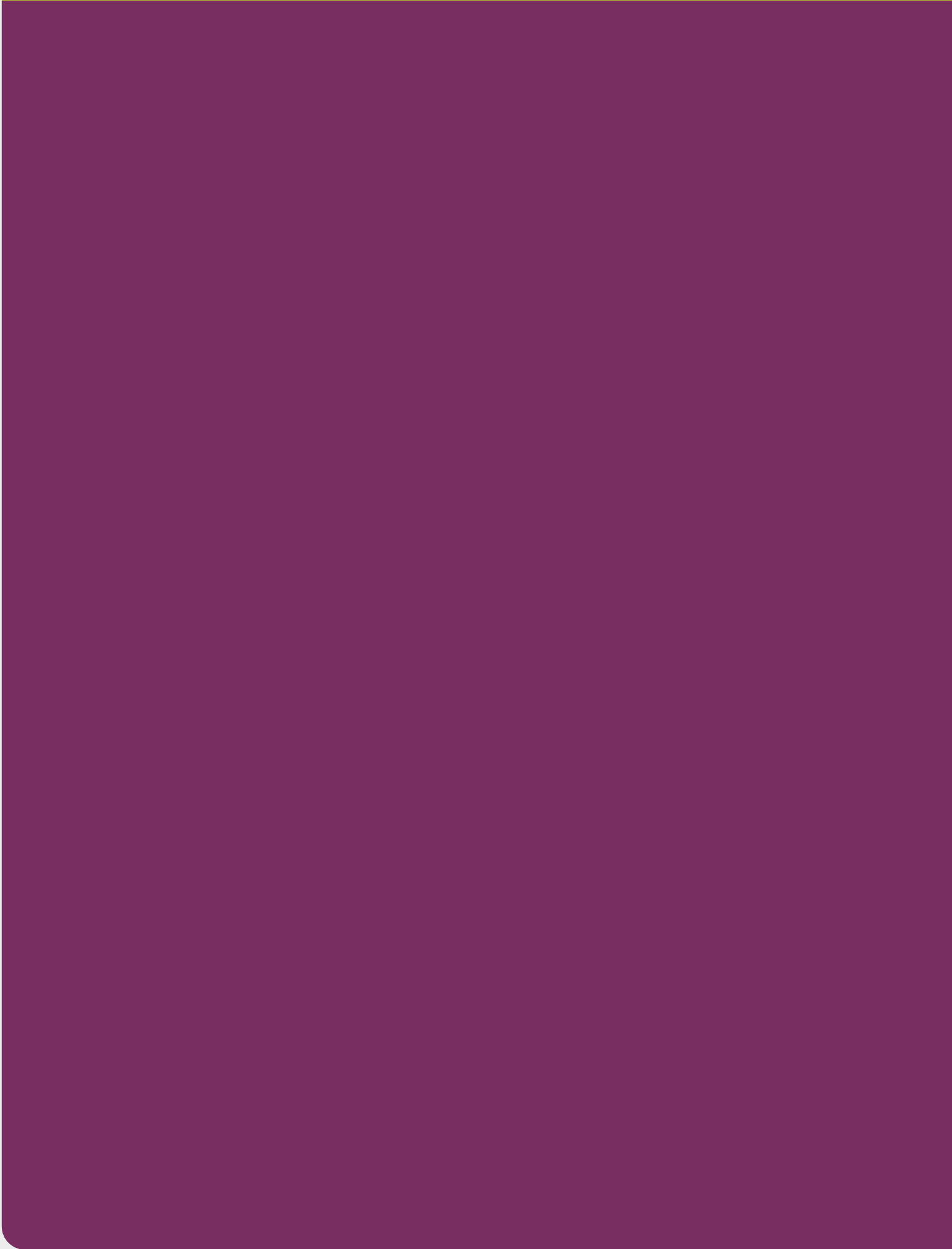
\*Serves whilst at ECEC assumes children are provided morning tea, lunch, and afternoon tea (based on an 8-hour ECEC day). Services should meet at least 50% of a child's total daily recommended serves from each food group across these feeding opportunities. However, many children attend ECEC for up to 12 hours each day, and therefore require extra food – often in the form of breakfast and other food opportunities. This would result in greater than 50% of total daily nutritional needs being provided.

**FIGURE 2:** Example day of food provision for a child across ECEC and home

GF = Gluten Free

**Reflective Questions**

- Are our menu planning processes driven by children's nutritional requirement or by convenience, cost, habit and children's existing food preferences?
- How does our service demonstrate that food and nutrition are viewed as an essential component of children's health, wellbeing, learning and development rather than simply a care routine?
- If we reviewed our menu against the Australian Dietary Guidelines today, what strengths would be identified and what opportunities for improvement would emerge?



SECTION 3

# Australian Infant Feeding Guidelines



# Australian Infant Feeding Guidelines

## What are the Infant Feeding Guidelines?

The Australian Infant Feeding Guidelines provide evidence-informed information and recommendations related to feeding infants from birth to around two years of age.<sup>5</sup> They were written in conjunction with the Australian Dietary Guidelines, which provide recommendations for children aged two years and older.

Published in 2012, they are a revision of the 2003 Infant Feeding Guidelines, utilising updated evidence to ensure recommendations were aligned with current knowledge at the time.<sup>5</sup>

## Why were they developed, what are the underpinning intentions?

The Infant Feeding Guidelines were developed by the National Health and Medical Research Council to provide health workers with clear advice around feeding infants. The Guidelines aim to promote and encourage exclusive breastfeeding as the optimal way for babies to be fed until around six months and up to 12 months and beyond. However, they also provide information regarding safe use of infant formula when infants are not breastfed (or partially breastfed), and recommendations regarding the introduction of solid foods.<sup>5</sup>

## How were they developed?

A panel of experts gathered evidence surrounding a variety of infant feeding topics, through a systematic literature review of scientific evidence. A draft of the Guidelines were then released to the public for consultation, with feedback from members of the public taken into consideration for the final version of the Guidelines.<sup>5</sup>

## What are the Infant Feeding Guidelines?

**Name:** Infant Feeding Guidelines: Information for health workers

**Developed by:** National Health and Medical Research Council (NHMRC) in partnership with the Australian Government Department of Health

**Year:** 2012

**Review date:** A minor review was conducted in 2024 following the release of the World Health Organization Guideline for complementary feeding of infants and young children 6-23 months of age.

## Sections

The Infant Feeding Guidelines are primarily organised into three sections covering the main ways infants are fed:

- Breastfeeding
- Infant formula
- Introduction of solid foods

## How the Infant Feeding Guidelines have been adopted and adapted and translated for the ECEC sector

As the Infant Feeding Guidelines were originally developed for health workers (including but not limited to midwives, lactation consultants, and maternal and child health nurses), recommendations in the Infant Feeding Guidelines have been translated into practical information relevant to the ECEC sector.

# Benefits of breastfeeding to the infant

The World Health Organization (WHO) and the Australian Infant Feeding Guidelines recommend that infants be exclusively breastfed for around the first six months of life.<sup>5,17</sup> They also recommend breastfeeding continue until 12 months of age or beyond, for as long as the mother and infant desire.

Every infant is different, and feeding should always take into account how each individual is growing and developing. It is important to acknowledge that some babies cannot be breastfed, for a variety of reasons, and in these cases infant formula is a safe alternative.<sup>5</sup> [See Section 3, page 36](#)

## Benefits to the infant

Breast milk is uniquely suited to what a newborn infant needs. At birth, many of an infant's body systems, including digestion, immunity, and brain development, are still maturing, and breast milk actively supports this.<sup>5</sup> The nutrients in breast milk are in a form that infants can absorb easily, and regularly adapt to suit the changing needs of the individual infant. This includes a range of protective substances, including specific fats, immune proteins, complex sugars, growth factors, and living cells, all of which play active roles in an infant's development and protection.

Infants who are predominantly breastfed have the lowest rates of illness in their first six months – any breastfeeding provides some protection; partial breastfeeding is better than none.<sup>18</sup>

Breastfeeding supports healthy eyesight, brain and motor development, and better jaw and tooth alignment. It also reduces the risk of a range of health problems (e.g. infection, sudden infant death syndrome [SIDS]).

Breastfeeding also has clear health benefits for mothers and saves families money.<sup>5</sup>

AUSTRALIAN INFANT FEEDING GUIDELINES  
1.2.1

# Supporting breastfeeding in ECEC services

All mothers have a right to breastfeed their infant and their decision to breastfeed their infant should be protected. This section focuses on what a service can practically do to support families who are breastfeeding through the ECEC transition.

## Encouraging and supporting breastfeeding in the ECEC setting

Breastfeeding is one of the most important contributors to a young child's health and development. Many children who attend an ECEC service are at an age where breastfeeding is still part of their everyday life.<sup>5</sup>

ECEC services sit at a critical point in the breastfeeding journey.<sup>19</sup> The environment a service creates, the practical arrangements it puts in place, and the attitudes it models all send a message to families about whether breastfeeding is welcome and valued.

Many mothers return to paid work before they are ready to stop breastfeeding.<sup>19,20</sup> Returning to paid work is one of the most commonly cited reasons that mothers stop breastfeeding earlier than they had planned.<sup>5</sup> The anticipation of going back to work, or actually returning, has a significant impact on a mother's breastfeeding experience. This is due to barriers such as: short maternity leave, inflexible working hours, no paid breaks for expressing milk, no suitable place at work to express and store milk, and a lack of accessible childcare. These factors can cause reductions in breast milk supply, creating more challenges with maintaining breastfeeding.

Because of these barriers, some mothers feel that breastfeeding simply has to stop when they go back to work. This is not true, but it is a common assumption, and one that ECEC services have a role in gently challenging. Starting ECEC does not mean breastfeeding has to stop.

The Australian Breastfeeding Association (link on next page) has further resources to support breastfeeding mothers who are returning to work.

AUSTRALIAN INFANT FEEDING GUIDELINES  
1.3

NATIONAL QUALITY STANDARD  
QA6

## How ECEC services can support breastfeeding

For an ECEC service, supporting breastfeeding means making it easy for families who have chosen to breastfeed. Use respectful, non-judgemental language. Every family makes their own feeding choices. Language and attitude should support whatever choice a family has made, without pressure in either direction.

Practical strategies to support breastfeeding families in ECEC include:

- Clearly communicate that breastfeeding is welcome. The idea around this communication is to make it clear that the mother does not need to stop breastfeeding when their infant starts ECEC. This can be done through signs/posters/stickers that breastfeeding is welcome, or through open direct communication with families.
- Ensure staff are educated about service policies and procedures relating to breastfeeding, and are upskilled in supporting mother's who wish to continue breastfeeding.
- If the facilities are available, provide a welcoming, private space. A comfortable, private area where a mother can breastfeed or express milk when she visits the service sends a clear message that breastfeeding is welcome. This does not need to be a dedicated room – a comfortable chair, a sign, and some privacy, are enough for many mothers.

The way feeding is managed in an ECEC service is part of the Mealtime Environment and Practices module. For infants, this includes how expressed breast milk (or infant formula) is offered, how responsive the educator is during feeding, and what the physical feeding environment looks like.

See Section 4, page 44

NATIONAL QUALITY STANDARD  
QA2, QA6, QA7

## Types of specialist support for breastfeeding

ECEC educators are not breastfeeding counsellors and should not offer clinical breastfeeding advice. When a mother is struggling, thinking about stopping breastfeeding, or simply asks what support is available, connecting her with the right person quickly is the most useful thing the service can do.

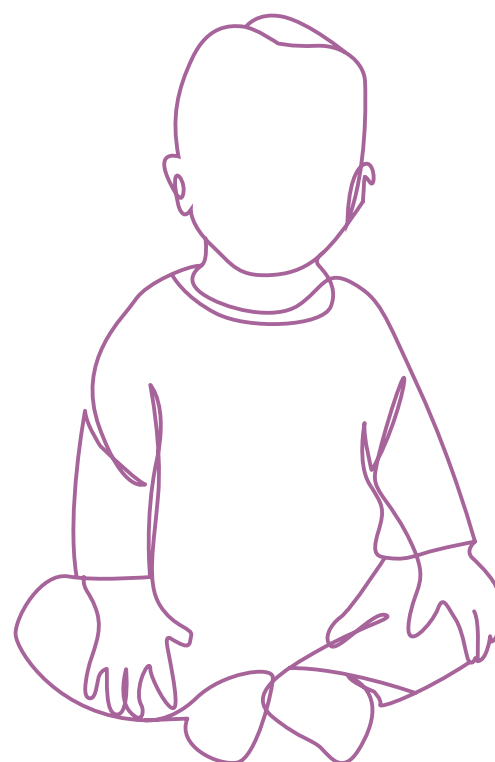
### Australian Breastfeeding Association

🔗 [www.breastfeeding.asn.au](http://www.breastfeeding.asn.au)

For mothers who need clinical assessment or hands-on support, refer to:

- **Australian Breastfeeding Association Breastfeeding Counsellor** – Volunteers able to provide support and offer strategies to resolve breastfeeding challenges
- **Lactation consultant** – Work in hospitals, child health services, or private practices, able to provide complex medical care, hold an International Board Certified Lactation Consultant (IBCLC) qualification
- **Maternal and child health nurse** – Registered Nurses and Midwives, provide help with child feeding, behaviour and bonding
- **General practitioner** – Can provide general support or refer to other services/professionals

NATIONAL QUALITY STANDARD  
QA6



# Expressing and storing breast milk

## Expressing breast milk

Expressing breast milk requires significant time, effort, and planning from mother's and families. The process needs careful timing, sterilised equipment, clean and safe storage and preparation areas, and consideration whilst transporting to ECEC. From an ECEC perspective, it is important to understand and acknowledge the effort it took each mother to express, store and transport breastmilk to the service. In addition, it may be useful to consider breastmilk as a wonderful, living substance.

AUSTRALIAN INFANT FEEDING GUIDELINES  
5.1

NATIONAL QUALITY STANDARD  
QA2, QA3, QA7

## Storage and preparation of expressed breast milk

Expressed breast milk is a food, and like any food it is prone to bacterial growth or contamination if not stored correctly.<sup>21</sup>

AUSTRALIAN INFANT FEEDING GUIDELINES  
5.3

## Receiving and storage

When storing expressed breast milk in an ECEC service, it is important to follow these steps:<sup>5,22</sup>

- Wash hands with soap and water before and after handling bottles or containers containing expressed breast milk.
- Check that expressed breast milk has arrived in a labelled, sealed container.
- Ensure expressed breast milk is correctly labelled with the child's **first name, surname, date it was expressed**, and **date that it is to be used**, so that the **right breast milk goes to the right child**.

⚠ It is essential that two staff check the name and date on expressed breast milk in the fridge before it is fed to an infant to ensure that the right breast milk goes to the right infant. If an infant has been given the incorrect expressed breast milk, it is important to let the service leader know immediately as the infant may need medical attention.<sup>22</sup>

- Store expressed breast milk immediately in the refrigerator below 5°C.
- Store expressed breast milk in a non-spill tray on the bottom shelf of the refrigerator to ensure it doesn't spill onto any other food in the fridge.
- Expressed breast milk can be stored by families in food grade, BPA-free glass or plastic containers, including sealable plastic bags.<sup>23</sup>

⚠ Gloves are not required when handling expressed breast milk, as long as hands are clean, dry, and the skin is not broken.<sup>21</sup> Although service policies and procedures must be followed, which may specify the use of gloves.

The length of time expressed breast milk can be stored varies depending on whether it is fresh, refrigerated or frozen and thawed. Table 5 over page from the Infant Feeding Guidelines outlines the recommended lengths of time for storing expressed breast milk.

AUSTRALIAN INFANT FEEDING GUIDELINES  
5.3.1

NATIONAL QUALITY STANDARD  
QA2, QA3, QA7

## Special consideration

For infants who are premature or unwell, more stringent storage requirements may apply. If a service is caring for an infant with complex health needs, seek guidance from the family's treating clinician or maternal and child health nurse before following routine storage guidance.<sup>5</sup>

## Transporting expressed breast milk to the service

When families bring in expressed breast milk to an ECEC service, it must be transported correctly to reduce the risk of bacterial growth in the milk. Expressed breast milk should be transported to the service in labelled, sterile bottles or containers that have been placed into an insulated container, such as an Esky.<sup>22</sup> The insulated container should be filled with enough freezer bricks to keep the expressed breast milk cold until it is dropped off at the service.

Once at the service, the bottles of expressed breast milk should be checked and re-labelled if necessary and placed immediately into the service's refrigerator.<sup>5</sup>

If frozen expressed breast milk partially thaws during transport, it should be used within 24 hours and must not be refrozen.<sup>23</sup>

Any bottles of expressed breast milk that have not been fed from by the end of the day should be returned to the family or discarded.<sup>22</sup>

AUSTRALIAN INFANT FEEDING GUIDELINES  
5.3.2

**TABLE 5:** Length of time expressed breast milk can be stored (excerpt from NHMRC Infant Feeding Guidelines, p58)

| Breast milk status                        | Storage at room temperature (26°C or lower)                 | Storage in refrigerator (5°C or lower)                                   | Storage in freezer                                                                                                                                                          |
|-------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Freshly expressed into sterile container  | 6–8 hours<br>If refrigeration is available store milk there | No more than 72 hours<br>Store at back, where it is coldest <sup>#</sup> | 2 weeks in freezer compartment inside refrigerator (–15°C)<br>3 months in freezer section of refrigerator with separate door (–18°C)<br>6–12 months in deep freeze (–20°C)* |
| Previously frozen (thawed)                | 4 hours or less – that is, the next feeding                 | 24 hours                                                                 | Do not refreeze                                                                                                                                                             |
| Thawed outside refrigerator in warm water | For completion of feeding                                   | 4 hours or until next feeding                                            | Do not refreeze                                                                                                                                                             |
| Infant has begun feeding                  | Only for completion of feeding<br>Discard after feed        | Discard                                                                  | Discard                                                                                                                                                                     |

\* Chest or upright manual defrost deep freezer that is opened infrequently and maintains ideal temperature

<sup>#</sup> In ECEC services, expressed breast milk sent from home will typically arrive already refrigerated. The 72-hour refrigerator limit applies from the time of expression, not the time of arrival at the service. Ask families to label containers with the date and time of expression so educators can check this on arrival.<sup>21</sup>

## Thawing, preparing and warming expressed breast milk

### Thawing frozen expressed breast milk

Frozen expressed breast milk can be thawed slowly overnight in the refrigerator or thawed quickly by placing the sealed bottle or bag in a bowl of warm water. As the water cools, add a little more warm water and keep moving the container until the milk is fully liquid.<sup>24</sup>

Do not leave frozen expressed breast milk to thaw at room temperature.<sup>24</sup>

Once thawed in the refrigerator, expressed breast milk can be stored for up to 24 hours in the fridge or used at room temperature within 4 hours. It must not be refrozen.<sup>5</sup>

### Warming expressed breast milk

To avoid the growth of bacteria, bottles of expressed breast milk **must only be heated once** and never be re-cooled and then reheated.<sup>21</sup>

Warming expressed breast milk in a container of warm water for 15 minutes or less is the preferred method of heating. Before feeding to an infant, check the temperature of the milk. This can be done by using a calibrated thermometer, or by dripping some onto your wrist, making sure it is about body temperature or slightly cooler. Warming milk in the microwave is not recommended as the risk of scalding the infant is too high due to the uneven heating of the milk.

