



Feeding Toddlers and Preschool Children

1-5 Year Olds

Section 4

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1-5 Year Olds

Toddlers and preschool children between 1 and 5 years have high nutrient requirements relative to their size, as they are still undergoing rapid growth and development and usually very active. Good nutrition is important for children of this age:

- To ensure that they are getting a balanced varied diet that meets their nutrient requirements
- Dietary habits adopted in the early years will be taken forward into later childhood and adult life
- Continue to develop self feeding skills
- Eating together helps children develop social skills
- Helps prevent childhood obesity

This section covers:

- **Nutritional requirements of 1-5 year olds**
- **Food safety**
- **Dental health**
- **Common feeding challenges**
- **Helps reduce issues of fussy eating**



Nutritional requirements of 1-5yr olds

Toddlers and pre-school children have high nutrient requirements relative to their size as they are still undergoing rapid growth and development and are usually very physically active.

Their average energy requirements are:

Age	Kilo calories / day	
	Boys	Girls
1-3 years	1230	1165
4-6 years	1715	1545

Ref: Dietary reference values (DH, 1991), updated 2011.

A healthy balanced diet for 1-5yr olds is based on the 4 food groups as each group provides different key nutrients.

Children's nutritional requirement for sugar and fat are contained naturally in milk, fruits and vegetable and some cooking methods and will be present in recipes and food items that make up a balanced diet. Homemade desserts, yogurts and breakfast cereal for example will contain sugar and fat but it is important to check the sugar content in these.

It is the sugar in snacks and drinks e.g. sweets, biscuits, cake, squash, flavoured water/milk that will cause children to consume much more sugar than they need which is why they are not recommended in a child's diet.

To achieve the nutritional requirements children should be encouraged to enjoy different foods. To achieve this they should be provided with foods from each of the four food groups every day:

- Bread, rice, potatoes, pasta and other starchy foods
- Fruit and vegetables
- Milk and dairy foods
- Meat, fish, eggs, beans and other non-dairy sources of protein

By choosing food from each food group every day the correct balance of nutrients will be provided. However, a child's requirement for vitamins A and D will only be met by taking a supplement (see page 76)



Food groups	Food included	Main nutrients	Recommended servings and daily portions
Bread, rice, potatoes, pasta and other starchy foods	Bread, chapatti, breakfast cereals, rice, couscous, pasta, millet, potatoes, yam, and foods made with flour such as pizza bases, buns, pancakes	Carbohydrate B Vitamins Fibre Some Iron Zinc Calcium	Serve at each meal and some snacks 3-4 portions each day
Fruit and vegetables	Fresh, frozen, tinned and dried fruits and vegetables	Vitamin C Carotenes which are a form of Vitamin A Fibre Zinc Iron	Serve at each meal and some snacks 5+ portions each day
Milk and dairy	Cows milk, goats milk, milks, yoghurts, cheese, calcium enriched soy milks and desserts, tofu	Calcium Phosphorus Protein Iodine Riboflavin	3 portions each day
Meat, fish, eggs, beans and other non-dairy sources of protein	Meat, fish, eggs, nuts and pulses e.g. lentils, dhal, chick peas, hummus, kidney beans and other similar starchy beans	Iron Protein Zinc Magnesium B Vitamins Vitamin A Omega 3 & Omega 6 fats Omega 3 long chain fatty acids: EPA and DHA from oily fish	2-3 portions each day

The wider the variety of foods eaten within each food group the better the balance of nutrients provided.

Think of sugar portions in terms of teaspoons. The following shows the maximum recommended daily number of teaspoons children should consume in a day.

9-24 months: a maximum of 6 teaspoons per day

2-3 years: a maximum of 7 teaspoons per day

3-5 years: a maximum of 8 teaspoons per day

When checking food labels remember 1 teaspoon = 5g of sugar



Bread, rice, potatoes, pasta and other starchy foods

- This group provides a good source of energy, carbohydrates, fibre and B vitamins
 - Starchy foods should make up about a third of the diet
 - Wholegrain varieties of bread and cereals such as rice and pasta provide fibre and can be gradually introduced into the diets of children from the age of 2 years
 - Aim for a variety of wholegrain and white breads and cereals across meals and snacks each week
 - Too much fibre in younger children can be very filling and can also bind with certain minerals thereby reducing their absorption
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Fruit and vegetables

- Fruit and vegetables are important sources of many nutrients including vitamin A and C, zinc, iron and fibre
 - Ensure a variety of fruits and vegetables are offered at every meal and with snacks
 - Fruit and vegetables can be fresh, frozen or tinned. If using tinned vegetables check that they do not have added salt and only use fruit tinned in natural juice
 - Dried fruit and fruit juice (100% unsweetened diluted 1 part juice to 1 part water) can be included but only at meal times as they contain sugars that may damage teeth
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Milk and dairy foods

- Foods from this group are a good source of energy, protein, calcium and vitamin A
- Full fat cows milk should be given until a child is at least 2 years old and semi-skimmed milk can be introduced from this age. Skimmed milk is not suitable as the main drink for children under 5 years of age as it does not provide enough energy and contains very little vitamin A
- Drinks of milk should be offered in cups, feeding bottles should be discouraged
- Milk or dairy foods should be provided at 2-3 meals and snacks each day
- Children should have three servings per day of these foods. A serving for 1-5 year olds is:
 - Cup of milk (120ml/3-4 oz)
 - Cheese in a sandwich or sauce, or on pasta or pizza
 - A small pot yoghurt (about 120g)

Healthy Early Years settings in B&NES are advised to only offer water or milk.



