



Best practice guidelines for increasing
children's vegetable intake

Out-of-School Hours Care

Embrace afternoon tea as a chance to get children to eat more vegetables



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Introduction

We all know that eating more vegetables is good for us and for the children in our care. Making it happen is not always easy.

Most Australian children are not eating enough vegetables. Only 6% of children aged 2–17 years of age eat the recommended amount [1].

This guide, an output of the VegKIT project, supports out-of-school hours care (OSHC) services as they seek to increase children's vegetable intake.

It sets out seven best practice guidelines that can be used in existing programs or to develop new initiatives. These can be applied across the range of activities in your service, from policy and curricula through to menus, mealtime practices and interactions with children and families.

There are a number of useful resources to support families, carers and educators in encouraging children to eat more vegetables. Some of these are listed at the back of this guide.

This guide is an important addition to these resources, founded on a robust review of the literature.

The seven best practice guidelines have been developed through analysis of previous programs and initiatives [2]. All the activities suggested in this guide are drawn from programs that have worked in the past.

All the activities suggested in this guide are drawn from effective programs.

OSHC can help children eat more vegetables

OSHC is well placed to encourage children to eat more vegetables.

- OSHC is the most common type of formal care for children aged five to 12 years, with approximately 16% of children regularly attending before and after school care [3].
- Vegetables are not generally a feature of the snacks provided to Australian children, including for afternoon tea [4].

As OSHC services provide snacks in their programs, they have the opportunity to introduce more vegetables at snack times.

In achieving any goal, you need to know the environment in which you are operating and the enablers and barriers to success. Among these are psychological, cultural, social, regulatory and policy factors.

National Quality Framework

The Australian Children's Education & Care Quality Authority's [National Quality Framework](#) tasks OSHC services with promoting healthy eating and providing appropriate nutrition to meet the requirements of Element 2.1.3: Healthy lifestyle of the National Quality Standards [5].

The best practice guidelines can contribute to meeting this standard by actively promoting healthy eating.

Barriers

OSHC services may come across a range of common barriers that impact on children's vegetable intake while in care [6-8], such as:

- access to staff nutrition training
- children's taste preferences
- children's fear of trying new foods.

Identifying and addressing barriers is an important step in increasing vegetable intake.

Whole-of-service approach

Taking a whole-of-service approach can help to overcome these barriers and change nutrition practices in care [7]. Simple measures include:

- revising menus to include more vegetables
- involving children in hands-on vegetable-related education
- supporting staff to improve their skills for nutrition education and food preparation.

The seven guidelines

The seven guidelines are grouped into three segments:

- Foundation: identify the concepts and structure that will enable change
- Action: set goals and plan for success
- Review: monitor and provide feedback.

It is recognised that OSHC services may already have nutrition policies and practices in place that support the intake of vegetables. Services are encouraged to review what they are currently doing and decide where they can have the best (and perhaps quickest and easiest) impact.



Foundation

1

Make vegetables the hero

Have simple vegetable specific messages with a clear focus.

2

Coordinate sustained effort across multiple players

Coordinate long-term action among key players involved in providing and promoting vegetables to children.

3

Grow knowledge and skills to support change

Identify and act on gaps in knowledge and skills to support children's vegetable intake.

4

Minimise barriers to increase success

Understand and identify ways to address barriers to children's vegetable intake.

Action

5

Plan for and commit to success

Set clear and measurable vegetable-specific goals and commit to a plan of action.

6

Create an environment that supports children to eat vegetables

Make vegetables the easy choice by providing an environment that promotes vegetable familiarisation and intake.

Review

7

Monitor and provide feedback on progress

Monitor progress and achievement against goals and provide feedback at regular intervals.

Further details on each guideline follow. Additional resources and proven ideas for action are included later in this guide.

Foundation

1 Make vegetables the hero

Initiatives that focus more specifically on vegetables, with clear and consistent messages on increasing children's vegetable intake are more effective.

What you can do

- Educators and co-educators can include vegetables in relevant learning experiences, resources and interactions.

The Phenomenom! [website](#) has fun, educational videos and activity resources to get children interacting with and thinking about food.

