

Editorial

Food illness is unpleasant and can be life threatening. Infants and young children are at particular risk as their immune systems are still developing. This issue of Heinz Sight looks at the role of parents, health professionals, government and food industry in keeping foods safe.

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IN THIS ISSUE

1. The Safety of Foods for Infants and Young Children
2. *Let's talk to...* Dr Karen Webb
3. Health Professional Section on heinzforbaby Website



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The Safety of Foods For Infants and Young Children

Ensuring foods are safe for infants and young children can be complex. There are many contributing factors, some of which are within the control of parents and health professionals, but many of which are not. Food safety issues are worth reviewing as parents often turn to health professionals for advice, clarification and sometimes re-assurance, particularly about the topics raised in the media.

This article will provide an overview the role of parents, health professionals, government and the food industry in ensuring foods are safe for infants and young children.

1. Role of parents

Approximately 5 million cases of food poisoning occur annually in Australia, with about one third of these due to poor food handling in the home¹. Parents can provide safe food by learning to buy, prepare and store it correctly. Infants and young children are particularly prone to food borne illnesses because their immature immune system and low stomach acid make it easier for harmful bacteria to enter their gastrointestinal tract². Food safety is one of guidelines in the Australian Dietary Guidelines for Children and Adolescents – *Care for your child's food: prepare and store it safely*³.

For excellent information on recommended food handling practices see the Dietary Guidelines for Children and Adolescents³ and visit the Food Safety Information Council (FSIC) website¹. The FSIC provides information to consumers on handling food from when it leaves the supermarket to when it is served on the plate.

Important food safety behaviours to teach children are²:-

- Wash and dry hands
 - before touching and/or eating food
 - after touching chicken or raw meat
 - after using the toilet

- after blowing their nose
- after playing with a pet
- Don't pick food up from the floor and eat it
- Don't share drink bottles

Key Food Safety Tips¹

1. Keep hot steaming food hot – at or above 60°C
2. Keep cold food refrigerated – at or below 5°C
3. Cook food properly. Always follow instructions on packs
4. Separate raw and cooked food
5. Keep the kitchen and utensils clean – wash all boards, surfaces, utensils
6. Wash hands with soap, rinse and dry thoroughly before cooking and after preparing raw food
7. If you are sick, ask someone else to cook

2. Role of Health Professionals

Health professionals have an important role in passing on to parents the latest government recommendations in age appropriate feeding. Parents need to be made aware of and reminded that for infants (<12 months)³:-

- All water given to them should be boiled
- All bottles and teats should be sterilized
- Breast feeding equipment such as pumps should be sterilized
- Manufacturer's instructions (preparation, feeding and storage) on all infant formula and foods must be followed

Parents need to be advised of “unsuitable” foods, so called because they may contain food poisoning bacteria.

These foods include:

- Uncooked and fermented meats eg. salami²
- Unpasteurized milk and milk products²
- Raw or uncooked meat, poultry, fish, shellfish, raw eggs^{2,3}
- Raw sprouts eg alfalfa, clover, radish²
- Unpasteurized fruit juices (eg freshly squeezed)²
- Unpasteurized honey for infants before 12 months of age³

Fish is an excellent food, however some large varieties contain high levels of mercury. Mercury can damage the nervous system and cause developmental delays in children. For children under 6 years, shark(flake), broadbill, marlin and swordfish should be limited to one serve (75g) per fortnight with no other fish eaten during this time. Orange roughy (deep sea perch) and catfish should be limited to one serve (75 g) per week, with no other fish eaten that week⁴. Canned salmon, sardines and tuna use the smaller fish species and so contain less mercury than the large fish above. Greenseas® products are tested for mercury and results show they fall below recommended safety limits.



Health professionals must warn parents of choking hazards, particularly in children less than 4 years of age, who lack back teeth to grind and chew lumps and who often run and play while eating. Common foods which may causing choking are:-

- Raw carrot sticks, apple pieces, celery, peas
- Whole peanuts, walnuts, almonds
- Hard sweets, mints (eg tic tacs, cool mints)
- Chicken and fish bones
- Frankfurts, sausages, boiled sweets, popcorn, grapes, corn chips

Choking can be prevented by not serving or leaving around ‘at risk’ foods, ensuring children sit while eating and always supervising eating occasions⁵.

