

Georgie Porgie Pudding and Pie

Exposing the truth
about nursery food



Organix

 Soil Association



in partnership with



Soil Association

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For more information and updates on the campaigning work being done by Organix and the Soil Association to improve nursery food, go to www.nurseryfood.org

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Foreword

This is the first ever report that looks in detail at the quality of food fed to young children attending nurseries in the UK. Over 600,000 children in England and Wales go to nursery for up to 10 hours a day. In many cases, nurseries are providing the majority of their daily food during the working week.

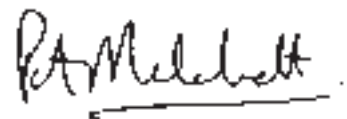
When a child attends any UK nursery, parents expect - and government delivers via regulation - a safe environment and a nurturing educational setting. It is unsurprising, therefore, that parents also expect the food that their children eat to meet regulatory and nutritional guidelines, and not to include additives unsuitable for young children. After all, the younger the child, the more vulnerable their health is to poor quality food. And the huge campaigns and publicity in recent years focused on the truism that 'you are what you eat' cannot have escaped even the humblest regulator or school manager.

But our research found no clear nutritional standards, particularly for the 9 out of 10 nurseries that are not state-maintained. We found some nurseries spending a pitiful 25p per child on the ingredients for a meal. We found that colourings and additives not permitted in manufactured foods for young children were regularly served in nurseries. And we could not find anyone, in any government department, including the Department for Children, Schools and Families, willing to take responsibility for this sorry state of affairs.

We commissioned this research, and published this report because someone needs to draw a line in the sand from which improvements can be made. The state of food in too many nurseries is indefensible. The Government must take responsibility for food in nurseries as they have in primary and secondary schools, and substantial changes must be made urgently. Our children deserve nothing less.



Lizzie Vann
Founder
Organix



Peter Melchett
Policy Director
The Soil Association





Executive Summary

– How nursery food got left behind

Introduction

- This is the first detailed investigation into the state of food fed to young children attending nurseries in England and Wales. Whilst many changes have been made to school dinners for primary and secondary school children over the last five years, food fed to younger and more vulnerable children has been left behind.
- This report covers research carried out by the Soil Association and Organix, questioning nursery workers and parents, researching case studies of good practice, and looking in detail at the legislative background to food provision in nurseries.
- The younger the child, the more vulnerable their health is to the effects of poor quality nutrition. The bodies of under-fives are developing at a fast rate, which means that the choices, tastes and nutritional quality of the food they eat have a far reaching impact on their food preferences and health later in life.
- In 2006, 618,000 children under the age of five attended nurseries in England and Wales.¹ Whilst there is no complete data, all these children are eating some food during their time at nursery, and a significant minority of children who attend nursery 'full time' will be eating the majority of their food at the nursery.

Research findings

- Research detailed in this report shows that some nurseries are regularly serving food that is not permitted or heavily restricted in primary and secondary schools, including crisps, chocolate, lollies, sweets, cakes, biscuits, burgers and chips.
- Regulations covering the use of food additives such as artificial colourings and artificial sweeteners recognise the special vulnerability of young children by banning the use of some additives in food manufactured for the under-threes. However, the research team found that some nurseries are serving food to children under the age of three that contains such additives, including Sodium aluminium phosphate (E541), Carboxy methyl cellulose (E466), Propyleneglycol esters of fatty acids (E477), Calcium stearoyl lactate (E482), and the colouring Norbixin (E160(b)), as well as the flavour enhancers Monosodium Glutamate (E621) and Disodium 5-ribonucleotide (E635). Without clear regulation and better information for nursery staff, this situation will continue.

- The serving of foods containing such additives at nursery reveals a legal inconsistency that must be addressed: foods served to children under three years are permitted to contain additives that are banned in manufactured foods for the same age group. With so many young children now eating food at nursery, this is a great cause for concern.
- The amount of money spent on ingredients is sometimes pitifully low. Although not formally monitored, the research found some nurseries spending as little as 25p on ingredients for a child's meal.
- Many parents and nursery staff are unhappy with the current 'unregulated' state of nursery food: 82 per cent of nursery school staff and 85 per cent of parents want clearer and more effective standards for nursery school food. Clear standards already apply in other European countries such as Italy, France, Austria and Denmark.
- In spite of all the challenges, many nurseries are providing an exceptional service to the children in their care. The research team found examples of high quality, freshly prepared, locally sourced and sometimes organic food in all sectors of nursery provision.

The need for better regulation

- Early in 2008, the Government Cabinet Office's Strategy Unit said² that "existing patterns of food consumption will result in our society being loaded with a heavy burden of obesity and diet-related ill health" and that "ill health is already costing the NHS £10 billion per annum"³. Against this background, it is hard to under-estimate the public health significance of the food provided for children in nurseries.
- However, there are no statutory nutritional standards covering the food served in all nurseries, despite the ongoing improvement and introduction of standards for primary and secondary schools. Basic statutory nutrition standards cover state-maintained nurseries, but:
 - These are far less stringent than the standards for primary and secondary schools.
 - There is no systematic monitoring of the food provided.
 - 88 per cent of nurseries fall outside of these basic standards because they are not state-maintained.⁴
- There is no requirement for nursery workers to be trained in nutrition, or food quality, or to understand the limited standards that apply to the food provided for very young children.
- No Government department has been willing to take responsibility for the quality of food provided in nurseries. Despite much questioning, the research team could find no one in the Department for Children, Schools and Families (DCSF) that was clearly responsible for this vital service.
- In summary, when considering food served in nurseries in England and Wales, this is the situation:
 - No compulsory training for staff
 - No clear nutritional standards
 - No agency to monitor the quality of food provided
 - No Government department giving a lead or promoting good practice
 - No Government funding available to help nurseries improve provision

Recommendations

The Soil Association and Organix recommend that:

- The Department for Children, Schools and Families takes full responsibility for:
 - Implementing Caroline Walker Trust nutrient-based standards in all nurseries
 - Improving the regulation of food in nurseries
 - Staff training
 - Performance measurement
 - Financial assistance

However, if they are unwilling or unable to do this, the Prime Minister should pass responsibility to the Department of Health.

- The Food for Life standards, used throughout England, should be adopted as basic criteria for nursery school food provision. The Food for Life standards represent the gold standard in food provision in schools, building on the Caroline Walker Trust nutrient-based standards, and to that adding the following criteria:
 - Minimum 75 per cent of meals to be made from unprocessed food/ingredients
 - Minimum 50 per cent of food to be locally sourced
 - Minimum 30 per cent of food to come from certified organic ingredients
 - Environmental sustainability of food provision
 - Appropriate food education

While the Food for Life targets are the best examples of their kind in primary and secondary schools, younger children, who are more vulnerable, deserve such high standards as a minimum in their food provision. If these standards can work for older children, then the younger and more vulnerable children deserve nothing less.





Many children are consuming food that is high in fat, salt and sugar whilst at nursery because nursery food is inadequately regulated.

1 Introduction

This report is the result of an independent investigation into the quality of foods served to children when attending nursery. The research was conducted over a five-month period in spring 2008.

The research has been funded by children's food company Organix as part of their ongoing work to raise standards in the quality of food fed to children.

The results show that many children are consuming food that is high in fat, salt and sugar whilst at nursery, because nursery food is inadequately regulated.

We call on parents, nursery workers and the Government to become more involved in the provision of good food in nurseries. We strongly recommend that the Government take action to ensure that this situation is improved for future generations.

The period before a child starts school is one of the most critical times for their growth and development. It is essential that their food offers good quality nutrition in a tasty way. A toddler's food provides the nutritional building blocks for the development of essential physiological systems. And, of equal importance, the quality, taste and appearance of the food helps to set patterns of eating habits, good or bad, for life.

Steps have been taken over recent years to improve school food – notably with the introduction of mandatory nutrition standards for meals in primary and secondary schools, and the exclusion of vending machines selling foods and drinks high in fat, salt and sugar or of limited nutritional value. Steps are also being taken to restrict advertising of fatty, salty and sugary foods, snacks and drinks on television in the times that many children are watching – although a 9pm watershed for restricting this food advertising has still to be achieved. A requirement for schools to offer “an entitlement to cook” has also been introduced. In addition, £20 million Lottery funding was given to the School Food Trust to roll out the “Let's Get Cooking” programme of after-school cooking clubs for parents and children in schools all over the country.



But despite all of this progressive work with older children, there are no national mandatory nutrition standards for food provided for pre-school children. There is little training for nursery catering staff to ensure that they understand the nutritional needs of young children, or to have the skills to provide healthy foods.

The research team found that processed foods high in salt, sugar and/or fat were served in many nurseries. In some cases, additives that are not permitted under EU law in foods manufactured for young children (under three years) were regularly being served.

Yet the Government appears to have no plans to address this situation. The Department for Children, Schools and Families has stated that they have no plans to improve the rules governing nursery food saying: "there are no further policy developments in relation to nursery school food."⁵ The Department of Health does not have a policy covering nursery food.

Rampant variability

How well a child will be fed at nursery, and how well their health is protected, relies on where they live, whether the nursery is committed to good food, and – importantly – what parents can afford. A child's chances of developing diet-related disease in later life are greater if they come from a low-income background. Nurseries could be playing their part in reversing this trend.

Good examples of nurseries around the country that provide tasty and nutritious food in sociable surroundings feature in the chapters that follow, presented as case studies. However, we fear that these are the exception rather than the norm.

How well a child will be fed at nursery, and how well their health is protected, relies on where they live, whether the nursery is committed to good food, and what parents can afford.



A way forward

This report recommends that the government provide clear standards such as those specified by the Soil Association's Food for Life standards. The Food for Life criteria are 75 per cent unprocessed food, 50 per cent locally sourced and 30 per cent organic food, along with compliance to the nutritional standards produced by the Caroline Walker Trust. These criteria are easy to understand and practical to achieve. They represent a gold standard in nutrition standards, and would provide a strong benchmark for nurseries.

Nursery food provision is letting children down. Enforceable standards and training are needed to improve nursery food and give children the best possible start in life. Poor provision is often invisible to parents and the public. Government is ignoring the situation. This research presents a convincing case for rapid improvement for the sake of children's health.

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Notes

- The Caroline Walker Trust (CWT) is a registered charity that promotes better public health through good food and which provides practical and nutritional guidelines to ensure that vulnerable population groups can eat well. The CWT published nutritional guidelines for children under the age of five in childcare settings in 2006 which are widely used across the UK and it is against these quantified nutritional standards that the nutritional analyses of nursery food in this report have been compared. The new primary and secondary school nutrient-based standards are built on the CWT standards. For more information see: www.cwt.org.uk
- The School Food Trust is an agency set up by Government to oversee implementation of the new statutory nutrient-based standards for school food. See: www.schoolfoodtrust.org.uk
- The Food for Life Partnership works to transform school and community food culture across England, by harnessing the ideas and initiative of young people and community leaders. Its mission is to reach out through schools to give communities access to seasonal, local and organic food, and to the skills they need to cook and grow fresh food for themselves. See: www.foodforlife.org.uk

Disclaimer

- All data in this report was correct, to the best of our knowledge, at the time of the survey. Food or nutritional content of menus and individual food products may change. Please check with the caterer or manufacturer for details. Commentary on menus and foods in this report reflects the opinions of the authors, and their opinion on the general situation of nursery food in the UK, comparing this wherever possible to nationally recognised nutrition advice, guidelines and rules for primary and secondary school food.

Geographical area

- The report focuses only on nursery school food in England and Wales, as responsibility for nursery school food in Scotland and Northern Ireland is a devolved issue.



The legal requirements that cover nursery food are very low, and do not match up to the high standards now enforced in primary and secondary schools to support older children's dietary health.

2 The size of the problem

Or...what are crisps and biscuits doing on nursery menus?

The total number of children going to nursery in England and Wales in 2006 was 618,300.⁶ This figure is expected to rise.

