

HEALTHY EATING FOR TODDLERS

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A varied and nutritious diet, a daily supplement of vitamin D and good eating habits are essential for toddlers' health, growth and development.

This factsheet is the first in a series on toddler nutrition and development, that aims to give a general overview on healthy eating for toddlers aged between one and three years. Subsequent factsheets will explore specific topics in more detail, such as combining food for a balanced diet, how to deal with picky eaters and, food allergies and intolerances.

LEARNING POINTS

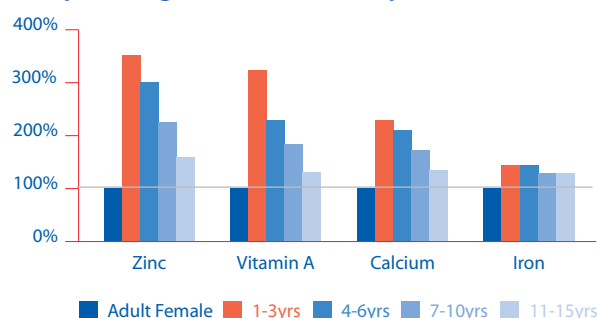
- 1** Toddlers need a nutritious diet and a daily supplement of vitamin D.
- 2** A healthy balance of nutrients will be supplied by combining foods as shown in factsheet 1.2.
- 3** Three meals of toddler-sized portions and two to three nutritious snacks per day should provide the nutrients and energy they need.
- 4** Toddlers should have six to eight drinks per day to ensure adequate hydration.
- 5** Toddlers benefit from a daily routine of meals and snacks based around their sleeping pattern.
- 6** Foods to avoid are: large quantities of salty foods, sugary and acidic drinks, drinks with sweeteners, raw eggs that do not have the red lion brand, raw shellfish, some large fish and whole nuts.
- 7** Eating in social groups and praising toddlers when they eat well will encourage them to enjoy their meals.

HEALTHY EATING FOR TODDLERS

Toddlers' nutritional requirements

Toddlers' nutritional requirements differ quite markedly from those of older children and adults. Rapidly growing toddlers require more nutrients in each mouthful of food than adults. A toddler's daily energy requirement is around twice that of an adult (72 kilocalories (kcal) per kilogramme (kg) of bodyweight compared to 30–35 kcal per kg of body weight). Similarly toddlers need higher amounts of nutrients per kg of their body weight than adults (see figure 1).

Fig. 1 Nutrients needed per kg body weight as percentage of adult female requirements (RNI)*

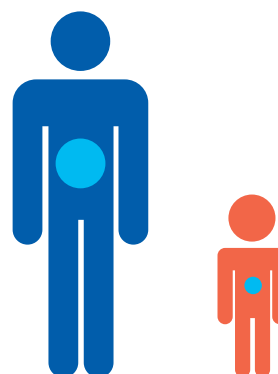


*RNI = Reference Nutrient Intake

Calories (Energy)

To consume these relatively large amounts of calories it is important to give toddlers 2–3 nutritious snacks in addition to three meals because toddlers' stomachs are only about one third the size of an adult stomach (see figure 2)^{1,2}.

Fig. 2 The difference in stomach volumes between an adult and toddler



Nutrients

By making up meals and snacks with nutritious foods the high nutrient needs of toddlers can easily be met. The diet should include whole milk and milk products and a mixture of some high fibre and some low fibre foods.