Eat a Rainbow also has a [book list](#) of reading ideas.

- Educators can provide vegetable-based meals and snacks, such as vegetable platters. Recipes can be found at:
 - [SNAC](#)
 - [Healthy Eating Advisory Service](#)
 - [Eat a Rainbow](#)
 - [Eat Smart, Play Smart](#)
 - [Refresh.Ed](#)
 - VegKIT: [7 Days of Veggie Snacks](#).



Educators and co-educators can include vegetables in relevant learning experiences, resources and interactions.

2 Coordinate sustained effort across multiple players

A coordinated and sustained effort across management, OSHC staff, school staff and carers, is most effective in increasing children's vegetable intake. Regular and ongoing efforts to expose children to vegetables will have the best results.

What you can do

- Educators and co-educators can encourage similar approaches to eating vegetables both in care and at home.
- All staff can communicate consistent vegetable-specific messages with families.
[Eat a Rainbow](#), [Refresh.Ed](#) and [Crunch&Sip®](#) have pamphlets that can be taken home.
- Encourage changes to be made across the whole school to match the approaches made in OSHC.
- Make sure everyone on staff is on the same page and understands the role they play – communication is the key.

Regular and ongoing effort means at least once per week for a minimum of six weeks.



Encourage similar approaches to eating vegetables both in care and at home.

3 Grow knowledge and skills to support change

Being aware of your team's current knowledge and skills – and the gaps – can help identify areas for improvement. To create a collaborative effort, also find out what families know and do.

What you can do

- Find out knowledge levels and practices among staff and families.
- Management can tailor training and education to address gaps in knowledge and skills.
- All staff can participate in training and education on vegetable-based nutrition:

SNAC OSHC has a [professional development booklet](#), which can be used to upskill employees.

The Healthy Eating Advisory Service has [training](#) available for Victorian OSHC staff on essential knowledge and skills to meet the healthy eating requirements of the National Quality Standard (NQS).

The Eat Smart, Play Smart website has quick online [learning modules](#), including one on how to promote healthy eating. Management can also assess the menu or snacks using the [Menu Checklist for OSHC](#). This resource aligns with the NQS requirements.

- All staff can provide communications for families.

Refresh.ED has a range of [home activities](#), including a cooking with kids booklet, which can be provided to families to complete at home.

One serve of vegetables

75g = 1 cup raw vegetables or 1/2 cup cooked vegetables or legumes



4 Minimise barriers to increase success

Identifying and minimising barriers to children's intake of vegetables is a key component in increasing their vegetable intake.

Barriers are often complex and may overlap:

- Environmental, regulatory and health factors: policy restrictions relating to food storage and preparation; safety risks, such as allergies and choking hazards with some hard, crunchy vegetables; and competing priorities within curriculum requirements.
- Budget considerations: using seasonal produce or alternatives such as canned or frozen vegetables to help reduce cost; wastage of fresh produce; additional staff time required to prepare vegetable snacks.
- Knowledge and skills: lack of relevant cooking skills; limited knowledge of vegetable-based meal and serving ideas.
- Social influences: lack of positive role models enjoying vegetables; peer, sibling or parental dislike of vegetables; availability of other foods; distractions that create barriers to eating vegetables.
- Child development: development stages that create resistance to vegetables such as neophobia (the fear of something new), growth in independence or temperamental change.

You can address barriers in a variety of ways. Refer to page 19-21 for existing programs that have resources that can assist to minimise barriers.

What you can do

- All staff can make sure vegetables are readily available.
- Educators can involve children in growing and preparing vegetables, for example, cooking with kids activities.
- Children and educators can follow videos on quick and easy [recipes](#) available online at Eat Smart, Play Smart.
- Educators and co-educators can review activities to incorporate a vegetable focus, for example vegetable counting activities.

Resources to support this include:

- [vegetable curriculum activities](#)
- [book list](#)
- [music playlist](#)
- Management can plan menus and snacks so that they contain a variety of vegetable with different shapes and colours.
- [SNAC](#), the [Healthy Eating Advisory Service](#) and [Eat Smart, Play Smart](#) all have resources for menu planning.

Action

5 Plan for and commit to success

1. Identify a clear and specific goal

Be specific.