In the case of those children that attend nursery from 8am to 6pm, all daily food intake may be provided entirely by the nursery on the days they attend. But because the nursery sector includes a mixture of private, state, and voluntary providers, there are few nutritional standards covering food; no protocols, and no means of reporting on what young children in nurseries are eating.

There is very little published information about nursery food, and as far as we are aware, no comprehensive studies have been undertaken.

The legal requirements that cover nursery food are set out in Chapter Four. These standards fall short of the standards set in 2006 for older children in primary and secondary schools, in the following ways:

- There are no nutrient-based standards to guide nurseries on what they should be serving
- There are no exclusions or restrictions from nurseries of less healthy products, such as crisps, processed meat products, biscuits or fried foods
- There are no standards on portion size or fruit and vegetable intake. In contrast, primary and secondary schools must serve “not less than two portions of fruit and vegetables per day per child”⁷
- There is no regulation concerning snacks
- There is no ban on confectionery

The research team carried out two online surveys between February and April 2008 of:

- 1,773 parents with children at nursery
- 487 nursery workers

Both surveys were conducted by the online market research company Onepoll.com.

Questions were asked about what types of foods are being served to young children in nurseries. The results of the surveys were compared to the national dietary recommendations for the pre-school age group. Questions were also asked about water provision, and children's and parents' attitudes to nursery food.

Copies of the questionnaires are shown in Annex 3.

2.1 The view from the nursery

The online survey was carried out by a research company able to question nursery workers.⁸ A total of 487 nursery workers responded from around England and Wales. This is clearly a small, self-selecting sample, but the results were informative nevertheless, as they showed wide variation in the types and quality of food provided to their children.

- A total of 83 nursery workers of the 487 surveyed (17 per cent, or nearly one in five) felt that children at their nursery were not given healthy food.
- Food provision was less varied, and healthier foods were served less frequently, in nurseries providing places for children from low-income families.
- Research reviewed for this report showed that children from families on low incomes are likely to have less varied diets that are higher in sugar, saturated fat, salt and low in fibre, vitamins and minerals (compared to children from higher socio-economic backgrounds).⁹ For these vulnerable children the food provided at nursery can make a vital contribution to their diet.
- For example, a key indicator of the healthiness or otherwise of nursery food provision is the availability of fruits and vegetables at snack times. Sure Start Centres (now called Children's Centres) are part of a long-term Government programme explicitly designed "to deliver the best start in life for every child", bringing together early education, childcare, health and family support.¹⁰
- However, only 27 of the 67 (40 per cent) Sure Start Centres surveyed served fruit or vegetables at snack times, compared to 71 per cent of state-maintained nurseries, 69 per cent of private nurseries and 75 per cent of voluntary nurseries.
- The diversity of foods served in many nurseries also appeared limited. For example, only 8 per cent of nurseries ever served oil-rich fish such as salmon, trout, mackerel or sardines, foods which are rich in a number of nutrients useful in the diets of pre-school children. Whilst no official government recommendations exist for the under-fives to eat oily fish, the School Food Trust's food-based standards for primary and secondary schools stipulate that oily fish must be provided at least once every three weeks; so it is good practice to encourage children at nursery to get used to eating it.¹¹
- National standards for under-eights state that all nurseries must provide access to drinking water throughout the day.¹² But only a quarter (27 per cent) of nursery workers in our survey said they regularly served water to their children as a drink.
- Asked to choose an option that best described the food served in their nursery, eight per cent picked the description: "lots of processed food such as biscuits, burgers, etc, and sugary drinks like orange squash".



One in five nursery workers felt children at their nursery were not given healthy food.

Table 1: Quality of food served in nurseries. This table shows the percentage of nurseries that were reported by the nursery workers to serve foods high in fat, salt and sugar to children in nurseries, either at meal times or as snacks. The table also shows the percentage of nurseries that were reported by nursery workers to serve key nutrient-rich foods regularly – namely oily fish, fruit and vegetables.

| Type of nursery | Percentage of the nursery workers surveyed who reported that they regularly serve this food. | | | | |
|-----------------------------------|--|----------|--------|-----------|------|
| | Crisps | Biscuits | Sweets | Chocolate | Cake |
| State-maintained | 14 | 26 | 7 | 11 | 26 |
| Sure Start/ Children's Centres | 16 | 22 | 18 | 10 | 24 |
| Private | 14 | 36 | 12 | 12 | 27 |
| Voluntary | 12 | 31 | 10 | 11 | 19 |
| Other | 24 | 24 | 8 | 0 | 20 |

| | Traditional puddings <small>e.g. cake, sponge puddings</small> | Fizzy drinks | Ready meals | Powdered Soup <small>(e.g. Cup-a-soup)</small> |
|------------------------------------|---|--------------|-------------|---|
| State-maintained | 19 | 6 | 6 | 3 |
| Sure Start / Children's Centres | 21 | 3 | 9 | 6 |
| Private | 38 | 6 | 8 | 5 |
| Voluntary | 20 | 5 | 4 | 8 |
| Other | 36 | 4 | 4 | 0 |

| | Oily fish | Fruit or vegetables at snack time |
|------------------------------------|-----------|-----------------------------------|
| State-maintained | 12.5 | 71 |
| Sure Start / Children's Centres | 16 | 40 |
| Private | 25 | 69 |
| Voluntary | 14 | 75 |
| Other | 16 | 60 |

The researchers asked the nursery workers about children's and parents' attitudes to nursery food:

- One fifth of the nurseries surveyed (20 per cent) said they did not inform parents what food is served during the day.
- Asked if parents had ever commented on their nursery's food, one nursery worker said: "Some have wanted healthier food, even though we prepare some healthy food – but we don't get the funds to pay for what the parents want."
- One respondent said parents had wanted more "chips and pizzas" on the menu. Another said parents wanted "more food like burgers and chicken nuggets".
- Another said: "Some [parents] complain about sweets; some want chocolate cake at birthdays – you can't win!"
- More positively, some nursery staff said they had had good experiences helping children try new foods. Others said they enjoyed serving "themed food" to celebrate festivals from different cultures.

Case study London

| | |
|------------------------------------|------------------------|
| Organic ingredients: | No |
| Local ingredients: | No |
| Unnecessary processed food: | Yes – almost all of it |
| Parents given information on menu: | No |
| Parents involved in setting menus: | No |
| Comply with CWT guidelines: | No |
| Menu analysed by a nutritionist: | No |



One fifth of nurseries surveyed did not inform parents what food was served.

A 22-year-old nursery worker (who responded to our survey, but wishes to remain anonymous) explained that in her previous nursery in North London none of the food was cooked from scratch. It was either frozen or from a jar and all the meat was processed.

"The cook used to put a frozen lasagne in the oven and serve it with garlic bread. Sometimes the garlic bread was so burnt if you knocked it, it would shatter into lots of pieces, but the cook still served it to the children. They also used to get burnt chips too. The last straw came when she served up another pasta salad with loads of leftovers in it. It included hot dog sausages from the previous day, and cold baked beans. We called the manager down who explained to the cook she couldn't serve the children leftovers."

The puddings at the nursery were all processed too – ice-cream, cake and custard and jam tarts. Fresh fruit was rarely on the menu, and vegetables were not served with every meal.

The nursery worker also said she has really noticed a difference in her own wellbeing since she had moved on to another nursery: "I have lots more energy now, as I eat with the children at my new nursery and we have fruit three times a day, loads of vegetables and everything is cooked from scratch. It is totally different as the chef here is passionate about cooking, and is a trained cook. So everything she makes is delicious. I think at the previous nursery the chef just didn't know what she was doing, so she served the children ready meals."

In order to improve nursery food, the nursery worker believes: "It is all about communication. Parents and staff should be given an opportunity to discuss menus with managers or maybe fill in a questionnaire, so that the food gets better. Guidelines on what nurseries are allowed to feed the children should also be produced. Then nurseries couldn't get away with giving processed food every day."







2.2 The view from home¹³

1,773 parents of children who attended nursery school were surveyed in February 2008.

The research compared what parents reported their children ate with the rules now in place covering the quality of food to be fed to older children in school. These rules ban all confectionery (chocolate bars, crisps, chocolate-covered biscuits and sweets). In addition, cakes, biscuits and processed meat products such as burgers and sausages are restricted.¹⁴

The table below shows that there are clear disparities between what children may now be fed at school compared to what they can be fed at nursery.

Table 2: Comparison between what foods are restricted or banned in primary and secondary schools and what are permitted in nursery schools

| Food | Nurseries | Schools ^{15,16} |
|--|------------------------|--|
|  Chocolate bars | ✓ | ✗ |
|  Chocolate coated or flavoured biscuits | ✓ | ✗ |
|  Sweets | ✓ | ✗ |
|  Crisps | ✓ | ✗ |
|  Chips & other deep fried products | ✓ (no restrictions) | ✗ (restricted to "no more than two portions of deep-fried food in a single week") |
|  Economy burgers | ✓ | ✗ |
|  Squash | ✓ | ✗ |
|  Fruit juice | ✓ (no restrictions) | ✗ (only unsweetened) |

21 per cent of parents described the food at their children's nursery as 'poor' or 'mediocre'.

School Food Trust standards governing school food provision state that: "Biscuits are often high in fat, sugar or salt and so need to be consumed in the context of a balanced meal... Consuming biscuits and cake at mid-morning break reduces children's appetite for lunch."¹⁷

- Since September 2006, biscuits and cakes can only be served to older children at school as part of a balanced lunch
- In contrast, parents of nursery aged children reported that almost one third of children received biscuits while at nursery.

Parents surveyed have low expectations of food quality:

- Nearly one in ten parents (8 per cent of the survey sample) reported that their children did not receive what they believed to be healthy food at nursery
- 14 per cent reported that they were unsure about whether the food served was healthy
- 21 per cent of parents described the food at their children's nursery as 'poor' or 'mediocre'.

Many parents said there were no food-based learning opportunities for their children. By way of contrast, two of the four main objectives set by the School Food Trust for older children in schools involve food-based learning. The stated objectives are to "reduce diet-related inequalities in childhood through food education and school-based initiatives", and to "improve food skills through food education, and school and community initiatives".¹⁸

However, in nurseries, our survey showed that:

- Only half the children attending nursery were reported to take part in cooking activities
- 40 per cent of parents reported that their children did not learn about food and where it comes from
- 26 per cent of parents relied on their children to tell them what they had eaten that day, rather than nursery staff
- Only 34 per cent of parents reported that their child's nursery had a clear food policy.

Case study

The parents' view

Two respondents to our parents' survey said the following:

"I had to leave work to pick my child up from nursery once because he had become unwell. It turned out that he had been given orange juice despite the fact I had both verbally and in writing informed the nursery that he is highly allergic to orange juice. I was absolutely fuming and received no apology. My child was obviously upset as he had vomited numerous times and was only about two years old at the time. Most of the staff at the nursery are young girls with few qualifications and little experience. I have since moved my child to another location."

"My son was fed sausages once which is against our religion - we're Muslim, so my husband and I confronted the staff who, although were apologetic, had made us feel that we could no longer trust them so we took our son out of the nursery."



2.3 A closer look at nursery food quality

Some parents who took part in the initial survey agreed to provide more in-depth information about their experiences of nursery food. The following case study looks at a state-run nursery in Newcastle that was reported by one of the parents to serve highly processed foods. Further investigation by our researchers found foods were being served that contained additives not permitted in the manufacture of foods aimed at children under the age of three in the UK.^{19 20}

Case study Newcastle



Julia Statham, of the School
Food Parents Action Network

Julia Statham is the co-coordinator of the School Food Parents Action Network in Newcastle. Her daughter goes to Monkchester Road Nursery, in Newcastle. She says: "It's a fantastic state-maintained nursery, where the children learn really well, the teachers are great, and the outdoor activity area is brilliant too.