Meat, fish, eggs, beans and other non-dairy sources of protein

- Foods from this group provide protein, iron and zinc
- This food group is the richest source of iron and a significant number of children become anaemic from not having enough food from this group
- If children do not eat meat it is important they receive two or three portions per day of an alternative source of protein, for example, beans chickpeas, lentils and dhal. Processed meat alternatives should not be offered more than once per week
- Oily fish provide long chain omega 3 fatty acids, vitamin D and A however, should not be served more than twice a week as oily fish can contain dioxins and polychlorinated biphenyls
- Shark, swordfish and marlin should be avoided because of their mercury content
- Ground and chopped nuts and nut butters can be offered but whole nuts should not be given as they can cause choking or severe lung inflammation if inhaled



Foods and drinks high in fat and/or sugar

- These energy dense foods should be limited to small amounts
- Puddings that are made with cereals, milk and fruit can be included in a healthy balanced diet for young children but these should only be served with meals and not as snacks
- Fats and oils are needed in cooking and can be used as spreads on bread
- Use fruit and fruit purée to sweeten dishes

Salt and sodium

The Food Standards Agency recommends that salt and sodium should be limited to less than:

- **2g of salt (0.8g sodium) per day for 1-3 year olds**
- **3g of salt (1.2g sodium) per day for 4-6 year olds**

Note: Salt and sodium are not the same. If a food label only provides an amount for sodium, to convert to salt, multiply the amount of sodium by 2.5, for example 0.4g sodium = 1g salt.

This is hard to estimate as many foods naturally contain some sodium. But in practice it means:

- Salt should not be added to food at the table
- Herbs and spices rather than extra salt can be used to flavour food
- If using tinned foods choose varieties without added salt or sugar
- Avoid the amount of processed foods offered as these usually have a higher salt content than home cooked foods
- Limit salty snacks like crisps and corn snacks. As well as being high in salt, they are generally high in fat and low in key nutrients.

Vegetarian and vegan diets

Vegetarianism can be divided into four main groups:

- Partial vegetarian - red meat and offal are excluded
- Lacto-ovo vegetarian - red meat, offal, poultry and fish are excluded
- Lacto-vegetarian - red meat, offal, poultry and fish and eggs are excluded
- Vegans - all animal products including eggs and cows milk are excluded

Vegetarian diets

The main nutrient at risk for 1-5 year olds that do not eat meat is iron. Iron from vegetarian foods is less well absorbed than from meat and fish. Omega 3 fat may be low in diets that exclude all fish.

Nutritional requirements for growth and development can be achieved by:

- Offering 3 servings per day of the vegetarian protein source such as eggs, nuts and pulses
- A food high in vitamin C should be offered at each meal to increase the iron uptake from the plant based foods
- Choosing breakfast cereals with added iron
- Foods that are rich in iron include: dark green leafy vegetables, beans, apricots and iron fortified bread and cereals
- Increasing Omega 3 fats from plant sources for those excluding fish by using:
 - Rapeseed oil for cooking
 - Walnut, soya or olive oil for dressings
 - Chopped walnuts in place of other chopped nuts
 - A supplement of omega 3 fatty acids may be considered

Vegan diets

Vegan diets are not recommended for young children as they are unlikely to provide all the energy and nutrients required in adequate amounts. This is because these children may not be able to eat enough vegan food, which is bulky and high in fibre, to obtain all the energy (calories) and nutrients they need for growth and development.

A child on a vegan diet should always be referred to a dietitian for assessment to ensure that the foods consumed by the child contain all the essential nutrients.

Calcium enriched soya milk can be used as a substitute for dairy foods. However, an extra supplement may be needed for the key 'at risk' nutrients which are iron, zinc, calcium and vitamin B12.

Vegan mothers who are breastfeeding should also have their diets assessed as they may need a supplement of calcium, vitamins D and B12.



Diets more restricted than a vegan diet e.g. Zen Macrobiotic, Fruitarian and raw food diets, **are not recommended** for young children as they cannot provide all the energy and nutrients for growth and development.

Vitamin supplements

The Department of Health recommend that all young children are given a vitamin supplement containing vitamins A & D as they have high requirements for both these vitamins.

The Healthy Start Scheme replaced the Welfare Food Scheme in November 2006. Children whose families are receiving the Healthy Start vouchers can use them to purchase cows milk, fruit and vegetables as well as vitamin drops containing A, C and D.

HEALTHY START



Drinks

Drinks should be offered in open cups or if using a lidded cup it should be a free-flowing one. Children should be offered 6-8 drinks (of 100-120mls) per day to provide adequate fluid. They may need more drinks in very hot weather or after extra physical activity as young children can dehydrate quite quickly.

Water and milk are the safest drinks to offer between meals as they do not cause tooth erosion or increase the risk of dental decay. Up to 3 drinks per day can be milk but this should not be exceeded

Pure fruit juices do provide nutrients from fruit but they contain large amounts of the fruit sugar, fructose, and they are acidic. Both this sugar and acid can cause dental decay. To lower the acid and sugar content fruit juices should be given diluted (1 part juice to 1 part water) and only be given at meal times to lessen the risk of dental decay. NB. Healthy Early Years Settings are advised to only offer water or milk.

Avoid all soft drinks like squashes, fizzy drinks, energy drinks and flavoured waters, even those saying 'sugar free', 'no added sugar' or 'reduced sugar'. They can contribute to tooth damage and provide little nutritional value.