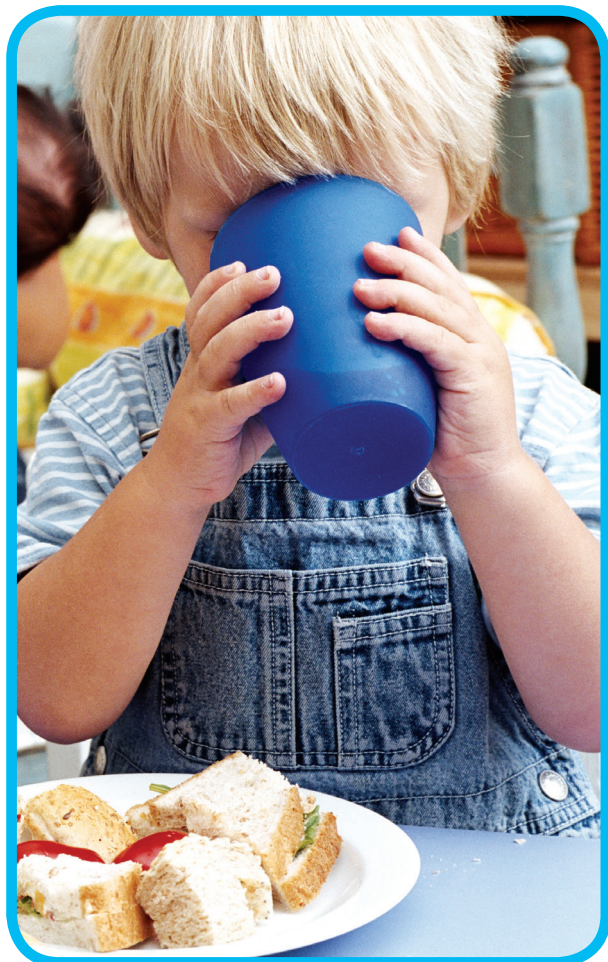
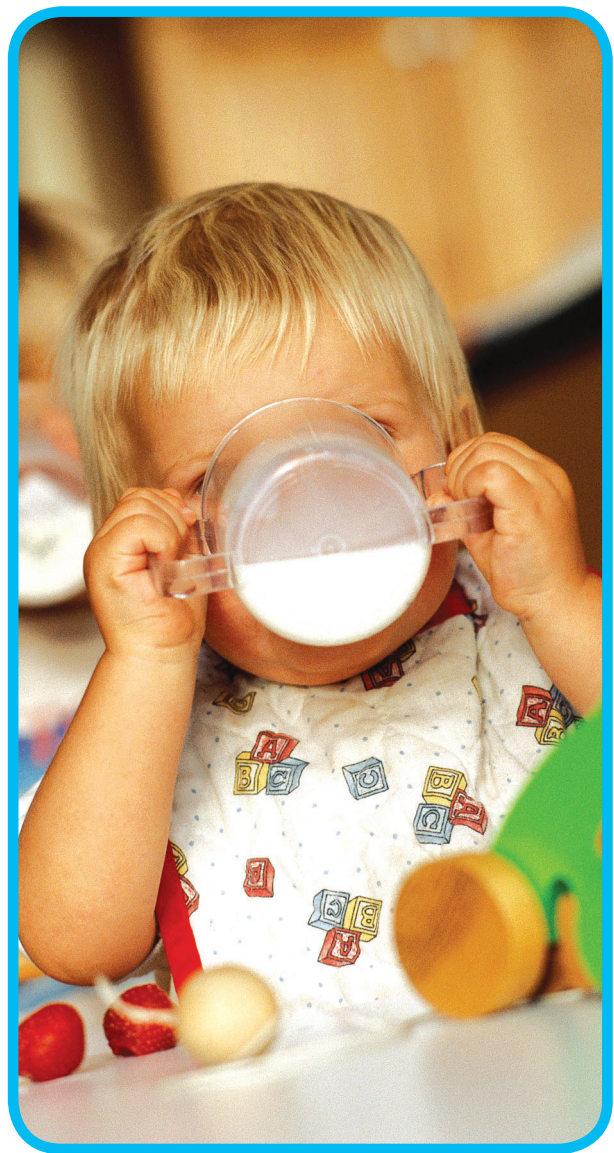
MILK

Toddlers need less milk than they did in their first year of life. About three drinks of 120mls (4oz) per day are enough³. They need less if they are eating yogurt and cheese. More milk than this may suppress appetite and so decrease their intake of other foods, most of which are higher in iron. Toddlers who drink large amounts of milk are at risk of iron deficiency anaemia in their second year.

Milk from baby bottles should be discontinued by the age of one year. Thereafter milk and other drinks should be given in beakers or cups, because continued bottle sucking can become a difficult habit to break⁴.

Although all types of cows' milk contain the same amounts of protein, calcium and other nutrients, semi-skimmed milk has less fat and vitamin A than whole milk. Therefore all toddlers should drink whole (full fat) milk until they are at least two years old and can continue throughout childhood as vitamin A supports the immune system.

After two, toddlers that are eating well can change to semi-skimmed milk but this is not necessary and they will benefit from higher amounts of vitamin A if they continue with whole milk⁴. Skimmed milk should not be given to children under five years old^{3,4}.



