

How to encourage kids to eat more vegetables from your school canteen

The research that informed this brochure

VegKIT (www.vegkit.com.au) is a 5-year project that aims to increase vegetable demand and innovation.

VegKIT addresses low vegetable intake by Australian preschool and early primary school children. The project has developed tools, resources and learnings to increase children's' vegetable consumption.

A menu audit in conjunction with interviews with canteen managers and parents has provided insight into the challenge to lift vegetable provision and consumption in primary school canteens.







This brochure has been prepared by CSIRO, Healthy Kids Association and Nutrition Australia Victoria Division.

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Introduction

Only 6% of primary school aged children eat enough vegetables, and most vegetables are consumed at home at dinner time. Canteens can play a role in increasing children's vegetable intake.

VegKIT researchers undertook an intervention study in Australian primary school canteens and concluded that by implementing several simple strategies, canteen vegetable sales increased by 75%. Importantly, the study reported no increase in vegetable waste and that canteen managers found the strategies easy to implement and not time consuming.

This brochure describes these strategies and provides other suggestions on how to increase vegetable demand in primary school canteens – including offering good tasting products, making vegetables the easy choice, and making preparation as easy as possible for canteen managers.



Add veggies to dishes kids already love

Hot meals

1. Increase vegetable content of popular mixed dishes.

Aim for mixed dishes to contain a variety of different vegetables where possible.

 Butter Chicken with sweet potato (see the trialled recipe on one of the following pages)



- Pasta dishes: tomato, onion, carrot, mushroom, zucchini, spinach, asparagus
- Burrito or taco: tomato, onion, corn, carrot, mushroom, capsicum, lettuce
- Stir-fries or fried rice: onion, capsicum, broccoli, mushroom, green beans, asparagus, carrot, snow peas

2. Top pizza and garlic bread with vegetables.

Add baby spinach, fresh tomato slices, zucchini slices or mushroom as toppings on pizza and fresh pesto (kale, rocket, spinach) to garlic bread.

3. Add vegetables to a hot snack item.

For example, make savoury muffins or scones with ham, cheese and a slice of tomato on it



Sandwiches, wraps and rolls

Adding vegetables to sandwiches is a great way to get kids to eat vegetables. To make it easy, add one salad vegetable in any sandwich with a cheese, chicken, tuna or ham filling with little changes to the price. You can stick to one vegetable of the day to save on preparation time



and add it across all sandwiches. Rotate with another vegetable throughout the week to provide variety (e.g. lettuce and cucumber on alternating days).

Salads

Vegetables are already the hero in salads. You can make salads a more complete meal, by including a grain component such as pasta, rice, couscous or quinoa, or a protein component such as chicken or falafel. By doing this, parents and students may feel they are getting more 'bang for their buck' and would be more likely to buy a salad.



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New vegetable ideas that kids will love

Snacks

Raw vegetables with dips. Vegetable sticks might already be on your menu. Selling them as a package with a dip e.g. avocado, tzatziki, French onion, hummus can really make them fun to eat and increase their appeal to children.

Offer a Crunch & Sip pack.

If your school participates in the Crunch and Sip program, create a new sales occasion by offering a combination of snacking vegetables and fruits in three different colours e.g. cherry tomatoes with orange capsicum and green pear sticks or celery sticks with red capsicum and apple slices. Kids love to eat a rainbow! You may consider a subscription package for parents.

Soups. Vegetable soups like pumpkin or tomato soup can be a tasty addition to the winter menu and can be loaded with vegetables.

Ice blocks. CSIRO has created a carrot and orange ice block recipe that has been approved by children. This ice block is made of 100% juice and has a sweet/sour flavour that is familiar to children. The recipe can be found on the following page.

Bento boxes and meal deals with veggies

Offer 1-2 vegetables in every Bento Box, for example veggie sticks,

cherry tomatoes or corn on the cob. For Meal Deals, you can also include small side dishes like zucchini corn fritters, grated carrot with raisins, a small garden salad, a coleslaw with yoghurt dressing, cooked broccoli or cauliflower florets with a cheese sauce, green beans with a vinegar dressing, mashed vegetables, corn kernels with cheese melted on top, mixed beans, roasted sweet potato or beetroot or edamame.



Carrot and orange ice blocks

This recipe is enough for 60 ice blocks of 75mL each.

Equipment:

- Chopping board
- Knife
- Fruit juicer
- Measuring jug
- Large deep bowl/jug (min. 5L capacity)
- · Large/long metal spoon
- Ice block moulds (enough for 60 ice blocks)
- 60 food grade popsicle sticks

Ingredients (to make 60 ice blocks of 75ml each):

- 45 large juicing carrots (washed and ends removed)
- 15-18 oranges (skin removed) OR, 2.3L sweet fresh tasting orange juice



Method:

- 1. Juice carrots into measuring jug and transfer to large bowl/ jug until you have 2.3L carrot juice.
- 2. Juice oranges, or pour bought juice, into a measuring jug, until you have 2.3L orange juice.
- 3. Transfer orange juice to large bowl/jug with carrot juice.
- 4. Stir well to combine and pour into ice block moulds (aim for 75mL portions).
- 5. Place lid on the moulds and place sticks, then freeze (~6 hrs).
- 6. Serve frozen.