### After the feed

Discard any warmed expressed breast milk that has not been used at the end of a feed. **Expressed breast milk must not be frozen or heated more than once.**<sup>5</sup>

Some families send more EBM than an infant needs at a single feed. Warming small amounts and preparing more only if needed reduces waste.<sup>25</sup> Once an infant has begun feeding from a bottle, any remaining milk must be discarded after the feed.

### If expressed breast milk runs out during the day

If an infant needs more milk before the family arrives and expressed breast milk has run out, contact the family as soon as possible. The mother may be able to come in sooner or arrange for more milk to be sent. For young infants not yet having solid foods, water is not an appropriate substitute for breast milk or formula.<sup>25</sup>

For additional information on storing expressed breast milk, utilise the following resources:

- [NHMRC \(2012\) Infant Feeding Guidelines](#)
- [NHMRC \(2024\) Staying Healthy: Preventing infectious diseases in early childhood education and care services](#)
- [Australian Breastfeeding Association \(2023\) Carer's guide to the breastfed baby](#)

# Infant formula

## Types of formula

### Infant formula

Infant formulas available in Australia are regulated by the Australia New Zealand Food Standards Code.<sup>26</sup> Infant formula can provide the nutrients an infant requires from 0-12 months of age, and are the only safe alternative to breast milk. Some formulas, such as extensively hydrolysed or amino-acid based formulas are used under medical supervision for infants who cannot digest regular cow's milk-based formula.<sup>5</sup>

### Follow-on formula

Follow-on formulas are designed for babies 6 months and older.<sup>26</sup> However, infant formula is still appropriate from 6 months of age, and there is no evidence that follow-on formula has advantages over infant formula at this age.<sup>5</sup>

### Toddler milks

After 12 months of age, toddlers should be getting all of their nutrition from solid food, with full-fat cow's milk (or alternative milk if necessary) offered as a drink alongside water and breast milk if the mother chooses to continue.

See Section 4, page 46

Toddler milks are not recommended under international guidance on infant and young child feeding, and they are not part of Australia's dietary guidance for young children.<sup>5</sup>

However, some toddlers are prescribed limited amounts of toddler milk to fill nutritional gaps by health care professionals. For example, if the child is a selective eater, or to boost nutritional intake after a period of illness.

AUSTRALIAN INFANT FEEDING GUIDELINES  
8.1, 8.5

## Preparing infant formula

In most ECEC services, families bring infant formula from home, either as powder to be mixed at the service or as ready-to-feed liquid. Whichever is used, the same food safety rules apply. An infant formula that is not prepared, stored, and warmed correctly puts an infant at serious risk of bacterial infection or scalding.<sup>5</sup> If service policies dictate specific infant formula requirements (e.g. not allowing pre-mixed liquid), this must be clearly communicated with families.

Incorrect preparation is a real risk. The most common mistakes are not washing hands, not sterilising bottles and teats properly, using a microwave to warm infant formula, and not discarding infant formula that has been standing at room temperature for too long. All of these can make an infant seriously unwell.

AUSTRALIAN INFANT FEEDING GUIDELINES  
8.3

NATIONAL QUALITY STANDARD  
QA2, QA3, QA7

⚠ Providing formula in its original tin, labelled with the child's name and date it was opened, is best practice to ensure the safe and appropriate preparation of infant formula at ECEC.

### Before starting

Before preparing a bottle of infant formula:

- Wash hands thoroughly with soap and water.
- Make sure the work surface is clean.
- Use only clean, sterilised bottles, teats, caps and equipment. See Section 3, page 38
- Ensure the formula tin is labelled with the date it was opened (the tin should be discarded one month after opening).
- Label the bottle with the child's first and last name and the date it was prepared.<sup>21</sup>

### Correct preparation of infant formula

Infant formula can be correctly, and safely, prepared for infants by following the advice in Table 6.

### Preparing infant formula in advance

Prepare one bottle of infant formula at a time whenever possible. If it is necessary to pre-prepare infant formula, follow the steps below to ensure it is kept food safe.

- Pre-prepared infant formula must be refrigerated at 5°C
- Pre-prepared infant formula must be used within 24 hours
- Warm pre-prepared infant formula in a container of warm water for a maximum of 15 mins
  - Microwaving infant formula is not recommended as the heating is uneven and there is a risk that the infant could be scalded
- Do not rewarm infant formula that has already been warmed once
- Discard any pre-prepared infant formula after a feed – it cannot be stored
- If preparing bottles for multiple children, wash hands or change gloves between each bottle prepared.

 Families may bring prepared infant formula from home. If they do, it must have been refrigerated before transport and kept cold in transit. Apply the same receiving and storage rules as for expressed breast milk. [See Section 3, page 38](#)

**TABLE 6:** Preparation of infant formula (excerpt from NHMRC Infant Feeding Guidelines, 2012)

- Always wash hands before preparing infant formula and ensure that infant formula is prepared in a clean area
- Wash bottles, teats, caps and knives (e.g. if used to level off the scoop of formula) – careful attention to washing is essential – and sterilise by boiling for 5 minutes or using an approved sterilising agent
- Boil fresh water and allow it to cool until lukewarm – to cool to a safe temperature, allow the water to sit for at least 30 minutes (in places with clean water supply which meets Australian standards, hot water urns such as hydroboils are safe to use for formula reconstitution, provided the supply of very hot water has not been depleted)
- Ideally prepare only one bottle of infant formula at a time, just before feeding
- Always read the instructions to check the correct amount of water and powder as shown on the feeding table on the back of the pack – this may vary between different infant formula brands
- Add water to the bottle first, then powder
- Pour the correct amount of previously boiled (now cooled) water into a sterilised bottle
- Always measure the amount of powder using the measuring scoop provided in the product tin, as scoop sizes vary between different infant formula brands
- Fill the measuring scoop with formula powder and level off using the levelling device provided or the back (e.g. flat edge) of a sterilised knife – the measuring scoop should be lightly tapped to remove any air bubbles
- Take care to add the correct number of measuring scoops to the water in the bottle – do not add half scoops or more scoops than stated in the instructions
- Keep the measuring scoop in the product tin when not in use – do not wash the scoop as this can introduce moisture into the tin if not dried adequately
- Place the teat and cap on the bottle and shake it until the powder dissolves
- Test the temperature of the liquid with a few drops on the inside of your wrist – it should feel just warm, but cool is better than too hot
- Feed infant – any infant formula left at the end of the feed must be discarded
- A feed should take no longer than 1 hour – any infant formula that has been at room temperature for longer than 1 hour should be discarded
- Infant formula that has been at room temperature for less than 1 hour may be stored in a refrigerator for up to 24 hours (in a sterile container)
- Discard any refrigerated feed that has not been used within 24 hours
- When a tin of infant formula is finished, throw away the measuring scoop with the tin, to ensure that the correct measuring scoop is used next time

### Transporting infant formula to the service

Preparing infant formula at the service is preferred, rather than families bringing in pre-prepared infant formula. This is because there is an increased risk of bacterial growth in the infant formula if it has not been stored properly on the journey from home to the service. If it is necessary for families to transport pre-prepared infant formula, Table 7 applies:

Families can also bring sterilised bottles of cooled boiled water and separate infant formula powder to mix at the service. Single-serve sachets of infant formula powder are another option. Always check the manufacturer's instructions.<sup>5</sup>

### Sterilising bottles and equipment

Bottles, teats and lids must be sterilised before every use. Wash all equipment thoroughly in hot soapy water first, then sterilise using one of the three methods below.

This information applies to services which sterilise on their premises. However, some services may opt for families to be responsible for the washing and sterilisation of bottles and equipment, as documented in service policies.

#### AUSTRALIAN INFANT FEEDING GUIDELINES 8.3.3

### Boiling

Boiling is a safe and reliable method of sterilising infant bottles and feeding equipment. Follow the steps outlined in Table 8 to ensure optimal results.

### Chemical sterilisation

Chemical sterilants are an effective alternative to boiling. See Table 9 for guidance.

### Steam sterilisation

Electric steam sterilisers heat equipment using steam in order to kill bacteria that could contaminate feeds.<sup>5</sup> Clean the equipment first before using the electric steriliser and operate using the instructions provided by the manufacturer. The unit turns itself off automatically when complete. Microwave steam sterilisers work on the same principle – follow the manufacturer's instructions.

**TABLE 7:** *Transporting infant formula feeds (excerpt from NHMRC Infant Feeding Guidelines, 2012)*

- Prepare the feed and put in the refrigerator
- Ensure feed is cold before transporting
- Do not remove feed from the refrigerator until immediately before transporting
- Transport feed in a cool bag with ice packs
- Use feeds transported in a cool bag within 2 hours, as cool bags do not always keep foods adequately chilled
- Re-warm at the destination (for no more than 15 minutes)
- If the destination is reached within 2 hours, feeds transported in a cool bag can be placed in a refrigerator and held for up to 24 hours from the time of preparation

**TABLE 8:** *Sterilisation by boiling (excerpt from NHMRC Infant Feeding Guidelines, 2012)*

- Wash bottles, teats and caps in hot soapy water with a bottle/ teat brush before sterilisation
- Place utensils, including bottles, teats and caps in a large saucepan on the back burner of the stove
- Cover utensils with water, making sure to eliminate all air bubbles from the bottle
- Bring water to the boil and boil for 5 minutes. Turn off – do not allow it to boil dry
- Allow the equipment to cool in the saucepan until it is hand hot and then remove it – be very careful if children are present
- Store equipment that is not being used straight away in a clean container in the fridge
- Boil all equipment within 24 hours of use

**TABLE 9:** *Sterilisation using chemicals (excerpt from NHMRC Infant Feeding Guidelines, 2012)*

- Follow the manufacturer's instructions carefully when making up the solution to ensure the correct dilution
- Discard the solution after 24 hours, thoroughly scrub the container and equipment in warm water with detergent and make up a new solution
- Make sure all equipment is made of plastic or glass: metal corrodes when left in chemical sterilant
- Completely submerge everything, making sure there are no air bubbles, and leave it in the solution for at least the recommended time – equipment can be left in the solution until it is needed
- Allow the equipment to drain, do not rinse off the sterilising liquid or there will be a risk of re-contamination
- Store the sterilising concentrate and solution well out of the reach of children

## Infant formula considerations – water quality and contamination

When preparing infant formula, both the quality of water used, and the safety of the formula itself should be considered.

### Fluoride in infant feeding

In general, cooled boiled tap water is safe to use when preparing infant formula. Unopened bottled water (but not sparkling water) can be used, but in most parts of Australia this is not necessary.

Where this might be important is when tap water is not potable, or is not fortified with fluoride, as is the reality in some remote areas. Infants under the age of 6 months do not require a fluoride supplement, however if fluoridation of the water is a concern, services can contact local medical professionals for advice.<sup>5</sup>

## Contamination of infant formula

### Recalls

For services providing infant formula to infants, staying informed about food safety alerts and product recalls, including infant formula can ensure any affected products are not used. Check for current infant formula recalls and food safety alerts.

➤ [Food Standards Australia New Zealand \(2026\) Australian food recall alerts](#)

### Feeding bottles

Several countries have banned infant feeding bottles made of polycarbonate plastic containing small amounts of bisphenol A (BPA). In Australia, manufacturers and importers of infant feeding bottles placed a voluntary ban on BPA infant bottles. FSANZ additionally evaluated infant feeding bottles in Australia and concluded that BPA levels were very low and did not pose a risk to infants' health.<sup>27</sup>

AUSTRALIAN INFANT FEEDING GUIDELINES  
8.6, 8.7

# Providing expressed breast milk or infant formula

## Providing expressed breast milk or infant formula

### Infant formula requirements during ECEC care hours

The amount of infant formula or breast milk a baby needs depends on their age, size, how fast they are growing and what else they are eating. Babies commonly have 6–8 feeds every 24 hours, but there is **no set amount of food or number of feeds** each baby should have. Different babies drink different amounts of infant formula or breastmilk. Some might have feeds close together and others further apart. Some babies have predictable feeding patterns, whereas other babies change their feeding times and the amount they drink each day.

Although infant formula tins are required to provide a guide about amounts of infant formula to make up and how often to offer a bottle, each baby should be fed according to their needs and hunger cues. It is normal for babies to leave some formula in a bottle at the end of a feed, and for them to drink more some days and less on others. Babies should never be forced to finish a bottle or drink more than they desire.

As a baby eats more solid food, the total amount of bottle feeds they take in a day will decrease. The amount of breastmilk or infant formula will also decrease as a baby starts to drink from a cup instead of a bottle. It is important to focus on hunger and 'had enough' cues throughout the day.

### Using a feeding cup – for both infant formula or breast milk

- For infants over 6 months of age, a feeding cup may be used rather than a bottle for expressed breast milk or infant formula.
- In the ECEC setting, a cup can be a useful option when a baby refuses a bottle or is transitioning away from using a bottle. Some breastfed infants who will not accept a bottle may accept a cup more readily.
- In areas where sanitation and clean water are a problem, cup feeding is a safer option compared to bottle feeding
- Feeding cups containing breast milk or formula should be sterilised up to the age of 12 months. [See Section 3, page 38](#)

AUSTRALIAN INFANT FEEDING GUIDELINES  
8.4

## Responsive feeding practices for expressed breast milk and infant formula

The aim of every bottle feed, whether the bottle contains expressed breast milk or infant formula, is to create a comfortable, safe experience for the infant and the educator using responsive feeding.

Responsive feeding means responding to an infant's cues rather than aiming to finish a set amount. This includes the infant actively guiding the pace and amount of each feed.

NATIONAL QUALITY STANDARD  
QA2, QA5

## Monitoring an infant's progress

In an ECEC setting, the educator's role in monitoring an infant's progress is to observe, document what happens during the day, and share that information with families.<sup>5</sup> Families are the experts on their own infant. What happens at the service, how the infant is fed, how long the feed took, and how they settled afterwards, is valuable information for the family.

A healthy infant is generally alert and responsive when awake, with bright eyes and firm skin with good elasticity. Changes in alertness, unusual fussiness, or signs that an infant is not their usual self are worth noting and sharing with the family at the end of the day, or sooner if you are concerned. It is not the educator's role to diagnose feeding problems or advise families on what to change at home. If you have a concern, raise it with the family and, if needed, suggest they speak with their maternal and child health nurse or GP.

### Behaviour

After a feed, most infants are content and settled. However, many infants have a period each day, often in the late afternoon or evening, when they want to feed more frequently and will not settle easily. This is a normal feeding pattern, not a sign that the infant is hungry or that something went wrong during the day.

Families who arrive for pickup at the end of the day may arrive during this unsettled period. If an infant is 'fussier' than usual at the end of the day, reassuring the family that this is a common pattern is helpful.

## Expressed breast milk or formula feeding – strategies to adopt



### Contact (including eye contact) is important.

Hold, cuddle and if appropriate talk to the infant while feeding – ensuring to respond to hunger and 'had enough' cues.



### As much as possible, provide a calm bottle feeding environment.

For example, reduce noise, clutter, etc.



### For both breastfed and formula-fed infants – it is important to feed according to hunger and 'had enough' cues.

Examples of hunger cues include mouthing, searching, rooting, flexing arms and legs, and sucking fingers and fists.

Examples of 'had enough' cues include turning away their head, closing their mouth, or becoming distracted.



### There are variations in how much each infant will need

Follow responsive feeding practices and respond to infants' hunger and 'had enough' cues.



### Signs that all is well include plenty of wet nappies (6 or more across a whole day), consistent (not excessive) weight gain and growth, and a thriving active infant.



### Be conscious of whether the teat flow is right for the child.

If feeding looks uncomfortable, the infant is gulping rapidly, pulling away, or there is a lot of milk running from the corners of the mouth, let the family know so they can look at whether the teat is right for their infant.

## Things to avoid



### Never leave an infant to feed on their own (e.g., with the bottle propped up).<sup>28</sup>

This does not support responsive feeding practices. Additionally, infants propped up to feed by themselves may splutter or choke if the breast milk or infant formula flows too quickly.



### Do not rush the feed, the infant should be given the opportunity to pause if desired before continuing.<sup>28</sup>



### Never put an infant to sleep drinking from a bottle – this increases risk of choking and dental caries.<sup>28</sup>

### Some infants have medical conditions affecting their feeding, or complex feeding issues.

This could include an infant displaying distress during feeding, such as crying or excessive regurgitation. In these cases, advice should be sought from the child's family about how to manage feeds. This may include advice on formula preparation or positioning during and after feeds. Services should support families to seek further assistance if desired, and check-in regularly to ensure practices match what is happening at home.

## Feeding patterns

Feeding patterns include how often a baby feeds, how much they consume at each feed, and how quickly they feed. Every infant has their own feeding pattern, and it changes as they grow. Feeding patterns are not a great indicator of whether a baby is feeding well. What matters is that the baby is content after feeds, is gaining weight consistently, and is showing hunger and 'had enough' cues that are being responded to.

AUSTRALIAN INFANT FEEDING GUIDELINES  
3.4

NATIONAL QUALITY STANDARD  
QA2, QA5, QA6

## Bowel actions

What an infant's stool (poo) looks like depends on what they are fed, and it changes as they get older. Understanding what 'average' is helps educators know what is worth mentioning to a family.

### Breastfed infants

A breastfed infant's stools are typically loose, runny, and mustard-yellow, sometimes with small white specks that look like milk curds. They may also occasionally be green or orange.<sup>5</sup> This is completely normal. Runny stools in breastfed infants are not diarrhoea and do not mean anything is wrong; they are simply what a breastfed infant's stool looks like.

Frequent and runny stools can be viewed as a positive sign that the infant is getting enough milk, not a cause for concern. How often stools occur for breastfed infants also varies a lot. Some infants will have a bowel motion after nearly every feed; others may go several days without one. For an infant receiving only breast milk, going several days without a stool is not usually a cause for concern, as long as the infant is otherwise well.<sup>5</sup> If a family is worried, encourage them to speak with their maternal and child health nurse or GP.

Between six weeks and three months of age, the number of bowel motions can decrease, and intervals of a few days between stools become common. If the baby is receiving only breast milk and no other fluid or food, this is not a cause for concern.

Many breastfed infants strain, grunt, or go red in the face before passing a motion. This can look uncomfortable, but it is a normal response; it does not mean the infant is constipated. Constipation is about whether the stool is hard and dry, not about how much effort an infant makes to pass it. Infants who are exclusively breastfed are rarely constipated. Hard, dry stools are more likely when formula or solid foods are introduced.

## Formula-fed infants

Formula-fed infants generally have less frequent bowel motions than breastfed infants, and their stools tend to be firmer and more formed.<sup>5</sup> Constipation, where stool is hard and dry, is more common in formula-fed infants. If a formula-fed infant is passing hard, dry stools and seems uncomfortable, it is worth letting the family know.