Parents often confuse gagging with choking causing them to delay introducing textured foods. Choking is the occlusion of the airways caused by hard foods/objects and is usually silent. Gagging is a normal reflex that helps prevent choking by bringing food forward in the mouth and is quite noisy. Gagging happens when food hits the back of the throat too quickly before baby has time to swallow. Babies need to learn to co-ordinate these movements and parents encouraged to continue to gradually increase texture.

3. Role of Government

Food Standards Australia New Zealand (FSANZ) is responsible for ensuring a safe food supply for all Australians. It does this via:-

a. The Food Standards Code

In consultation with other government agencies, the food industry, health professionals, consumers and other interested parties, FSANZ develops the food standards in the Australia New Zealand Food Standards Code⁶. These cover:-

- the composition and labelling of foods
- permitted additives
- contaminant and residue limits
- microbiological limits
- food hygiene and safety standards for businesses handling food for sale or selling food (Australia only)
- primary production and processing standards for seafood, poultry, meat, dairy foods and specific cheeses (Australia only)

The Code covers all foods produced and imported into Australia. It is legally enforceable and non compliance results in a penalty.

Infant formulas must comply with Standard 2.9.1 *Infant Formula Products*, baby foods in jars/ cans and infant cereals with Standard 2.9.2 *Foods for Infants* and toddler milks with Standard 2.9.3 *Formulated Meal Replacements and Formulated Supplementary Foods*. Standard 2.9.1 and 2.9.2 defines infant as “a person under the age of 12 months”.

If a manufacturer wants to use a nutrient or other food additive not currently permitted in the Standard or change the quantity allowed or make an amendment to labelling or other clauses, an application must be made to FSANZ to justify the change in terms of health, nutrition, safety and technological need. The application goes through an assessment and consultation process before approval and the Standard changed. These processes take time, often years.

Proposals being considered are:-

- *Addition of oligosaccharides to the list of permitted nutrients in Standard 2.9.1 Infant Formula*. Oligosaccharides (prebiotics) help stimulate the growth of the healthy bacterial cultures such as bifidobacteria in the infant gut and are found in breast milk. Bacterial cultures (probiotics) are currently permitted but not prebiotics. (Refer to HeinzSight, March 2006, Number 72 for more information on prebiotics and probiotics.)
- *Review of Minimum Age Labelling of Foods for Infants* to assess the need to change the minimum age labelling on baby foods ‘from 4 months’ as currently in Standard 2.9.2, to ‘around 6 months’, to be in line with the Dietary Guidelines for Children and Adolescents⁷.
- *Consideration of Mandatory Fortification of Folic Acid*⁸ to prevent neural tube defects in infants
- *Consideration of Mandatory Fortification of Iodine*⁹ as a way of reducing the re-emergence of iodine deficiency particularly in children

b. Monitoring the food supply

FSANZ regularly checks that foods are within the microbiological, pesticide residue and chemical contaminant limits set in the Standards.

❖ Australian Total Diet Study

Undertaken every two years, it measures our intake of food additives, nutrients, pesticide residues, contaminants and other substances¹⁰. Past studies have shown dietary exposure to pesticide residues and contaminants is well below international and Australian standards and pose no risks. The last survey in August 2005¹¹ looked at the preservatives benzoates, sulphites and sorbates. Children 2 to 5 years who ate large quantities of sausages, dried apricots and cordials exceeded the safe level of sulphite intake. Sulphur containing preservatives can trigger asthma in susceptible children. High intakes of benzoate were found in children who drank large volumes of non cola soft drinks, orange juice and cordial. FSANZ is reviewing the sulphite and benzoate content of foods.