Avoid tea, coffee, cola or any other drinks with added caffeine they are not recommended for young children as caffeine is a stimulant. Tea and coffee contain tannins and can interfere with iron absorption.



Mealtime routines

With their small stomachs but high energy and nutrient needs, toddlers should be offered food at 3 meals and 2 nutritious snacks per day. Advise parents to establish a daily routine with meals and snacks at regular times, evenly spaced throughout the day, around any daytime sleeps.

- Mealtimes should be a happy social occasion
- Where possible parents and or carers should eat with children
- Children should be sitting comfortably and utensils should be appropriate to the child's age
- If the family sit at a table to eat, the chair and table should be at the right height for children to eat
- Allow plenty of time for the meal, but ensure it is not prolonged beyond about 30 minutes
- Sweets should not be used as bribes or treats
- Encourage self-feeding as much as possible. Toddlers up to about 3 may still need help to eat
- Accept mess as a normal part of the feeding process
- Avoid distractions like TVs, toys or games consoles
- Give praise for trying new foods
- Ignore food refusal
- Keep language positive
- Sticker rewards for 'eating all your meal' can be unhelpful in encouraging self regulation of food



Food Safety

Choking

Children under 36 months are more at risk from choking than older children, however, children above this age can also be at risk. As children get older, they put fewer non-edible items into their mouths but food risks are present at any age.

To minimise the risk:

- Advise parents that children should not run around or play whilst eating, and that all mealtimes are supervised. Young children should be seated and in a calm atmosphere when eating
- Advise that foods are cut up into small lengths rather than round pieces e.g. sausages, which can act as a 'plug'. Grapes, cherry tomatoes can be cut into quarters



Specific foods and ingredients

The Food Standards Agency currently advise that the following colours and preservatives should be avoided as they may affect children's behaviour:

Colours:

Tartrazine	E102
Ponceau	E124
Sunset yellow	E110
Carmosine	E122
Quinoline yellow	E104
Allura red	E129

Preservative:

Sodium benzoate	E211
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The foods that present themselves time and time again in choking incidents are:

- Sweets
- Popcorn
- Grapes and cherries
- Hard fruit
- Hard vegetables – especially peas, celery, carrots
- Hot dogs / sausages
- Burgers
- Chunks of cheese
- Meatballs
- Peanuts and large nuts and seeds (crunchy peanut butter also can cause a risk)

Dental Health

Dental caries are common in under-fives and are mainly due to poor dental health care in the home. The NDNS Dental Survey (Hinds and Gregory 1995) found that 30% of 3½ - 4 ½ year olds had some experience of dental decay and this was higher in children:

- From lower socio-economic groups
- Whose teeth brushing began at a later age
- Whose teeth were brushed less frequently than twice a day
- Who always brushed their own teeth compared to those who had an adult helping them
- Who used a bottle, dinky feeder or dummy
- Who more frequently ate sugar and confectionery
- Who more frequently drink sugary drinks i.e. squash & carbonated drinks
- Who had a drink containing non-milk extrinsic sugars in bed at night

Sugar and acid in food and drinks cause dental decay. Limiting the quantity and frequent consumption of these products can reduce the risk of decay. Decay (caries) is the breakdown and wearing away of enamel caused by constant exposure to acid that is either contained in food and drink or produced by bacteria in the plaque on teeth.

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To reduce the risk of dental decay

- Limit the consumption of food and drink containing sugar and/or acid at meal times only
- Water and milk are the only safe drinks to give between meals should be given in an open or lidded beaker
- Saliva has a protective effect on teeth but saliva production reduces during sleep. Hence sweet or acidic drinks given at bedtime are very harmful. Most harmful are sweet and acidic drinks given in a feeding bottle.

A child should never be left alone sucking on a bottle

- If any confectionery or chocolate is included it should only be offered at the end of a meal and not be given between meals

Medicines

Children who require frequent and multiple medications are particularly at risk of dental decay and associated dental treatment. Effective prevention of dental disease should therefore be a priority. Sugar free medicines should be used where possible.

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Brushing teeth

Brushing teeth reduces the plaque coating on teeth that contains the bacteria that converts sugar into acid. Brushing should start either at the introduction of solid foods around six months or if sooner, as the first tooth appears to break through. Cleaning teeth last thing at night and at one other time in the day should be encouraged and supervised by an adult until the child is at least 7 years old.

Children under the age of 3 years

- Use a toothpaste containing no less than 1000ppm fluoride
- Apply a smear of paste (a thin film covering no less than three-quarters of the brush)
- Once brushing is completed wipe away the froth with a cloth until spitting can be encouraged
- Do not rinse
- Never allow toothpaste to be eaten or licked from the tube
- For maximum control of caries a toothpaste containing 1,350–1,500ppm fluoride can be used, but the advice above must be followed.

Children over the age of 3 years

- Use a toothpaste containing no less than 1000ppm fluoride
- Apply a pea-size amount to the brush (a blob covering 3 tufts of filaments)
- Once brushing is completed spit out excess froth and paste
- Do not rinse
- Never allow toothpaste to be eaten or licked from the tube
- For maximum control of caries a toothpaste containing 1,350–1,500ppm fluoride can be used, but the advice above must be followed

Registering with a dentist

All infants and young children should be registered with a dentist and have regular checkups.