### Observing and documenting bowel actions

While there is a wide range of normal, some things are worth letting the family know about promptly:

- A sudden change from the infant's usual pattern, stools that are much more frequent, much more watery, or that look or smell very different from usual.
- Signs that the infant may be unwell, alongside changes in bowel habits, such as fewer wet nappies, unusual quietness, or an infant who seems harder to rouse than normal.
- Large amounts of blood in the stool, or stool that is a chalky white or pale grey colour.

If any of these are present, let the family know and, if the infant seems unwell, encourage them to seek medical advice. Recording nappy changes during the day, including what the stool looked like, is part of good documentation practice. However, documentation should not involve taking photographs of nappies or their contents. This information helps families track their baby's patterns and gives a useful picture if a health professional needs to be consulted.

AUSTRALIAN INFANT FEEDING GUIDELINES  
3.4.4

NATIONAL QUALITY STANDARD  
QA6

### Reflective questions



- *How does our service create a welcoming, respectful, and supportive environment for families who choose to breastfeed, express breast milk, or provide infant formula?*
- *How do we ensure that feeding times are viewed as valuable opportunities for connection, learning, and wellbeing, rather than simply care tasks?*
- *How do educators ensure they use respectful, non-judgemental language when discussing infant feeding choices with families, regardless of whether they breastfeed, formula feed, or use a combination of both?*
- *How effectively do we implement responsive feeding practices that follow each infant's hunger and 'had enough' cues, rather than focusing on predetermined feeding amounts or schedules?*

SECTION 4

# Introduction of Solid Foods (First Foods)

4

Introduction of Solid  
Foods (First Foods)



# Introduction of solid foods (first foods)

This guide will use the term “introduction of solid foods” as the period between 6 and 12 months where infants are being introduced to foods whilst still being offered breastmilk or formula. The Australian Infant Feeding Guidelines and the WHO Guideline for complementary feeding recommends introducing solid foods at around six months and not before four months of age.<sup>5,17</sup>

## Why are solid foods introduced at around 6 months?

By around 6 months of age breastmilk or infant formula will no longer provide enough energy and nutrition to support normal growth and development, and solid foods need to be introduced. Between 6 and 12 months of age, breast milk or formula continues to be a major source of nutrition alongside solid foods.

*“Introducing solid foods at around 6 months of age is necessary to meet an infant’s increasing nutritional and developmental needs”<sup>5</sup>*

At around 6 months of age, most infants are ready to be introduced to different foods including different textures. At this age:

- Nutritional requirements are no longer met from breastmilk or infant formula alone. Iron is a particular concern after 6 months.
- Hunger cues will show that an infant is no longer satisfied by breast milk or infant formula on its own.
- The tongue-extrusion reflex (which makes babies push food out of their mouth) has disappeared. As they also become able to sit without much support, babies can move food around in their mouth more easily before swallowing. This means they can manage thicker foods and varied textures.
- Their digestive system has matured, and they can digest starchy foods (like bread, rice, potato).
- They are interested in their environment and will be willing to accept new flavours and textures.
- Most infants are chewing by 7–9 months of age and can manage finger foods at around 8 months of age.

## Problems that may occur when solid foods are introduced too early

- Could cause issues with breastfeeding (e.g. reduction in maternal milk production).
- Can cause digestive issues for the infant.

## Problems that may occur when solid foods are introduced too late

- By around 6 months of age breast milk and infant formula is not enough to support a baby’s growth, therefore growth can falter.
- Nutrient deficiency, especially iron and zinc can develop. Iron stores are likely to become depleted if iron from solid foods are not provided at this age.
- Optimal development and motor skills such as chewing may be delayed and the baby may become unwilling to accept new textures and tastes.

AUSTRALIAN INFANT FEEDING GUIDELINES  
9.2

NATIONAL QUALITY STANDARD  
QA2, QA7



## First foods

### Prioritising iron rich foods

As long as **iron-rich foods** are included in first foods, food can be introduced in any order at a rate that suits the infant. Iron-rich foods include pureed meat, poultry, fish, cooked tofu or legumes, iron-enriched infant cereals, or iron-fortified cereals (e.g. Weet-Bix™).

All solid foods introduced should be high in nutrients and include a variety of foods from each of the five food groups – meat / alternatives, fruit, vegetables, grains (including wholegrains) & dairy (e.g. cheese, yoghurt). A variety of culturally appropriate foods and food preparation methods should be encouraged.

### Texture and consistency

Foods offered should be of an appropriate **texture and consistency** for each individual infant to suit their developmental stage, rather than their age. It is important that infants learn to manage a range of foods of different textures, from smooth, to soft lumps, to mashed foods, to finger foods.

### Safety – choking hazards

Small, hard pieces of food should be avoided as they can cause choking. Foods should be modified to suit developmental stage: e.g., hard fruits/vegetables (such as carrots, apples and celery) are softened or grated; grapes / cherry tomatoes are quartered lengthwise; and choking-risk foods like popcorn and whole nuts are not offered. Staff should be trained in the recognition and first aid management of choking.

### Continued breastfeeding or infant formula

Until 12 months of age breast milk or infant formula is still important for nutrition. Continue to provide expressed breast milk or infant formula as often as the infant desires. Other drinks (including cow's milk) and sugar-sweetened beverages (e.g. fruit juices, cordial) should be avoided.

Communication with families can support an understanding of why infants and toddlers may be consuming less breast milk, infant formula, or solid food at ECEC. For example, if overnight feeds become more or less frequent, this could impact their hunger levels at ECEC.

### Safety – allergy

Systems should be in place to ensure that infants with diagnosed food allergies are offered foods and drinks (expressed breast milk, infant formula) that are suitable for their food allergies, in line with the child's individualised allergy care plan. For more information visit:

- ② [National Allergy Council \(2026\) Allergy Aware](#)
- ② [National Allergy Council \(2026\) All About Allergens for CEC Kitchen Handbook](#)

Staff who are caring for infants with food allergy should complete anaphylaxis first aid training, and anyone who is making decisions about, preparing food or supervising mealtimes should complete:

- ② [All About Allergens for CEC food allergen management training](#)

⚠ **Be aware that children can be allergic to any food and may have their first food allergy while they are at an ECEC. Just because a child has previously consumed a food without an allergic reaction, there is still a potential for an allergic reaction to occur on future exposures.**

### Transition from infancy to toddler (12-24 months)

By 12 months of age toddlers should be eating a **modified version of what the family / older children in ECEC are eating**. It is important to ensure that toddlers are exposed to a wide **variety** of food from all five of the food groups. Continue to offer iron-rich foods – the iron in meat is bioavailable and meat is also a source of zinc and vitamin B<sub>12</sub>. Plant-based iron rich foods include legumes (e.g. lentils, chickpeas) and dark, leafy green vegetables (e.g. spinach).

From 12 months, pasteurised full-fat cow's milk can be offered as a drink at the end of mealtimes. Offer cow's milk (or alternative milk if necessary, see over page for more information), expressed breast milk (for as long as the mother and child desire) and water – all in a cup rather than a feeding bottle.

When an infant moves into a toddler or older room, the main change that occurs is a transition from being fed on demand to following the set mealtimes of the service. Toddlers moving into a room with more set mealtimes should be supported through a gradual introduction to participation in shared meals. At this age group, children should be offered regular meals, based on their **hunger and 'had enough' cues**.

*See Mealtime Environment and Practices, Section 2, page 20*

## Foods and beverages not suitable for infants or that should be used with care

### Whole nuts and other hard foods

Some foods have a high risk of choking. This includes whole nuts, popcorn, corn chips, seeds, raw carrot, celery sticks, chunks of apple, whole grapes, blueberries (which should be cut in half or squashed), and cherry tomatoes. These should be avoided up to 3 years of age.

### Honey

Honey can contain spores of *Clostridium Botulinum*, which can cause botulism and should not be given to infants under the age of 12 months. This includes all forms of honey, including in cooked recipes or products.

### Added salt

Salt should not be added to food as the kidneys of infants are immature and unable to process excess salt. When purchasing ingredients for cooking, choose low salt options (e.g. 'no added salt', 'low sodium', 'low salt').

### Added sugars

Consuming added sugars is associated with increased dental caries. Minimise the amount of sugar and other sweeteners (e.g. honey, syrups, intense sweeteners, etc) added to food when cooking. When purchasing ingredients for cooking, choose low or no added sugar options. Check the ingredient list to see if sugar or other sweeteners have been added.

Infants given salty or very sweet foods may develop lasting preferences for these tastes, which can influence food choices later in life. These foods should not be offered.

### Deep-fried foods

When fried in large amounts of oil, foods are changed physically, chemically, and nutritionally. These deep-fried foods (e.g. potato chips, chicken nuggets) are linked to long-term health issues such as heart disease or Type 2 diabetes and should not be offered at ECEC.<sup>29</sup>

### Infant food pouches

These commercially made products are widely available and are often promoted as convenient and healthy options for young children. However, Australian research has found that many of these products, including squeeze pouches, are high in sugar, low in iron, and carry packaging claims that do not align with infant feeding guidelines.<sup>30,31,32</sup> Consuming foods directly from a pouch spout can also interfere with oral motor development, which relies on chewing and managing foods of increasing texture, and has been linked to selective eating patterns over time.<sup>33</sup>

### Milk and milk substitutes

Under 12 months of age, breastmilk or infant formula are the only recommended milk drinks. Milk from other sources, such as cow's, goat's, and sheep's milk, is not suitable as a **main drink**. Plant-based milks, including soy, rice, almond and oat milks, are also not an appropriate source of nutrition as an alternative to breastfeeding or infant formula for infants under the age of 12 months.<sup>5</sup> However, small quantities of milk and milk substitutes can be introduced as part of solid foods, such as on cereal or in custards, or in an open cup for practice.

After 12 months of age, cow's milk can provide nutrients such as protein and calcium and can be introduced. Full fat milk should be offered until 2 years of age, after which reduced-fat milk can be offered if the family chooses. Cow's milk as a drink should be limited to approximately 250 ml during the time a child is in ECEC (assuming an 8-hour day at ECEC). This is around half of the recommended maximum amount of milk they should drink in a whole day (including what they drink at home). Any milk that is offered needs to be pasteurised. Raw, unpasteurised milk must not be used. Calcium-enriched plant-based milk can be used after 12 months of age, as long as a full-fat variety is used, and alternative forms of protein and vitamin B<sub>12</sub> are included in the diet. The use of plant-based milks as drinks are suitable when used under the supervision of a health professional as they are not nutritionally equivalent to cow's milk.

### Non-milk beverages

Whilst the Australian Dietary Guidelines does list half a cup of juice as a serve of fruit, fruit juice should not be given to infants under the age of 12 months, and should be avoided or limited in ECEC services.<sup>5</sup> Additionally, sugar-sweetened beverages should be avoided for all children (e.g. fruit drink, cordial, soft drink, etc).

#### AUSTRALIAN INFANT FEEDING GUIDELINES 9.4

## Types of specialist support

The following provides an overview of the roles of Australian health professionals involved with the introduction of solid foods:

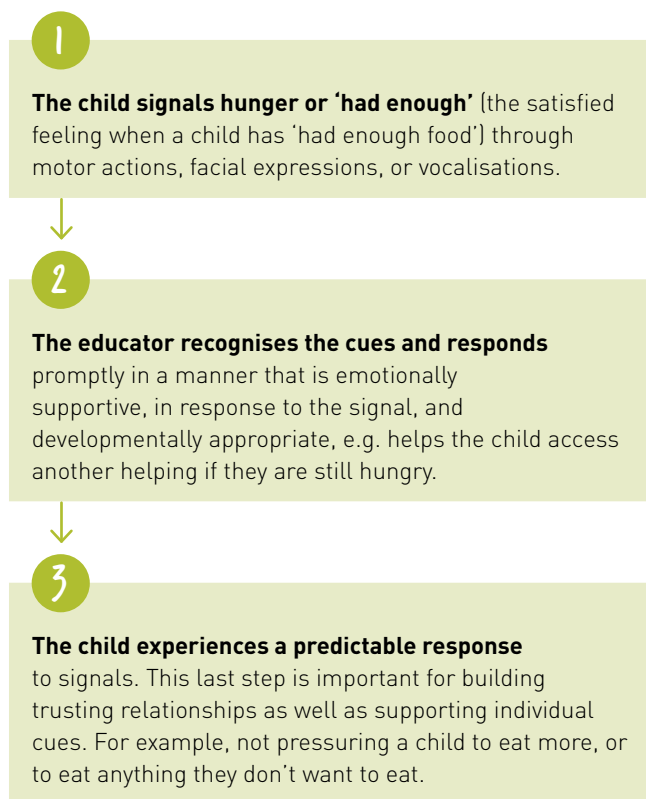
- **Child Health Nurse:** Can support families to introduce solid foods and provide practical guidance, information and resources, and monitor development and growth.
- **Paediatric Dietitian:** Can provide practical advice about how and when to introduce solid foods, including information about foods to offer. Able to assess intake of solid foods against nutritional requirements. Able to measure growth and compare with standard growth charts. Provide practical information about how to modify a diet if the child has special dietary needs.
- **Paediatrician:** Provide individualised medical advice on introducing solid foods, particularly for babies with health conditions or developmental concerns that may affect feeding.

- **General Practitioner (GP):** Identify and treat medical concerns, and refer families to specialist support.

**NATIONAL QUALITY STANDARD**  
**QA6**

## Responsive feeding practices for the introduction of solid foods

As infants grow, responsive feeding continues, but the way it looks in practice changes. From around six months, when solid foods are introduced alongside breast milk or formula, the responsive feeding guiding principles remain the same: the infant leads, the educator responds, and mealtimes stay calm and free from pressure. This can be summarised in three key steps:



Responsive feeding styles are recommended for all children from birth, including when they are introduced to solid foods (around 6 months).<sup>17</sup> In simple terms, responsive feeding means the adult notices hunger, interest and if the child has 'had enough', offers safe and nutritious food, and changes support to match the infant's cues and skills. In ECEC, responsive feeding does not mean stepping back completely. It means being present, watching closely, and helping when needed.

- The educator provides the food (including what, when and how food is offered).
- The infant decides whether to eat and how much to eat.
- Mealtimes stay calm, social and free from pressure.

The educator supports changes with the infant's cues, skills and readiness.

See *Mealtime Environment and Practices*, Section 2, page 20

**NATIONAL QUALITY STANDARD**  
**QA2, QA5**

**Baby-led weaning** is a feeding approach in which infants self-feed finger foods of appropriate texture from the start of solid foods being introduced at around six months, where the caregiver stays present and responsive but does not spoon-feed.

Baby-led weaning has features that align with responsive feeding principles, including supporting infant autonomy and participation at mealtimes. However, some studies have found that strict baby-led weaning is associated with lower iron intake compared to approaches that include spoon-feeding, particularly when iron-rich foods are not prioritised from the start.<sup>34,35,36</sup>

A responsive feeding approach that incorporates both supported self-feeding and assisted spoon-feeding is recommended, with iron-rich foods offered as a priority from the beginning of complementary feeding.<sup>5,17</sup>

If families are using or planning to use baby-led weaning, services should support them to discuss this with their maternal and child health nurse or a dietitian to ensure iron and other nutritional needs are met, and choking risks are considered.

### Reflective Questions

- *How do we work in partnership with families to ensure solid foods are introduced at a developmentally appropriate time and in accordance with each infant's individual needs and family preferences?*
- *How do our mealtime practices support children's agency, autonomy and positive relationships with food from the earliest stages of life?*
- *How do we ensure our food preparation and service practices minimise choking risks while still supporting infants to experience a progression of age and developmentally appropriate textures?*



SECTION 5

# Effective Menu and Meal Planning



# Supporting effective menu planning

## What is meant by effective menu planning? What are the elements?

Effective menu/meal planning in ECEC can be defined as a process that involves carefully planning which foods are served at breakfast, morning tea, lunch, afternoon tea and other food opportunities from day-to-day and week-to-week to ensure a variety of nutritious, safe and balanced meal options that meet children's developmental and nutritional needs.

Effective meal planning is critical as the food prepared and served in ECEC settings can influence lifelong habits and child development outcomes.<sup>37</sup> Elements of effective menu planning in ECEC include:

### Adherence to nutritional guidelines

An essential element of effective menu planning is meeting nutritional guidelines. Current benchmarks suggest that children should be offered at least 50% of their daily recommended food group serves at ECEC if morning tea, lunch, and afternoon tea are provided. However, if breakfast or late afternoon tea is also provided, the proportion of total daily intake that should be offered increases – reflecting the amount of time children spend in care and the increased number of feeding opportunities.<sup>9,38</sup>

### Variety and balance

Planned menus should not only provide enough of each food group but also provide a variety of foods within each food group, providing opportunities for exposure to different tastes, colours, textures and flavours.<sup>9,39,40</sup> In practice, for example, this may look like a two-week menu cycle where main meals are not repeated.<sup>40</sup> This also includes changing which days menu items appear on, so children attending part-time are exposed to a variety of foods.

### Developmental appropriateness

Menus should be planned so that they match the attending children's age (including appropriate textures), portion needs and eating skills.<sup>38</sup>

### Food allergy and other special dietary requirements

Menu should be planned so they provide appropriate foods for children, including those with food allergies, intolerances, cultural or religious dietary requirements, dietary patterns such as vegetarian or vegan, and medical or developmental dietary needs. The planning, preparation, and adaptation needed to safely implement this is complex and requires detailed knowledge and training. This is especially important to protect the safety of all children.<sup>41</sup>

When preparing meals for children with food allergies, the Food Standards Code requires services to take all practicable measures to prevent the likelihood of the food being contaminated with the relevant allergens.

### Cultural and demographic influences

It is important to consider the cultural backgrounds of families in the ECEC community to ensure that planned menus are inclusive. In some services, as part of the onboarding process, they ask families about their cultural backgrounds, and consult with families on appropriate cultural foods. Food access and availability are also important factors to consider.

### Food waste and sustainability factors

Effective menu planning is essential when it comes to mitigating food waste. Adjusting the menu plan for the number of children in attendance (not enrolment numbers) can reduce food waste.<sup>42</sup> Ensuring that sufficient amounts of food is prepared, but keeping an eye on portion sizes so as not to overprovide, can limit food waste. In addition, having safe plans for food that was prepared but not served (and therefore not touched) can reduce unnecessary food waste. For example, decanting meals into smaller batches, rather than placing all food out at once, allows untouched portions to be safely refrigerated or frozen for use another day. Planning a menu with sustainability factors in mind, including reduced reliance on packaged food, is an important element of effective menu planning.

### Centre budget

Although effective menu planning can reduce food costs, a sufficient budget is crucial to provide food which meets dietary guidelines.<sup>2</sup>

### Allocated hours for menu planning

In order to effectively plan a menu, the staff member responsible should be allocated sufficient work time, including access to appropriate tools and equipment (e.g. digital resources).