"The problem is their catering. City Schools Catering, which is Newcastle City Council's in-house provider, supplies the food in the nursery, as it does in 94 schools across the city. In my opinion, the food is awful. The menu has far too many processed elements such as chicken bites, haddock bites and salmon nibbles; and it also uses packet mixes for its dumplings, muffins and cookies which contain hydrogenated fat which I think is detrimental to the health of children. There is no excuse for such bad practice - food should be made from scratch on the premises using fresh ingredients."²¹

She added: "The awful thing is the nursery has no control over the quality of the food City Schools Catering is providing for its children. The cook's hands are completely tied, she is told what to serve and how to serve it."

The nursery is state maintained and therefore there are no fees paid by parents.

Julia asked City Schools Catering for a list of ingredients of the food that they provide. A registered public health nutritionist reviewed that list and commented on the suitability of the foods and ingredients for young children. Her comments are on the following pages.

Sponge Cake

McDougalls Sponge-mix²²



A home-made spongecake could be made with just

four ingredients:

Butter
Flour
Eggs
Sugar

McDougalls Sponge-mix 20 ingredients:

Wheat Flour
Sugar
Hydrogenated Palm & Rapeseed Oils
Dried Egg
Raising Agents (E500, E541)
Dried Glucose Syrup
Dried Egg White
Emulsifiers (E472(b), E471 E477, E472(e), E482)
Calcium Carbonate
Dried Skimmed Milk
Dried Milk Proteins
Stabiliser (E450(a))
Flavouring
Colour (E160(b))

Comments from nutritionist:

Questionable additives: The number of chemical ingredients in the sponge-mix illustrates how baking with packet mixes necessitates the use of artificial additives. The cake mix contains eleven additives, four of which are banned in the manufacture of food for babies and children under three years of age (E541, E477, E482, E160(b))²³ because of potential adverse effects on their health.

Hydrogenated palm and rapeseed oils: The process of hydrogenating fats changes their chemical structure, making them solid at room temperature. This makes the fat more stable, so it gives a product a longer shelf life. Yet the process also has detrimental health effects.

The Food Standards Agency states that: "Trans fats may be found in foods that contain hydrogenated vegetable oil. These trans fats have no known nutritional benefits. They can raise blood cholesterol levels and increase the risk of coronary heart disease. Some evidence suggests that the effects of these trans fats may be worse than saturated fats."²⁴

Sugar: The second largest ingredient after flour. Ideally nursery catering staff should be looking for ways to sweeten cakes naturally with dried fruit, fresh fruit, maple syrup, agar nectar, molasses or honey rather than refined sugar.

Asked about the food served at the nursery, Stephen Boon, head of area-based facility services for Newcastle City Council, said: "We strongly disagree that the food at Monkchester Road Nursery is sub-standard. We're confident that Monkchester offers a balanced and varied menu that meets nutritional standards and is popular with children and the majority of parents."

Chicken Nuggets Green Gourmet Chicken Bites²⁵



Home-made chicken nuggets could contain just **four** ingredients:

Chicken
Breadcrumbs
Flour
Egg

Green Gourmet Chicken Bites **18 ingredients:**

Chicken (50%)
Breadcrumbs
(contains Wheat Flour)
Water
Flours (Wheat, Maize)
Rapeseed Oil
Modified Wheat Starch
Salt
Dextrose
Stabilisers (Carboxy methyl
cellulose (E466), Sodium
Phosphate)
Yeast Extract
Dried Onion
Celery Extract
Spices
Vegetable Fibre
Wheat Protein
Maltodextrin
Raising Agent (Sodium
Bicarbonate)
Paprika Extract

.....
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Comments from nutritionist:

Only 50% meat: The chicken content of this product is only 50 per cent. And water is the third largest ingredient. So this product contains lower levels of the high quality protein that children need for growth.

Questionable additives: The manufacturers are using an additive (E466) that is not permitted under EU law in the manufacture of weaning foods aimed at children under three years of age. However, the nursery is serving these Chicken Bites to children in their care from the age of 2 1/2 years.

High salt content: This product contains 400mg sodium or 1g salt per 100g. The current recommendations for the amount of salt a child of 1-3 years or 4-6 years of age should consume in a day has been set by the Scientific Advisory Committee on Nutrition (SACN) at 2g and 3g per day respectively (ideally intakes should not meet this maximum amount every day).²⁶ If a child of one to three years ate three Chicken Bites, that would provide 30 per cent of the maximum daily recommended amount of salt. If a child of four to six years ate four Bites that would provide 27 per cent. These foods therefore provide a considerable proportion of a child's daily salt allowance.

Case study

South East England



A private nursery in the South East of England was visited. The nursery's Ofsted report states that it is "a very good school"²⁷. It attracts mainly middle-income parents. The cost of attending the nursery for a full day from 8am – 3.30pm is between £33 and £38 per day depending on the number of days the child attends. This is above the English average of £32 per day.²⁸

A researcher went to the school as a prospective parent and was given the menu for spring 2008. She asked the catering manager detailed questions about cooking methods, ingredients and food provision. The findings of the visit are described in detail below, with comments from a public health nutritionist. Details of the school have been kept confidential, given that many of the flaws identified are the result of national policies rather than simply individual decisions.

An overview of the menu

The menu at the nursery²⁹ routinely featured the processed foods no longer permitted in a primary or secondary school setting. These include foods not allowed as snacks at school:

- Crisps
- Chocolate-coated biscuits
- Biscuits served at each morning's snack time
- Hash browns – a processed potato product not recommended for children under the age of five
- Sausages served twice a week (school standards stipulate no more than once per fortnight)

No oily fish was served in the three-week menu rotation; school standards stipulate "at least once every three weeks".³⁰ The nursery is situated close to well-established fishing ports with a thriving fish industry. The only fish on offer was fish fingers and crispy bites, so children were becoming accustomed to eating fish in a processed and coated form. This would make them less likely to accept healthier unprocessed fish if they were served it at home or in future at school.

On a more positive note, the older nursery children had their own water bottles available all day, and the younger children were allowed to ask for a glass of water whenever they wanted one. Drinks provision at snack time was also positive - the children were only offered milk or water, as currently recommended. Fruit-based drinks can damage teeth and it is suggested that these are only given with meals.

Fresh fruit was available with the snack-time biscuits and as an alternative to the puddings served in the nursery, but the snacks lacked variety and vegetables were not offered as snacks.

Lack of nutrition knowledge and skills among nursery staff



Foods [at the nursery] contained many additives, including two that are not permitted as ingredients in the manufacture of weaning foods aimed at children under three.

The researcher found that the nursery school cook had minimal training in nutrition. For example:

- When asked about additives, the cook said that no food contained additives, but closer inspection revealed that the foods contained many additives, including two (Plain caramel: E150a and Curcumin: E100) that are not permitted as ingredients in the manufacture of weaning foods aimed at children under three. The food is being served to children two years of age and above.
- The cook was proud of her policy of only serving processed foods on Fridays, serving “pretty much everything else home-cooked”. But the menu showed frequent use of pre-manufactured products – e.g. jars of carbonara sauce, supermarket jam tarts, and packet dessert topping mix for a trifle.
- When asked about the contents of the Crispy Cod Bites on the menu, it became apparent that the food was not cod, but pollack.

More positively, nursery staff had a good grasp of food safety and food allergies. The headteacher is a qualified nurse and able to deal with allergic reactions in relation to food, including anaphylaxia. Other staff had also undergone training in first aid, which included what to do in cases of allergic reactions.

Missed educational opportunities

- Socialisation – good practice during the lunch break is for staff to sit with children and encourage them to eat new foods, try new ingredients, and socialise during the meal. But in this nursery there is no nursery dining room – the children eat in a classroom that is furnished for the occasion and available for a limited time. The children have half an hour to eat their lunch. Staff members choose to eat separately from the children so that they get a ‘proper’ lunch break.
- Education – good practice is for nursery children to be allotted time in the day to play with food and contribute in some way to the food eaten, ideally making foods from scratch and with fresh ingredients. Our researcher found some of the children making fairy cakes using a pre-mixed pack.

Provided with a list of the products and brands used at the nursery, the researcher purchased some of the products to look at their nutritional content as declared on the label. The comments from our nutritionist follow.

.....

2.4.1 Food quality examples

Crispy Cod Bites Supermarket own-brand frozen fish nuggets



“Shaped from skinless boneless white fish fillets coated in crispy omega 3 enriched breadcrumbs,” and a “nutritionally balanced range”

Marine Stewardship Council (MSC) accreditation – a fishery which meets the MSC’s environmental standard for a well-managed and sustainable fishery.

Home-made fish nuggets could be made simply with

four ingredients:

Fish
Breadcrumbs
Flour
Egg

Supermarket own-brand frozen fish nuggets - 24 ingredients:

Alaskan Pollack (55%)
Breadcrumbs (Wheat Flour, Wheat Germ, Yeast, Salt)
Colours (Plain Caramel, Paprika Extract, Curcumin.)
Emulsifiers (Mono- and Diacetyltartaric Acid, Esters of Mono- and Diglycerides of Fatty Acids; Rapeseed Oil)
Flour Treatment Agent (Ascorbic Acid)
Batter (Water, Wheat Flour, Wheat Starch, Salt, Raising Agents (Disodium Diphosphate, Sodium Carbonate, Spice Extract)
Vegetable Oil
Spray Dried Fish Oil (Refined Tuna Oil (contains Omega 3), Sodium Caseinate (from Cows’ Milk), Dextrose Dried Glucose Syrup Soya Lecithin).

Comments from nutritionist:

The colours Caramel and Curcumin are not permitted in the manufacture of foods aimed at children under three years old.^{31, 32} Yet the nursery serves this product to children as young as two years old.

High salt content: Reducing salt intake is a key national priority to help reduce incidence of high blood pressure. A portion of this food is four nuggets (80g). This provides nearly half (48 per cent) of a three to four year old’s daily recommended salt intake – too high a level from one food at one meal.

Sausages

Supermarket own-brand sausages



British sausages are generally a blend of:

Pork meats
Breadcrumbs
Seasoning
A natural or casein-based skin

Supermarket own-brand sausages 15 ingredients:

Pork (34%)
Water
Rusk (Wheat Flour, Water, Salt, Raising Agent: Ammonium Hydrogen Carbonate)
Pork Fat
Pork Rind
Salt
Spices
Stabilisers (Disodium Dihydrogen Diphosphate, Pentasodium Triphosphate, Dextrose)
Preservative (Sodium Sulphite)
Herbs
Antioxidants (Ascorbyl Palmitate, Alpha Tocopherol)
Colour (Cochineal)
filled in a beef protein casing

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Comments from nutritionist:

Only 34 per cent meat: The meat content is only 34 per cent, so the product could not be described as a 'pork sausage' because this only applies to sausages with a minimum of 42 per cent pork.³³ The low meat content results in lower levels of high quality protein, which is important for development and growth.

High salt content: Children of one to three years or four to six years of age should consume a maximum of 2g and 3g salt per day respectively.³⁴ The sausages contain 0.75g of salt per sausage. One sausage therefore provides 38 per cent of the maximum daily recommended amount of salt for a one- to three-year-old child and 25 per cent for a four- to six-year-old. As with the fish nuggets, these levels are too high for a young child to consume from one item in one meal.

The following additives are not permitted in the manufacture of weaning foods aimed at children under three years of age: Pentasodium triphosphate (E451a), Sodium sulphite (E221) and Cochineal colouring (derived from crushed beetles).^{35, 36} These additives are banned from the manufacture of foods for young children because their developing bodies makes them more susceptible to any adverse effects that may be associated with the additives.³⁷ The EU Scientific Committee on Food states: "The immaturity of the organs of absorption, metabolism or excretion [in young children] may mean that the distribution of an additive in the body is different in the infant and young child than in the adult. In addition, developing organs and tissues may show greater sensitivity to the effects of an additive than mature organs and tissues." ³⁸

Snacks - crisps (served during tea-time) Walkers Quavers



Walkers Quavers

ingredients:

Potato starch,
Sunflower Oil (30%)
Cheese Flavour
(Whey Powder from milk)
Flavour Enhancers
(Monosodium Glutamate,
Disodium 5'-ribonucleotide)
Flavouring
Milk Powder
Cheese Powder
Butter Acids)
Soya Protein
Colour (Paprika Extract)
Rice Flour
Soya Flour
Salt
Yeast
Onion Powder
(Malt flour from Barley)
Pepper
Wheat Flour
Colour (annatto)

Comments from nutritionist:

High salt content: This snack contains 2.69g of salt or 1.06g of sodium per 100g. This makes it officially 'high in salt', according to the government's Food Standards Agency criteria. The FSA states that foods containing 1.5g salt or 0.6g sodium per 100g are 'high' in salt.