To find a dentist in B&NES contact

- **NHS Direct - 0845 46 47**
- **NHS Dental Helpline - 0845 120 66 80**
- **NHS Choices - <http://www.nhs.uk>**
- **NHS B&NES - <http://www.banes.nhs.uk>**



Iron deficiency anaemia

Iron deficiency is a common nutritional problem of early childhood (Gregory 1995). It is not unique to any population although its incidence tends to be higher in inner city areas and amongst Asian populations (Lawson 1998).

Children 1-5 years old are at high risk of iron deficiency anaemia if they:

- Were changed to cows milk as their main drink before 12 months of age
- Consume excessive amounts of cows milk - frequently from a bottle (an excess is more than 600mls or 1 pint per day)
- Eat an unbalanced diet with excess low nutrient foods and eat too little good dietary sources of iron such as meat, fortified cereals and vegetables

Symptoms of iron deficiency include:

- Poor appetite
- Lethargy
- Poor weight gain
- Developmental delay
- Frequent infections

Iron deficiency is diagnosed from a blood test.

The WHO definition of iron deficiency anaemia is a haemoglobin of **<11.0g/dl**

Preventing iron deficiency

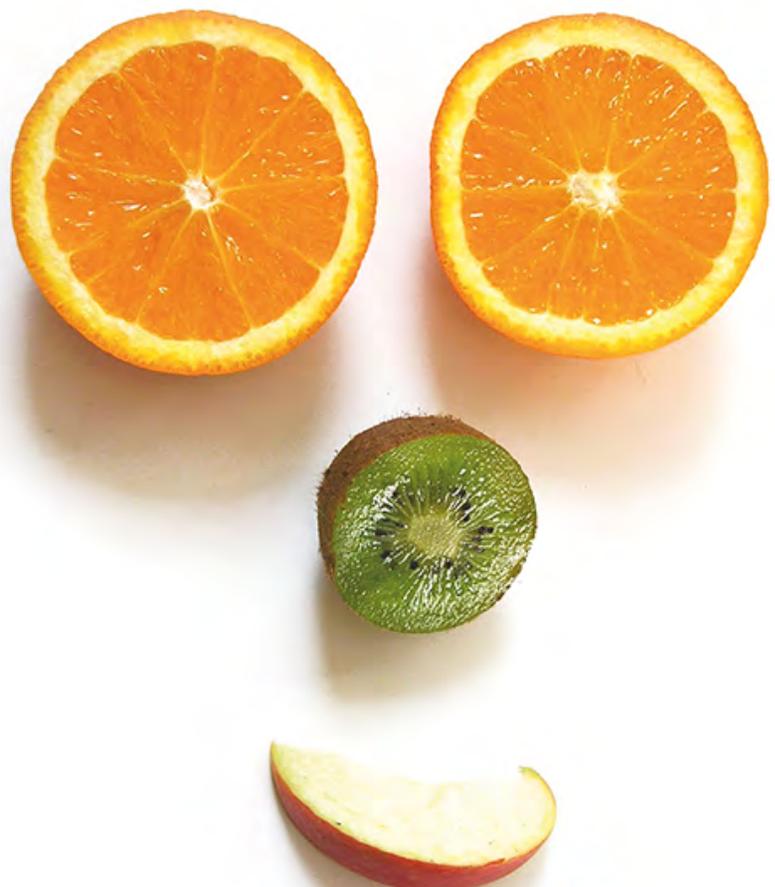
Good dietary sources of iron should be included and introduced into the diet during the early stages of weaning. Food containing haem iron that is easily absorbed are red meat and oily fish they are the richest source of iron.

A food high in vitamin C should be offered at each meal, this will increase the iron uptake from the plant based foods. Alternatively a drink rich in vitamin C such as diluted pure fruit juice (1 part juice to 1 part water) could be provided with meals.

Dairy products such as milk, cheese and yogurt limited to 3 servings per day.

Tea should be avoided as it contains tannin, which decreases the absorption of iron from food.

In some circumstances it may be necessary for a medical practitioner to prescribe an iron supplement.



Obesity

Obesity in 1-5 year olds is becoming increasingly prevalent. The National Child Measurement Programme in B&NES for 2009/10 revealed that of 4-5 year olds measured:

- 15.8% were overweight
- 8.4% were obese

In most cases the cause of the obesity will be multi-factorial and a single solution will not suit every family.

Causes of obesity in under fives

The genes, ethnic group and environment of a child all contribute to their risk of obesity. However for most under fives poor eating patterns and low activity levels are the main reason for being overweight. If the food energy (calories) eaten is in excess of the energy expended for physical activity, growth and development, then the excess energy is stored as body fat (adipose tissue).

Medical causes are very rare and include:

- Endocrine disorders often signalled by short stature such as hypothyroidism, Cushing's syndrome, growth hormone deficiency and leptin deficiency
- Chromosomal disorders Such as Prader-Willi syndrome

Risk factors for developing obesity (Reilly et al. 2005)

- Parental obesity of one or both parents
- High birth weight and/or rapid weight gain in the first year
- Sedentary behaviour:
 - more than eight hours watching TV per week at 3 years
- Less than ten hours sleep per day at three years



Preventing and treating obesity in under fives in B&NES

There is currently limited evidence of what works in terms of treatment but primarily there has to be engagement of the whole family. B&NES Shaping Up strategy was re-launched in 2011, identifying a governance structure to deliver action on children's healthy weight.

A children's healthy weight pathway from Birth to 5yrs is being developed and will be available on line via the council websites.