### Periodic menu review

One element of ensuring menus meet nutritional guidelines is reviewing the menu for compliance against guidelines.<sup>2</sup> In-person menu planning support may be available in your area. Further, web-based menu assessment tools can be a useful tool when it comes to assessing the menu and planning a menu that adheres to nutritional guidelines.<sup>43,44</sup>

**NATIONAL QUALITY STANDARD**  
QA2, QA7

## What factors influence how service leaders and cooks perceive and prioritise menu and meal quality in practice?

Research in ECEC services across Australia and internationally shows that when the menu is made a priority in the service, it is more likely to meet the nutritional needs of children. The perception of this by cooks and service leaders in a service is shaped by a variety of factors.

### Main factors

Whilst a multitude of factors have been shown to impact whether service leaders and cooks perceive menu and meal quality to be a high priority, the two main factors are the **time allocated to menu planning**, and the **food budget**.<sup>41</sup>

See Section 5, page 52

### Additional factors

Table 10 below outlines factors that influence how service leaders and cooks perceive and prioritise menu and meal quality in practice, and identifies practical strategies within the guide that may support each factor..

**NATIONAL QUALITY STANDARD**  
QA2, QA7

**TABLE 10:** Factors influencing how ECEC staff perceive and prioritise menu and meal quality

| Factor                         | Influence on how service leaders / cooks perceive and prioritise menu and meal quality in practice                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Child health                   | Cooks and service leaders prioritise providing nutritious foods on the menu to support child health and wellbeing. <sup>44</sup><br>See Section 1, page 16                                                                                                                                                                                                                                                                                                                                                     |
| Children's food preferences    | Cooks and service leaders plan menus with input based on what the children at the service like to eat. However, planning menus based on children's food preferences can at times be a barrier to introducing new, nutritious foods that children may not eat until they are familiar with them. <sup>45,46</sup><br>See Section 7, page 76 See Mealtime Environment and Practices, Section 3, page 31                                                                                                          |
| Food waste                     | Some service leaders and cooks raise concerns that providing more nutritious menus, particularly with increased vegetables, could increase food waste. <sup>47,48</sup> However, this is not always the case, careful menu planning based on the number of children attending each day (rather than total enrolments) and responsive feeding practices can mitigate food waste. <sup>42</sup><br>See Sustainable Food Practices, Section 4, page 52 See Mealtime Environment and Practices, Section 2, page 21 |
| Whole-of-organisation support  | Cooks can be supported by their organisation providing encouragement, access to menu planning tools or resources, and guidance for where to seek assistance. <sup>44,49</sup><br>See Section 6, page 56                                                                                                                                                                                                                                                                                                        |
| Cook/chef training & skills    | Many ECEC cooks have not received any training in nutrition, often relying on their own background and experience. <sup>39,46,49,50</sup> When they have received training, they are more likely to plan menus effectively and use menu planning tools. <sup>49</sup><br>See Section 6, page 56                                                                                                                                                                                                                |
| Food allergy requirements      | Adjusting menus to meet food allergy requirements is a critical, complex component of menu planning. <sup>41,51</sup><br>See Section 8, page 80                                                                                                                                                                                                                                                                                                                                                                |
| Family requests                | Family food requests (e.g. avoiding or providing specific food options) can add further complexity to menu planning.<br>See Staff and Family Engagement, Section 1, page 27                                                                                                                                                                                                                                                                                                                                    |
| Continuous quality improvement | Planning and preparing nutritious meals are an important factor in centres' quality improvement plans. <sup>44</sup><br>See Section 6, page 56 See Section 7, page 76                                                                                                                                                                                                                                                                                                                                          |



## Time allocated to menu planning

In many services, cooks/chefs are fully responsible for planning the menu – in addition to preparing and serving at least morning tea, lunch, and afternoon tea each day.<sup>2</sup> On average, cooks work 5 hours per day, and menu planning is often expected to be completed within these normal working hours, with **most cooks (94%) having zero to five paid hours allocated each week to menu planning.**<sup>2</sup> For most cooks, this is not enough time to effectively plan a menu that meets the dietary needs of children whilst adhering to budget constraints.<sup>41</sup>

Additionally, some cooks rely on shopping outside of hours (e.g. over the weekend) to ensure the kitchen runs smoothly during the week.

Instead, **cooks, service leaders, and organisational staff should work together to decide on an appropriate allocation of time for menu planning.** This will look different for every service, but ideally the cook should have enough time and support to plan an appropriate menu which meets the recommended serves of the five food groups, whilst fitting budget constraints and allowing for special dietary requirements.

It is important not to underestimate the extent of tasks associated with menu planning, including budgeting, shopping, and completing necessary paperwork such as preparation for food safety audits, standard recipes, food allergen menu matrices that are essential to run a safe and effective kitchen.

*“...regarding the amount of time in order to organise the menu and deliveries and all that – it is never enough... Each week in order to, you know, taking care of paperwork and all the things...Its very hard...So sometimes I do it on my day off, which is OK because you know, you can place the orders online, but yes, I would need like a couple of hours a week to do things really really properly.”*

–CENTRE COOK, REGIONAL SERVICE

*“So yeah, I get 6 hours a week...I’m doing the three centres and if they need anything from town, that is my going to town day”*

–CENTRE FOOD COORDINATOR, RURAL SERVICE



## Food budget/costs

For some services, food budget is the main driver of menu quality, having sufficient funds is crucial to purchase enough food to meet recommendations across all five food groups.<sup>7,43,44,46</sup>

Service leaders can work with cooks to set, or advocate for, a food budget which allows the provision of enough food for all children, meeting the recommended dietary guidelines and providing the cook with flexibility to menu plan accordingly.

### Food budget allocation

#### What factors impact the allocation of a food budget

Allocating a food budget based on the number of children attending ECEC each day can provide a framework to ensure each child has their nutritional needs met.

Data from Western Australia shows that the average cost (\$) per child per day of a menu that provides the recommended amounts of all five food groups differs greatly for services in metropolitan versus very remote areas.<sup>52</sup>

Although lower food budgets have been seen in services that do not provide the recommended amounts of all five food groups, careful menu planning and budgeting can help to keep costs low whilst meeting dietary guidelines recommendations.<sup>52</sup>

#### What factors effect budget costs

The cost to purchase foods (including raw ingredients, packaged foods, etc) is closely linked with a number of factors shown in Table 11.

**TABLE 11:** Factors that affect budget costs

| Factor                        | Description                                                                                                                                                                                        | Effect on food costs in ECEC                                                                                                                                                                             |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Geographic location</b>    | Often, food has to travel further to reach areas outside of major cities.                                                                                                                          | The more travel that is involved, the greater the cost of that food is.                                                                                                                                  |
| <b>Availability</b>           | A poor growing season, a cancelled shipment, or other logistical problems can decrease the availability of foods. This is often worse for more remote areas which might rely on a single delivery. | When a food is less available in a certain town or region, that food is more expensive. Even small changes in availability of foods each week can change their prices, making exact budgeting difficult. |
| <b>Seasonality</b>            | Different fruits, vegetables, and grains grow best during different parts of the year – meaning they are only available in some seasons.                                                           | Foods that are currently in season (different for each region) are often at their cheapest.                                                                                                              |
| <b>Weather events</b>         | Major weather events (e.g. cyclone, flooding) can impact the growth, delivery, or storage of foods making them less available.                                                                     | If foods become less available due to impacts on the supply chain, they will become more expensive.                                                                                                      |
| <b>Cost of living</b>         | National level factors such as inflation can filter down to the price of foods.                                                                                                                    | During periods where cost of living is increasing, food costs often increase as well.                                                                                                                    |
| <b>Food/product selection</b> | When shopping or ordering through a supplier, product choices can impact total cost.                                                                                                               | Often, fresh fruit and vegetables are more expensive than frozen or canned options, and certain brand name products may be more expensive than generic alternatives.                                     |

To keep costs down where possible, work with local suppliers to get the best value (see next page), focus on using seasonal produce, and consider building up a 'stable pantry'.

See *Sustainable Food Practices*, Section 5, page 70

See *Vignette*, page 62 of this module

#### Non-conventional food sources

In a survey completed in WA, researchers found that just over one in five long day care services surveyed (22.3%) used food from non-conventional food sources. Of these services, 51.3% indicated that they did not use this food to feed the children in their care but rather donated the food to families at the service.

The types of non-conventional food sources used were gardens at the service (25.0%), food pantries (13.9%), donations from families (13.9%), churches (5.6%), local producers (5.6%) and other sources (25.0%).<sup>53</sup>

# How can ECEC service leaders support high-quality meal provision in their services?

ECEC service leaders can play a pivotal role in providing quality meals in their service. As a first approach, it is important for a service leader to believe in their capability to create change to the food environment in their service as a leader.

Foundational knowledge of leadership can create a working environment which encourages the prioritisation of menu quality. This includes effective communication between staff allowing for the transfer of knowledge and ideas, encouraging staff to try new methods of practice, and permitting routines to be changed when appropriate.<sup>54</sup> Additionally, positioning the quality of the menu as supportive of broader developmental goals (e.g. providing foods which support children to be energetic for the rest of the day) incorporates it into the service culture.<sup>55</sup>

Service leaders can provide a supportive environment and culture in the service, through approaches such as:<sup>42,56</sup>

## Allocating time and budget

- Allocating time for menu planning during paid hours (including time to access menu planning tools, and time to gather, review, and action feedback).<sup>46</sup>
- Working with cooks to set, or advocate for, a food budget which allows the provision of enough food for all children, meeting the recommended dietary guidelines and providing the cook with flexibility to menu plan accordingly.

## Supporting professional development

- Making a commitment to supporting continuous learning, through professional development opportunities during paid time.<sup>57</sup>
- This includes providing all staff with opportunities for professional development to support nutrition knowledge, menu planning, and safe food provision.<sup>2,41</sup> **This could be through formal training (in-person or online), or by signposting to available resources.**
  - For a service leader, professional development in nutrition and menu planning enables them to make informed decisions about menu quality and provide additional support to the cook responsible for planning menus.
- For cooks, completing the Food Safety Supervisor course can be an important element of professional development. This recognises a cook's importance in the provision of safe food at the service, and encourages them to take responsibility for safe food handling in the kitchen.
  - For larger services, provide opportunities for cooks to develop commercial food service skills that differ from home cooking, including yield-based recipe scaling and production scheduling.

## Supporting involvement and collaboration

- Involving cooks, educators, children and families in menu planning discussions to ensure expectations are met.<sup>41</sup>

- Facilitating ongoing collaboration through open communication between the service leader, educators and cooks/chefs can:<sup>57</sup>
  - foster team cohesion. For example, at the start of each service, confirm attendance, dietary needs and any menu changes for the day with educators.
  - increase mutual understanding of staff roles and responsibilities.
  - allow cooks to vocalise challenges they face which other staff may not be aware of.
- Encouraging all staff members (especially cooks) to take pride in the responsibility they have to nourish and feed children.<sup>57</sup> Seek collaboration with external menu planning or nutrition education programs/organisations where possible to support staff capacity and skills.

## Developing underpinning policies

- Developing and implementing a strong centre-based policy, through engagement with staff and families can ensure that the policy reflects the unique service.<sup>58</sup>
- Clearly communicating policy expectations with staff and families to ensure a whole-of-service approach.<sup>58</sup>

## Working with suppliers

- Sourcing reliable and local (when possible) food suppliers to maximise consistency and time efficiency (e.g. pre-cut meats, food service product sizes, etc).<sup>57</sup>
- When changing suppliers (or when suppliers change brands used), check ingredient labels, particularly for allergens, and suitability for dietary needs.

**NATIONAL QUALITY STANDARD**  
QA2, QA5, QA6, QA7

## Reflective questions

- *Are there barriers, such as budget, staffing, time or access to resources, that may be impacting menu quality, and how are we addressing them?*
- *How do we know whether our menu truly reflects the diverse cultural backgrounds and dietary needs of the families attending our service?*
- *In what ways do we review and evaluate our menus to ensure they continue to support children's health, wellbeing and learning?*

SECTION 6

# Menu Planning in Practice



# Supporting menu planning, assessment and review in ECEC

## Types of support

To assist cooks with menu planning a variety of support services, online tools and resources have been developed. Some evidence suggests that the use of these supports can improve menu quality.<sup>2,41,44,49</sup>

Seeking menu planning support can also assist with meeting Regulations 79 (Service providing food and beverages) and 80 (Weekly menu) of the Education and Care Services National Regulations 2012.



### Individualised menu planning support

- A number of on-the-ground support services are available across each state and territory, delivered by dietitians, registered nutritionists, and health promotion officers.
- These services vary from being government-funded and freely available, to subscription or fee-based.
- Support provided varies from periodic menu reviews/assessments that include advice and recommendations (including understanding the number of food group serves being provided), advice and recommendations for specific issues, and training for cooks/chefs to build knowledge and confidence.



### Online menu planning support

- Online tools are available whereby the person responsible for menu planning enters menu items/recipes into an online platform.
- Details such as the number of children being served are captured. The tool provides an overview of food groups provided, and compares this to the *Australian Dietary Guidelines* or local jurisdictional guidelines providing recommendations for menu improvement.



### Online resources

- A variety of downloadable resources exist which aim to support menu planning.
- The information within these resources varies, but generally they provide information and recommendations on the amounts, varieties, and types of food and drinks that should be offered at ECEC.

**⚠ States and territories may set specific guidelines with accompanying documents. ECEC services should check what is available in their jurisdiction.**

**NATIONAL QUALITY STANDARD**  
QA2, QA6, QA7

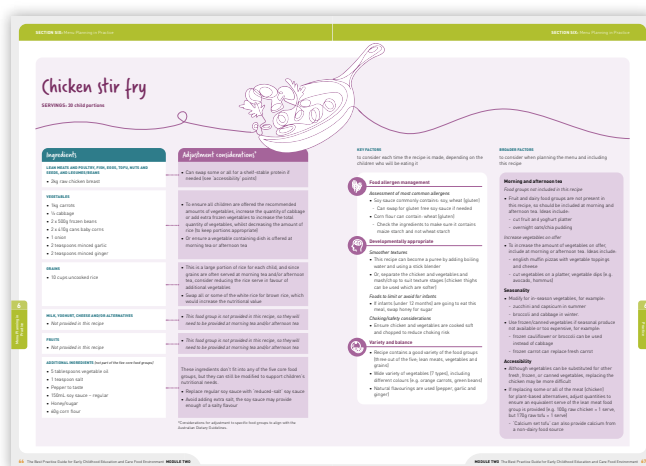
## Improving your recipes

The 'Australian Dietary Guidelines' section provides details on the recommended number of serves children should be receiving from each food group whilst attending ECEC. To extend this into practice, the 'Improving your recipes' section below has been developed for cooks, by cooks, to support the menu planning process and help services meet the Australian Dietary Guideline recommendations by utilising the effective menu planning principles outlined above.

This section provides prompts for considering how to adapt the main meal (lunch) recipe to align with effective menu planning principles. This includes considering alignment with the Australian Dietary Guidelines, whilst reviewing if ingredients can/should be substituted based on special dietary requirements (e.g. food allergies, cultural requirements, etc), seasonal availability of produce, and budgetary concerns. Example recipe cards have also been provided to demonstrate this process in action with ECEC recipes.

These example recipe cards are not intended to be used as actual recipes, their purpose is to demonstrate how the principles of effective menu planning can be applied to an ECEC recipe.

It is recommended that after evaluating a recipe by utilising the 'Improving your recipes' section below, the final recipe is then inputted into a standardised recipe template.



**NATIONAL QUALITY STANDARD**  
**QA2. QA7**

# Standardised recipes

## What is a standardised recipe?

A standardised recipe is a way of ensuring that **each time a recipe is made, the exact same ingredients and methods are used** – regardless of who is making the recipe or when. After developing a standardised recipe, ensure that this is followed precisely each and every time the recipe is made.

## What elements make up a standardised recipe?

Generally, a standardised recipe includes the following elements:

- The recipe name
- The number of serves it makes (including the standard portion size and total yield)
- A list of ingredients (including brand, amount [quantity and unit])
  - For recipes made in bulk, different amounts can be listed for increasing number of portions
- Any common food allergens listed on the ingredient's packaging/information sheet, as well as any listed in the precautionary allergen ('may contain') labelling
- Detailed, step-by-step methods/procedure of how the recipe is made
- The number of serves provided in each food group (optional)
- Instructions for how the recipe is to be served (optional)
- Photos of the recipe at each step and as a final product (optional). Photos can be particularly helpful if specific textural requirements must be met.

A variety of downloadable standard recipe templates exist which aim to support menu planning. The elements within these templates vary, but generally they include the elements listed above. ECEC services should check what is available in their jurisdiction or nationally.

## How standardised recipes support effective menu planning?

Utilising a standardised recipe is considered best practice in food service settings, as it **ensures consistency in nutritional contribution, food group balance, flavour, texture, portion size, ingredient sourcing, cost, and allergen content**, regardless of who is cooking or when. Therefore, standard recipes are a key tool for protecting both the nutritional quality and the safety of meals across staff changes, busy days, and ingredient substitutions.

## After finalising the recipe

### Impact of the main meal on morning and afternoon tea

By beginning the menu planning process with the main meal (lunch) recipe, services can then determine which other foods to provide in the daily menu (e.g. morning tea and afternoon tea) to ensure children's food group recommendations in ECEC are being met.

Acknowledging the logistical constraints often associated with the provision of breakfast and other foods over the course of the day, practical strategies and ideas have been provided which encourage services to consider options beyond what may be routine (e.g. cereal, crackers).

### Recipe and menu review

Finally, regular review of the menu (including recipes used) is a critical aspect of making sure that the food provided is meeting the expectations of the ECEC community. *Section 7, Menu and meal feedback*, provides practical strategies for gathering feedback on the menu from children, educators, and families; and considering this feedback at the next menu planning cycle to demonstrate a commitment to continuous improvement.

See Section 7, page 76

# Reviewing and improving recipes

## How can recipes be improved to meet children's nutritional needs?

By assessing recipes against the criteria listed below, small tweaks or major changes may become apparent which would help the recipe provide more serves of key food groups (e.g. lean meats, vegetables, etc), whilst also considering factors such as seasonality, cost, and variety.

To utilise this section, take a recipe from the standard menu, list the ingredients used (including quantities) and consider how each criterion (and related points) could be applied to your recipe.

**NATIONAL QUALITY STANDARD**  
QA2, QA7

## Why is this important?

Recipes that align with the Australian Dietary Guidelines directly impacts the nutritional quality of food children are provided whilst at ECEC. Providing enough variety and adequacy across the food groups ensures children receive key nutrients, crucial for their health and wellbeing. This also relates to Regulations 79 (Service providing food and beverages) and 80 (Weekly menu) of the Education and Care Services National Regulations 2012.

Table 12 expands upon the principles of effective menu planning outlined below

### Key principles of effective menu planning

Effective menu planning in ECEC ensures the daily, weekly, and seasonal menu meets the nutritional needs of all children attending.



