

Reducing food- related choking for babies and young children at early learning services

Citation: Ministry of Health. 2020. *Reducing food-related choking for babies and young children at early learning services*. Wellington: Ministry of Health.

Published in December 2020 by the Ministry of Health
PO Box 5013, Wellington 6140, New Zealand

ISBN 978-1-99-002970-7 (online)
HP 7526



This document is available at health.govt.nz



This work is licensed under the Creative Commons Attribution 4.0 International licence. In essence, you are free to: share ie, copy and redistribute the material in any medium or format; adapt ie, remix, transform and build upon the material. You must give appropriate credit, provide a link to the licence and indicate if changes were made.

Contents

Introduction	1
Recommendations	1
How to alter high-risk food to lower its choking risk	3
Background information and references	5

Introduction

Babies and young children have an increased risk of choking on food. This is because they have small air and food passages. They are also learning to move food around in their mouths and learning how to bite, chew and grind food. It takes some years for children to master these skills and many don't truly master chewing until four years of age.¹

This advice is based on the Ministry of Health's recommendations www.health.govt.nz/food-related-choking, but has been adapted for licensed early learning services such as early childhood education services, ngā kōhanga reo and certificated playgroups. The original advice is for parents and caregivers who have a good awareness of a child's stage of development, and who can closely supervise a child. This close relationship and degree of supervision is not often possible in early learning services, so the advice here is more prescriptive to manage the risk involved.

Recommendations

While it is not possible to remove all risk, it can be reduced by following the recommendations based on these three areas:

1. a safe physical environment when eating
2. first aid
3. providing appropriate food.

1. A safe physical environment when eating

Take the following actions to provide a safe physical environment for babies and children while they are eating:

- Supervise babies and children when they are eating.
- Have an appropriate ratio of adults to children at mealtimes.
- Minimise distractions and encourage children to focus on eating.
- Ensure there is a designated time where children sit down to eat, rather than continuous grazing.
- Ask children not to talk with their mouths full.
- Have children sit up straight when they are eating. Sitting down and maintaining good posture are essential for safe eating and drinking. Do not allow walking, running or playing while children are eating.
- Place food directly in front of the child. This helps to prevent them twisting around to the left or right, which can cause them to lose control of the food in their mouth.

¹ The ages in this advice are based on the expected range of development in small children. If a child has a developmental delay, suspected or diagnosed, discuss food requirements with the child's parents or caregivers.

2. First aid

Some teachers and kaiako must know what to do if a baby or child is choking.

- Teachers and kaiako need to know choking first aid and cardiopulmonary resuscitation (CPR).

For more information see the *Well Child/Tamariki Ora Programme Practitioner Handbook* available on the Ministry of Health website (www.health.govt.nz).

3. Providing appropriate food

Research shows that some food poses a greater risk of choking on. To reduce the risk, early learning services should remove high-risk foods and change the texture or size and shape of others.

a. High-risk food to exclude

Exclude the following foods. They have the highest risk of choking on, and are either not practical to alter, have no or minimal nutritional value, or both:

- whole or pieces of nuts
- large seeds, like pumpkin or sunflower seeds
- hard or chewy sweets or lollies
- crisps or chippies
- hard rice crackers
- dried fruit
- sausages, saveloys and cheerios
- popcorn
- marshmallows.

b. High-risk food to alter

The following table shows which foods to alter, why and how to do it for different age groups.