❖ Imported Food Program

FSANZ works with the Australian Quarantine and Inspection Service (AQIS) to ensure imported foods are safe and comply with the Food Standards Code. Through the Imported Food Program, Australia remains Bovine Spongiform Encephalopathy (BSE) free¹². It is also being vigilant about keeping out the avian flu virus which is currently affecting parts of Asia, Hong Kong, the Middle East and Europe.¹³

❖ Food Recalls

FSANZ, with the food manufacturer and/or supplier and State and Territory health departments coordinates the

removal of unsafe foods from the market. Over the last 15 years, the main reasons for product recalls have been¹⁴:-

- microbial contamination,
- presence of foreign matter
- poor labelling, particularly incorrect labelling of allergens.

Very few consumer recalls of infant foods have occurred. Between February 2006 to January 2007, 56 consumer products were recalled with only one an infant food – an infant formula recalled because of the presence of foreign matter¹⁵.

c. Consumer Information

FSANZ provides information on food issues and responds to “media scares”. Brochures are available on *Listeria in Foods*¹⁶ and *Mercury in Fish*¹⁷, two important food safety issues for pregnant women, infants and young children.

4. Role of Food Industry

The food industry follows the relevant Australian laws in the production and sale of foods. These include:-

- *Trade Practices Act*, which requires information on product labels and in advertising be true, substantiated and not misleading or deceptive, and
- *Australia New Zealand Food Standards Code*.

Heinz also has its own internal Global Nutrition Policy and Standards for Infant Feeding (nutrition and safety) which Heinz businesses adhere to.

a. Heinz Nurture Infant Formulas

These formulas all comply with Standard 2.9.1 *Infant Formula Products*. To ensure safe storage, preparation and use, the Standard requires labels to contain information on:-

- how formula should be prepared – one bottle at a time
- storage time, once prepared
- using the correct scoop
- using boiled water only
- discarding left over formula after feeding
- warning statements about making it incorrectly
- statement on the superiority of breast milk and the need to consult a health worker before use.



Powdered infant formula is not sterile (although strict hygiene and quality management practises are followed during manufacture) so good hygiene is essential when preparing it at home and in hospital. Two bacteria of concern are Salmonella and Enterobacter sakazakii. E. sakazakii affects the infant's brain, gut health and development and can cause death. Infants less than 2 months old, low birth weight infants and immunocompromised infants are at greatest risk¹⁸. To minimize the risk of bacterial contamination, formula should be made up just before use. Heinz recommends unused made up formula stored in the fridge be discarded after 12 hours.

b. Heinz Infant Foods

Heinz Baby Foods in cans and jars are produced in a dedicated baby food factory which is a peanut free site. No genetically modified (GMO) ingredients are used and all vegetables and fruits fall within the government safety limits for pesticide and herbicide residues. The factory including kitchens, ingredients, staff and equipment is regularly monitored to ensure microbiological safety.

Baby foods are cooked at temperatures high enough to preserve nutrients but also to kill bacteria. Before being filled into the jar/can, they are passed over magnets and metal detectors and when filled in the can/jar, passed through X-rays to ensure that no foreign matter has accidentally entered. Vacuum sealing preserves the food, so no preservatives are needed. The pop top lids and safety seals ensure the food stays safe.



Texture is important for chewing and oral development such as speech. Colour coded labels - blue (pureed), red (mashed) and green (chunky) - provide parents with an age guide as to the right texture for their baby. To guard against choking no hard whole foods such as whole sultanas or whole corn are found in baby foods. Standard 2.9.2 *Foods for Infants* requires that foods for babies under 6 months must have a texture that minimizes choking.

In line with Standard 2.9.2, Heinz baby foods do not contain:-

- honey
- colours
- preservatives

Sodium levels are always less than 100mg/100g. Sugar is not added, except to some dessert varieties for flavour. If added, it is always less than 4g per 100g of food. Because the nutritional requirements of infants are different to adults, the range and quantities of vitamins and minerals permitted in infant cereals is more restrictive and sodium significantly lower than adult cereals. Particular attention is given to labelling -age, texture, ingredients, nutrients, presence of allergens, directions for use, storage, best before dates - to ensure safe use of the product. More information on food allergen labelling is in a previous HeinzSight issue¹⁹.