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www.bathnes.go.uk
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Health professionals and early years settings

could offer a range of interactive parental education sessions to prevent obesity such as:

- Interactive cooking activities
- Videos and group discussions on practical issues such as healthy eating, meal planning and shopping for food and drink
- Encourage active play by:
 - Giving ideas for family activities involving physical activity
 - Promoting local facilities for active play
 - Overcoming any safety concerns that limit physical activity of young children
 - Encouraging more walking instead of using the car or pushchair

Obese under fives do not need to lose weight but the family lifestyle will need to change so that weight gain slows down. Professionals need an empathic and non-judgemental approach to empowering families and carers to make lifestyle changes. This may involve support for parents by enhancing their parenting skills.

The Government's **Change4Life** campaign aims to get families eating well, moving more and hence living longer. **Start4life** is a sub-brand for the campaign aimed at families with children under 2 years. Information on the campaigns can be found:

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www.nhs.uk/change4life

www.nhs.uk/start4life
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Healthy family lifestyles are the key to success

Encourage physical activity

Toddlers should have opportunities and be encouraged to take part in active play every day to promote development of co-ordination.

Most under fives do not need encouragement to play and will enjoy active play. However many 3-5 year old children may be moderately or vigorously active for only 20 to 25 minutes per day (BHF 2004).

In 2011 the UK Chief Medical Officers (CMO) published new guidelines which state that children under 5 should be active for 180 minutes – (three hours) – each day, once a child is able to walk.

For non-walkers physical activity should be encouraged from birth, particularly through floor-based play and water-based activities in safe environments.

For local support on implementing these guidelines, and accessing local services go to Initiatives and Training section (P91, Section 4).

Encourage healthy eating

Encourage a balanced diet including foods from all the food groups:

- Bread, rice, potatoes, pasta and other starchy foods
- Fruit and vegetables
- Milk and dairy foods
- Meat, fish, eggs, beans and other non-dairy sources of protein

Families who:

- Have limited knowledge of healthy eating
- Do not have the cooking skills necessary to prepare simple home-cooked food and instead rely on convenience foods which are usually energy dense and high in fat, sugar and salt
- Do not have set mealtimes and consequently frequent snacking forms part of their eating pattern

The B&NES Cook It Service is commissioned to support families to prepare healthy food for their families. Families can be referred or self refer via the Healthy Lifestyle Hub.

The HENRY programme builds skills and confidence in both staff and families to tackle the complex issues in a solution focused way, using evidence based techniques See Initiatives and Training (P91, Section 4).

Limit sedentary behaviour

Many toddlers spend a lot of time watching a TV/DVD/video. The American Academy of Paediatrics recommends no more than two hours per day of sedentary behaviour such as TV viewing. Parents may need help exploring activities that can be substituted for watching TV or DVDs.

Encourage 12 hours sleep in children under five

Under fives normally sleep about 12 hours in each day and this is important for growth.



Fussy eating and food neophobia

Both fussy eating and food neophobia (fear of new foods) are considered normal development stages in young children. Evidence shows that fussy eating affects about 10-20% of children under five. Severe selective eating is rare and generally has its roots in early feeding difficulties or significant health problems (Carruth, 1998). Neophobia typically emerges in the latter half of the second year of life in children and is thought to be an innate predisposition (Cooke et al 2007).

Causes of fussy eating

Giving frequent drinks of milk or juice: Many young children prefer drinking to eating and readily fill themselves up with drinks (Houlihan and Rolls 1995, Smith and Lifshitz 1994). Useful advice is that drinks should be limited to water in between meals. Cups should replace any bottles still being given as this will help to reduce fluid intake.

Frequent snacking: Some children end up eating most of their food between meals and the snack food often tends to be high in fat, sugar and salt. There is often little or no incentive for the toddler to eat an appropriate meal if they are allowed to fill up on confectionary, biscuits and crisps. Less frequent snacking and more appropriate snacks such as fruit should be suggested.

Snacks being given when a meal is refused: Children may prefer snack foods and refuse meals in order to be given snacks instead.

Coercing children to eat more and/or extending mealtimes when the child has indicated they have had enough to eat.

The situation can sometimes be exacerbated by parents becoming very anxious at mealtimes.



Simple strategies for management of fussy eating and neophobia

Although, fussy eating and neophobia are thought by some to be behaviourally distinct, they can both be helped using similar techniques. A consistent approach is essential and all those involved in the care of the child, including relatives and child carers need to co-operate with any measures agreed.

- Offer small well-spaced meals and snacks
 - Parents and/or carers should eat with children where possible
 - Regular and repeated opportunities to taste new foods results in children in accepting foods, 10-15 tastings may be required
 - Do not allow mealtimes to be too long 20-30 minutes is about right
 - Give lots of praise, even if the smallest quantity of food is eaten
 - Remove uneaten food without comment at the end of a meal
 - Do not discuss eating and food with others in front of the child
 - Do not coax or force a child to eat
 - Do not use food as a reward or a treat
 - Keep calm
 - Encouraging babies (6mth+) to use finger foods and to feed themselves will increase their confidence and interest in food
 - Encouraging children to get involved in cooking as young as possible will also help to build their interest in food
 - Using food stuffs as specific play materials can help a child who is really struggling for example, making pictures using glue, macaroni and lentils
 - Preschool children's eating habits can improve once they begin eating with other children on starting nursery or school
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Additional support

If these types of feeding problems persist, consult the local health visiting team for additional support, particularly if the child's growth is faltering.