**Adherence to  
Australian Dietary Guidelines**



**Food allergy and other special  
dietary requirements**



**Developmental  
appropriateness**



**Allocated hours for  
menu planning**



**Cultural and  
demographic influences**



**Food waste and  
sustainability factors**



**Centre budget**



**Variety and balance**



**Periodic menu review**

For effective menu planning to occur, the provision of quality meals should be a priority within the service culture, policies, and structure. For example, allocating sufficient paid hours each week to the staff member(s) responsible for menu planning, along with setting a food budget which allows for enough food (including quality and variety) to be purchased are crucial steps to prioritising menu planning in a service. [See Section 5, page 50](#)

**NATIONAL QUALITY STANDARD**  
QA2, QA6, QA7

TABLE 12: General points to consider

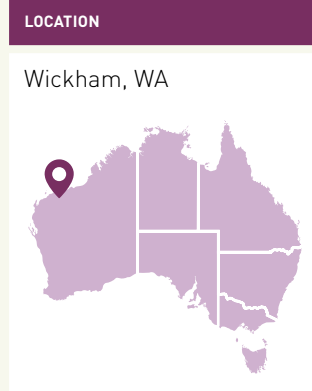
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|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Australian Dietary Guideline Adherence</b> | <p><b>Assessment</b></p> <ul style="list-style-type: none"> <li>• Full menu compliance with guidelines is assessed across all food served throughout the day or week, rather than by individual recipes alone. However, checking if a recipe meets the recommended amounts from each food group provides an opportunity to understand which food groups may be missing, or may need to be provided more elsewhere.</li> <li>• Attendance patterns can be used to ensure daily serve targets remain achievable across the occasions offered.</li> <li>• Checking recipes against the Australian Dietary Guidelines can help to identify any discretionary foods or ingredients on the menu, and whether they can be reduced or swapped for a different option.</li> </ul> <p><b>Portions/serve sizes</b></p> <ul style="list-style-type: none"> <li>• Portions must consider the dietary needs for different age groups – generally, older children will require larger portions. Using standard sized serving equipment (e.g. scoop, ladle) ensures all portions are the same size and that every child will have enough, allowing extra to then be served for children that need it (e.g. older children or those that are still feeling hungry).</li> </ul> <p><b>Food group guidance</b></p> <ul style="list-style-type: none"> <li>• If using meat in a recipe, choose lean meats when possible.</li> <li>• If swapping meat for plant-based alternatives (e.g. tofu, legumes, etc.), ensure there is enough alternative in each portion to allow a similar 'serve' of the food group. For example, half a serve of raw red meat is 50g, whereas half a serve of canned legumes is 75g, or 85g for tofu. More of the alternative is needed to create a similar 'half serve'.</li> <li>• Replace 'white' grains (e.g. white bread, white rice, white flour, regular pasta) with brown or wholemeal options. Even replacing a portion of the grain with a wholegrain version can improve nutritional quality.</li> </ul> |
| <b>Variety and balance</b>                    | <ul style="list-style-type: none"> <li>• Including a variety of food groups in a recipe ensures a balanced nutritional profile. Variety within a food group (e.g. multiple colours of vegetables) is also important.</li> <li>• If possible, update the menu so that meals aren't repeated on the same day of each week (for example, rather than serving fish every Tuesday, change which day fish is served each time). This ensures children who attend part-time still receive a variety of options.</li> <li>• Rice is a cost-effective grain but keep to the recommended portion as too many grain serves can displace vegetables and may reduce dietary variety. If reducing the amount of rice in a recipe, use any cost saving to increase vegetable content instead, such as adding frozen peas, canned corn, or seasonal cabbage.</li> <li>• Check salt (sodium) content of flavourings, sauces, stock, canned goods, etc. as these are common high-salt foods, swap for 'low-salt' options.</li> <li>• Cooking methods can impact the nutritional quality of meals – for example avoid deep frying.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Food allergies</b>                         | <ul style="list-style-type: none"> <li>• When substituting ingredients due to surrounding considerations (e.g. guideline adherence, seasonality, etc), be aware of additional allergens introduced and update your food allergen menu matrix. <a href="#">See Section 8, page 80</a></li> <li>• Clearly list and identify all allergens present in ingredients when completing a standard recipe template (after utilising this section).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Developmentally appropriate</b>            | <p><b>Texture</b></p> <ul style="list-style-type: none"> <li>• Check for foods that should be modified (e.g., texture) before they are given to infants and younger children.</li> <li>• Select softer meat cuts for younger children (for example chicken thighs rather than breast).</li> </ul> <p><b>Choking risk</b></p> <ul style="list-style-type: none"> <li>• Ensure foods are prepared in a way that minimises risk of choking (e.g. carrots cooked or grated and grapes chopped lengthwise for infants and toddlers). <a href="#">See Section 4, page 45</a></li> </ul> <p><b>Foods to avoid for infants</b></p> <ul style="list-style-type: none"> <li>• Choose ingredients with all children in mind (e.g. do not include honey if infants under 12 months will be eating). <a href="#">See Section 4, page 46</a></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

|                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Planning morning tea and afternoon tea around this main meal</b>                                                                                        | <ul style="list-style-type: none"> <li>Identify which food groups are not meeting recommendations (e.g. not included in the recipe, or included but not fully meeting recommendations) from the main meal (i.e. lunch) and use the morning and afternoon tea occasions strategically to fill this gap. For example, if the recipe contains half the requirements of vegetables per child per day, another half serve of vegetables will be required during morning tea or afternoon tea.</li> </ul>                                                                                                                                                                                                                                                                    |
| <b>Special dietary requirements</b><br><br><i>What are the considerations with respect to dietary requirements (cultural, vegetarian, vegan, medical)?</i> | <p><b>Cultural</b></p> <ul style="list-style-type: none"> <li>Ensure that ingredients are suitable for cultural or religious dietary requirements – confirm these with the families.</li> <li>Choose dishes that cater to a variety of cultural food traditions and flavour profiles.</li> </ul> <p><b>Vegetarian/vegan</b></p> <ul style="list-style-type: none"> <li>Meat dishes can often be adapted by replacing the animal protein with firm tofu or legumes (e.g. chickpeas or lentils). Adjust quantities to ensure an equivalent serve is provided<br/> <a href="#">See Section 2, page 22</a>   <a href="#">See Section 6, page 68</a> </li> <li>Ensure that any sauces / flavourings used in the recipe are vegan-friendly by checking the label.</li> </ul> |
| <b>Facilities, equipment and storage needs</b>                                                                                                             | <ul style="list-style-type: none"> <li>Consider storage facilities (e.g., freezer/fridge space or availability) and adjust recipes accordingly.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Seasonality</b>                                                                                                                                         | <ul style="list-style-type: none"> <li>Modify recipes to include seasonal fruits and vegetables.</li> <li>Frozen or canned vegetables can be used instead of fresh produce when seasonal ingredients are unavailable or too expensive.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Accessibility</b>                                                                                                                                       | <ul style="list-style-type: none"> <li>Avoid keeping large stockpiles unless reliable storage is available.</li> <li>Schedule vegetarian menu days to align with times when meat deliveries are unavailable.</li> </ul> <p>🕒 <a href="#">See Vignette, page 62 of this module</a></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Cost (budget driven adaptations)</b>                                                                                                                    | <ul style="list-style-type: none"> <li>Some protein-rich food sources can be more expensive, such as chicken breast. Partially replacing the animal protein element with legumes (e.g. chickpeas, lentils) can reduce cost while maintaining protein content and increasing vegetable serves.</li> <li>Frozen or canned vegetables are cost-effective, nutritious alternatives to fresh produce, making them a reliable option when fresh produce is unavailable or costly.</li> <li>Compare the cost of buying fresh vegetables whole (cheaper than pre-cut) against the cost of time needed to cut them.</li> </ul>                                                                                                                                                  |

## VIGNETTE

# Menu planning in a very remote Western Australian mining community

|                                |                                     |
|--------------------------------|-------------------------------------|
| SERVICE                        | One Tree Wickham Children's Service |
| SERVICE TYPE                   | Long day care                       |
| MEAL PROVISION MODEL           | All meals provided on-site          |
| BUSINESS MODEL                 | Private, not-for-profit             |
| AGE RANGE                      | Birth to 5 years                    |
| NUMBER OF APPROVED PLACES      | 46                                  |
| REMOTENESS AREA CLASSIFICATION | Remote                              |



The cook in this remote long day care service is responsible for all cooking and food preparation for children, menu planning, online food ordering, picking up grocery orders and managing food allergens, amongst other things.

Being in a very remote town, resources at the local grocery store are often limited. Substitutions, or doing without, are a common part of the food ordering and menu planning process. The cook has found that by keeping staples in the pantry, such as tinned legumes and vegetables, pasta, rice and noodles, and frozen fruit and vegetables, she is able to maintain enough food to prepare balanced meals for around one week in the case of delayed produce at the supermarket, or if any ingredients are unavailable.

When menu planning, the cook takes into account the availability of foods at the supermarket. Although she works off a summer and winter rotating four-week menu, she needs to remain flexible as sometimes the ingredients she needs for a recipe cannot be purchased. She tries to plan meals based around what is in stock, to avoid having to make extra substitutions. To achieve this, she uses recipes in which substitutions are easy, e.g. substituting legumes for meat when there is no meat available.

She also takes food allergies into account and aims to have recipes that are easily adjustable depending on which children are attending the service that day, and their food allergies. In this way, it looks like all of the children are eating the same foods, and the children with food allergies don't feel left out or different.

## What to include in a stable pantry

This pantry would feed around 30 children morning tea, lunch and afternoon tea for approximately one week

(5–10 meals) in the event that other food was not readily available. It can be scaled up or down according to the number of children and staff at your service, can be stored in the pantry without the need for refrigeration, and can be combined in many ways to make different meals.

### Stable pantry:

- 14kg flour (different varieties to accommodate food allergies and intolerances)
- 8kg pasta
- 10kg rice
- 5kg noodles (different types to accommodate food allergies and intolerances)
- 8 tins of diced tomatoes
- 5 each tins vegetables (peas, corn, etc.)
- 15 tins of legumes (different varieties)
- 8 tins tuna
- 2 packets each of various spices
- 2–3 litres of oil (e.g. vegetable oil, olive oil)
- 2 packets of various types of dried fruit (sultanas, apricots, dates)
- 20 cartons of long-life milk (different varieties to accommodate food allergies and intolerances)
- 5–10 packets of wholegrain crackers

### Add these foods if there is access to a freezer:

- Frozen vegetables – 3 packets of each type (e.g. mixed veg, cauliflower, broccoli, spinach)
- Frozen fruit – 2 packets of each type
- Frozen bread – 4 loaves of each type (e.g. wholemeal, fruit toast, wholemeal English muffins)
- Frozen meats – 2–4 kg each (chicken, mince)
- Frozen, pre-cooked legumes – 3 packs

# Effective menu planning principles in practice

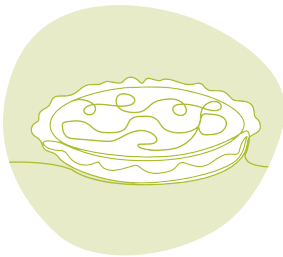
## Recipe cards examples



Chicken stir fry



Pumpkin penne pasta



Shepherd's pie

# Chicken stir fry

SERVINGS: 30 child portions



## Ingredients

### LEAN MEATS AND POULTRY, FISH, EGGS, TOFU, NUTS AND SEEDS, AND LEGUMES/BEANS

- 2kg raw chicken breast

### VEGETABLES

- 1kg carrots
- ½ cabbage
- 2 x 500g frozen beans
- 2 x 410g cans baby corns
- 1 onion
- 2 teaspoons minced garlic
- 2 teaspoons minced ginger

### GRAINS

- 10 cups uncooked rice

### MILK, YOGHURT, CHEESE AND/OR ALTERNATIVES

- *Not provided in this recipe*

### FRUITS

- *Not provided in this recipe*

### ADDITIONAL INGREDIENTS *(not part of the five core food groups)*

- 5 tablespoons vegetable oil
- 1 teaspoon salt
- Pepper to taste
- 150mL soy sauce – regular
- Honey/sugar
- 60g corn flour

## Adjustment considerations\*

- Can swap some or all for a shelf-stable protein if needed (see 'accessibility' points)

- To ensure all children are offered the recommended amounts of vegetables, increase the quantity of cabbage or add extra frozen vegetables to increase the total quantity of vegetables, whilst decreasing the amount of rice (to keep portions appropriate)
- Or ensure a vegetable containing dish is offered at morning tea or afternoon tea

- This is a large portion of rice for each child, and since grains are often served at morning tea and/or afternoon tea, consider reducing the rice serve in favour of additional vegetables
- Swap all or some of the white rice for brown rice, which would increase the nutritional value

- *This food group is not provided in this recipe, so they will need to be provided at morning tea and/or afternoon tea*

- *This food group is not provided in this recipe, so they will need to be provided at morning tea and/or afternoon tea*

These ingredients don't fit into any of the five core food groups, but they can still be modified to support children's nutritional needs.

- Replace regular soy sauce with 'reduced-salt' soy sauce
- Avoid adding extra salt, the soy sauce may provide enough of a salty flavour

\*Considerations for adjustment to specific food groups to align with the Australian Dietary Guidelines.

**KEY FACTORS**

to consider each time the recipe is made, depending on the children who will be eating it

**BROADER FACTORS**

to consider when planning the menu and including this recipe

**Food allergen management***Assessment of most common allergens*

- Soy sauce commonly contains: soy, wheat (gluten)
  - Can swap for gluten free soy sauce if needed
- Corn flour can contain: wheat (gluten)
  - Check the ingredients to make sure it contains maize starch and not wheat starch

**Developmentally appropriate***Smoother textures*

- This recipe can become a puree by adding boiling water and using a stick blender
- Or, separate the chicken and vegetables and mash/chop to suit texture stages (chicken thighs can be used which are softer)

*Foods to limit or avoid for infants*

- If infants (under 12 months) are going to eat this meal, swap honey for sugar

*Choking/safety considerations*

- Ensure chicken and vegetables are cooked soft and chopped to reduce choking risk

**Variety and balance**

- Recipe contains a good variety of the food groups (three out of the five; lean meats, vegetables and grains)
- Wide variety of vegetables (7 types), including different colours (e.g. orange carrots, green beans)
- Natural flavourings are used (pepper, garlic and ginger)

**Morning and afternoon tea***Food groups not included in this recipe*

- Fruit and dairy food groups are not present in this recipe, so should be included at morning and afternoon tea. Ideas include:
  - cut fruit and yoghurt platter
  - overnight oats/chia pudding

*Increase vegetables on offer*

- To increase the amount of vegetables on offer, include at morning or afternoon tea. Ideas include:
  - english muffin pizzas with vegetable toppings and cheese
  - cut vegetables on a platter, vegetable dips (e.g. avocado, hummus)

**Seasonality**

- Modify for in-season vegetables, for example:
  - zucchini and capsicum in summer
  - broccoli and cabbage in winter.
- Use frozen/canned vegetables if seasonal produce not available or too expensive, for example:
  - frozen cauliflower or broccoli can be used instead of cabbage
  - frozen carrot can replace fresh carrot

**Accessibility**

- Although vegetables can be substituted for other fresh, frozen, or canned vegetables, replacing the chicken may be more difficult
- If replacing some or all of the meat (chicken) for plant-based alternatives, adjust quantities to ensure an equivalent serve of the lean meat food group is provided (e.g. 100g raw chicken = 1 serve, but 170g raw tofu = 1 serve)
  - 'Calcium set tofu' can also provide calcium from a non-dairy food source

# Pumpkin penne pasta

SERVINGS: 40 child portions



## Ingredients

### LEAN MEATS AND POULTRY, FISH, EGGS, TOFU, NUTS AND SEEDS, AND LEGUMES/BEANS

- *Not provided in this recipe*

### VEGETABLES

- 1 kg sweet potato
- 1 butternut pumpkin
- 1 small kent pumpkin
- 2 tablespoons minced garlic

### GRAINS

- 1.5 kg penne pasta

### MILK, YOGHURT, CHEESE AND/OR ALTERNATIVES

- 500g parmesan cheese

### FRUITS

- *Not provided in this recipe*

### ADDITIONAL INGREDIENTS *(not part of the five core food groups)*

- 600mL sour cream
- 1 teaspoon salt
- 1 teaspoon garlic powder
- 1 teaspoon paprika
- 1 teaspoon mixed herbs

## Adjustment considerations\*

- Include a plant-based protein to provide extra nutrients whilst keeping this meal vegetarian (e.g. legumes, tofu)
- Provide additional lean meats or alternatives at morning tea and/or afternoon tea

- Include legumes to provide additional nutrients
- Add frozen peas to add another colour and different texture

- Swap all or some of the pasta for a wholemeal pasta, which would increase the nutritional value

- Parmesan cheese has a high salt content, replace some or all with a different cheese (such as tasty or mozzarella)

- *This food group is not provided in this recipe, so they will need to be provided at morning tea and/or afternoon tea*

These ingredients don't fit into any of the five core food groups, but they can still be modified to support children's nutritional needs.

- Sour cream is high in saturated fat and considered a discretionary food, consider replacing with a white sauce
- Remove salt: other herbs and vegetables provide flavour

\*Considerations for adjustment to specific food groups to align with the Australian Dietary Guidelines.