OTHER DRINKS

Toddlers should be offered around six to eight drinks per day from a beaker or cup (more may be needed in very hot weather or when they are very active). This will prevent dehydration and may reduce the severity of any constipation. Milk and water are the best drinks to give as they do not harm teeth when taken from a beaker or cup. [See factsheet 1.5](#)

All sweet drinks including fruit juices and smoothies are high sugar drinks and as they are acidic they dissolve tooth enamel. Squashes with sweeteners are also acidic. If given any sweet drinks should be well diluted and limited to mealtimes only.

Bottles and reservoir feeding cups should not be used because they bathe the gums and sensitive milk teeth in acid for longer which increases the risk of dental caries and enamel erosion.

Tea and coffee reduce iron absorption and should not be given to toddlers⁴.

EATING IN SOCIAL GROUPS WITH PARENTS AND OTHER CHILDREN

Toddlers learn by copying other children and adults, so eating in a social group can be an important part of learning to like new foods. Families should eat together as often as possible and parents should eat the foods that they want their children to eat. Toddlers may also learn to eat new foods at nursery or in extended family groups.

Not only do toddlers copy other people's eating behaviours, they also respond to others' reactions to them at a mealtime. Praising toddlers when they eat well will encourage them to enjoy their food. Attending to toddlers only when they are refusing food may increase problem eating behaviour.

See factsheet 2.1 and 2.2



REGULAR PATTERN OF MEALS & SNACKS

Toddlers benefit from a routine of regular meals and snacks around their daytime sleeps. Toddlers do not eat well if they are tired or over-hungry. Snacks evenly spaced between meals will help to avoid the frustrations of being over-hungry.

Toddlers can be given both a savoury and a second fruit based course at meals. This gives two opportunities for sufficient nutrients to be consumed and increases the variety of foods the toddler is eating. A fruit based pudding can be given once a day and should not be used only as a reward for eating the savoury course.



TEXTURES AND FLAVOURS

Toddlers have individual tastes regarding the flavour and texture of foods. Some like their food bathed in sauces while others prefer it dry. Some like each food kept separate from the others on the plate. Many do not like stringy meat or foods that are difficult to chew. It is important to respect a child's tastes and, where necessary, to offer alternative foods from the same food group.

Tastes often change overtime, so it is important to keep offering a toddler all the foods the family eats.

NUTRIENTS FOR HEALTH, GROWTH AND DEVELOPMENT

A wide variety of nutrients ensures the body grows, develops normally and continues to function well. Because toddlers are particularly prone to respiratory infections it is important to provide the full range of nutrients, which will help to maintain their immune system. [See factsheet 1.2](#) These include:

- Water
- Protein
- Fat including omega 3 and 6 fatty acids
- Carbohydrates
- Fat soluble vitamins A, D, E and K
- Water soluble vitamin C and the B vitamins
- Minerals: calcium, copper, fluoride, iodine, iron, potassium, selenium, sodium, zinc
- Fibre including prebiotics
- Other phytochemicals which are also antioxidants

[Factsheet 1.1i](#) explains the functions of these nutrients and which foods provide them. A diet containing foods from each of the five food groups, in the correct combinations, will automatically provide sufficient amounts of each nutrient.

[See factsheet 1.2](#)

However there is one exception to this: vitamin D – a supplement of 10 micrograms per day is recommended for all children to prevent rickets and ensure normal growth and development³. This is especially important for children with dark skins as they are more vulnerable to vitamin D deficiency.

The five food groups are:

1. Bread, rice, potatoes, pasta, and other starchy foods
2. Fruit and vegetables
3. Milk, cheese and yogurt
4. Meat, fish, eggs, nuts and pulses
5. Oils, butter and fat spreads

FOODS THAT MAY HARM

Salt intake should be kept to a minimum. Limiting sodium, which is part of salt, will help to minimise any health problems due to salt later in life, and may help prevent a rise in blood pressure with age⁵. It is better to flavour foods with herbs and spices than with salt. Processed foods, which are high in sodium and salt should also be avoided [See factsheet 1.9](#) and salty snacks such as crisps should be given less than once per week.

Additives and sweeteners used in food are all tested for safety. However large amounts of sweeteners, often found in drinks, should be avoided if possible.