Children can also be referred by their health visitor, GP or paediatrician to the paediatric dietetic clinic at The RUH.

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Faltering growth

This is assessed by plotting weights and heights on growth charts.

In 2002 the Children's Society defined faltering growth as:

Faltering growth	
Weight faltering	Weight falling through centile spaces, low weight for height or no catch-up from a low birth weight
Growth faltering	Crossing down through length/height centile(s) as well as weight. A low height centile or a height less than expected from parental heights

Causes of faltering growth are:

- Malnutrition through poor eating
- Diseases involving malabsorption or decreased appetite
- Hormonal syndromes e.g. Hypothyroidism, Turner syndrome, Growth hormone insufficiency
- Physical or emotional neglect

Most faltering growth in 1-5 year olds is due to poor eating. Only 5% is due to disease or hormonal disorders. It is estimated that a further 5% is due to neglect and will need the support of those involved in child protection.

When to refer

Referral to a paediatrician should be made if weight or height is noted, for the first time, to be below the 0.4th centile.

A referral should be considered if:

- Weight or height is below the 2nd centile
- Weight or height falls through 2 centile spaces

Dietary treatment for growth faltering will involve increasing calorie intake and this is best achieved by increasing the calorie content of foods and meals that are eaten. This will require appropriate medical and dietetic support.



Gastroenteritis and toddler diarrhoea

Toddler diarrhoea may occur in children who are otherwise healthy and growing well. The condition is thought to be due to a degree of immaturity of gut function and often improves spontaneously at around three to four years of age. Frequent loose stools containing recognisable food matter (peas, carrots, sweetcorn) may be passed up to eight times a day.

A dietary cause can be the consumption of large quantities of some squashes and fruit juices because they contain large quantities of non-absorbable monosaccharides and oligosaccharides (Hoekstra 1998).

Dietary advice should be a healthy balanced diet with a limit on squash and fruit juice intake. Continued diarrhoea (>7 days) after acute gastroenteritis may be associated with a temporary intolerance to lactose (Davidson et al. 1984). This might require the exclusion of dairy products and other lactose containing foods for a few weeks. Lactose free milks such as Lactofree or a calcium fortified soya milk can be used as a direct substitute for cows milk.

Constipation

Constipation in children is often a complex problem. It can be associated with formula feeding (see page 63) or begin at the time of weaning and again at around two years of age in relation to potty training. It can be a distressing problem for the child and the family.

Symptoms include infrequent defecation, pain and distress and refusal to defecate. Causes include insufficient intake of dietary fibre and fluid, emotional disturbances, possible childhood infection or a change in routine (Burnett and Wilkins, 2002).

NICE have published guidance in managing idiopathic (no known cause) constipation in children which recommends early prescription of laxative medication. Any child with constipation should be referred to a GP as early as possible so that it can be managed swiftly. (<http://guidance.nice.org.uk/CG99>)

Dietary changes to suggest

- Encourage foods with a higher fibre content e.g. wholegrain breakfast cereals, wholemeal bread, fruit, vegetables, beans, pulses and lentils e.g. baked beans
- Offer 6-8 drinks per day of about 120mls /4ozs each. More may be required in hot weather and after physical activity
- Unprocessed bran should not be given to young children as it can cause bloating and interferes with the absorption of micronutrients such as iron, calcium and zinc
- In some circumstances it may be necessary for a medical practitioner to prescribe medication



Food hypersensitivity: food allergy and food intolerance

This affects 2-4% of children 1-3 years old and most grow out of it by about 3 years of age (Zuberier et al. 2004, Venter et al. 2008). Food hypersensitivity is the umbrella term for food allergy and food intolerance which are different (Johansen 2003).

Food allergy

The term food allergy is used when the immune system is triggered and treatment is to exclude the food causing the problem. However this should only be undertaken under the guidance of a medical practitioner and dietitian. It is important to monitor the condition so that foods are not excluded for longer than is necessary.

Food intolerance (or non-allergic food hypersensitivity)

The symptoms usually appear a few hours or even days after eating the food and they are rarely life-threatening. Virtually any food can cause an intolerance, although in practice this does not occur. Foods which commonly cause intolerance include milk, chocolate, citrus fruits, fruits and vegetables, foods containing Monosodium glutamate, cheese, especially if matured, fermented foods such as blue cheese, sauerkraut, fermented soya products, yeast extracts fish, especially if stale or pickled and microbial contaminated foods.

Diagnosis

There is no simple diagnostic test for food allergy or food intolerance. The gold standard test is the placebo-controlled double blind challenge. In clinical practice, however, open challenges are usually performed. This involves offering a food, thought to be the cause of symptoms to the child and monitoring the response to that food. Food challenges are an integral part of diagnosis in order to:

- Detect a specific food which causes symptoms. A positive result confirms the need to exclude that food from the diet
- Confirm that a specific food is not responsible. An absence of symptoms confirms that a restricted diet is not needed

Many food challenges can be carried out at home with prior medical agreement. However there are some children who require a hospital setting where immediate medical treatment is available. Nut challenges should never be tried at home. All children with food intolerance should be under the care of a Paediatrician and GP.

Additional investigations that may be helpful include RASTs (Radio-Allergosorbent Tests), skin prick tests, patch tests, endoscopy and biopsy. There is no clinical or scientific evidence to support the use of various other tests including hair analysis, kinesiology and bioresonance in the diagnosis of food intolerance.