**KEY FACTORS**

to consider each time the recipe is made, depending on the children who will be eating it

**BROADER FACTORS**

to consider when planning the menu and including this recipe

**Food allergen management***Assessment of most common allergens*

- Pasta contains: wheat (gluten)
  - Swap with gluten-free pasta if needed, or use arborio rice to make this a gluten-free risotto
- Sour cream and parmesan both contain: Milk

**Special dietary requirements**

- This dish is a vegetarian option (ensure parmesan does not contain animal rennet)
- This dish is Halal (check all ingredient labels)

**Developmentally appropriate***Smoother textures*

- Pasta can be cooked soft
- Puree, mash, or chop pumpkin and potato to suit different stages of development

**Variety and balance**

- Good variety of food groups (three out of the five)
- Could increase variety of vegetables (add other colours)
- Swapping sour cream for yoghurt would provide a nutritious dairy group option
- Natural flavouring used (e.g. herbs, spices)

**Morning and afternoon tea***Food groups not included in this recipe*

- Provide missing food groups at morning and/or afternoon tea – fruit and lean meats, and dairy if yoghurt not used. This could include:
  - cut fruit with yoghurt dip
  - chicken and cheese toasties (cut into quarters)
  - hummus dip with wholegrain crackers

*Increase variety of vegetables on offer*

- This could include offering cut vegetables as part of the fruit platter

**Seasonality**

- Having this meal on the menu when pumpkins are in season locally will mean ingredients are fresher, and lower costs

**Accessibility**

- Butternut pumpkin may not be accessible throughout the whole year
  - frozen pumpkin can be used instead
  - or replace with other roast-type vegetables (e.g. carrots)

**Facilities/storage needs**

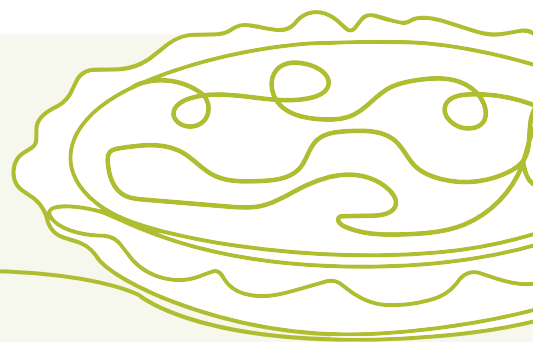
- Minimal storage requirements
- Fridge needed for proper storage of dairy products
- Pumpkin can be stored outside of fridge

**Cost**

- Kent pumpkin may be cheaper than butternut, could use two kent pumpkins

# Shepherd's pie

**SERVINGS: 30 child portions**



## Ingredients

### LEAN MEATS AND POULTRY, FISH, EGGS, TOFU, NUTS AND SEEDS, AND LEGUMES/BEANS

- 6kg beef mince

### VEGETABLES

- 2 ½kg frozen mixed vegetables (peas, corn and carrots)
- 1 large onion
- 3 tablespoons minced garlic
- 3 Celery stalks
- 4kg potatoes
- 1 cup tomato paste – no added salt

### GRAINS

- *Not provided in this recipe*

### MILK, YOGHURT, CHEESE AND/OR ALTERNATIVES

- 3 cups milk
- 2 ½ cups grated cheddar cheese

### FRUITS

- *Not provided in this recipe*

### ADDITIONAL INGREDIENTS *(not part of the five core food groups)*

- 2 tablespoons olive oil
- 250g butter
- 2 tablespoons dried mixed herbs
- 4 cups beef stock
- ½ cup Worcestershire sauce
- 2 teaspoons salt
- Pepper to taste

## Adjustment considerations\*

- Ensure lean beef mince is used
- This is a large amount of meat for 30 children (200g raw per child), consider swapping half (e.g. 3kg) for additional vegetables or legumes (see 'accessibility' points)

- Ensure 'no added salt' tomato paste is used

- *This food group is not provided in this recipe, so they will need to be provided at morning tea and/or afternoon tea*

- This is only a small amount of dairy for each child, ensure a dairy-containing dish is also offered at morning tea and/or afternoon tea

- *This food group is not provided in this recipe, so they will need to be provided at morning tea and/or afternoon tea*

These ingredients don't fit into any of the five core food groups, but they can still be modified to support children's nutritional needs.

- Substitute butter with poly- or mono-unsaturated margarine and/or milk for the mashed potato mixture
- Purchase a reduced-salt beef stock if available
- Remove salt: other herbs, stock and sauce should provide enough flavour

\*Considerations for adjustment to specific food groups to align with the Australian Dietary Guidelines.

**KEY FACTORS**

to consider each time the recipe is made, depending on the children who will be eating it

**Food allergen management**

- Milk, cheese, and butter contain: milk
  - Could use a dairy-free milk and cheese, and remove butter to meet cow's milk allergy
- Worcestershire sauce can contain: wheat, fish (anchovy)
  - Could swap for a gluten-free product or one that does not contain fish
- Beef stock can contain: wheat (gluten) and soy

**Special dietary requirements**

- To create a vegetarian option:
  - Replace beef with legumes (e.g. lentils)
  - Swap beef stock for vegetable stock
  - Ensure Worcestershire sauce does not contain fish
- Replace beef with lentils to create a vegetarian variety

**Developmentally appropriate**

- Mashed potatoes ready to be served to infants
- The full dish can be made into a puree if required
- By combining many different vegetables into one dish, this increases children's exposure to new foods they may be unfamiliar with

**Variety and balance**

- Good variety of food groups (three out of the five)
- Great variety of vegetables, including multiple different colours

**BROADER FACTORS**

to consider when planning the menu and including this recipe

**Morning and afternoon tea**

*Food groups not included in this recipe*

- Provide missing food groups at morning and/or afternoon tea
  - fruit and grains. This could include:
    - toast with avocado or hummus topping
    - fruit platter with whole grain crackers
    - blueberry pikelets
- To increase the amount of dairy on offer, provide at morning tea and/or afternoon tea. This could include:
  - fruit smoothie
  - cheese and fruit platter

**Seasonality**

- Potatoes and frozen vegetables usually available year-round. If unavailable, can change to sweet potatoes or pumpkin

**Accessibility**

- Potatoes can be kept at room temperature (don't take up space in the fridge)
- Frozen vegetables are interchangeable depending on what is available
- If beef mince is unavailable, could replace some or all of it for plant-based alternatives. Adjust quantities to ensure an equivalent serve of the lean meat food group is provided (e.g. 100g raw mince = 1 serve, but 150g drained canned lentils = 1 serve). For example, 2kg beef mince in this recipe could be replaced with:
  - 3kg canned chickpeas (drained and rinsed) – approximately 12-13 400g cans
  - 3kg canned lentils (drained and rinsed) – approximately 12-13 400g cans

These options stretch the mince further, and children may enjoy them when mixed into a wet dish such as Shepherd's Pie. Legumes count towards the amount of both vegetables food group and lean meats food group, and represent good value for money

**Facilities/storage needs**

- Can be made ahead of time and stored in the freezer (additional freezer space needed)
- Freezer space also needed for frozen mixed vegetables
- 4kg of potatoes can be held at room temperature and do not take up fridge space

**Cost**

- Using lean beef mince increases cost (but still cheaper than other cuts of meat)
- Can reduce cost of meat by reducing the quantity of beef used and adding lentils
- Potatoes and frozen vegetables are cost effective vegetable options

# Breakfast, morning and afternoon tea and other food opportunities

## Breakfast

### What impacts breakfast service in ECEC settings

The provision of breakfast varies across services, depending on the context of the service (e.g. later opening hours may result in no breakfast service). Often, breakfast is an optional meal, not provided to all children. Further, the cut-off times (e.g. when breakfast service ends) is determined by each service, and may impact which children are able to access this meal opportunity.

### Planning for breakfast

Various factors should be considered<sup>59</sup> when planning a breakfast service, including:

|                                                                                     |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <b>Roles and responsibilities</b>  | <ul style="list-style-type: none"> <li>Consider breakfast preparation in the context of the cook's work hours (e.g. is the cook at work and able to assist with breakfast preparation or service?).</li> <li>If cooks aren't available, educators must take responsibility for breakfast service as part of their role. Services will need to accommodate for this by scheduling sufficient staff at these times.</li> </ul>                                                                                                                                                                                                                                    |
|   | <b>Daily activity levels</b>       | <ul style="list-style-type: none"> <li>Acknowledging the activities the child has on for the day that may impact mealtimes.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|  | <b>Mealtimes schedules</b>         | <ul style="list-style-type: none"> <li>Take into account morning period can involve morning tea and other food opportunities – needs to be looked at holistically for the child and service.</li> <li>Timing (e.g. is it a progressive mealtime model?) <a href="#">See Mealtime Environment and Practices, Section 7, page 56</a></li> <li>How are breakfasts included in food policy at the service?</li> </ul>                                                                                                                                                                                                                                               |
|  | <b>Nutrition guidelines</b>        | <ul style="list-style-type: none"> <li>Taking into account the contribution that breakfast will bring to daily nutritional requirements and aligning breakfast provision with nutrition guidelines.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|  | <b>Food budget</b>                 | <ul style="list-style-type: none"> <li>Ensure that the budget allows for nutritious breakfast options.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|  | <b>Food insecurity</b>             | <ul style="list-style-type: none"> <li>Providing breakfast can be a safety net for children who may be experiencing food insecurity issues at home.</li> <li>Although not all services provide breakfast to all children, having some options available to those who need it is important.</li> </ul>                                                                                                                                                                                                                                                                                                                                                           |
|  | <b>Communication with families</b> | <p>As breakfast is less structured than other mealtimes in ECEC (e.g. not all children receive breakfast, options may be limited), communication with families is critical to:</p> <ul style="list-style-type: none"> <li>Understand whether or not a child has been fed before they arrive at ECEC.</li> <li>Determine if breakfast is regularly required.</li> <li>Ensure services can accommodate ad hoc family emergencies.</li> <li>Assist families to understand if enough food is being packed each day (in lunchbox-based services).</li> <li>Determine if breakfast will be brought from home for consumption upon arriving at the service.</li> </ul> |

## Breakfast and responsive feeding

Although the flow and structure of breakfast may be different to other mealtimes, responsive feeding practices should still remain consistent and deliberate:

- Offer breakfast for all children who arrive during the breakfast service window, allowing children to decide if they are hungry and would like to eat.
- Create a space where children can sit and eat relatively calmly where possible.
- Ensure children are seated and supervised whilst eating and drinking to reduce the risk of choking.

See *Mealtime Environment and Practices, Section 2, page 21*

Allow self-serving of breakfast options, to support self-regulation, or provide smaller portions at first and allow 'seconds' for those that wish to have more.

 For children with food allergies, follow individualised allergy care plans, ensure they are given the right food that is safe for them to eat. Two staff members should check and sign off that the right food is given to the right child with food allergy.

 For high-risk foods (e.g. milk, yoghurt), minimise the amount of time they spend at room temperature.

If a child is hungry before or after the set breakfast time, ensure nourishing options are available to them.

## Breakfast foods

Even while kept simple, breakfast is an opportunity to provide a variety of tasty options across the five food groups. When planning which options will be available, consideration should be given to:

- As a minimal breakfast that provides nutritional quality, offer wholegrain-based cereals (e.g. wheat biscuits, oats) with dairy (e.g. milk, yoghurt, or alternatives).
  - If possible, cereals should be high-fibre, minimally processed, and iron fortified.
  - If choosing packaged cereals, look for options that are low in added sugars (less than 15g of sugar per 100g if it does not contain dried fruit; less than 25g sugar per 100g if dried fruit is an ingredient in the cereal).<sup>40</sup>
  - Providing a side of fruit will create a more balanced meal.
- Pre-planning allows for quick and easy breakfast options which don't require cooking in the morning, beyond simple cereals (e.g. vegetable frittata, overnight oats, savoury breakfast muffins, etc). This allows for acknowledgement and support for offering breakfast options aligned with cultural preferences.

## Breakfast ideas

### Wholegrain or wholemeal toast with spread or topping:

Nutrient dense spreads (e.g. ricotta, avocado, roasted pumpkin) or toppings (e.g. cheese on toast, baked beans on toast)

### Cereals with dairy (and fruit):

- Wheat biscuits (e.g. Weet-bix™)
- Oats/porridge (with fresh or frozen fruit)
- Overnight oats (with fruit and yoghurt)
- Muesli

### Other:

- Pre-made savoury muffins
- Cold, hard boiled eggs
- Vegetable frittata

## Is breakfast part of menu and meal assessment?

As breakfast provision is optional and often less structured, it is generally not assessed in the same way as other mealtimes. However, when it is offered, it is an important contribution to a child's daily intake and energy levels at the start of the day. If providing breakfast, consideration should be given to:

- Clearly define who is responsible for preparation and service.
- Appropriate portion sizes, as breakfast is a full meal.
- Document what is available on the menu if it is a regular offering.

**NATIONAL QUALITY STANDARD**  
QA2, QA4, QA6, QA7

## Morning tea and afternoon tea

### Menu planning

Morning tea and afternoon tea are both important opportunities to create a balanced daily menu in conjunction with lunch (main meal) which meets the recommended number of serves from each food group for all children. Considerations when planning include:

- Think of this as a mini-mealtime (meaning a variety of options and food groups can be offered).
- Morning tea, lunch, and afternoon tea combine to form a standard menu which is assessed against the Australian Dietary Guidelines, so it is important to consider it:
  - in relation to the main lunch meal.
  - in terms of meeting and balancing 5 foods groups across the day.

### Morning and afternoon tea timing

- Services can decide what mealtime approach works best for their context .
  - For many services, Morning Tea starts at around 9am, with Afternoon Tea provided at 2pm-3pm.
  - If following a progressive approach, these options may be available for up to an hour, with children free to choose if, and how much, they would like to eat.

See Mealtime Environment and Practices, Section 7, page 56

### Morning and afternoon tea foods

Morning and afternoon tea are a great opportunity to provide children with foods and food groups which may not appear elsewhere on the menu that day.

Some key considerations:

- Include a vegetable option in at least morning or afternoon tea, such as:
  - Fruit and vegetable platter (only offer a platter if all foods on the platter are suitable for any children with food allergies).
  - Legume based dips (e.g. hummus, white bean dip).
  - Vegetable based fritters.
- Offer ½ cup milk at morning or afternoon tea, not at both.
- When providing sweet options, select low sugar foods, such as fruit-based muffins, unflavoured yoghurt with fresh fruit pieces.
- When providing savoury options, select lower fat and lower salt foods, such as vegetable and herb muffins instead of pastry based pinwheels or sausage rolls.

**NATIONAL QUALITY STANDARD**  
QA2, QA7

## Other food opportunities

### When other food is needed

This guide uses the term “other food opportunities” instead of “snacks”. The usual scheduled mealtimes are morning tea, lunch and afternoon tea, and these are the meals assessed as part of the menu.

The word “snacks” can suggest a focus on packaged foods. The term “other food opportunities” is used to emphasise that these are food opportunities outside the usual routine mealtimes.

There are a variety of reasons other food may be needed, including:

- Children who may still be hungry before or after the scheduled mealtimes (e.g. breakfast, morning tea, lunch, or afternoon tea).
- Toddlers undertaking the transition from infants rooms to toddler rooms (e.g. away from being fed on demand towards structured mealtimes), who will often be hungry at a time that does not match the room’s timetable.

- Children who are being picked up late and require additional food before leaving.
  - This can support families’ evening routines by preventing the child from being hungry immediately upon leaving ECEC.

 For children with food allergies, follow the set policies and procedures for providing foods for food allergy. All food and drinks for children with food allergy must be labelled with the child’s name and their allergy. Two staff members should check and sign off that the right food is given to the right child with food allergy.

Although generally quick and simple in nature, when planned effectively other food opportunities can be an important contributor to a child’s energy levels and overall dietary intake.

### Part of a child’s overall daily intake

- Other food can support children in meeting their recommended number of serves from the five food groups.
  - However, other food opportunities are generally not assessed as part of the broader menu as not all children will be offered them in a structured way.
- Cooks should be allocated time to plan and prepare other food opportunities, similar to the rest of the menu.

### Reducing workload in the kitchen and on the floor

- Make use of leftovers from morning and afternoon tea (e.g. fruit, vegetable platters, baked goods, etc) or lunch options which could be served cold (e.g. meatballs, frittata).
- Leftovers can be saved in the fridge for each room, to be offered again later in the same day. However, to minimise food safety risks, they should not be kept for the next day.
- Other food opportunities generally need to be low effort and ready-to-go for the educators serving them.
- If planned ahead, a ‘cook once, eat twice’ principal can be used, for example:
  - If making vegetable slice for lunch, cook an additional tray and freeze until needed at a future time.

### Meeting nutritional gaps

- Include calcium-rich foods such as dairy (e.g. unflavoured plain yoghurt, cheese).
- Include vegetables and meat and meat alternatives to complement the daily menu.

### Food suggestions

#### Crackers, preferably wholegrain varieties

- Plain, unflavoured rice crackers can be used for a gluten free option
- Pita crisps can be made in place of crackers
- Cheese and cracker platter

#### Rice cakes or corn thins

- Rice cake with cream cheese or hummus

#### Dairy and fruit

- Homemade frozen yoghurt (blend fruits into yoghurt, then freeze)
- Fruit and yoghurt cup
- Fresh, cut fruit pieces

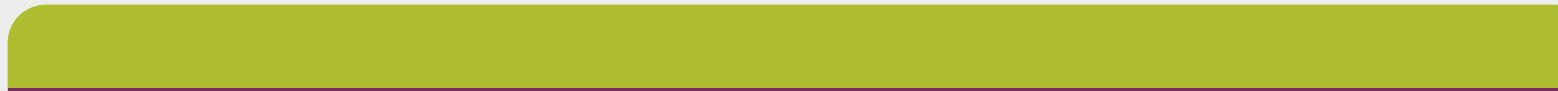
**NATIONAL QUALITY STANDARD**  
QA2, QA3, QA7

### Reflective questions



- *How well do we support cooks and food coordinators to undertake the complex responsibilities associated with menu planning, budgeting, food allergen management and food safety?*
- *How do we use mealtimes to support children who may experience food insecurity, varying attendance patterns, developmental transitions, or additional nutritional needs?*
- *When adapting recipes due to budget, seasonal availability, supply chain interruptions, cultural requirements or dietary needs, how do we ensure nutritional quality and food group balance are maintained?*





SECTION 7

# Menu and Meal Feedback



# Menu and meal feedback

Feedback on the menu (including specific recipes and menu options) is crucial. By gathering and utilising feedback from children, educators, and families, cooks are able to adapt the menu to support children's participation at mealtimes (impacting their mealtime behaviour), whilst minimising food waste.

The physical (e.g. position of the kitchen in relation to mealtime space) and social (e.g. how often children talk directly to the cook) environment within an ECEC can impact the types of feedback a cook receives, so structured feedback opportunities should be embedded into service culture to avoid valuable feedback being missed.