Information on appropriate food textures for newborns to one-year-olds is consistent with the Ministry of Health complementary feeding advice. See Eating for Healthy Babies and Toddlers <https://www.healthed.govt.nz/resource/eating-healthy-babies-and-toddlersng%C4%81-kai-t%C5%8Dtika-m%C5%8D-te-hungak%C5%8Dhungahunga>

How to alter high-risk food to lower its choking risk

Food characteristics	Examples	Choking risk	Changes to reduce risk	
			1–3 years old	4–6 years old
Small hard food	<ul style="list-style-type: none"> Pieces of raw carrot, apple or celery 	Difficult for young children to bite through and break down enough to swallow safely. Pieces can become stuck in children’s airways.	<ul style="list-style-type: none"> Grate raw carrot, apple or celery, spiralise to create vegetable or fruit spirals, slice thinly using a mandolin. Cook until soft² and cut into strips (around 4–6 cm long) that can be picked up with one hand. 	<ul style="list-style-type: none"> Prepare as for 1–3 years. Raw or cooked vegetables or fruit cut into sticks (approximately 4–6 cm long) that can be picked up with one hand.
Small round or oval food	<ul style="list-style-type: none"> Fruit with stones and large seeds or large pips like watermelon Grapes, large berries, cherry tomatoes Raw green peas 	Small round foods can lodge in children’s airways.	<ul style="list-style-type: none"> Remove stones and large seeds or large pips. Quarter or finely chop grapes, berries and cherry tomatoes to an 8mm x 8mm size or smaller (about half the width of a standard dinner fork). Cook and squash with a fork. 	<ul style="list-style-type: none"> Halve or quarter grapes, berries and cherry tomatoes Whole cooked green peas are acceptable.
Food with skin or leaves	<ul style="list-style-type: none"> Chicken 		<ul style="list-style-type: none"> Remove skin from chicken. Finely slice or chop salad leaves, spinach and cabbage. 	

² ‘Soft’ means the food can be easily squashed between your thumb and forefinger, or on the roof of your mouth with your tongue.

Food characteristics	Examples	Choking risk	Changes to reduce risk	
			1–3 years old	4–6 years old
	<ul style="list-style-type: none"> Lettuce and other raw salad leaves, spinach, cabbage Stone fruit (eg, plums, peaches, nectarines) Apples and pears Tomatoes 	Food skins are difficult to chew and can completely seal children’s airways.	<ul style="list-style-type: none"> Grate raw carrot, apple or celery, spiralise to create vegetable or fruit spirals, slice thinly using a mandolin. Cook until soft³ and cut into strips (around 4–6 cm long) that can be picked up with one hand. 	<ul style="list-style-type: none"> Prepare as for 1–3 years. Raw or cooked vegetables or fruit cut into sticks (around 4–6 cm long) that can be picked up with one hand.
Compressible foods	<ul style="list-style-type: none"> Pieces of cooked meat 	Can fit into the shape of the airway and get wedged tightly.	<ul style="list-style-type: none"> Cook meat until very tender. Choose mince, shred or chop meat to 8mm x 8mm sized pieces. 	<ul style="list-style-type: none"> Prepare as for 1–3 years; or offer thin strips of meat (around 4–6 cm long) that can be picked up with one hand or with a fork.
Food with bones	<ul style="list-style-type: none"> Fish Chicken nibbles 	Small bones present a choking risk.	<ul style="list-style-type: none"> Remove all bones. 	
Thick pastes	<ul style="list-style-type: none"> Nut or seed butter 	Can fit to the shape of a child’s airway or stick to side of airway.	<ul style="list-style-type: none"> Use smooth thick pastes sparingly, spreading thinly and evenly onto bread. 	
Fibrous or stringy food	<ul style="list-style-type: none"> Raw pineapple 	Fibres make it difficult for children to break up the food into smaller pieces.	<ul style="list-style-type: none"> Peel the skin or strong fibres off where possible. Slice these foods thinly across the grain of fibres. 	

³ ‘Soft’ means the food can be easily squashed between your thumb and forefinger, or on the roof of your mouth with your tongue.

Background information and references

The Ministry of Health's current advice on preventing choking in young children is available at www.health.govt.nz/your-health/healthy-living/food-activity-and-sleep/healthy-eating/food-related-choking-young-children

Archanbault Nicole and Coceani Paskay Licia. 2019. Unsafe chewing: choking and other risks. *The ASHA Leader*, 1 November 2019.