Eggs that do not have the red lion branding and shellfish should be well cooked as they can cause food poisoning in toddlers if eaten raw or partially cooked. Red lion brand eggs are safe to be eaten lightly cooked.

Large fish that live for many years, such as, swordfish, marlin and shark, may contain high levels of mercury and should be avoided⁶.

Whole nuts should not be given to toddlers and young children under five because of the risk of choking on them⁴.

References and Further Reading

1. Janet MacGregor: *Introduction to the Anatomy and Physiology of Children*. London: Routledge; 2000.
2. Richard S. Snell: *Clinical Anatomy for Medical Students*. 4th edition. London: Little Brown; 1992.
3. Department of Health: *Weaning and The Weaning Diet. Report of the Working Group On The Weaning Diet of the Committee on Medical Aspects of Food Policy. Report on Health and Social Subjects 45*. London: HMSO; 1994.
4. Department of Health: *Birth to five. Your complete guide to parenthood and the first five years of your child's life*. London: Department of Health Publications; 2004.
5. Consensus Action on Salt & Health (2005) http://www.hyp.ac.uk/cash/information/salt_intake.htm
6. Food Standards Agency (2005) <http://www.eatwell.gov.uk/agesandstages/children/yrtoddler>

Other Sources of Information

1. Wardley B & More J: *365 Recipes for Babies, Toddlers and Children. From first foods to starting school*. London: Duncan Baird Publishers; 2004
2. Health Education Board for Scotland (2001) http://www.hebs.com/researchcentre/pdf/infant_nutrition_Evidence_into_action.pdf
3. Scottish Executive (2005) <http://www.scotland.gov.uk/Publications/2005/03/20897/55165>
4. The Caroline Walker Trust (2005) <http://www.cwt.org.uk/>

HEALTHY EATING FOR TODDLERS GUIDANCE & TIPS FOR PARENTS



A healthy diet for a toddler is different to that for an older child or an adult because toddlers need a more nutritious diet than that recommended for others

- Use some butter, margarine and oils in cooking.
- Give a mixture of white and some wholemeal/wholegrain breads and cereals because just wholegrain foods are too filling for toddlers.
- Toddlers can have a small fruit based pudding or some cake or biscuits with fruit for a second course once a day for some puddings.



Toddlers will get adequate amounts of all the nutrients and energy they need if their diet is based on combining foods from the five food groups along with a daily vitamin D supplement

- The nutrients in a healthy, balanced diet are protein, fat, carbohydrate, vitamins, minerals, omega 3 and 6 fats, and other protective plant compounds, fibre and fluid.



Toddlers will eat best when they have a routine of three meals and two to three snacks per day planned around their sleeping pattern

- Eat with your toddlers and praise them when they eat well, as this will encourage them to enjoy their meals.



Give your toddler between six and eight drinks per day to ensure adequate hydration- that is, a drink with each meal and snack

- More may be needed in very hot weather or if they are particularly active.
- Use beakers and cups instead of bottles.
- The best drinks to give are water or milk.
- Avoid all sweet drinks including fruit juices and fruit smoothies as they are high sugar drinks.
- Large quantities of juices may reduce your toddlers' appetite or cause loose stools.
- Do not give tea, coffee or fizzy drinks to toddlers.



Foods that may cause harm

- Keep very salty foods to a minimum. Limit crisps and other salty snacks to less than once per week.
- Sugary, acidic drinks such as squashes and 'fruit juices' can cause tooth decay if drunk frequently between meals.
- Do not give raw eggs or raw shellfish to toddlers as they may cause food poisoning. Make sure eggs are well cooked right through. Only red lion eggs can be safely eaten lightly cooked.
- Do not give, swordfish, marlin or shark to toddlers, as they may contain high levels of mercury. Limit smaller oily fish to twice a week for girls and four times a week for boys. e.g. sardines, mackerel, salmon, trout, eel.



Do not give toddlers whole nuts due to risk of choking

- Only offer nuts that are chopped or ground as a nut butter.



Give toddlers a vitamin A & D supplement each day

- This is for normal growth and development and to prevent rickets.
- It is especially important for fussy eaters, toddlers of Asian, African and Middle Eastern origin and those living in the northern areas of the UK.
- Vitamin drops usually include vitamin C which helps with iron absorption.



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from pregnancy to preschool

Supported by an unrestricted educational grant
from Danone Nutricia Early Life Nutrition