## Children

It is crucial that children are provided with the opportunity to give feedback on the menu, not only because they are the ones eating the food served, but also to ensure their autonomy is respected and to build a sense of being a valued member of the community.

| Type of feedback                                                                                                          | Mechanisms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Feedback on meals had</b><br><i>Children provide feedback on specific foods eaten and how the foods made them feel</i> | <b>Requested feedback</b> <ul style="list-style-type: none"> <li>Thumbs up to show if it was enjoyed.</li> <li>Include narrative responses from educators – e.g. written on the whiteboard.</li> </ul> <b>Observed feedback</b> <ul style="list-style-type: none"> <li>Educators note which dishes children returned to for more servings, as an indicator of what was popular.</li> <li>Communication to the cook, letting them know when they like the food.</li> <li>Amount of plate waste can be an indicator of what is eaten vs not (e.g. lots of tuna being left on plates from tuna pasta might mean the recipe needs adjusting).</li> <li>However, leftover food does not necessarily mean it was not enjoyed, as the child may have served more than they required.</li> <li>Overall daily food waste (e.g. if all dumped in compost bin) indicates how much food was not eaten.</li> </ul> |
| <b>Feedback on meals they would like</b><br><i>Providing feedback on what they would like</i>                             | <ul style="list-style-type: none"> <li>'Mat time' (when the educator and children sit together) provides an opportunity for input on the kinds of foods they would like to try.</li> <li>Support mealtime discussions on different foods children like to eat at home.</li> <li>Taste testing potential new recipes before they are added to the menu (e.g. the cook prepares a small batch of a new vegetable soup and offers tastes at morning tea, noting which children return for more).</li> <li>Children choose between two pre-planned nutritious meal options for the upcoming menu cycle.</li> <li>Picture-based preference cards indicating options or foods or dishes which children can vote on based on what they would like to see on the menu.</li> </ul>                                                                                                                             |
| <b>Initial input</b><br><i>In some services children are part of the planning process</i>                                 | <ul style="list-style-type: none"> <li>Engage children in learning activities that explores different meals through pictures of meals. Or, for example, exploring different coloured fruits and vegetables that could be included on a platter – making pretend platters.</li> <li>Children nominate a favourite ingredient for the cook to incorporate into an upcoming meal.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Input on involvement</b><br><i>Feedback on how they would like to be involved in the process</i>                       | <ul style="list-style-type: none"> <li>Children indicate whether they would like to be involved in choosing meals (e.g. at the start of a new menu cycle, an educator asks the group whether they would like to help pick what is on the menu that week).</li> <li>Children indicate their preferred way of giving menu feedback (e.g. some children prefer tasting new foods to give feedback, others prefer pointing to picture cards; educators note individual preferences and structure feedback opportunities accordingly).</li> <li>Children indicate whether they would like to see a food regularly used at home included on the menu (e.g. a child shares a food from their cultural background, and the educator asks the group if they would like the cook to try including it in an upcoming meal).</li> </ul>                                                                           |

## Educators

By being present during mealtimes, educators will observe and hear direct and indirect feedback from children – which the cooks are often not able to notice on their own. Therefore, passing this feedback on to cooks is essential.

| Type of feedback                                                                                                                                                                                                                                 | Mechanisms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Feedback from children on meals had</b><br><i>Educators can provide more contextualised feedback to cooks, such as certain parts of a meal that received specific comments, rather than just an overall indication of liking or disliking</i> | <ul style="list-style-type: none"> <li>Talking with the cook directly (e.g. a brief end-of-mealtime conversation where the educator shares what children responded well to and any observations that might help the cook with upcoming menu planning).</li> <li>Feedback book (e.g. a shared notebook in the kitchen where educators record positive mealtime observations and children's responses after each mealtime, for the cook to draw on when planning the next menu cycle).</li> </ul> |

## Families

Communicating with families about the menu and recipes being used ensures their voices are heard and knowledge of their child's needs and preferences are understood. In smaller communities (e.g. remote towns) this may be easier due to familiarity within the community, but it is important regardless of geographic location.

| Type of feedback                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Mechanisms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Feedback from children on meals had</b><br><i>Families' feedback on what the children have favoured/how they eat at home in after care to cooks and educators</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Informal</b> <ul style="list-style-type: none"> <li>Families as First Teachers (FaFT) require family members to stay in the space while the children are there. This time can be used to talk about the menu (e.g. while a family member is present during the session, an educator points out the week's menu displayed on the wall and invites the family member to share any feedback or foods their child favours at home).</li> <li>During drop-off or pick-up, an educator invites families to share any meal ideas or ingredients they would like to see featured on the upcoming menu.</li> <li>A menu suggestion box is available at the service entrance where families can leave written ideas for the cook to review during menu planning.</li> </ul> |
| <b>Feedback on child needs in relation to meals</b> <ul style="list-style-type: none"> <li><b>Special Dietary Requirements</b><br/> <i>Must be considered when the child is attending (e.g. food allergies, intolerances, or preferences)</i> </li> <li><b>Cultural Requirements</b><br/> <i>Different requirements across cultures and between individuals in the same culture, specific feedback needed to ensure recipes meet the need (e.g. Halal, kosher, or pescatarian)</i> </li> <li><b>Illness</b><br/> <i>Children who are unwell may have specific requirements</i> </li> </ul>                                                      | <b>Formal</b> <ul style="list-style-type: none"> <li>Communication apps or websites used with families (e.g. the weekly menu is posted through the service's digital platform with a simple prompt inviting families to share any feedback or suggestions for the cook to consider at the next menu planning cycle).</li> <li>A short survey sent to families at the start of each menu cycle asking if there are any meals, ingredients, or cultural foods they would like the cook to consider including.</li> </ul>                                                                                                                                                                                                                                               |
| <b>Menu</b> <ul style="list-style-type: none"> <li><i>Invite families to provide feedback and/or offer recipes for consideration in menus when menus receive periodic reviews</i></li> <li><i>General family preferences (e.g. providing carbohydrate options other than rice or pasta to increase variation)</i></li> <li><i>Families suggest meals or ingredients that reflect their child's preferences or cultural background for the cook to consider when planning upcoming menus</i></li> <li><i>Families provide feedback on meals their child has talked about or requested at home following a mealtime at the service</i></li> </ul> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## Closing the feedback loop

Collecting feedback is only valuable if it is acted on and communicated back to those who provided it. When children, educators, and families can see that their input has made a difference to the menu, they are more likely to continue engaging with the feedback process.

Embedding a structured feedback loop into service culture also supports continuous improvement of the food environment, consistent with Quality Area 2 of the National Quality Standard (NQS), which requires services to actively promote healthy eating and embed it as part of ongoing quality improvement planning.

To close the feedback loop:

- Feedback from all sources should be recorded in a consistent way (e.g. a shared feedback book or digital log that the cook can access during menu planning).
- The cook reviews recorded feedback at each menu planning cycle and considers what changes, if any, are appropriate to make.
- Where feedback has informed a change to the menu, this is communicated back to the relevant person, e.g. an educator lets a child know their suggested vegetable is on the menu this week, or a family is informed via the digital platform that their recipe suggestion has been included in the upcoming cycle.
- Where feedback cannot be acted on due to (for example) budget, allergen management, or nutritional requirements, the cook or service leader communicates this back to the person who provided it in a way that acknowledges their input and explains the reason.

**EARLY YEARS LEARNING FRAMEWORK**  
Outcome 2, Outcome 3

**NATIONAL QUALITY STANDARD**  
QA1, QA2, QA3, QA4, QA5, QA6, QA7

### Reflective questions



- How do we create meaningful opportunities for children to provide feedback about meals and menu options in ways that are appropriate to their age, communication style and level of participation?
- How effectively do educators observe, document and communicate children's responses to meals, including food preferences, engagement, enjoyment and food waste, to support menu improvement?

#### OR

- Are all children, including infants, non-speaking children and children with additional needs, provided with genuine opportunities to contribute feedback about meals and food experiences?
- How effectively does our service use feedback to reduce food waste while maintaining nutritional quality and variety?
- How do we ensure cooks, educators and families work collaboratively to support mealtime experiences and continuous improvement of menu quality?



SECTION 8

# Food Allergy and Food Safety



# Food allergy and food safety

## Your legal obligations to provide safe food

In addition to the Education and Care Services National Law, ECEC services that provide food as part of their service will also be required to comply with state and territory food safety legislation.

As a first step, contact your food safety regulator in the state or territory where your ECEC operates to determine to what extent the food legislation applies to you. Depending on your food handling activities and jurisdiction, one of the following scenarios is likely to apply:

- 1 You do not provide food as part of your service and are therefore not required to register/notify as a food business.
- 2 You are required to register/notify as a food business and comply with the general requirements of the Food Safety Standards.
- 3 You are required to register/notify as a food business and implement a food safety program.

Table 13 provides further details on the intent of the legal requirements stipulated in food legislation that may apply to your ECEC service.

**TABLE 13:** Food safety principles and outcomes of applicable legal requirements

| Legal requirement                                                      | Food safety principles and outcomes                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Not required to register/notify as a food business</b>              | ECEC services that do not provide food as part of their service are generally not considered food businesses. For example, children bring their own food from home. Some ECEC services that have very minimal handling of low-risk foods may also be in this category.                             |
| <b>Register/notify as a food business</b>                              | Enable food regulators to identify food businesses, apply risk-based regulatory oversight to ensure food safety risks are managed, and to protect public health.                                                                                                                                   |
| <b>Have a food safety program</b>                                      | Provides a systematic approach to identifying hazards associated with the handling of food, and to ensure controls are implemented to manage those hazards. This requirement typically applies to food businesses that serve food to vulnerable populations (Standards 3.2.1 and 3.3.1).           |
| <b>Comply with the general provisions of the Food Safety Standards</b> | The Food Safety Standards (Standards 3.2.2, 3.2.2A and 3.2.3) set out a risk-based, preventive approach to providing safe and suitable food. The Standards detail the outcomes that must be achieved while providing food businesses with the flexibility to determine how those outcomes are met. |
| <b>Appoint a Food Safety Supervisor</b>                                | Ensures food handlers receive appropriate supervision and guidance to support safe food handling practices. The Food Safety Supervisor's additional recognised food safety training enhances their ability to identify, prevent and manage food safety risks effectively.                          |
| <b>Provide food safety training for food handlers</b>                  | Ensures food handlers have the knowledge and skills necessary to handle food safely and maintain appropriate food hygiene practices. This outcome may also be demonstrated through competent practice to an Authorised officer.                                                                    |
| <b>Keep records demonstrating food safety</b>                          | Enables food businesses to monitor food handling practices, verify that food safety controls are effective, and demonstrate compliance with food safety requirements. This outcome may also be demonstrated through competent practice to an Authorised officer.                                   |

## Food allergen management

Effective food allergen management is essential for preventing harm to children with food allergies in ECECs that prepare or provide meals for children with food allergies. Safe food handling practices must be implemented throughout food preparation, storage and service to prevent the unintended transfer of allergens into meals intended for children with food allergies.

The National Allergy Council has developed a dedicated All about Allergens training course for ECEC. This free course provides additional guidance on food allergen management and may complement food handler training requirements that apply under relevant food safety legislation.

In addition, some Registered Training Organisations (RTOs) that deliver Food Safety Supervisor training, such as those approved by the NSW Food Authority, have incorporated the National Allergy Council's comprehensive allergen management module into their training.

For ECECs that have children with food allergies and required to have a Food Safety Program, allergen management procedures should be incorporated into the Food Safety Program.

## Continuous improvement and building a strong food safety culture

Complying with the food safety legislation should be more than a box-ticking exercise. While documented procedures, records and inspections are important, they are only effective when they are consistently put into practice. A food safety system is only as strong as the people who implement it every day.

When non-compliances occur, the immediate issue is often only a symptom of a deeper problem. The underlying cause is frequently related to behaviours, attitudes, leadership, communication or the overall food safety culture within the business. Addressing these root causes leads to more sustainable improvements and helps prevent the same issues from recurring.

A practical approach to continuous improvement is the Know-Do-Follow through model:

### Know

#### Understand where your organisation currently stands.

Regularly review food safety practices, identify risks, investigate incidents and non-compliances, and encourage staff to report concerns without fear of blame.



### Do

#### Implement meaningful improvements.

This may include improving procedures, providing additional training, strengthening supervision, clarifying responsibilities, or removing barriers that make safe practices difficult to follow.



### Follow through

#### Monitor whether the improvements have been effective.

Review trends, verify that changes have been embedded into daily practice, and continue refining systems as new risks and opportunities are identified. Continuous improvement is an ongoing process rather than a one-off activity.

Building a strong food safety culture requires visible leadership and commitment from management, supported by adequate resources such as sufficient staffing, appropriate equipment, time for training, and effective communication. When people have the knowledge, tools and support to perform their roles safely, safe food handling becomes the normal way of working rather than a compliance obligation. A positive food safety culture encourages everyone to take ownership of food safety, speak up about potential risks, and continually look for opportunities to improve.

For resources, visit:

- [Food Standards Australia New Zealand \(2025\) Food Safety Culture](#)

## Your food safety regulators

The primary point of contact for ECEC services regarding food safety legislation and regulatory requirements are as follows:

- **ACT:** ACT Government – Health Protection Service
- **NSW:** NSW Food Authority
- **NT:** NT Department of Health
- **QLD:** Local Government where the ECEC is located.
- **SA:** Local Government where the ECEC is located.
- **TAS:** Local Government where the ECEC is located.
- **VIC:** Local Government where the ECEC is located.
- **WA:** Local Government where the ECEC is located.

**NATIONAL QUALITY STANDARD**  
QA2, QA3, QA6, QA7

## Reflective questions



- How do we ensure all educators, cooks and staff understand and consistently follow each child's individual food allergy and anaphylaxis management plan?
- What systems are in place to prevent cross-contamination during food preparation, storage, serving and mealtimes, and how do we monitor their effectiveness?
- What processes do we use to verify that food provided to children is correctly labelled, prepared and served to the right child, particularly when special dietary requirements exist?
- How effectively do our policies translate into consistent practice during busy periods, staff absences or routine changes?
- What opportunities do we provide for ongoing professional learning in food safety, food allergen management and emergency response, and how do we assess staff competence?

# Managing allergies in the ECEC setting

Allergies are common in Australia – it is estimated that around one in ten babies and one in twenty school aged children has a medically confirmed food allergy, and other children may have allergies to insect stings and medications.

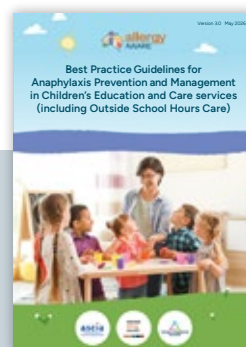
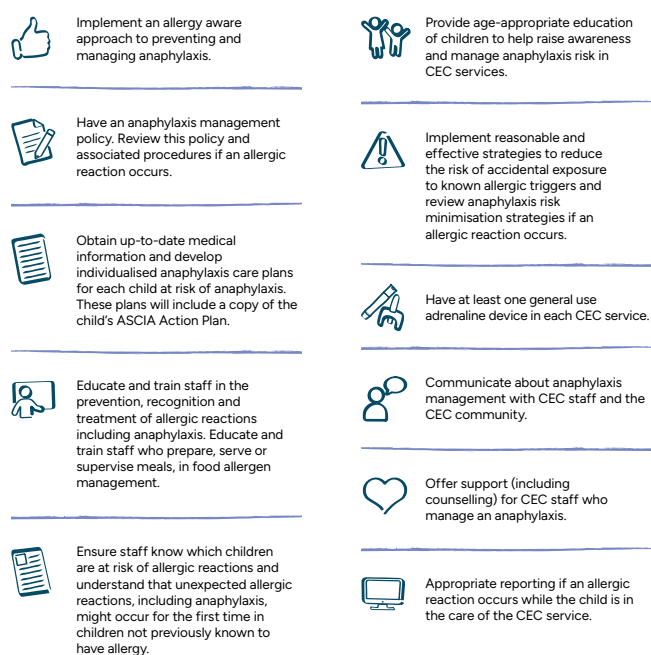
While most children have allergies to the common allergy causing foods (cow's milk/dairy, soy, egg, wheat, fish, shellfish, peanut, tree nuts and sesame), it is possible to be allergic to any food, including fruits and vegetables. The only way to manage a food allergy is for the child to completely avoid the food they are allergic to. Even a crumb or drop of food, or a sip of a drink can cause an allergic reaction.

To help care for children and young people with allergies, the National Allergy Council have published *Best Practice Guidelines for Anaphylaxis Prevention and Management for Children's Education and Care (CEC) (including Outside School Hours Care)*.

The Best Practice Guidelines:

- Outline the **key principles** and recommendations for reducing the risk of anaphylaxis in early childhood education and care settings and outside school hours care services.
- A set of **resources** including templates and sample documents are available as free downloads from the National Allergy Council's website:
  - 📄 [Allergy Aware](#)
- An **implementation guide** supports services to put the recommendations into place.

**FIGURE 3:** Key principles for reducing the risk of anaphylaxis in children's education and care



📄 [Best Practice Guidelines for Anaphylaxis Prevention and Management for Children's Education and Care \(CEC\) \(including Outside School Hours Care\)](#)

## An allergy aware approach

When planning menus and providing food for children with food allergies, being allergy aware means doing many things to lower the chance of a child with allergies to any food having food or drink they are allergic to.

Banning food allergens and using terms such as 'nut free' is not an effective way to manage food allergies in CEC services. Food bans do not help children with allergies to other foods. CEC services may restrict peanuts and tree nuts (such as cashew, hazelnut and almond) in their menu as a risk reduction strategy. This is because peanut and nut pastes are sticky and can be transferred from hands to toys and other surfaces.

Foods that are essential foods in children's diets such as wheat, cow's milk (dairy) and egg should not be removed from CEC services.

Allergy aware children's education and care (CEC) services support staff as they work with families to reduce the risk of a child with food allergies having an allergic reaction. Children should not miss out on activities because of their food allergy – instead, plan ahead so that activities do not expose them to the food they are allergic to.

The following information provides practical guidance on how to be allergy aware.

## Documentation

- When they enrol, ask families about their child's allergies and any other dietary needs. Document this in the child's individual anaphylaxis care plan along with a copy of the child's Australasian Society of Clinical Immunology and Allergy (ASCIA) Action plan.

- Use the same approach for all food allergies, regardless of the type of ASCIA Action Plan the child has.
- Parents should not be asked to sign disclaimers or waivers about possible exposure to food allergens while their child is at a CEC service.

### Training

Food allergies are an important food safety issue in CEC services.

- All staff who plan, make or serve food and those who supervise children with food allergies should complete the National Allergy Council's:
  - ⊗ [All About Allergens for CEC free online training](#).
- The Managing Food Allergies in Children's Education and Care Kitchen Handbook clearly outlines how to provide food and drinks for children with food allergies and procedures that reduce the risk of exposure to their food allergens in the CEC setting:
  - ⊗ [Managing Food Allergies in Children's Education and Care Kitchen Handbook](#)
- The highlighted tools and templates are available from the National Allergy Council:
  - ⊗ [Food allergy training resource hub](#)

### Risk reduction

Follow best practice food allergen management procedures when making and serving food:

- Use standard recipes.
- Use a food allergen menu matrix so that staff know which allergens are in your recipes and the food products used in the service. Keep the food allergen matrix up to date.
- Subscribe to food safety recalls so the service knows about products that are recalled due to undeclared allergens. Foods that are recalled should not be used in the menu.
- Do not serve foods with precautionary allergen labelling ('may be present' or 'may contain') statements for a child's food allergen.
- Know which children with food allergy will be present for each mealtime.
  - A record of food allergy and special dietary needs is filled out when a child is enrolled and updated if the child's food allergies change.
  - Use a daily attendance sheet that lists the name of each child that is attending on that day and which meals they will be present for, and shows which children have food allergies and other special dietary needs.
- Plan and make food for children with food allergies in ways that avoid cross contamination with allergens from other foods. This includes storing food, and cleaning benches, utensils, equipment and hands well before making food, in between food handling tasks, before and after handling a food allergen.
- Make food for children with food allergy at a different time or in a different space so their food does not contact other foods being prepared.

- If the food is to be stored before it is given to the child, it must be clearly labelled with the child's name and their allergy and placed in an enclosed container or covered to avoid contact with other food.