High fat content: The snack is 30 per cent (nearly one third) fat. This makes it officially 'high in fat', according to the FSA criteria. The FSA states that foods containing 20g or more of fat per 100g are 'high' in fat. Some of the saturated fat in this product has recently been replaced with unsaturated fat, but this does not make up for the high fat (and associated high calorie) content.

Alternatives: Snacks like this are now banned from being sold or served in schools, where nutritious alternatives such as fresh fruit and vegetables, or baked vegetable or dried fruit snacks are served.

Questionable additives: These crisps include artificial additives that are not permitted in the manufacture of foods aimed at children under three years, including Monosodium glutamate (E621), Disodium 5'-ribonucleotide (E635) and Annatto (E160(b)).³⁹ The word 'flavouring' also appears in the ingredients list which, as for other products on sale in the UK, is a generic term for a wide range of flavouring chemicals.





Whilst there has been a large increase in the number of nursery places available, they are not always available where and when parents need them.

3 How many children are affected?

Children in daycare

There has been a large increase in the number of children going out of the home for childcare. This is in part due to changes in Government policy. In 2004 the Ten Year Childcare Strategy was launched, giving free childcare provision to all three-year-olds. This was part of a drive to encourage parents back to work and bring an end to child poverty.

The key themes of the Childcare Strategy are:

- An increase in maternity and paternity leave
- More childcare places made available via Children's Centres (formerly Sure Start)
- An increase from 12.5 hours a week free nursery school places for three- and four year-olds to 20 hours per week by 2010
- All childcare settings to be led by graduate level workers
- A series of measures using the Working Tax Credit to make childcare more affordable

However, a 2007 report by the DayCare Trust,⁴⁰ which investigated the progress of the Ten Year Childcare Strategy, found that over a quarter of families entitled to a free place for three- and four-year-olds for 12.5 hours were being asked to pay. And one tenth of those in non-working or low-income families are failing to take up the free places. In effect, more than one third of families are missing out on free provision for their children.

The report found that the cost of childcare was still a barrier for many families. It stated there was a large difference in take-up between the two main forms of Government help with childcare costs. The free entitlement (for three- and four-year-olds) was said to be working well, but the help through the Childcare Element of Working Tax Credit, aimed at other age groups and at working parents, was received by only 3 per cent of parents.

The report also found that there are problems with the supply of nursery places. Whilst there has been a large increase in the number of nursery places available, they are not always available where and when parents need them, for example:

- Four in ten parents think there are not enough places in their area
- Half of non-working parents say that they would return to work if they could find good quality, affordable and reliable childcare

Another survey by the Daycare Trust, carried out in 2008, found that more than two-thirds (70 per cent) of Children's Information Services in England said that parents had reported a lack of affordable childcare in the last 12 months.⁴¹

Sure Start and Children's Centres

Sure Start is a Government programme which aims to deliver the best start in life for every child. It brings together early education, childcare, health and family support. Sure Start covers a wide range of programmes including those targeted at particular local areas or disadvantaged groups within England. In April 2007 there were 1,250 Sure Start Children's Centres around England and by 2010 the Government aims to have a Sure Start Children's Centre in every community – 3,500 in total.⁴²

3.1 Childcare statistics for England

Ofsted survey figures show that in 2006 there were 13,600 day nurseries in England.⁴³ The number of children attending these day nurseries showed a three-fold increase between 1997 and 2006 – at 588,300 in 2006, up from 193,000 in 1997.⁴⁴ The percentage of three- and four-year-olds attending a nursery or early-years childcare organisation was 94 per cent in 2004.⁴⁵

The National Day Nursery Association estimates that 73 per cent of the nurseries are in the private sector which equates to 9,928; 15 per cent (or 2,040) are voluntary (this means they are run by community or voluntary groups, often with help from parents and on a not-for-profit basis); and 12 per cent, or 1,632, are in the maintained (or state) sector.⁴⁶

3.2 Childcare statistics for Wales⁴⁷

There are 446 day nurseries in Wales⁴⁸ and 30,000 children attended them in 2006.⁴⁹ This equates to 86 per cent of three and four-year-olds attending nursery school in Wales.⁵⁰



The average cost of a full-time nursery place for a child under two is £159 a week in England.



3.3 The cost of nursery places

The cost of a nursery place varies according to region. The Daycare Trust estimates⁵¹ that on average a full-time nursery place for a child under the age of two years costs:

- £159 per week in England
- Between £161 and £202 in London
- £142 in Wales

This equates to around £8,000 per year, or £32 per day, assuming a five-day week.

3.4 How much is spent on food?

There is no published data on the average spend on ingredients for food in nursery schools in England and Wales. However, the survey completed for this report⁵² found the majority of nurseries reported that they spent around £1 per child per day on food.

The lowest figure reported by 3 per cent or 15 nurseries was 25p per child.

Bearing in mind that the survey was self-selecting and covered only 487 nurseries, and is therefore to be considered as a 'snapshot' report, the results did show some variation between types of provision. The survey asked how much was spent on food, showing that:

- 21 per cent of private nurseries spent between £1 and £2 per child per day
- 9 per cent of state-maintained nurseries spent between £1 and £2 per child per day
- 17 per cent of state-maintained nurseries spent 50p or less per day
- 7 per cent of the private nurseries spent only 50p per day

Table 3: Responses to survey question "How much does your nursery spend on food per child per day?"

| | % of respondents that answered the question | | | | |
|--------------|---|--------------------------|------------|-----------|-------|
| | Private daycare | State-maintained daycare | Sure Start | Voluntary | Other |
| 50p or less | 7 | 17 | 23 | 8 | 0 |
| 50p to 99p | 20 | 12 | 28 | 16 | 16 |
| £1 to £1.99 | 21 | 9 | 11 | 12 | 8 |
| £2 or more | 11 | 7 | 7 | 7 | 0 |
| I don't know | 41 | 55 | 31 | 57 | 76 |

Despite budgetary constraints, many nurseries try hard to provide fresh and sometimes organic and/or locally sourced food. Some of the best examples found are shown in Table 4.

Table 4: Examples of best practice in spending on food in nurseries

| | Amount spent on food and drink per child per day | Positive attributes of the food provision |
|---|--|--|
| Abbeywood Tots - Bristol | 80p | 100 per cent organic foods with local meat, fruit and vegetables. All meals freshly made from scratch |
| Tall Trees Kindergarten – Frome, Somerset | £1.15 | Includes organic milk. Offers a well-balanced menu, including locally sourced meat |
| Childsplay Claremont Nursery – Newcastle | £1.72 | All meals are made from organic ingredients, apart from the fish, which is sustainably sourced. Local yogurt and milk used and looking to extend local sourcing to meat. Uses Nutmeg nutrition software to ensure menus meet Caroline Walker Trust standards |



Case study

Little Monkeys Nursery, Windsor



The nursery excels in teaching children about food in exciting ways, integrating food into the curriculum.

| | |
|------------------------------------|-------------------------------------|
| Money spent per day per pupil: | £1.60 |
| Organic ingredients: | Yes – all where available, Waitrose |
| Local ingredients: | Organic box from Riverford |
| Unnecessary processed food: | No |
| Parents given information on menu: | Yes |
| Parents involved in setting menus: | Yes – parent feedback is sought |
| Comply with CWT guidelines: | Yes |
| Menu analysed by a nutritionist: | No |

The nursery spends £1.60 per day on each child's food, and has a nutritionally balanced menu. It provides a good variety of protein from lean red meat, lentils, poultry, oily fish, eggs and white fish; a good variety of starchy carbohydrates, and a wide variety of fruit and vegetables in the recipes and as side dishes – for example spring onion mash, or winter ratatouille, which includes sweet potato and butternut squash. All puddings are fruit or milk based.

The nursery also excels at teaching children about food in exciting ways, integrating food into the curriculum. For example, the children do vegetable printing using the types of vegetables that they will be eating for lunch that day such as squash, mushroom, leek and cauliflower.

As Linsey Lunny, nursery manager, says: "We do regular tastings of new food. So at Chinese New Year the cook made spring rolls for snacks, and we are constantly introducing the children to new tastes and experiences."

The Little Monkeys nursery has displays of the vegetables in season on the walls and they do collages and stories to coincide with what the children will be cooking that week. For example, the children were read the story of Little Red Hen, which is about baking bread. The children made a collage of the story and baked bread, learning about it as they did the activities.





“Commercial baby food production is tightly regulated yet at nurseries the food provided may be determined by the budgets, education and beliefs of the nursery owners.”

Dr Kathryn Hart, University of Surrey.

4 The role of Government

Why food rules are letting children down

“Commercial baby food production is tightly regulated yet at nurseries the food provided may be determined by the budgets, education and beliefs of the nursery owners.”⁵³ **Dr Kathryn Hart, Registered Dietitian and Lecturer in Nutrition and Dietetics, University of Surrey.**

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This section sets out the legal nutritional requirements for food provision in nurseries in England and Wales.

These requirements are lagging far behind the detail and the direction of the higher standards now enforced in primary and secondary schools. As a result, the government inspection agencies in England and Wales - Ofsted and Estyn - have limited powers to undertake meaningful inspection and assessment of healthy food provision in nurseries and to provide effective recommendations for improvement. There is minimal obligation to enforce stringent nutritional standards.

4.1 Legal requirements for nursery food in England

Compulsory nutrition standards covering lunches for children in nursery schools and daycare settings came into force in 2001, based on a broad “food group” approach.⁵⁴ They have limited impact as they only apply to Local Authority maintained nursery schools (this includes Sure Start Children’s Centres) and those maintained nursery schools attached to primary schools.⁵⁵ They do not apply to private and voluntary nurseries which together make up 88 per cent of total provision. Nor do they apply to meals other than lunch.

The standards state that every day at least one item from each of the food groups below must be available for lunch:

- Starchy foods such as bread, potatoes, rice and pasta
- Fruit and vegetables
- Milk and dairy foods
- Meat, fish and other non-dairy sources of protein

There is another layer of standards - The National Standards for Under-8s in Daycare which were set by the Department for Education and Skills in 2003. These apply to all nurseries (state, private and voluntary) and cover the provision of fresh drinking water, which must be available all day, as well as awareness of children’s dietary requirements such as food allergies. They also state in a general way that “Food and drink should be properly prepared, nutritious and comply with dietary and religious requirements.”⁵⁶



Provision of healthy food at nursery remains a lottery, with few winners.

Looking at these two standards together, and comparing them to the standards now set for primary and secondary schools in England, our conclusion is that nursery standards are inferior as there are no nutrient-based standards to show what nurseries should be serving and no exclusions or restrictions on what cannot be served. The weak “food group” approach described above can mean wide variability in nutritional quality and nutrient content of the food served – often heavily affected by the skills, knowledge and budget of the nursery cooks. In contrast, school food standards are based on stringent nutrient requirements designed to meet the nutritional needs of the target age group, and are therefore more effective in improving nutritional quality and health.