Cultural diets

Minority ethnic communities may follow the dietary habits of their own country; these practices will vary not only according to religion but also region. They may require support to ensure an adequate diet and eliminate any potential nutrient deficiencies. Iron, vitamin B12 and total energy intake may present a particular problem.

The following practical points may act as a guide when supporting these families:

- Find out about the family's usual dietary intake and meal pattern
- Find out about any dietary restrictions they may follow
- Work within the decision making structure of the family
- Where any dietary changes are necessary make sure the advice given is practical
- Check that understanding has taken place

There may be periods of fasting though very young children do not normally fast. However the meals are eaten at home may be different during fasting periods, such as a main meal late at night or breakfast early.

The food customs may involve what foods are eaten, how the foods are prepared, what combinations of foods are used or when particular foods are eaten. A guide to some of the differences in food choice commonly observed by those from different religious and cultural groups is shown Appendix 2.

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Initiatives and Training

Healthy early years

Laying the foundations of healthy habits during children's most formative years is vital in supporting them in establishing healthy lifestyles later on.

Through its training, resources and award scheme offered to Children's Centres, nurseries, preschools and childminders across Healthy Early Years (HEY) works closely with practitioners, children and families to promote healthy behaviours.

All the work of HEY compliments the themes, principles and practice that underpin the EYFS framework which now places greater emphasis on children's healthy development and what this constitutes.

By completing the Active Play and Healthy Eating Award settings are able to gain the prestigious Director of Public Health Award.

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Healthy eating award

The Healthy Eating Award framework builds upon the Food and Drink Guidelines for Early Years Settings "Eat Better Start Better" and the "Food for Thought" Guidance.

The award enables settings to develop and celebrate the work they are doing to encourage children to eat well, establish positive mealtime behaviours and promote healthy lifestyles to the whole setting's community.

The accompanying training and award resources provide guidance on areas such as menu planning; portion size advice; responsive feeding; support to encourage better eaters and information on ensuring a positive eating environment within your setting that encourages independence and communication.

Settings are required to provide learning and development opportunities to increase children's familiarity with food, where it comes from and what we can do with it through cooking, growing and exploration activities.

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Active play award

The Active Play Award has been written in line with the UK Physical Activity Guidelines for the under5's. It supports settings in providing varied and regular opportunities for children to be physically active both inside and outdoors in order to meet the recommended daily guideline of 180 minutes.

The award ensures that for all children time spent being sedentary is kept to a minimum and for babies time spent restrained (car seats, buggies, bouncers etc.) is minimised to care routines (sleeping, feeding and changing) and that they have a variety of stimulating floor based free play both indoors and out.

Settings are required to audit their environment.

As walking is promoted as a means of increasing activity levels settings are provided with road safety training and resources to support practice and share with families.

All the criteria of the awards support the reformed EYFS framework, the Development Matters guidance for 'Moving and handling' and 'Health and self-care' further compliments the HEY messages and resources.

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New website for early years professionals

4Children and the Early Years Strategic Partnership have launched a one-stop shop for all those who work in the foundation years, bringing together a vast array of information, resources and up to the minute news into one place.

The website should be the first port of call for all those interested in the foundation years with sections dedicated for example to child development, health, quality, sustainability and children's centres. It also signposts to an array of resources to support quality provision, news of the latest developments and information on early years events and training run across the country.

The website, **www.foundationyears.org.uk**, aims to support all early years professionals whether they are on day one of their job, or are seasoned experts in the field.

The professionals' site joins its sister site, aimed at parents **[/www.foundationyears.org.uk/parents](http://www.foundationyears.org.uk/parents)**, which was launched in July to provide the vital information, from preparing for pregnancy through to registering children at their first school, that all parents need.

Go to the website, or email **foundations@4children.org.uk** to find out more.

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Feeding for life foundation

The Feeding for Life Foundation is a new education initiative which aims to support healthcare professionals (HCPs) and early-years practitioners (EYPs) to enhance their knowledge and expertise in early nutrition through training, provision of resources, educational grants, and aiding the development and sharing of best practice. The Foundation is led by an independent panel of leading child health experts.

Feeding for Life Foundation commissioned a survey and the report was launched at the Feeding for Life Foundation seminar on Thursday 20th October. It showed that:

- 51% of HCPs are either not sure or unaware of the UK department's supplementation recommendations
- 56% of HCPs do not discuss the importance of vitamin supplementation with parents
- 58% of HCPs agree that they don't have sufficient information about strategies other than vitamin supplementation to increase vitamin levels in under-5s
- 73% agreed that HCPs don't have enough training about the benefits of supplements

If you would like further information on the Feeding for Life Foundation go to: **www.feedingforlifefoundation.co.uk**

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Portion sizes for toddlers

The Infant & Toddler Forum (ITF) has launched a new Factsheet

Portion Sizes for Toddlers: 1-3 years

It provides evidence-based portion size ranges for toddlers that meet the UK Estimated Average Requirements for energy (EAR) and Reference Nutrient Intakes (RNIs).

The Factsheet, which has won the poster presentation best practice award at the CPHVA/Unite Annual Professional Conference this year based on its high relevance to clinical practice and clarity, can be downloaded for free at www.infantandtoddlerforum.org

The factsheet provides practice guidance for healthcare professionals in advising parents and carers about portion sizes. It helps to address anxiety about over- and under-feeding, and to reassure parents and carers that as long as toddlers are eating within the ranges they are meeting their nutritional needs.