### Have systems in place to make sure the right food is given to the right child

- Foods and drinks for children with food allergy must be labelled with the child's first and last name and their allergy.
- Have a clear way of identifying meals for children with food allergy – for example a coloured plate, or different shaped plate.
- The cook or chef should hand over meals for children with food allergy first to a staff member who knows the child – use the meal sign off form for allergies and special dietary needs for this handover, signed by the staff member supervising the meal.
- Serve children with food allergy first, before other children.
- Two staff members should check and sign off that the right food is given to the right child with food allergy. Use the meal sign off form for allergies and special dietary needs to confirm that the right meal is given to the right child.
- Children with food allergies should only be supervised by staff who know them well, and who have completed the All about Allergens for CEC online food allergen management training:

- ⊗ [All about Allergens for CEC](#)

### Infant formula

- It is important that children with food allergies are given the right formula, and there is no contamination of their formula when it is made up. Pages 19/20 of the Managing Food Allergies in Children's Education and Care Kitchen Handbook outlines steps to take when managing infant formula for children with cow's milk and other food allergies:
  - ⊗ [Managing Food Allergies in Children's Education and Care Kitchen Handbook](#)
- Two staff members should check that the right infant formula is given to the right child. Use the form for infant formula and expressed breast milk to help staff check and document that the right formula is made and given to the right child.

### If an allergic reaction occurs

- All allergic reactions (where there is a risk of anaphylaxis) must be reported to the Regulatory Authority by the approved provider within 24 hours of the incident.
- Documentation of the incident should include adequate details about the event.
- After an incident or near miss, review your processes to see what changes you can make to prevent something similar happening again.

## All About Allergens for ECEC online training and support resources



### Allergy Aware website

#### ➤ [Allergy Aware website](#)

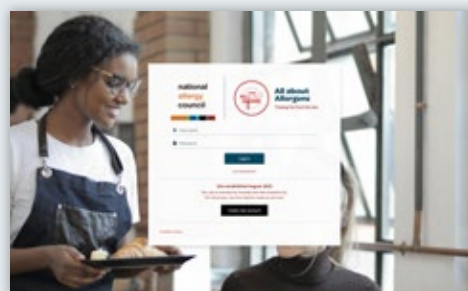
The Allergy Aware website is a resource hub that includes links to evidence-based resources and training for education and care services to help manage anaphylaxis. The website also contains links to state and territory specific information and resources. Note that the Allergy Aware website is separate from the All About Allergens Resource Hub which provides free training about managing food allergies when providing food. Further details on the All about Allergens Resource Hub can be found in the upcoming pages.



### All About Allergens for CEC online training

#### ➤ [All about Allergens for CEC](#)

It is recommended that all staff involved in planning, ordering, making, serving and supervising meals complete the National Allergy Council's free All about Allergens for CEC food allergen management online training.



### All About Allergens Kitchen Handbook

#### ➤ [All about Allergens Kitchen Handbook](#)

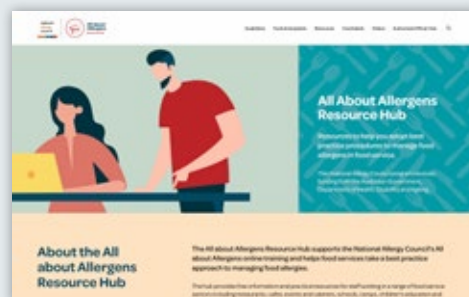
The National Allergy Council's All about Allergens Kitchen Handbook is the companion to the All about Allergens training. The Kitchen Handbook clearly outlines considerations when planning, ordering, making, serving and supervising meals for children with food allergies in Early Education and Care settings.



### All about Allergens Resource Hub

#### ➤ [All about Allergens Resource Hub](#)

The All about Allergens Resource Hub supports the National Allergy Council's All about Allergens online training and helps food services take a best practice approach to managing food allergies. The hub provides free information and practical resources for staff working in a range of food service sectors including children's education and care.



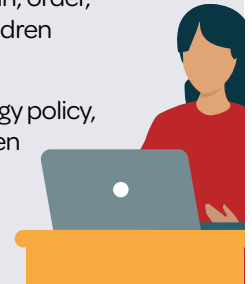
## Managing food allergies in ECEC settings is everyone's responsibility

# Managing food allergies is everyone's responsibility

Everyone plays a role and needs to communicate about food allergies.

### Service Manager

- Make sure all staff are aware of the risk of food allergies. This includes managers, educators, cooks, chefs and other kitchen staff.
- Make sure that only staff who are trained in food allergen management plan, order, make, serve and supervise children eating the food.
- Make sure you have a food allergy policy, and procedures for food allergen management. Audit your service to make sure the policy and procedures are followed.



### Parent/Carer

When they enrol, ask parents about their child's allergies and any other dietary needs.

Parents should:

- Tell the service if their child's allergies change.
- Provide a copy of their child's ASCIA Action Plan and allergy medication.



### Educator

- Know how to recognise and respond to allergic reactions.
- Know how to provide a safe environment for children with food allergies during meal and snack times.
- Plan safe and inclusive activities for children with food allergy.



### Cook/Chef

- Know how to make and serve suitable food for children with food allergies.
- Know what is in the food they make and serve.
- Know which children in their childcare service have food allergies.
- Be able to answer questions from parents of children with food allergies about the ingredients of the food they make and serve. Other CEC staff should know how to find this information if they are asked for it.



### All food allergies must be taken seriously

Use the same approach for all types of food allergies, regardless of the type of ASCIA Action Plan they have.

Parents should not be asked to sign disclaimers or waivers about possible exposure to food allergens while their child is at a CEC service.

Poster supplied with permission from the National Allergy Council All about Allergens Kitchen Handbook.



SECTION 9

# Appendices



# Appendix A – Glossary

## Abbreviations and acronyms

| Abbreviation | Full form                                                                   |
|--------------|-----------------------------------------------------------------------------|
| ADG          | Australian Dietary Guidelines                                               |
| AGHE         | Australian Guide to Healthy Eating                                          |
| BPG          | Best Practice Guide for Early Childhood Education and Care Food Environment |
| CCS          | Child Care Subsidy                                                          |
| ECEC         | Early Childhood Education and Care                                          |
| EYLF         | Early Years Learning Framework                                              |
| FDC          | Family Day Care                                                             |
| IFG          | Infant Feeding Guidelines                                                   |
| MEP          | Mealtime Environment and Practices module                                   |
| MMQ          | Menu and Meal Quality module                                                |
| NHMRC        | National Health and Medical Research Council                                |
| NNN-ECEC     | National Nutrition Network – Early Childhood Education and Care             |
| NQS          | National Quality Standard                                                   |
| NRV          | Nutrient Reference Values                                                   |
| SFE          | Staff and Family Engagement module                                          |
| SFP          | Sustainable Food Practices module                                           |
| WHO          | World Health Organization                                                   |

## Key terms and definitions

| Term                                              | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Artichoke Model</b>                            | A visual conceptual framework for understanding the whole food environment in Early Childhood Education and Care settings. Like the layers of an artichoke, the model places children's everyday food experiences at the centre, surrounded by the people, places, systems and routines that shape those experiences. The model includes 12 connected 'leaves' grouped into three layers: What (food provided), How (feeding practices and support), and Environmental levers (service conditions). |
| <b>Australian Dietary Guidelines (ADGs)</b>       | Evidence-informed national recommendations developed by the National Health and Medical Research Council (2013) that translate nutrition science into practical guidance on the types and amounts of food needed to support health, organised around five core food groups. Currently under review.                                                                                                                                                                                                 |
| <b>Australian Guide to Healthy Eating (AGHE)</b>  | A plate-shaped graphic accompanying the Australian Dietary Guidelines that illustrates the proportions of each of the five food groups to be enjoyed across the day.                                                                                                                                                                                                                                                                                                                                |
| <b>Australian Infant Feeding Guidelines (IFG)</b> | National guidance on feeding infants from birth to around two years, including breastfeeding, infant formula, and the introduction of solid foods.                                                                                                                                                                                                                                                                                                                                                  |
| <b>Best Practice Guide (BPG)</b>                  | The Best Practice Guide for Early Childhood Education and Care Food Environment – a comprehensive guide providing evidence-informed recommendations for creating positive food environments in ECEC settings for children from birth to 5 years.                                                                                                                                                                                                                                                    |

| Term                                                | Definition                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Core (five) food groups</b>                      | The five food groups identified in the Australian Dietary Guidelines: (1) grain (cereal) foods; (2) vegetables and legumes/beans; (3) fruit; (4) lean meats, poultry, fish, eggs, tofu, nuts, seeds and legumes/beans; and (5) milk, yoghurt, cheese and/or alternatives.                                                                                                                          |
| <b>Discretionary foods</b>                          | Foods and drinks that are not part of the five food groups and are not needed for health, often higher in saturated fat, added sugar or salt. The Australian Dietary Guidelines recommend these are limited.                                                                                                                                                                                       |
| <b>Early Childhood Education and Care (ECEC)</b>    | Formal care and educational settings for children from birth to 5 years, including long day care, family day care, preschools and kindergartens.                                                                                                                                                                                                                                                   |
| <b>Early Years Learning Framework (EYLF)</b>        | Australia's national framework (version 2.0) that guides early childhood educators in developing high-quality programs for children from birth to 5 years. The framework describes the principles, practices and outcomes essential to support and enhance children's learning.                                                                                                                    |
| <b>Food allergy</b>                                 | Food allergy is an immune system reaction to a food. Foods that cause an allergic reaction are called food allergens.                                                                                                                                                                                                                                                                              |
| <b>'Had enough' cues</b>                            | Alternative term for satiety cues - the signals a child shows when they are satisfied and have had enough to eat. Examples include slowing eating pace, becoming distracted, pushing food away, or saying 'all done'.                                                                                                                                                                              |
| <b>Menu cycle</b>                                   | A planned sequence of menus rotated over a set period (for example, a number of weeks) before repeating.                                                                                                                                                                                                                                                                                           |
| <b>National Nutrition Network – ECEC (NNN-ECEC)</b> | A community of practice comprising researchers, practitioners, and government and non-government employees who collaborate to improve nutrition and food environments in early childhood education and care settings across Australia. <a href="http://www.nationalnutritionnetwork.com.au">www.nationalnutritionnetwork.com.au</a>                                                                |
| <b>National Quality Standard (NQS)</b>              | Australia's national benchmark for quality in education and care services, consisting of seven quality areas including Educational Program and Practice, Children's Health and Safety, Physical Environment, Staffing Arrangements, Relationships with Children, Collaborative Partnerships with Families and Communities, and Governance and Leadership.                                          |
| <b>Nutrient Reference Values (NRVs)</b>             | A set of reference values for nutrient intakes used to plan and assess the diets of population groups.                                                                                                                                                                                                                                                                                             |
| <b>Responsive feeding</b>                           | A feeding approach based on recognising and responding appropriately to children's hunger and satiety cues. Responsive feeding creates a supportive feeding relationship where adults provide structure and guidance while respecting children's internal regulation of food intake. This approach avoids pressure and allows children to decide whether and how much to eat from what is offered. |
| <b>Service leader</b>                               | This may include roles such as director, nominated supervisor, coordinator, or other service leadership positions depending on the service structure and jurisdiction.                                                                                                                                                                                                                             |
| <b>Standard recipe</b>                              | A written recipe with set ingredients, quantities and method used to produce a consistent meal each time it is prepared.                                                                                                                                                                                                                                                                           |
| <b>Standard serve</b>                               | A defined amount of food within a food group that provides approximately the same energy, used as the unit for the serve recommendations in the Australian Dietary Guidelines.                                                                                                                                                                                                                     |

# Appendix B – MMQ Module Development Process

## Stage 1: Scoping

**Purpose:** To develop the initial topic and question list for the Best practice Guide.

**Approach:** Using the Artichoke Framework as a basis the following process was completed:

- Alignment of the artichoke model to reduce duplication of themes and sub topics.
- Problem Analysis based on each theme and sub topic of the artichoke model.
- Based on initial problem analysis and associated problem trees adaptation to theme objectives, and associated questions.
- Development of background and foreground questions addressing each problem statement.

**Who was involved:** Best Practice Guide Project Team

## Stage 2: Evidence sourcing, co-design and question refinement

### Evidence Sourcing and Co-Design

**Purpose:** Source relevant evidence (all forms), lived experiences and contexts.

**Approach:** Using the initial topic and question list Evidence Sourcing, System Mapping and Co-design was undertaken using the following approach:

- Literature reviews.
- Surveys representation from a wide range of centre types (e.g., centre-based care, family daycare), meal provision models (meals provided onsite, lunchbox services) and locations (metropolitan, inner regional, outer regional, remote, very remote).
- Focus groups (ECEC cooks, educators, directors and Authorised officers)
- BPG Advisory Group

### Who was involved

- Best Practice Guide Project Team
- Advisory group (review only)
- MMQ Working Group

### Question refinement

**Purpose:** To review and provide feedback to refine the initial question list for the Best Practice Guide.

**Approach:** Presentation of the process and associated outputs (i.e, themes and question list) for review and refinement.

### Who was involved

- Advisory group (review only)
- MMQ Working Group

## Stage 3: MMQ Guide development

**Purpose:** To develop the recommendations, strategies and practices and review associated supporting text for the Best Practice Guide.

| Approach                                                                                                                                                          | Who was involved                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Induction Session and Background Session:</b> To outline the process to date and review the evidence from the evidence sourcing and co-design process outputs. | <ul style="list-style-type: none"> <li>• MMQ Working Group</li> <li>• BPG Advisory Group</li> <li>• BPG Project Team</li> </ul>                                                                              |
| <b>MMQ Workshop 1:</b> To develop the guide recommendation, strategies and background text<br>- <b>Out of Session:</b> Review outputs of previous workshops       | <ul style="list-style-type: none"> <li>• MMQ Working Group</li> <li>• Best Practice Guide Team</li> </ul>                                                                                                    |
| <b>MMQ Workshop 2:</b> To develop the guide recommendation, strategies and background text<br>- <b>Out of Session:</b> Review outputs of previous workshops       | <ul style="list-style-type: none"> <li>• MMQ Working Group</li> <li>• Best Practice Guide Team</li> </ul>                                                                                                    |
| <b>MMQ Workshop 3:</b> To develop the guide recommendation, strategies and background text<br>- <b>Out of Session:</b> Review outputs of previous workshops       | <ul style="list-style-type: none"> <li>• MMQ Working Group</li> <li>• Best Practice Guide Team</li> </ul>                                                                                                    |
| <b>MMQ Workshop 4:</b> To develop the guide recommendation, strategies and background text<br>- <b>Out of Session:</b> Review outputs of previous workshops       | <ul style="list-style-type: none"> <li>• MMQ Working Group</li> <li>• Best Practice Guide Team</li> </ul>                                                                                                    |
| <b>MMQ Workshop 5:</b> To develop the guide recommendation, strategies and background text<br>- <b>Out of Session:</b> Review outputs of previous workshops       | <ul style="list-style-type: none"> <li>• MMQ Working Group</li> <li>• Best Practice Guide Team</li> </ul>                                                                                                    |
| <b>Specialist Input</b>                                                                                                                                           | <ul style="list-style-type: none"> <li>• Food, Environmental Health Directorate, Public and Aboriginal Health Division, Department of Health, Western Australia.</li> <li>• Education Consultants</li> </ul> |
| <b>Review and Design Process:</b> Finalise MMQ Module                                                                                                             | <ul style="list-style-type: none"> <li>• MMQ Working Group</li> <li>• BPG Advisory Group</li> <li>• BPG Project Team</li> </ul>                                                                              |
| <b>MMQ Guide Completed</b>                                                                                                                                        |                                                                                                                                                                                                              |

# Appendix C – Evidence Framework

This Best Practice Guide is evidence-informed, using a comprehensive evidence framework that intentionally draws on multiple forms of evidence. It integrates peer-reviewed research, national and international guidelines, policy and regulatory requirements, and practice-based and lived experience evidence from ECEC educators, families and sector interest holders. Where high-quality research evidence was limited or still emerging, we deliberately incorporated practice wisdom, sector consensus and experiential knowledge so the guidance remained realistic, inclusive and implementable across diverse ECEC contexts.

|                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                           |
|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>Purpose</b>                                                             | A range of questions were developed in consultation with the project team. The evidence framework guides the sourcing, identifying, selecting and synthesis of evidence to answer these questions                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                   |                                                                                                           |
| <b>Types of evidence – all types of evidence were included, including:</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                           |
| <b>Qualitative</b>                                                         | <b>Qualitative research design</b> <ul style="list-style-type: none"><li>• Phenomenological</li><li>• Ethnographic</li><li>• Grounded theory</li><li>• Historical</li><li>• Case study</li><li>• Action research</li><li>• Participatory research</li></ul>                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                   |                                                                                                           |
| <b>Quantitative</b>                                                        | <b>Experimental</b> <ul style="list-style-type: none"><li>• Randomised controlled trial</li><li>• Non-randomised controlled trial</li><li>• Cross-sectional study</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Observational analytical</b> <ul style="list-style-type: none"><li>• Observational analytical</li><li>• Cohort study</li></ul> | <b>Descriptive</b> <ul style="list-style-type: none"><li>• Case report, case series, case study</li></ul> |
| <b>Other</b>                                                               | <ul style="list-style-type: none"><li>• Grey literature (when searches could not answer questions sufficiently)</li><li>• Best Practice Guide: Focus group interviews</li><li>• Best Practice Guide Surveys</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                   |                                                                                                           |
| <b>Process</b>                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                           |
| <b>Search strategy</b>                                                     | Key search terms were developed by an expert research team specialising in the ECEC food environment, in collaboration with a faculty librarian. Constructs were based on the Population (children aged 0-5), Context (ECEC), Concept (questions to be answered) framework.                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                   |                                                                                                           |
| <b>Databases searched</b>                                                  | <ul style="list-style-type: none"><li>• Medline</li><li>• CINAHL</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"><li>• Education source</li><li>• ERIC</li></ul>                                                 | <ul style="list-style-type: none"><li>• Cochrane</li></ul>                                                |
| <b>Screening</b>                                                           | Articles were imported to the program Covidence for screening. Title and abstract screening excluded articles that were not related to the food environment in ECEC. Full text screening applied the below inclusion and exclusion criteria.                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |                                                                                                           |
| <b>Inclusion/exclusion criteria</b>                                        | <ul style="list-style-type: none"><li>• Studies were included if they aligned with the Population, Context, Concept principles aligned with the research questions outlined.</li><li>• Date range: published since 2020. Older studies considered “key” evidence were included</li><li>• Studies were excluded if they were:<ul style="list-style-type: none"><li>- not conducted in ECEC</li><li>- not involving children aged 0-5</li><li>- not related to the food environment</li><li>- not related to one of the questions</li><li>- more than 5 years old (unless considered a key resource)</li></ul></li></ul> |                                                                                                                                   |                                                                                                           |
| <b>Data extraction (literature reviews)</b>                                | A structured extraction tool with predefined categories corresponding to each question was utilised to ensure consistency in data extraction                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                   |                                                                                                           |
| <b>Synthesis/data analysis</b>                                             | <ul style="list-style-type: none"><li>• <b>Literature reviews:</b> A narrative synthesis was conducted for each literature review question utilising predefined templates. The templates outlined the information in sections based on the proposed format i.e. definitions, paragraph, image, evidence statement, table and gaps in the literature.</li><li>• <b>Surveys:</b> Descriptive data from surveys (cooks, educators, service leaders and authorised officers) informed focus group questions and discussions.</li><li>• <b>Focus groups:</b> transcripts were analysed using thematic analysis.</li></ul>   |                                                                                                                                   |                                                                                                           |

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