From September 2008, both sets of national standards will be subsumed into the new Department for Children Schools and Families, “Early Years Foundation Stage” (EYFS).⁵⁷ The EYFS – the Government’s “standards for learning, development and care for children from birth to five” – will apply to all nurseries that offer provision for children from birth to five. It is not specifically about food or health and does not significantly change the requirements in the national standards for food outlined above. However, it is a legal requirement that “Where children are provided with meals, snacks and drinks these must be healthy, balanced and nutritious.”⁵⁸

In addition there is guidance (which is not a legal requirement) for childcare workers, suggesting they should “encourage children to try healthy food, involve them in the preparation of food and reinforce messages about healthier choices through, for example, discussions about children’s food choices”.⁵⁹ Ofsted will be inspecting how nurseries meet the requirements but “final decisions about how they reach the judgements are still being taken”⁶⁰ despite the fact that the EYFS is to come into force in September 2008.

The new standard makes little mention of nutrition or food-related activities, focusing mainly on other factors in a child’s emotional and physical development.⁶¹

Similarly, in the Government’s most recently published national strategy to target obesity – Healthy Weight, Healthy Lives – there is only one provision for nursery school food under the title Pregnancy and the Early Years. The aim of the strategy is to ensure “that nurseries, child centres and child minders support the healthy early development of all children” by the “requirement that all meals, snacks and drinks that are provided for children must be healthy, balanced and nutritious”, which simply repeats the guidance given by the EYFS.⁶² However, a general encouragement to ensure that food is “balanced” is unlikely to have an effect on nutritional quality, if at all. There are still no definitions in the EYFS or the Healthy Weight, Healthy Lives to guide nurseries on what is meant by “healthy, balanced and nutritious food”. Precise definitions are essential to give children adequate nutritional protection, particularly as most nursery staff lack the nutritional knowledge or training to produce genuinely nutritious menus. To date, no national training scheme has been made available to help early years workers enforce the new requirements.

Provision of healthy food at nursery remains a lottery, with few winners.

Case study Scotland

Scotland published its Nutritional Guidance for Early Years report in 2006. It was distributed to all early years workers, including those at state-maintained and private nurseries. Its aim was to give practical support to enable carers to meet the Scottish National Care Standards. It is much more detailed and comprehensive than information provided in England and Wales. Although the document stops short of establishing compulsory nutrient-based standards, it does give very detailed and practical guidance on menu planning, how to develop nutrition or food policies and how to develop good eating habits including the social aspects of meal times. It includes case studies of good practice as well as sample 10-day menus.

NHS Scotland has also produced and distributed to all nurseries an excellent activity resource for the early years sector called Adventures in Foodland, to help carers of pre-school children to implement the Nutritional Guidance for Early Years. It includes enjoyable activities for cooking and growing food as well as craft activities, and encourages children to think of food as being fun.

The NHS health promotion agency, Health Scotland, also undertook a nationwide programme of training in 2006 and 2007 for the early years sector, working with local professional and stakeholder groups in Childcare Partnerships. The aim of this was to build training to support implementation of the Guidance and to attract local funding to supporting this.



4.2 Inspection of nursery food in England

In the past, Ofsted inspections looked simply at “the extent to which learners adopt healthy lifestyles”. More recently, it has been made clear that Ofsted expects nurseries to present evidence of their general approach to food and healthy eating.⁶³

Ofsted inspection teams do not currently check that the food on offer in private and voluntary nurseries complies with the limited “food group” standards for state-maintained nursery schools described in section 4.1. Inspectors judge whether the nursery has attained National Standard 8, which judges only whether adequate supplies of food and water are provided and whether the food provided is “nutritious”. However as no definition of “nutritious” exists, it is difficult – if not impossible – for inspectors to judge this.

Ofsted occasionally recommends improvements that could be made to nursery school food. For example, in 2006 it undertook an extra survey of healthy eating in 110 childcare settings and suggested actions and recommendations in only seven out of 110 settings.⁶⁴ Out of the seven, two establishments had actions raised regarding provision of healthy snacks and establishing procedures so that carers are aware of children’s dietary needs. Without this special report the nurseries that were not complying with even the most basic of legal standards could have been missed.

It is likely that because Ofsted does not inspect to specific nutritional standards, it is unable to differentiate between good and bad food quality at nursery schools.

“Our Ofsted inspector did not stay to try the lunch. He simply checked whether what was on the menu was what we were going to be serving on the day and looked through our seasonal menus.” **Nursery owner, Bath.**

“There used to be much less detail about health and food provision in our inspections. But now inspectors are asking to see menus, they watch the way the children eat, and see lunch going on. They do seem to be more aware that food is important. In an ideal world though, we would like the inspectors to actually eat the lunch with the children as then they’ll see how good it is!” **Linsey Lunny, Manager of Little Monkeys Nursery, Windsor.**



4.3 Legal requirements for nursery food in Wales



In Wales, nurseries are regulated by the National Minimum Standards for Full Day Care published in 2002.⁶⁵ Standard 12 covers food and drink and states that the outcome on food and drink should be that “Children are provided with regular drinks and food in adequate quantities for their needs” and:

- Food and drink should be “properly prepared, nutritious and adequate in quantity”
- Food and drink should comply with dietary and religious requirements
- Fresh drinking water should be available at all times
- Snacks should be varied and nutritious
- Food allergies should be catered for and documented
- Children must be able to sit at a table for meals

Babies under two years old are covered by additional regulations but these relate to the time of feeding, rather than specific nutritional standards.

Recent policy on food for children in Wales has been focused on provision in schools. The Appetite for Life Action Plan details nutrient-based standards in school meals for primary and secondary school pupils.⁶⁶ Nursery schools are not mentioned.

4.4 Inspection of nursery food in Wales

Welsh nurseries are inspected by both the Government inspection body Estyn and by the Care and Social Services Inspectorate Wales (CSSIW). Since April 2007, Estyn inspectors have been issued with new guidance on assessing healthy living and food and drink.⁶⁷ Inspectors now “must comment on whether the school has appropriate arrangements that encourage and enable learners to be healthy”, as this reflects the Welsh Assembly Government’s aim to develop a whole-school approach to nutrition. Inspectors are encouraged to ask questions under Key Question 4: “How well do schools care for, guide and support learners?” with prompts such as:

- Do children under-five have opportunities to develop and extend their understanding of healthy living in different areas of learning?
- Does the school encourage healthy eating and drinking?

The inspectors may stay for lunch and may look at menus, but this is not a requirement.⁶⁸ If inspectors were to eat lunch with the children as a matter of course it would provide more of an incentive for nurseries in Wales to improve their food provision. The phrase “healthy eating and drinking” is not defined, and without nutrient standards it is hard – if not impossible – for an inspector to assess whether the school is encouraging healthy eating effectively.

"We have government funded drives for breastfeeding and healthier school meals but there is a big gap in the middle."

Neil Leitch, Pre School Learning Alliance.

4.5 The role of Government

There are three key ways in which government policy could support healthier nursery school food provision, namely:

- 1 Provide a lead on both sentiment and policy in encouraging better provision of food in nurseries
- 2 Implement a set of statutory nutrient-based standards for nursery food, to be enforced by Ofsted and Estyn inspectors
- 3 Introduce compulsory cookery and nutrition training for all catering staff in nurseries

These critical issues are explored in detail in this section.

4.5.1 Leaders required

"We have government funded drives for breastfeeding and healthier school meals but there is a big gap in the middle." **Neil Leitch, Pre-School Learning Alliance**⁶⁹

In England and Wales the legally enforceable standards for nursery school food are inadequate. There are no plans to address this. The Department for Children, Schools and Families (DCSF) was asked if any policy developments were planned in the area of nursery food. The reply was: "At present, there are no further policy developments in relation to nursery school food."⁷⁰

The policy focus has been on schools. For example, in England, funds of £21 million were made available to the School Food Trust (the agency charged with the task of improving school food) in February 2008. This is in addition to the £627 million funding already ring-fenced for school food since 2005.⁷¹ School policy is now for a 50p minimum spend on ingredients for lunch in English primary schools and 60p in secondary schools. £2 million will also be spent on School FEAST training centres to improve the skills of catering staff in cooking fresh and tasty food that meets the nutritional standards and will be appealing to children in their care.

In Wales, the Appetite for Life Action Plan focuses only on schools. There is £6.6 million funding provided for school meals between 2008 and 2010.

Apart from two small studies by Ofsted⁷² and the Food Standards Agency,⁷³ mentioned earlier in this report, we found no policy documents or reports covering how nursery school food should be developing in England and Wales, and no money set aside to address the issues.

But guidance and regulation would be widely welcomed. A study of the food served at ten local nurseries for East Sussex County Council found "a lack of knowledge and confusion concerning what constitutes healthy eating for one- to four-year-olds" as well as a "lack of information available for childcare providers on infant nutrition". The researchers found a tendency to apply the requirements of healthy eating for school-age children to the nursery age group, who have very different nutritional requirements. The researchers also observed that nurseries can receive "conflicting" advice from a range of authorities.⁷⁴

Children between one and five years old grow and develop so rapidly that eating habits and food intake affect their growth. The Government frequently declares that pre-school nutrition is of fundamental importance to preventing obesity. But these concerns do not translate into policy or practice, where the focus continues to be on school meals or on encouraging breastfeeding. A gap in policy remains for the pre-school years after weaning and before school.

Case study Pennsylvania, USA

The Kindergarten Initiative started in 2004 in Pennsylvania, and it combines eating healthy food, farm visits, learning about nutrition and parental involvement. It started as a primary school initiative for five- to six-year-olds, but it has now spread to nurseries too.

The project has been so successful that Pennsylvania State has shown strong leadership and passed the Healthy Farms, Healthy Schools Bill in 2006, modelled on a Kindergarten Initiative programme run by the not-for-profit organisation The Food Trust. The Bill was established to educate kindergarten children and their families about the importance of choosing healthy, locally produced foods while increasing awareness of Pennsylvania agriculture. The programme is already working with 41 schools. The law has also helped Pennsylvanian farmers gain access to new markets and it allows state funding to be used to put in place similar programmes to the Kindergarten Initiative in more schools.

The programme's aims are to:

- Increase the consumption of nutritious food by teaching children and parents about healthier food choices
- Increase student and parent awareness of locally grown food and enlist the support of parents to help increase children's consumption of local products

The types of activities undertaken by participating schools include farm visits - for example, around Hallowe'en time they visit pumpkin farms. Parents also take part in farm visits, where children and grown-ups play a game together. They are blindfolded and taste fruit and vegetables and have to guess what they are.

Bonnie Hallam, the programme director for the Kindergarten Food Initiative explains that: "The key to success was to develop a programme that easily integrated into the kindergarten curriculum and was not an add-on to what teachers have to do. The programme is fun and on-going - it is not a programme that happens for a six-week period or even one day a week.

"Every day, children and teachers are talking in some way about eating healthy food and where food comes from. Or they are eating local foods, going on farm trips or having parents participate in events. I believe the programme is successful because it not only involves the school, but it involves parents and the community. Everyone working together can change the local food system."



4.5.2 Lack of nutrient-based standards

There are no nutrient-based standards for food in nursery schools. These standards are now mandatory in primary and secondary schools. When asked about the likelihood of nutrient-based standards being introduced for nurseries, the Department for Children Schools and Families replied: "There are currently no plans to extend these standards to nursery schools or units."⁷⁵

Basic food standards exist in nurseries (as shown in section 4), requiring caterers to serve food from each food group in state-maintained nurseries, but:

- The standards are too simplistic and are not a useful tool for planning menus
- They are not monitored systematically by the authorities
- The inspection authorities do not have any meaningful powers to improve nursery nutrition
- They only apply to state maintained nurseries – just 12 per cent of the total

In 2004, Ofsted and nutritionists from the Government's Food Standards Agency visited around 25 childcare settings to assess their promotion of good health and nutrition. They found that "In many of the schools surveyed, the nutritional standards were not being implemented effectively."⁷⁶

The lack of nutrient-based standards means that the food in nurseries in England and Wales is inconsistent. With higher numbers of children going into childcare every year, parents have no guarantee that their children will be fed a nutritious and balanced diet when they attend nursery.

Some other countries are far ahead of the UK, with widespread implementation of nutrient-based standards in Austria, France, Italy, Denmark and in some parts of Belgium⁷⁷ akin to the nutrient-based standards that are now mandatory in primary and secondary schools in England.