Decide which behaviour you want to target first. Eating behaviours can be divided into three simple types:

Increasing serves

Increasing the portion or amount of vegetables eaten at each meal.

Increasing frequency

Increasing the number of times vegetables are eaten each day.

Increasing variety

Increasing the number of different types of vegetables eaten each day.

What management and staff can do

- Target one behaviour in the first instance by asking yourself and your team:
 - What is the easiest behaviour to change?
 - What change or activity would most appeal to the children in our care?

Examples of a target behaviours to raise vegetable intake: increasing serves, frequency and variety

Approaches	Increasing serves	Increasing frequency	Increasing variety
Target behaviour examples	Provide ½ serve (38g) of vegetables per child at afternoon tea.	Include vegetables with breakfast options (e.g. tomato on toast).	Vary the preparation and presentation of vegetables at afternoon tea.
	During vacation care: Encourage families to provide 1 serve (75g) of vegetables in children's lunches. See Seven Days of Veggie Snacks resource available on www.vegkit.com.au .	Ensure one after-school activity per week includes vegetables.	Involve OSHC students in the creation and maintenance of a 'cooking garden' containing a variety of vegetables.

2. Choose a practical, simple approach

Keep it simple.

Once you know what behaviour you want to change – increasing serves, frequency or variety of vegetables – identify how best to achieve your goal.

What you can do

- Identify one or two simple actions to achieve your goal by reflecting with your team:
 - What is the most practical option?
 - What is affordable and what do I have the resources to achieve?
 - What will deliver the best outcomes for the children in my care?

3. Plan for and commit to change

Make a plan.

There are lots of ways to make a plan. A tried and true way to start is by bringing your team or colleagues together and brainstorming the following:

Why are we doing this and why is it important?
What is the overall goal and what steps need to be undertaken?
When do we put these steps in place?
Where should the initiative and steps take place?
Who is responsible and who is the target audience?
How do we measure our progress and how can we improve?

Commit to the change and make it part of your overall work plan.

What management and staff can do

- Create clear goals on vegetable intake.
- Include your goal in your service's Quality Improvement Plan.
- Get students to commit to the goal, for example by signing a pledge.

6 Create an environment that supports children to eat vegetables

Make vegetables readily available and always at hand. Make them part of everyday life.

Children eat foods that are familiar and liked. Whether that food is healthy or not may be of little interest to them, so make vegetables an ongoing and easy choice.

What you can do

- Educators can provide regular opportunities to interact with vegetables

Eat a Rainbow has [Flash Cards](#) featuring vegetables of many colours

Eat Smart, Play Smart has [activities](#) suitable for primary school-aged children, including how to grow vegetables from leftovers, a range of simple craft [activities](#) and a cookbook template for children to complete with their own recipes.

- SNAC OSHC has a range of nutrition [activities](#) specifically designed for OSHC.
- Educators or coordinators can prepare vegetables in fun and interesting ways and put them first in line when multiple foods are provided.

For example, the resource from the Healthy Eating Advisory Service: [Making Veggies Fun for Kids](#).

- Educators can add cues to the environment to encourage vegetable intake, for example posters and placemats.

Some examples of posters include:

- Munch & Move: [Key messages and characters posters](#)
- [Eat a Rainbow](#)
- [Crunch the rainbow](#)
- Crunch&Sip®: [Packed with goodness sandwich builder](#).



Cooks can prepare foods in fun and interesting ways.

Review

7 Monitor and provide feedback on progress

Monitoring and providing feedback are essential components of any initiative. They are undertaken at regular times during the initiative as well as at the end. Final evaluation is a must.

Monitoring has a number of benefits. It keeps you on track. It allows you improve what you are doing as you go – as well as helping you design better initiatives in the future. And it helps you communicate with staff and families along the way. Giving feedback keeps everyone motivated and keeps you accountable.

An important part of your evaluation will be to measure any change in the amount of vegetables eaten by children during the initiative. To do this, you will need to use a well-developed measurement tool to ensure accuracy and reliability.