Frequently asked questions about safe food from the Heinz Product Info Line

My baby doesn't eat all the contents of the jar/can of baby food. How long will it keep?

Heinz does not recommend feeding baby directly from the jar or can. Place the portion baby will eat into a clean bowl. Replace the lid on the jar containing the uneaten contents and place in the fridge. Keep refrigerated for no longer than 48 hours from the time of opening and then throw out. In the case of a can – empty the uneaten contents into an airtight container for storage in the fridge. (This information is on all cans and jars)

I occasionally “comp” my breast fed baby with formula. How long can I keep the can of formula (900g) once opened?

The formula contents must be used within 4 weeks of opening the can.

My baby doesn't finish all the formula in his bottle. How long can I keep it in the fridge?

Dietary Guidelines for Children and Adolescents³ recommend the contents of partially drunk bottles be thrown out after an hour. Reusing them is risky, as they have been sucked and heated, providing an environment for bacteria to grow.

How long can I keep made up bottles in the fridge?

Made up formula should be kept in the centre back of the fridge where it is coldest, not the door. Dietary Guidelines for Children and Adolescents³ and Standard 2.9.1⁶ recommend unused made up formula be thrown out after 24 hours. Heinz recommends discarding after 12 hours.

Conclusion.

Australia has one of the safest food supplies in the world. Parents need to be reassured about this and encouraged to focus on things within their control. These include serving healthy, age appropriate foods and textures and following recommended food handling/hygiene practises when purchasing, preparing, serving and storing foods.

Please note: Breastfeeding is best for babies. Maternal nutrition requirements increase during breastfeeding. Before introducing infant formula, always seek professional advice. Once bottle feeding has been commenced it is difficult to reverse the decision. Partial bottle feeding may also adversely affect breastfeeding. Always use infant formula as directed because improper use can affect the health of the infant. Always consider the social and financial implications before selecting a method of infant feeding.

References

1. Food Safety Information Council. www.foodsafety.asn.au
2. Food Safety Information Council. *Protecting tiny tummies. Preparing food for an infant or young child.* www.foodsafety.asn.au
3. National Health and Medical Research Council and Commonwealth Department of Health and Aging 2003. *Dietary Guidelines for Children and Adolescents in Australia.*
4. FSANZ *Advice on Fish Consumption. Mercury in Fish* www.foodstandards.gov.au
5. The Children's Hospital, Westmead. Fact Sheet. *How to prevent children choking on food.* August 2003
6. Food Standards Australia New Zealand (FSANZ). *Australia New Zealand Food Standards Code* www.foodstandards.gov.au/the-code/foodstandardscode
7. FSANZ. Proposal P274 Draft Assessment Report, *Review of Minimum Age Labelling of Foods for Infants.* 20th October 2004. www.foodstandards.gov.au
8. FSANZ. Proposal P295 Draft Assessment Report, *Consideration of Mandatory Fortification of Folic Acid.* 3rd July 2006 www.foodstandards.gov.au
9. FSANZ. Proposal P230 Draft Assessment Report, *Consideration of Mandatory Fortification of Iodine.* 18th August 2006 www.foodstandards.gov.au
10. FSANZ. *The Australian Total Diet Study* www.foodstandards.gov.au/monitoringandsurveillance
11. FSANZ. *Benzoate, Sulphites and Sorbates in the food supply. Fact Sheets 2005* www.foodstandards.gov.au/newsroom/factsheets/factsheets2005
12. FSANZ. *Bovine Spongiform Encephalopathy (BSE)* www.foodstandards.gov.au/foodmatters
13. Department of Health and Aging. *Australia's Health Emergency Influenza Pandemic Preparedness – What is the Government Doing?* www.health.gov.au/internet/wcms/publishing.nsf/Content/phd-health-emergency-govt
14. FSANZ. *Food Recall Statistics* www.foodstandards.gov.au/foodmatters/foodrecalls
15. FSANZ. *Archive consumer level recalls* www.foodstandards.gov.au/foodmatters/foodrecalls
16. FSANZ. *Listeria.* www.foodstandards.gov.au/foodmatters
17. FSANZ. *Mercury in Fish.* www.foodstandards.gov.au/foodmatters
18. Agostoni C, Axelsson I, Goulet O et al. *Preparation and Handling of Powdered Infant Formula: A Commentary by the ESPGHAN Committee on Nutrition.* *J Paediatr Gastroenterol Nutr* 2004; 39 (4): 320-322
19. Cooper J, Warren L. *Food Allergen Labelling – An Industry Perspective.* *HeinzSight* 2005 November 2005, Number 71