In the UK, the Caroline Walker Trust (CWT), a group of campaigning nutrition specialists have tirelessly championed nutrition standards for both nursery school and school-aged children. Their 2006 report *Eating Well for Under-5s in Child Care* makes a compelling case for nurseries to adopt nutrient-based standards.⁷⁸

In surveys conducted for this report 85 per cent of parents and 82 per cent of nursery workers said they would like to see compulsory nutritional standards for nursery school food.⁷⁹

But only 16 per cent of nurseries ever use the CWT guidelines mentioned above.⁸⁰ Voluntary mechanisms are insufficient to give pre-school children the protection they need.

"We need compulsory nutrient-based standards for nursery school food. At the moment nurseries can do what they like so there is no level playing field and parents are rightly very concerned when they come and look around our nurseries. We spend a lot of time going through menus, talking about healthy food and reassuring them. If there were compulsory nutritional standards, parents would be more trusting and they would know that whatever nursery their child goes to, the food will be of a good standard."

Sylvie Dorman, Nursery Owner, Zebedees, Bath and Bristol.



Case study

Italy



Italy's Department of Health sets nutritional standards for all nursery school food. All food has to be prepared on the premises by trained staff.

Italy's Department of Health sets nutritional standards for all nursery school food. All food also has to be prepared on the premises by trained staff. Staff members eat with the children, who are encouraged to help with the food preparation. Parents are consulted about menus and pay around £2 for a meal via their nursery fees.

Examples of pioneering nursery school food providers are spread throughout Italy. In the city of Ferrara in northern Italy, all food served in the city's 27 nursery schools is organic. This has led to the diet of the whole city gradually improving as more organic products become more widely available. In nearby Cesena, the nurseries all serve organic food. The city of Turin ensures that all fruit and vegetables served in nurseries are not only organic, but the bananas are also certified as fair trade.⁸¹

4.5.3 Lack of compulsory training for staff involved in cooking

Nursery school cooking staff in England and Wales must have a basic food hygiene qualification. Some Local Authorities go further and offer training schemes (such as those highlighted in annex 4). These may be compulsory for an area's state-maintained nurseries, but this is not the case for private nurseries which make up 73 per cent of nursery provision.

"I have previously asked about the quality of school lunches at nursery and they tried to improve them but their knowledge of food nutrition was so basic – they hadn't got a clue." **Respondent to parents' survey, 2008**

Whilst Government funds are available to Sure Start Children's Centres to promote healthy lifestyles by training Child Centre staff in developing healthy eating habits, in reality these programmes train only a minority of those working with the under-fives. The Pre-School Learning Alliance, a charity specialising in the early years, supports improvements in pre-school education, and believes the training should be available to private and voluntary nurseries too.⁸²

In 2004 Ofsted, in partnership with Food Standards Agency nutritionists, visited 25 childcare settings. Their purpose was to:

- Evaluate the appropriateness and quality of the work with food that the children undertake
- Assess the extent to which the environment in which the children work and eat is supportive of promoting good health and nutrition
- Identify the factors that support or impede food and nutrition education

They found that there is a real need "for the nutrition knowledge and practical food-handling skills of staff responsible for the children in their care... to be improved. Without this it is difficult for high quality food and nutrition education to be achieved."⁸³

A study of nurseries in Stoke-on-Trent questioned staff, including teachers, classroom assistants, early years practitioners, and nursery nurses. Their qualifications included:

- Nursery Nurse Education Board (NNEB)
- National Vocational Qualification (NVQ)
- Diploma in Childcare Education (equivalent to NVQ level 3)
- Further Education degrees

Despite these qualifications, 61 per cent - nearly two out of three - reported that they had no training in diet and nutrition issues.⁸⁴ Out of those who had received training, none could recall learning how to positively influence children's meals or food choices.

In our survey of nursery workers, 115 of the 487 people questioned (24 per cent) said that they and other members of staff had no qualifications in food preparation or nutrition.⁸⁵

"The word 'chef' can be used very loosely by some nurseries. There are no compulsory guidelines in place so nurseries could have a cook that has limited experience or qualifications and parents would be none the wiser."

Tish Dorman, Nursery School Food Provider, Northern Ireland



"There are no compulsory guidelines in place so nurseries could have a cook that has limited experience or qualifications and parents would be none the wiser."

Tish Dorman, Nursery School Food Provider.

Case study Wales

| | |
|------------------------------------|-----|
| Organic ingredients: | No |
| Local ingredients: | No |
| Unnecessary processed food: | Yes |
| Parents given information on menu: | Yes |
| Parents involved in setting menus: | No |
| Comply with CWT guidelines: | No |
| Menu analysed by a nutritionist: | No |

A mother of two from Wales who responded to our parents' survey said: "In 2003, my son attended a nursery school with a terrible menu. Out of a two-weekly rotation menu there were only three days where fresh vegetables were included in the main lunchtime meal. There was no fish apart from fish fingers. Angel Delight, jam tarts and sugary puddings were all on the menu. Two particularly bad meals stand out: a lunch of chicken nuggets, with tinned spaghetti and waffles. And the other lunch, which provided minimal nutritional benefit, was fish fingers, beans and chips with trifle for pudding. I always sent my son with his own home-cooked organic lunch, as I didn't want him eating all that processed food.

"One day I was really upset as they told me they had given him chicken nuggets as he was not eating the food I had provided. I was furious and it was then that I first approached the nursery to ask them to improve the menu. The owner was very defensive saying "We can't afford to give them anything else" and "The children just won't eat healthy food – this is what they like." She made me feel like an interfering mum and looked at me as if I was mad.



“I persevered and made some easy and cheap suggestions for change, such as jacket potatoes with tuna, macaroni cheese with mushrooms and peas. And instead of Angel Delight I suggested banana fool (natural yogurt with bananas sliced in). They eventually tried out my new menu for two weeks, and it was a great success, so they continued with it.

“However, friends who use the nursery now report that, despite some good days (e.g roast chicken and four fresh vegetables) – baked beans, fish fingers, jellies and jam roly poly are all still on the menu.

“The nursery is so good in other respects – it’s an Eco-School, grows its own vegetables and has a wonderful outside space, but I genuinely think the people cooking at the nursery do not know anything about nutrition. If they had some training on healthy eating and nutrition, I am sure they would understand how important good food is, cooked from scratch.”

4.5.4 Low pay, morale, and the status of nursery workers

The people who work in nurseries are often poorly paid and lacking in morale.

A 2007 report into childcare provision⁸⁶ found that 60 per cent of nursery nurses are considering leaving the profession.

The report said: “The pay and status of childcare and early years work is low, which affects staff recruitment retention and therefore can have a potential impact on children.”

The report also found that staff in the childcare sector are amongst the lowest paid in the education workforce, with nursery nurses earning less per hour than school secretaries and nursing auxiliaries, who have comparable qualification levels. Qualified nursery staff earn on average £7.15 per hour, and unqualified nursery staff earned an average of £5.70 per hour. The minimum wage is £5.35.

At worst, childcare and early years workers are paid over a third less than secretarial staff with equivalent qualifications, and at best receiving pay equivalent to 84 per cent of nursing auxiliary workers.

But childcare is a massive growth area. The Transport and General Workers Union⁸⁷ describes the nature of nursery work as “highly demanding, undervalued work in small workplaces in the public, private and voluntary sectors”... which, they conclude, can lead to serious exploitation. They say that the problem is particularly acute in private nurseries. Workers in local authority nurseries are at least protected by the wider agreements and regulations of local councils. The union has campaigned for greater training for childcare workers, saying, “It is important both for staff and children that high standards of care and education exist in all nurseries.”



Almost one in four children aged five are overweight or obese – and numbers continue to grow.

5 They are what they eat

Because eating habits are formed in childhood, nurseries can influence whether children develop either a positive attitude to food and a healthy diet, or a preference for foods that are high in fat, salt or sugar. Nursery-aged children need guidance and encouragement to eat a healthy diet for both current and long-term wellbeing.

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Food problems in childhood

Obesity

A ground-breaking Government-funded Foresight obesity report published in autumn 2007 identified “eleven critical opportunities for intervention to prevent obesity later in life”. The first three are breastfeeding/bottle-feeding (zero to six months), weaning (six to 24 months) and pre-school age (two to five years). In other words, nearly a quarter of these opportunities to prevent obesity can occur when a child is at nursery.⁸⁸

Latest figures show that almost one in four children aged five are overweight or obese – and numbers continue to grow.⁸⁹ The Foresight report describes how society has created an “obesogenic” (obesity-promoting) environment that encourages weight gain. Key problems are the abundance and promotion of energy-dense foods, increased sedentary lifestyles and widespread use of motorised transport.

It should be difficult for babies and young children to become overweight or obese. For the first four to six months their diet consists solely of milk. The foods that are then gradually introduced to their diet are usually simple and unprocessed, high in naturally occurring vitamins and minerals, and without added sugar or salt.

Babies are very good at regulating their appetite. It is only when they are regularly given processed food and sugary drinks that the balance is tipped in favour of eating too many calories.

Overweight or obese children face a childhood beset by bullying and stigmatisation,⁹⁰ both of which can lead to psychological problems. For such children, food – which should be a source of nourishment and enjoyment – can become associated with guilt and negative feelings. Research also shows that obese children are more likely to become obese adults.

But when a child becomes overweight it is difficult to then lose the weight gained. Their body is biologically programmed to maintain these food stores. In addition the eating patterns that resulted in weight gain have become dietary habits that are hard to change. The main focus for tackling obesity is therefore prevention rather than treatment.



Long-term degenerative diseases

There are other health concerns associated with unhealthy diets. If a child routinely eats too much sugar, fat, salt and refined carbohydrates – and not enough fibre, fruit and vegetables – they are likely to carry these eating habits into adulthood. Over a lifetime, they are more likely to develop degenerative diseases such as type 2 diabetes, heart disease, and cancer.^{91, 92, 93, 94} Research shows that about a third of all cancers could be prevented with a healthy diet.^{95,96}

While these diseases were once associated with middle to old age, the first signs are now being seen in young people. Type 2 diabetes was previously called “mature onset” diabetes because it was associated with middle age. Today, signs of this disease are being seen in childhood.⁹⁷ Medical scientists have also found furring of the arteries in teenagers – a risk factor for heart disease that has a strong positive correlation with unhealthy fats in the diet.⁹⁸

Short-term problems

In the short term, children who eat unhealthily are likely to suffer from constipation and fatigue. They are also more likely to suffer regular colds, other illnesses and distressing conditions such as breathing problems, particularly if they are asthmatic.^{99,100,101} Evidence is also emerging that children who eat poor diets are likely to have difficulty concentrating, with implications for academic attainment.¹⁰² In fact, the latest research has found a direct link between poor diet at age three and children’s later attainment at school.¹⁰³

The foundation of good health

The foundations of a good diet and healthy physiological development are laid down when a baby is breastfed and also when weaned – in other words, just around the time when more and more children are entering nursery school. Research demonstrates that breastfed babies are more willing to try new foods when first given, compared to bottlefed babies.¹⁰⁴ All babies benefit from a wide variety of foods being introduced during weaning as it increases their acceptance of new foods later in childhood.^{105,106}

So, at an age where children’s eating habits are being set, nurseries play a vital role in influencing the future health of the children they care for.

5.1 Helping children eat well

Adults looking after young children sometimes find it hard to encourage children to eat healthier foods. However, gaining knowledge of some of the common issues around food and young children can help childcare workers look after the children in their care better.