What management can do

- Track the progress and initiatives you undertake.
- Build your chosen vegetable initiative into your Quality Improvement Plan. Communicate its goal, metrics and its progress with staff and families.
- Evaluate the change in children's vegetable intake.
- Communicate with families about how things are going.



Educators can involve children in preparing vegetables.

What you can do:

A checklist of simple ideas that work in OSHC

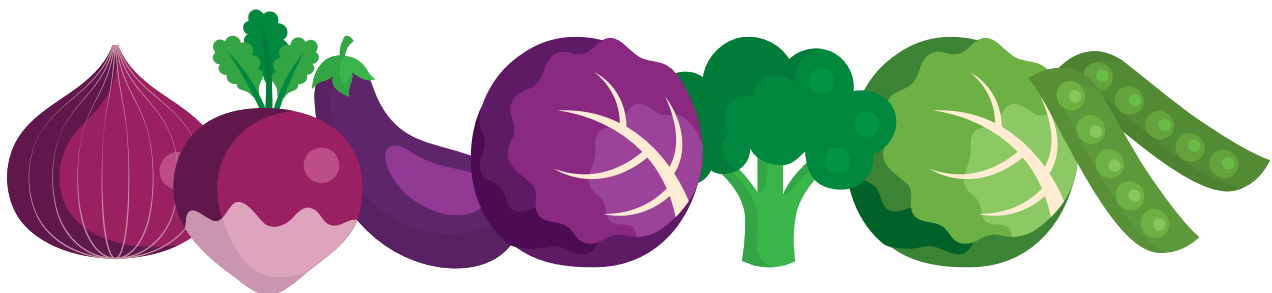


All the activities suggested are drawn from effective programs.

Educators and Coordinators:

Put vegetables on the menu and include vegetables in activities

- ☐ Get creative and serve up vegetables so they look appealing
- ☐ Provide a variety of vegetables every day, including different types, colours, smells and textures
- ☐ Provide vegetables at snack time
- ☐ Set challenges for children such as trying a new or disliked vegetable at snack time
- ☐ Supply cutting kits with child-safe knives, chopping boards and peelers to allow children to prepare their own vegetables
- ☐ Encourage the children to sign a pledge to eat/try vegetables, be active and have fun with their friends to help make OSHC an even better place
- ☐ Provide the children with a sticker chart to log their vegetable intake at OSHC
- ☐ Create clear vegetable-related goals across all your activities
- ☐ Establish a vegetable garden where the children can plant, grow and harvest vegetables
- ☐ Use vegetable characters or mascots to encourage learning about vegetables
- ☐ Have the children create or use posters or placemats that encourage vegetable intake or tell vegetable stories
- ☐ Conduct a food-related excursion, visiting a grocery store, market, vegetable garden or farm
- ☐ Provide non-food rewards, such as stickers, rather than rewarding with unhealthy foods



Management: Build a joint approach

- ☐ Ensure your service's nutrition policy has an emphasis on vegetables that applies across all of its activities
- ☐ Audit or log practices that encourage vegetable intake, for example by using an afternoon tea or snack checklist
- ☐ Communicate with families through brochures, posters, newsletters and emails on the value of eating vegetables
- ☐ Provide take-home activities such as vegetable-rich recipes for children to create with their families
- ☐ Provide tailored feedback to families about children's eating behaviours such as stickers which state: "I tried [insert vegetable] today"
- ☐ Conduct education sessions for staff and families with practical classes such as making vegetables part of breakfast and snacks
- ☐ Meet with school teachers and canteen employees to ensure consistent messaging on eating vegetables

All staff

- ☐ Be a role model for eating vegetables



Engaging with families

Engaging with families has the best results for increasing children's vegetable intake. It ensures consistent messages. It can also improve vegetable intake at home. Australian children currently eat 54-65% of their vegetables at dinner time, so increasing intake at this meal can have results.

Below are a few ideas on how to engage with families. VegKIT also offers a range of resources, such as posters, newsletter templates, recipes and take-home activities, to help you engage with families. See the website and registry at www.vegkit.com.au.

Ways to engage with families



Include information and tips in newsletters.



Share videos on how to have discussions with children about vegetables or how to create healthy lunchboxes.



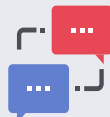
Share children's interest in vegetable activities through service apps and social media.