HENRY health exercise nutrition for the really young

HENRY is a health promotion, prevention and early intervention scheme that aims to tackle child obesity by enhancing the skills of practitioners working with parents of babies, toddlers and preschoolers. Currently, one third of children in the UK are overweight or obese and at risk of numerous health problems, both physically and emotionally as a result. Research clearly shows that eating and activity habits are established in the early months and years of life so enhancing the skills of practitioners in this area as well as providing support for families is vital.

Henry core training for practitioners

This 2 day training is currently on offer to all practitioners, Health Visitors, Children Centre Staff, Outreach, Family Support Workers etc working with families with babies and children under 5.

It aims to develop and enhance knowledge, skills and understanding in the following five key lifestyle areas, as well as build confidence in tackling lifestyle issues when working 1:1 with individuals and families:

- Parenting / relationship skills
- Eating patterns and behaviour
- Healthy eating
- Physical activity
- Emotional wellbeing.

The HENRY approach reflects the Family Partnership Model and promotes strengths based, solution focussed support. The course is practical, interactive, reflective, flexible and fun, and explores effective ways of working to optimise efforts in promoting healthy lifestyles and developing community resilience to an obesogenic environment.

To find out about the next Core Training please contact:

Lucy Rae, Healthy Early Years Coordinator,
Early Years and Extended Services, Children's Services,
Bath and North East Somerset Council

Tel: 01225 395031 / 07530 263098

Email: lucy_rae@bathnes.gov.uk



Core Training

to tackle child obesity and enable young children to flourish

HENRY Core Training is underpinned by the latest research into the complex factors that protect against, or lead to, obesity. The course adopts a holistic approach, bringing together

- **eating behaviour, food and activity ...**
enabling the whole family to adopt a healthier lifestyle - right from the start
- **parenting...**
helping parents to develop the confidence and skills to give young children a good start for life - so that they start school physically and emotionally ready to learn
- **a practical framework for supporting behaviour change ...**
using a solution-focused and strength-based approach to help families change old habits and achieve their goals

“

I have worked in Early Years for 15 years and attended many training events. This one has certainly been the best!

”

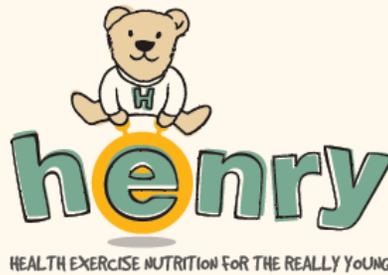
Our courses are practical, reflective, fun – and effective. Research has shown that brief HENRY training resulted in

- increased practitioner **confidence** to tackle complex and sensitive lifestyle issues
- **long-term changes to practice**, with practitioners continuing to use the knowledge and skills gained many years after they completed their HENRY training
- improved child and family **outcomes**

A two day course for health and early years practitioners

- **Develop the knowledge, skills and confidence to tackle weight issues**
- **Promote physical and emotional well-being in the years before school and beyond**





Let's Get Healthy with HENRY

Helping parents provide the best start for babies and young children

Let's Get Healthy with HENRY offers parents the chance to share ideas and gain new skills and tools to address lifestyle issues in a supportive and fun environment. The course adopts a holistic approach and focuses on

- practical and authoritative **parenting skills** for a healthy lifestyle
- increasing self-esteem and **emotional well-being** - so children start school **ready to learn**
- helping families **change** old habits and adopt a **healthier lifestyle**
- practical information that will help the whole family **eat more healthily** and become **more active**

Each participant receives a toolkit of resources to use in the family to support a healthy lifestyle.

“ I've stopped buying sweets and crisps, started to exercise and am eating more fruit and vegetables. When my child is demanding, I've tried the new ideas and they've really helped. ”

Let's Get Healthy with HENRY is practical, fun and popular with parents – 86% participants complete the course. It is also effective. National clinical studies have demonstrated improved child and family outcomes, including

- increased **parenting efficacy**
- **healthier eating** across the whole family
- reduced screen time and **increased activity** levels
- **sitting down together** as a family to eat **home-prepared food** more often

An 8-week course for parents and carers of babies and young children enabling them to

- establish a healthy lifestyle for the whole family
- meet the physical and emotional needs of babies and young children



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Further information is available from:

British Dietetic Association

Weaning Fact Sheet

www.bda.uk.com

Comic Company

Resources on healthy eating and oral health

www.comiccompany.co.uk

Caroline Walker Trust

Eating Well for Under-5's in Childcare (2006) Practical and Nutritional Guidelines. 2nd Edition

Eating Well for Under-5's in Childcare (2000) Training Materials for people working with under fives in child care

www.cwt.org.uk

Eating Well for 1-4 year olds (2010)

Practical Guide & Food Photo cards

www.cwt-chew.org.uk

Change4life

www.nhs.uk/change4life

Department of Health

Birth to Five Book
Delivering Better Oral Health:
An evidence-based toolkit for prevention.
September 2007

www.gov.uk

Food Standards Agency website

www.nhs.uk/Livewell/healthy-eating

Harlow Printing

Growth charts and BMI Charts

www.healthforallchildren.co.uk

Healthy Start

www.healthystart.nhs.uk

National Childminding Association

www.pacey.org.uk

National Daycare and Nurseries Association

www.ndna.org.uk

NHS Choices

www.nhs.uk/conditions/pregnancy-and-baby

Pre-school Learning alliance

www.pre-school.org.uk

School Food Trust

www.childrensfoodtrust.org.uk

Start4life

www.nhs.uk/start4life