5.1.1 Neophobia

Up to about 18 months babies and toddlers are open to trying new foods. Research shows that giving a new food once in the first year can double a baby’s intake of that food when a parent offers it again at mealtime.¹⁰⁷

When they start to walk and become more mobile, some toddlers develop neophobia (a fear of new foods). Academics believe that humans developed this condition to prevent them from eating toxic or poisonous substances. So any food that they do not recognise as ‘normal’ is seen

Nurseries play a vital role in influencing the future health of the children they care for.

as a potential danger.¹⁰⁸ This is why it is so important to introduce a wide range of foods during the weaning period. Once toddlers are around 18 months to two years old, it is much more difficult to introduce new foods. Research indicates that the child might have to taste a new food up to 15 times before they accept it.¹⁰⁹

It is therefore crucial for parents and childcare providers to offer a wide variety of foods before a child reaches 18 months old. The neophobic phase is thought to peak between two to six years. However, it can extend into later childhood if parents and childcare providers such as nurseries allow this phase to dictate and limit the variety of food offered.

5.1.2 Fussy eating

Children who are showing signs of neophobia are often labelled 'fussy' or 'picky eaters'. But there is a clear distinction between the two, and both types of challenge need to be handled differently:

- Children who refuse a food on sight (without trying it) are neophobic
- Children who taste a food but refuse to eat any more because they say they don't like the taste are fussy or picky eaters

There is confusion over these two conditions because they occur about the same time: when children become more mobile and independent. Unless a child genuinely has very specific tastes, fussy eating can be a way for them to feel more in control at a time when they are becoming independent, or to gain a busy adult's attention.

5.1.3 Eating environment

Nurseries can promote a healthy eating environment, where children sit together around tables in a social setting. Sitting around a table with other children who are eating a new food can provide a supportive peer environment that will persuade a child to try new foods. The more children that are eating the food, the higher the chance will be that other children will try the food too.¹¹⁰ For parents who find their child eating food at nursery that they refuse at home, this evidence may be reassuring.

Regularly providing foods that children have previously refused has been shown to encourage increased consumption and to increase the chance that the child will come to like the food. This was demonstrated in a small study which increased vegetable consumption in children aged five to seven years.¹¹¹

Case study

Sweden

Elisabeth Amting is one of the pre-school teachers at Skogstrollet School, Norrland, Sweden. She works at an innovative nursery that tries to have the children eat outside every day throughout the year.

She explains: "Last year we cooked outside every Friday lunch. We always eat outside when the weather is good, even if we don't actually cook outside. We do it because everything tastes so good outdoors. All the senses are involved and everyone wants to eat more when they are out in the fresh air. Going outside helps us all to calm down - people today are so stressed and we find this is a more relaxed way for the children to eat."



The nursery staff use a unique system in order to cook their food outside. A fire is built up in a cement ring and a pan called a “Murrikka” is placed above the fire. They make vegetable stir-fry dishes such as broccoli, corn and peas, chicken or meat dishes and rice or pasta. The children also help to wrap up fish, potato and vegetables with creme fraiche in small foil parcels and the teacher places them in the embers of the fire to cook.

The nursery allows half an hour for lunch and staff members wait for everybody to finish. All the staff eat with the children and it is a very sociable time. Biscuits, sweets, crisps and ice-cream are not on the menu in the nursery, partly due to health issues but partly because they cost too much. The nursery spends £1.11 on food per child per day.

5.1.4 Distinguishing nutrient and energy requirements

Babies and children's stomachs are small and fill up quickly. For this reason, young children need to eat little and often. In addition to having three main meals a day, they are likely to need two to three snacks to keep them going. These snacks should be a combination of starchy carbohydrates (preferably wholemeal) and fruit and vegetables. If children are not given food in this way they may become tired and fractious and be less likely to meet their energy requirements for growth and development.

Children require a lot of energy for growth and development, and to fuel their high activity levels. The food and drink they consume also needs to be rich in vitamins and minerals. All too often processed refined foods provide “empty calories”, being high in energy (e.g. from refined fats and/or or sugars) with few, if any, vitamins, minerals or other essential nutrients.

5.2 Are pre-school children malnourished?

Paradoxically, while many young children may be consuming too much energy and becoming overweight or obese, many children, whatever their energy intake, are also malnourished – i.e. they are not meeting their vitamin and mineral requirements. The National Diet and Nutrition Survey of children aged between 1½ and 4½¹¹², published in 1995 by the Department of Health found that:

- On average children's intakes of non-milk extrinsic sugar (NME sugar – the least healthy type) was 20 per cent (9 per cent above the maximum recommended level)
- Approximately 10 per cent of children in the survey consumed 33 per cent of their energy in the form on NME (least healthy) sugars
- The average salt intake was 3.3g to 3.8g per day. This exceeds maximum recommended intakes set by the Food Standards Agency, which should be limited to a maximum of 2g per day for one to three years and 3g for four to six years
- Eighty four per cent did not meet the recommended intake for iron
- Seventy per cent had zinc intakes below the recommended level
- Thirty eight per cent did not have enough vitamin C in their diet
- Almost half had intakes of vitamin A below the recommended level

Concerns have been raised that pre-school children with too much fibre in their diet (e.g. from fruit and vegetables), and not enough fat, may not meet their energy requirements. However there is little research to support this hypothesis.¹¹³ Conversely research shows that limiting fat intake to

If children regularly consume sugary food and drink then it follows that they are likely to develop a preference for sweet foods.

between 30 to 35 per cent of calories consumed by children aged 18 months (equivalent to the level recommended for healthy adults) does not delay growth. Where children have fat intakes higher than the healthy level recommended, at between 39 to 43 per cent, they may have lower intakes of iron and vitamin C as well as low iron status.¹¹⁴

5.3 No added sugar

If children regularly consume sugary food and drink then it follows that they are likely to develop a preference for sweet foods.^{115, 116, 117}

Not only are sugary drinks and foods bad for teeth if consumed between meals, but evidence is emerging that children who regularly consume sugary drinks are more likely to become overweight or obese.^{118, 119, 120}

Sugar-free alternatives, such as diet drinks, might seem like the answer. But some diet soft drinks have been shown to be just as damaging to teeth as sugary alternatives due to their acidity¹²¹. Sweetened soft drinks are also usually flavoured with an artificial sugar replacer such as aspartame, sucralose, saccharin or acesulfame-K.

These sweeteners are not suitable for children under three years of age. EU Law does not permit manufacturers to use these artificial sweeteners in foods and drinks aimed at children under three years of age because their bodies are developing and growing at a fast rate. In addition, their food intake compared to their body weight is higher than that of an adult, so they are likely to consume proportionately more of the additive compared to an adult. Both these factors make young children more vulnerable to possible effects associated with such artificial additives.

5.4 Allergies

It is essential that all nursery staff have knowledge and understanding of food allergies (where the body mounts an immune response when an allergen-containing food is consumed) and especially to severe allergic conditions such as anaphylaxis. The early years are when children are most likely to develop an allergy.

Common symptoms of allergic reactions include coughing; dry itchy throat; nausea and feeling bloated; diarrhoea and/or vomiting; swelling of the lips; runny or blocked nose; sore red itchy eyes; wheezing, and shortness of breath. Allergies can affect two to seven per cent of babies under one year old. Eighty per cent of children with egg or milk allergies outgrow them, while only 10 to 20 per cent of children with peanut allergy outgrow their allergy. Overall, most children grow out of allergies by the time they are three years old. Carers and parents need to ensure that the allergy-causing food is avoided completely, as exposure can worsen the allergy and result in the allergy persisting into older childhood or adulthood.

Symptoms can appear immediately or several hours after the offending food has been eaten.

Very rarely, an allergy can cause the condition anaphylaxis, which is a very severe allergic reaction that can be fatal. The symptoms include difficulty in breathing, swollen lips or mouth and complete collapse. Emergency treatment by a medical professional is essential – hence the need for nursery staff to be able to avoid allergy-causing foods, and identify any adverse reactions quickly.

Common allergy-causing foods (some of which can also trigger anaphylaxis) include: celery; cereals that contain gluten (wheat, rye, barley and oats); shellfish such as crabs, mussels, oysters and prawns; eggs; fish; lupin; milk; mustard; nuts (particularly brazil nuts, hazelnuts, almonds and walnuts); peanuts; sesame seeds; soya, and the food additives sulphur dioxides or sulphates.

Labelling regulations state that if these ingredients are added to pre-packed foods, they must be listed on the label. Difficulties do arise, however, since not all food needs to be labelled – such as food bought loose or in catering establishments. In addition, people who have allergies may also react to ingredients that are derived from the allergen that causes the trouble. However, it is sometimes very difficult to find out whether an ingredient is a derivative of an allergen-causing food.

Lack of training in allergies can be fatal. This is tragically illustrated by the death of a five-month-old baby at a nursery in Milton Keynes in 2003.¹²² The baby was allergic to cows' milk protein. Despite his parents giving full details of the allergy and strict dietary instructions to staff before he started at the nursery, he was mistakenly fed cereal containing milk powder for breakfast. The baby died within two hours of eating the cereal. Although there were procedures in place, they were inadequate and not applied. Staff had not received any formal training in caring for babies and young children with serious food allergies.



While young children are protected from additives in manufactured foods, no legislation exists for foods served in catering.

5.5 Additives

Artificial additives are used by food companies to make processed foods look and taste appealing. They generally have no nutritional value, and are added to replace the natural colours and flavours lost in processing. Some are often used to give food a longer shelf life.

Under EU law most artificial additives (including colours, sweeteners, flavours and preservatives) are not permitted in the manufacture of weaning foods aimed at children under the age of three. This is because their bodies are developing and growing so rapidly that they are susceptible to any adverse affects associated with artificial additives.¹²³

It is important that legislation relating to manufacturing weaning foods exists to protect babies and younger children. However, it does raise questions about how regulators decide on a cut-off point, as research shows that some older children can be affected by these additives too.

And while young children are protected from additives in manufactured foods, no legislation exists for foods served in catering. With so many young children now eating meals at nursery this legal loophole must be addressed.

The best way to avoid artificial additives is to cook food from fresh ingredients. However, problem ingredients can sometimes turn up in everyday kitchen cupboard ingredients. For example, stock cubes can contain the artificial flavour enhancer Monosodium glutamate (MSG, which is not suitable for children under three years). In addition, a small study by the parents' group, Hyperactive Children's Support Group,¹²⁴ found that for children diagnosed as hyperactive or with Attention Deficit Hyperactivity Disorder (ADHD), MSG could trigger hyperactive behaviour. It is possible that adverse effects can also be triggered in some asthmatic people.



In 2005, researchers at Liverpool University led by Professor Vyvyan Howard found that, combined together, food additives can have a powerful effect on nerve cell development. A three-year study funded by Organix found that the harmful effect of additives on developing nerve cells was up to seven times greater than expected when two of the additives were combined. The team claimed that the damage was identified at levels which are consistent with the average amounts consumed by children eating popular snack foods and drinks.¹²⁵

The additives tested in the Liverpool research were the flavour enhancer Monosodium glutamate (E621), the artificial food colours Brilliant blue (E133) and Quinoline yellow (E104) and the artificial sweetener Aspartame (E951).

- Monosodium glutamate is a flavour enhancer found in many crisps, some processed cheeses, stock cubes, sauces and ready meals
- Brilliant blue is found in some sweets, soft drinks, canned and baked foods, desserts and ice lollies
- Quinoline yellow is also used in sweets, to colour smoked haddock, in scotch eggs and in some pickles
- Aspartame is used in many diet drinks (and in drinks that include a mixture of sweetener and sugar) and foods, as well as some sweets

Recent research, funded by the Food Standards Agency (FSA) found that when these six artificial colours and a preservative (Sodium benzoate) were removed from certain children's diets, their behaviour improved.¹²⁶ The colours included in the study were Tartrazine (E102), Quinoline yellow (E104), Sunset yellow (E110), Carmosine (E122), Ponceau 4R (E124), Allura red (E129) and the preservative Sodium benzoate (E211). All these additives are not permitted in the manufacture of foods aimed at children under the age of three.