Organise education sessions for families.



Exhibit displays and posters of vegetables.



Talk with families at pick-up time about how to add more vegetables to dinner.



Provide information about children's intake and exposure to vegetables in communication books.



Create a challenge for families e.g. parents try two new vegetables this week.



Provide families with the same posters, placemats and marketing materials used in the service.



Provide take-home activities families can do with their children.

Program examples & resources

There are many freely accessible programs and resources that can help you increase children's vegetable intake.

See some of the excellent resources listed below, some are national, whilst others are designed to meet state-based guidelines.

VegKIT

The VegKIT project aims to increase the vegetable intake of Australian children. Designed to provide a collection of practical tools, resources and interventions, the five-year project centres around six key activities to support children, educators and health care professionals, and engage with industry.

Delivered via a collaboration between CSIRO, Flinders University and Nutrition Australia, and financially supported by Hort Innovation, VegKIT is the first Australian program to provide an integrated nation-wide approach to improving children's vegetable intake.

The VegKIT website offers many more resources for you to use free of charge
For more information: www.vegkit.com.au.

Healthy Eating Advisory Service

The Healthy Eating Advisory Service is a free service that supports Victorian outside school hours care services to provide and promote healthy foods and drinks.

HEAS provides a free telephone and email Infoline, recipes, fact sheets, and online training.

Wherever you are, you can visit the HEAS website to access practical resources and templates, such as:

- menu planning resources
- recipes and healthy food and drink ideas
- case studies
- online training
- and more

For more information: heas.health.vic.gov.au

HEAS is delivered by Nutrition Australia Vic Division, with support from the Victorian Government.

Eat Smart Play Smart

Eat Smart Play Smart is an online learning resource that focuses on nutrition and physical activity guidelines and how they apply to OSHC services.

Developed by NSW Health and the Heart Foundation, it provides resources such as:

- online training for OSHC staff
- example policies
- cooking and food activities.

For more information go to esps.androgogic.com.au.

Hort Innovation's Phenomenom!

Phenomenom! is a free digital toolkit for teachers designed to slip more serves of vegetables into the classroom. Visit the website to access resources including:

- a guidebook with vegetable-focused lesson plans
- a library of online videos and audio clips
- searchable curriculum activities.

For more information see phenomenom.com.au.

Eat a Rainbow

SA Health's Eat a Rainbow educational program encourages children to eat a range of different coloured fruit and vegetables. It includes curriculum activities as well as ideas for families.

The website includes resources such as:

- teachers' guides
- a program toolkit, including certificates, fact sheets and tasting charts
- posters, flashcards and games
- colour-coded recipes.

Search Eat a Rainbow resources on www.sahealth.sa.gov.au.

SNAC

SNAC is a support site for early years' educators and childcare centres. It is part of a research project by Edith Cowan University in WA to support nutrition education. It hosts a range of resources.

SNAC OSHC has resources dedicated to out-of-school hours care. You can register for free to access resources such as fact sheets.

For more information: snacwa.com.au.

Refresh.ED!

Refresh.ED! helps teachers to introduce food and nutrition into the classroom. Developed by Edith Cowan University, it includes professional learning and curriculum materials from kindergarten to year 10, linked to the Early Years Learning Framework and the Australian Curriculum.

Register for free to access a range of resources such as:

- curriculum materials
- teacher information sheets and videos
- professional practice videos and teaching ideas.

For more information go to www.refreshedschools.health.wa.gov.au.

Crunch&Sip®

Crunch&Sip® is a primary school nutrition program to increase children's vegetable, fruit and water intake through snack breaks in the classroom. Students bring vegetables, fruit and a clear water bottle to school each day for the Crunch&Sip® break.

The program was developed in Western Australia, is coordinated by the Cancer Council WA and is funded by Healthway. It is implemented in New South Wales by the Healthy Kids Association.

The Crunch&Sip® website provides resources such as:

- lunchbox ideas
- case studies
- information for teachers and families
- classroom resources, such as posters, newsletter inserts, fact sheets and
- curriculum resources.

Visit the website to join the program and become a certified school:
www.crunchandsip.com.au.

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