Baig A, Thomas H, Britigan D et al. 2019. Food choking hazards in toddlers: An interventional study. *International journal of paediatrics, neonatology and primary care*. 1 (1): 11-16 doi:10.18689/ijpn-1000104.

Be Smart, Don't Choke. British Columbia Children's Hospital/University of British Columbia Initiative URL: <https://dontchoke.ubc.ca> (accessed 4 November 2020).

Chapin M, Rochette L, Annet J et al. 2013. Nonfatal choking on food among children 14 years or younger in the United States, 2001–2009. *Pediatrics* 132: 2.

Committee on Injury, Violence, and Poison Prevention. 2010. Prevention choking among children. *Pediatrics*.125(3): 601–607 doi.org/10.1542/peds.2009-2862.

Dodrill P. 2016. Treatment of feeding and swallowing in infants and children. In M Groher, M Crary (eds). *Dysphagia: Clinical management in adults and children* (2nd ed. pp. 325–348). St. Louis, MO: Elsevier.

Dodrill P. 2016. Typical feeding and swallowing development in infants and children. In M Groher, M. Crary (eds). *Dysphagia: Clinical management in adults and children* (2nd ed. pp. 253–268). St. Louis, MO: Elsevier.

Edwards DK, Martin SM. 2011. Protecting children as feeding skills develop. *Perspectives on swallowing and swallowing disorders*. 20:30 doi.org/10.1044/sasd20.3.88.

Foltran F, Ballali S, Passali F et al. 2012. Foreign bodies in the airways: A meta-analysis of published papers. *International Journal of Pediatric Otorhinolaryngology*. 76S, S12–S19.

International Dysphagia Diet Standardisation Initiative (IDDSI)

- http://ftp.iddsi.org/Documents/FAQ_When_to_change_from_child_to_adult_L5_and_L6_p1_consumer_handout_30Jan2019.jpg ,
- [7_Regular_p1_Paeds_consumer_handout_30Jan2019.jpg](#).

Lorenzoni G, Azzolina D, Baldas S, et al. 2019. Increasing awareness of food-choking and nutrition in children through education of caregivers: the CHOP community intervention trial study protocol. *BMC Public Health* 19:1156.

Lumsden A and Cooper J. 2017. The choking hazard of grapes: a plea for awareness. *Archives of diseases in childhood*.102: 473–474. doi:10.1136/archdischild-2016-311750.

Mohammad M, Saleem M, Mahseeri M et al. 2017. Foreign body aspiration in children: A study of children who lived or died following aspiration. *International Journal of Pediatric Otorhinolaryngology*, 98: 29–31. doi:10.1016/j.ijporl.2017.04.029

Nichols B, Visotcky A, Aberger M et al. 2012 Pediatric exposure to choking hazards is associated with parental knowledge of choking hazards. *International journal of Pediatric Otorhinolaryngology*. 76(2): 169–173. doi: 10.1016/j.ijporl.2011.10.018

Ministry of Health. 2008. *Food and Nutrition Guidelines for Healthy Infants and Toddlers (Aged 0–2): A background paper (4th ed) – Partially revised December 2012*. Wellington: Ministry of Health.

Ministry of Health. 2012. *Food and Nutrition Guidelines for Healthy Children and Young People (Aged 2–18 years): A background paper. Partial revision February 2015*. Wellington: Ministry of Health.

Sidell D, Kim I, Coker T et al. 2013. Food Choking hazards in Children. *International journal of Pediatric Otorhinolaryngology*, 77(12): 1940–1946. doi:10.1016/j.ijporl.2013.09.005.

The Susy Safe project overview after the first four years of activity. (2012). *International Journal of Pediatric Otorhinolaryngology*, 76(S1): 3–11. <https://doi.org/10.1016/j.ijporl.2012.02.003>