Butter chicken with sweet potato

This recipe is enough for 50 portions



Equipment:

- Rice cooker
- Cooking pot with steam basket
- Chopping board
- Knife
- Large pan
- Large mixing spoon

Ingredients:

- 1.3 kg peeled and diced sweet potato
- 5.2 kg chicken breast fillet
- Olive oil
- 2 Litre Butter Chicken sauce
- · 1200 mL Yoghurt
- 1.5 kg uncooked rice

Method:

- 1. Cook the rice in the rice cooker.
- 2. Bring water to boil in the pot and steam the sweet potato until soft enough to pierce easily with a fork.
- 3. Dice the chicken breast.
- 4. Heat a drizzle of olive oil in the pan and brown the chicken
- Combine the sweet potato, chicken, butter chicken sauce and yoghurt.
- 6. Let it simmer for 5 minutes (or longer if chicken isn't cooked through yet).
- 7. Scoop 80 grams of cooked rice in a single serve container and add 130 grams of the Butter Chicken
- 8. Can be stored frozen in portions for up to 3 months.
- 9. Serve hot.

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Making vegetables the easy choice

Move vegetable-containing items to the top of each menu category.

People often choose items that are higher on a menu. This is an easy to implement strategy which only needs to be done once and your online ordering provider can probably help you with the online menu.

Use an opt-out option instead of an opt-in option for vegetable toppings on sandwiches and burgers.

People are less likely to opt-out of toppings than to opt-in toppings. Our study showed a significant effect when vegetables were made default toppings on sandwiches and burgers. You could use either lettuce, cucumber or tomato slices, or grated carrot. Ask your online ordering provider to program this by providing a tick-box "remove lettuce"

Ensure your pricing strategy supports choosing vegetable-based dishes.

Menu analysis across 112 NSW canteens showed that sandwiches with a vegetable filling and salads were more expensive than

sausage rolls and meat pies. Set margins to be higher on foods such as meat pies and sausage rolls so that meals and snacks containing vegetables are more likely to be chosen.



4 Make vegetables fun

Promotion

Make sure it's fun!

Avoid promoting vegetables as good for health as this will steer children away from them. Rather, focus on fun, enjoyment and good taste in promoting your menu items with vegetables. Give your meals/snacks creative names to appeal to children, e.g. Captain Capsicum, Queen Pea, or use characters or offer a fun sticker when they purchase vegetable products. You can also organise a competition for students to come up with new ideas for dishes or how to promote them. For ideas and resources, see www.superherofoodshq.org.au/shop/.

Promote changes in your menu to parents and students through your regular channels (e.g. newsletter, app) or a poster at the canteen.

Taste testing with students

Involve your students in taste testing two or three options to choose the winning new recipe. Students are more likely to ask their parents to purchase those once they have tasted it and know they like it. This is also a way to attract new customers and to make the canteen a vibrant part of the school.



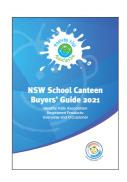
5 Logistics and cost saving

Swap some protein for some vegetables to save costs.

Cutting back on meat in a sauce, e.g. Bologonese, and replacing it with vegetables like grated carrot and zucchini is a good way to fill the dish out and increase vegetable intake. You can save money as meat can be more expensive than some vegetables.

Frozen and canned vegetables

Frozen and canned vegetables are an affordable way to increase the vegetable content in meals. Always keep frozen onions, kale, zucchini, cauliflower, broccoli, spinach,canned tomatoes and corn kernels ready to use in your dishes. The Healthy Kids Association Buyers Guide lists suppliers that deliver frozen and canned vegetables.



Pre-cut vegetables

Several vegetables can be bought pre-cut or grated. Perhaps you can work out a deal with your local greengrocer to buy in bulk and save costs. Try diced or grated carrots for Bolognese, spiralised zucchini and diced pumpkin for salads.



"I think the majority of a menu needs to contain vegetables..., it's very clear the role that not only just having a full belly but filled with good food can play in their concentration and their ability to learn at school."

-Canteen Manager



References

Beelen et al.: Menu Audit of Vegetable-Containing Food Offering in Primary School Canteens in Sydney, Australia: A Preliminary Study. Int. J. Environ. Res. Public Health 2021, 18(22), 11789 https://www.mdpi.com/1660-4601/18/22/11789

Poelman et al.: Effectiveness of a Multi-Strategy Behavioral Intervention to Increase Vegetable Sales in Primary School Canteens: A Randomized Controlled Trial. Nutrients 2022, 14(19), 4218 https://www.mdpi.com/2072-6643/14/19/4218











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