Let's talk to...

Heather Ferguson, Heinz Dietitian/Nutritionist talks to **Dr Karen Webb.**

Karen is a nutritionist and senior lecturer at the University of Sydney, School of Public Health. Her recent research includes a study of toddler's food intake.

Heather: *What did your recent study¹ reveal about what Aussie toddlers are eating?*

Karen: Nearly a third of the energy or calories that toddlers aged around 18 months ate came from 'extra' foods eg hot chips, cordial, soft drink, sweet biscuits and doughnuts. Every child except one, had consumed these foods during the 3 day study period. The more 'extras' eaten, the less healthy foods were eaten. Over two thirds of children had consumed sweetened drinks during the study period.

Heather: *Is this surprising to you?*

Karen: Yes, it is. During toddlerhood, parents try hard to give healthy food so their kids get a good start. Children at this age are not as influenced by TV ads or peers, so it is usually easier to control what they eat and drink. Yet, parents' good intentions don't seem to be borne out in the dietary intakes shown in our data.

There are various reasons why things come unstuck. Firstly, parents lose track of how much of these foods the kids are eating through the day. Secondly, this is the time when fussy eating may begin. Parents can be at their wits end trying to get their toddler to eat something, and are tempted to use these foods as rewards for "cleaning their plate" or other "good" behaviour. Thirdly, parents often worry (usually needlessly) about whether their children are growing well enough or fast enough and tend to believe (usually erroneously) that they are not eating enough.

Heather: *What are the implications of this for toddler's future health?*

Karen: Having lots of 'extra' foods at this age, is not a great start. It puts children at risk of becoming overweight with its associated health problems such as diabetes, heart disease, cancers and arthritis. Toddlers also fill up quickly, so these less nutritious foods replace healthier or 'core' foods like meat, fish, vegetables, fruits, dairy products and cereals that provide important nutrients for growth and development. Children who eat less of the core foods are at greater risk of low intakes of calcium and iron.

Heather: *How can parents manage their toddler's desire for 'extra' foods?*

Karen: Give them in small amounts and infrequently. 'Extra' foods are not every day foods. Be firm – don't keep them in the house. Set a good example by eating well and develop non-food 'treats' such as outings, gifts, 'sleep-overs'.

Heather: *What are your concerns as a result of this information?*

Karen: Healthy eating is fundamental to better health throughout life. Daily consumption of high energy (calorie), low nutrient 'extra' foods by very young children exceeds the Australian Guide to Healthy Eating recommendations (27% of energy vs 10-20%) and may lead to poor dietary habits and obesity in the longer term. Parents seem unaware that all children are at risk of becoming overweight. By 5 years of age, about 15% of children will already be overweight, and by 8-10 years 25-30% will be overweight.

Reference

1. Webb KL, Lahti –Koski M, Rutishauser I et al. *Consumption of 'extra' foods (energy –dense, nutrient poor) among children aged 16-24 months from western Sydney, Australia.* *Public Health Nutrition* (2006); 9(8):1035-1044

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Health Professional Section on heinzforbaby Website.

Visit www.heinzforbaby.com.au, click on Health Professional and register a user name and password. You can then access past and present issues of Heinz Sight; ingredient, nutrient and allergy information on Heinz infant formulas and baby foods; brochures and other up to date information on infant feeding.

The Heinz Product Info Line 1800 633 333 provides information to callers on Heinz Baby Food products.

All callers are asked to contact the child health service in their state or territory for individual advice.

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