These colours and preservatives are found in many processed foods and soft drinks. Supporters of the Action on Additives campaign run by the Food Commission and supported by the Organix Foundation have found over 1,000 products containing these artificial additives, widely available around the UK, including fruit squashes, desserts, crisps, yogurt drinks, character goodie bags, cakes and sweets.¹²⁷

The FSA website includes statements that eating foods or drink containing Tartrazine can cause nettle rash (urticaria), dermatitis (an allergic skin condition), asthma, or rhinitis (runny nose) in a small number of people. The Agency also warns that Sodium benzoate and other benzoates (food additives E210, E211, E212, E213, E214, E215, E216, E217, E218 and E219) could make the symptoms of asthma and eczema worse in children who already have these conditions.

Following the FSA research, in July 2008 the European Parliament voted in favour of labelling foods containing the six food colours E110, E104, E122, E129, E102 and E124 with the words "may have an adverse effect on activity and attention in children." The Action on Additives campaign welcomed the news, but continues to push for a full ban on these additives, which are in any case purely cosmetic and of no nutritional value.

Other studies show that when problem food additives were removed from young children's diets, researchers observed a reduction in hyperactive behaviour.^{128,129}



However, nursery staff may be unaware of the adverse affects that additives can have on some children. They may also be unaware that some artificial additives are not permitted in the manufacture of foods aimed at children under three years of age. The researchers for this report found many examples of catering staff who were unaware of problem ingredients in the foods they were serving to children as young as two.

Parents and nursery staff can avoid problem additives by becoming more familiar with the rules governing the manufacture of foods for young children. Choosing organic food is a simple solution because organic food standards explicitly exclude the use of problem additives.

5.6 Pesticides and the special needs of young children

Infants and young children are growing and developing at a fast rate. They also consume large amounts of food in proportion to their bodyweight, compared to adults. Both these factors put them at particular risk from exposure to pesticides.¹³⁰

In March 2006, Professor Vyvyan Howard – now Professor of Bio-imaging at the University of Ulster – warned that dangers of pesticides for children have been underestimated. In an interview with The Guardian newspaper,¹³¹ he said: “We’re talking about chemicals which could potentially cause cancer in children at parts per billion and parts per trillion levels, rather than parts per million and thousands.”

He and fellow scientist John Newby had published research in the Journal of Nutritional and Environmental Medicine in which they argued that low levels of chemicals from pesticides and plastics could affect the development of babies before they are born and increase their likelihood of developing cancer later in life.

He added: “Preventative measures for these types of cancer have focused on educating the public about the danger of tobacco smoke, improving diet and promoting physical activity. We should now, however, be focusing on trying to reduce exposure to problematic chemicals.”

Research in 2004 funded by the environmental campaign group Friends of the Earth found that, based on Government figures, between 10 to 220 young children a day could be exposed to pesticides in apples and pears that exceed safe maximum levels.¹³² This research focused on three pesticides: dithiocarbamate, carbendazim and phosmet. The former two pesticides are thought to disrupt the normal metabolic pathways of hormones. The latter pesticide is not permitted in UK produce but has sometimes been found in imported foods and may damage the nervous system; in addition it can induce carcinogenic and mutagenic changes to cells.

The Government has been monitoring pesticide levels in our food since the 1950s. Over the years the system has changed and since 2000 the Pesticide Safety Directorate (PSD) reports to the FSA and to the Health & Safety Executive (HSE) about the levels of pesticides found. This work is carried out by the Pesticide Residue Committee (PRC) and involves the publication of four quarterly reports per year. These reports cover a vast number of foodstuffs and includes over 2000 fruit and vegetables tested a year.¹³³

The overall trend on the presence of pesticides in our foods is running at around 50 per cent as the table on the following page shows.

The latest quarterly report published in June 2008 found that 53 per cent of all fruit and vegetables sampled had pesticides.

Table 5: Total % of fruit and vegetables tested containing pesticides¹³⁴

| | |
|------|----|
| 2002 | 43 |
| 2003 | 33 |
| 2004 | 38 |
| 2005 | 42 |
| 2006 | 50 |
| 2007 | 46 |

The latest quarterly report published in June 2008 found that 53 per cent of all fruit and vegetables sampled contained pesticides, and 92 per cent of strawberries tested contained pesticides.

In a statement on the PRC website, the Chair of the PRC Dr Ian Brown says: "The positive effects of eating fresh fruit and vegetables as part of a balanced, healthy diet are well proven and far outweigh any concern about pesticide residues."¹³⁵ However, the reports show that many of these foods contain a number of different pesticides. While there is some scientific evidence about the effects of individual chemicals on our health, there is little research regarding how combinations of pesticides react: this is often referred to as the 'cocktail effect'. The few studies that are available show worrying results. Mixtures of insecticides, herbicides and nitrates at low levels (which are permitted in groundwater) can affect the reproductive, immune and nervous systems in ways that individual chemicals do not.¹³⁶

5.6.2 Organic food

One way for nursery age children to avoid both pesticides and additives is to opt for organic food. Organic standards prohibit a host of additives that researchers say may be harmful to our health, such as hydrogenated fat, monosodium glutamate, artificial flavourings and colourings. The standards also severely restrict the use of pesticides.¹³⁷



Children who consume organic dairy produce... have been shown to have a lower risk of eczema.

The bodies of children who eat organic food have been shown to have lower levels of pesticides compared to those who consume non-organic food.¹³⁸ The consumption of organic food can also benefit children's health. One study, carried out over 10 years found that organic tomatoes had nearly double the amount of antioxidants in the form of flavonoids which are thought to have a protective effect for health.¹³⁹ Another revealed that organically grown tomatoes contained levels of vitamin C, antioxidants and beta-carotene which were higher compared to conventionally grown ones.¹⁴⁰

Similarly, another study found that organic chicken contained 38 per cent more omega-3 compared to non-organic chicken.¹⁴¹ The Institute of Brain Chemistry and Human Nutrition, London Metropolitan University, reported from a study that organic chicken contained 25 per cent less fat compared to intensively-reared chicken.¹⁴²

Proponents of intensive farming, such as caged or 'battery' chicken production, often assume that the use of antibiotics and a controlled environment results in lower levels of bacterial contamination compared to organically produced eggs. However, a recent government survey showed that organic laying hen farms have a significantly lower level of the highly toxic Salmonella bacteria, which can cause food-poisoning. Twenty-three per cent of farms with caged hens tested positive for Salmonella compared to only 4 per cent in organic flocks and 6.5 per cent in free-range flocks. The research also found that the highest prevalence of Salmonella occurred in the largest holding size category (more than 30,000 birds).¹⁴³

There is also evidence that organic milk contains higher levels of vitamin E, antioxidants and healthy omega-3 oils.^{144,145} Children who consume organic dairy produce (compared to non-organic produce) have been shown to have a lower risk of eczema. The strong link between consuming organic milk and reduced eczema incidence may be because organic milk has a higher level of omega-3 fats compared to non-organically farmed.¹⁴⁶



Case study

OK Foods



| | |
|------------------------------------|-----|
| Organic ingredients: | Yes |
| Local ingredients: | Yes |
| Unnecessary processed food: | No |
| Parents given information on menu: | Yes |
| Menu analysed by a nutritionist: | Yes |

OK Foods is a private company providing nutritious organic and part-organic meals, snacks and drinks to nine nurseries in Devon. Currently they supply 2,000 hot meals per week for nurseries to serve up without any additional preparation. OK Foods use organic suppliers such as Riverford Organics – a fruit and vegetable wholesaler – as well as organic meat from the Well Hung Meat company. Nutritionists review the menu; a vegetarian option is available each day, and those who eat meat get at the very least one vegetable portion with each meal.

When OK Foods starts to supply new nurseries they are happy to do talks for the children and go along to parents' evenings. Parents with children who have special dietary requirements (e.g. vegan or dairy allergy) can meet to discuss the appropriate diet for their child. The company makes use of lots of different web-based resources such as posters, flyers and activity packs to encourage nurseries to teach a whole-school approach to food.

Sally Eveleigh, the Director of OK Foods, says she finds it very frustrating that more nurseries do not give organic milk to children. She has found that the Welfare Reimbursement Unit reimburses nurseries for any milk they buy for under-fives, organic or otherwise. She says: "Some nurseries will not change despite the fact that as we buy in bulk we can give them organic milk for the same price as non-organic, and organic milk is higher in vitamins."

OK Foods have signed up to a voluntary code of practice run by the Soil Association that shows they use organic food where possible. They say that they would like to see more nurseries doing this.





Some nurseries have found that allowing children to help themselves to food helps them to eat more and to try a wider variety of foods.

6 The wider picture

Meals as social occasions; local, seasonal and organic food

6.1 Meals as social occasions – how we learn

Nurseries can promote a healthy eating environment. Sitting around a table with other children (and staff) who are eating a new food can provide a supportive peer environment that will persuade a child to try new foods. The more children that are eating the food, the higher the chance will be that other children will try the food too.¹⁴⁷ Many parents have found this very useful as a way of encouraging their child to try new foods that they will not try at home.

But the research carried out for this report found that 11 per cent of nurseries gave only 20 minutes for lunch, while almost half the nurseries (49 per cent)¹⁴⁸ allowed half an hour.

Young children are learning how to eat complex meals, and as a result, eat and chew slowly. This helps maximise the nutrients absorbed from food eaten. They need to be able to eat at a leisurely pace. Time and flexibility needs to be built into the lunchtime slot to accommodate the slowest eaters, and to give time for social interaction and learning.

If staff members do not sit down with the children because of lack of space in the dining room or because the nursery can't afford to provide food for workers, this is an issue that should be looked at. Similarly, nursery workers obviously need breaks during the working day, and these need to be provided at appropriate times if their lunchtimes are spent with the children.

Some nurseries have found that allowing children to help themselves to food helps them to eat more and to try a wider variety of foods, as well as making meal times more enjoyable.¹⁴⁹



In nurseries throughout Pistoia, Italy, lunch is viewed as an opportunity for eating, talking, socialising and introducing children to their food culture.

Case study

The pleasure of eating in Pistoia's nurseries in Italy¹⁵⁰

In nurseries throughout Pistoia, Tuscany, Italy, lunch is viewed both as an opportunity for eating, talking, socialising and introducing children to their food culture. Nurseries routinely use fabric tablecloths, real crockery and glass drinking glasses. In this setting, the nurseries report that they find children behave with more care and greater consideration.

The children all have their own special place to sit each day, which staff report adds to the calm atmosphere. The adults sit at tables with the children, eat the same as them and ask the children to talk about the food - how it tastes, looks and smells.

There are many rules and rituals that the nurseries follow each day before, during and after lunch. For example first they wash their hands and take a bib from a cupboard. Then one child on each table draws a name from a box to see who will be the waiter or waitress at the table that day. The waiters then lay their table, the food is put out, and the children help themselves.

Donatella Giovanni, education co-ordinator for the municipality, says: "Giving children a sense of responsibility for themselves and others and the things that surround them helps to encourage autonomy."

At the end of one nursery's lunch-time the children have developed their own ritual – they light a candle, have a pretend coffee and sing a song. Finally they brush their teeth, put their bib in the laundry basket and wash their hands.

A typical weekly menu in a Pistoia nursery:

| | |
|-----------|---|
| Monday | Pasta with tomato sauce, boiled vegetables; fruit |
| Tuesday | Vegetable soup, rice, fish, carrots cooked with lemon; fruit |
| Wednesday | Pasta with meat sauce, boiled and raw vegetables; fruit |
| Thursday | Noodles in vegetable soup, roast turkey, boiled potatoes; fruit |
| Friday | Pasta with olive oil, egg with tomatoes, boiled vegetables; fruit |



6.2 Local, seasonal and organic food

By choosing local, seasonal, fresh and organic food nurseries can reduce their greenhouse gas footprint, increase the nutritional value of the meals they serve, and in many cases, save money. This section discusses these benefits, and how nurseries could help the environment through their food choices.

6.2.1 Climate change

Several reviews and studies have found that the food system is a significant contributor to greenhouse gas emissions.

- In the EU over 30 per cent of the greenhouse gases from consumer purchases come from the food and drink sector.¹⁵¹
- The Food Climate Research Network in the UK suggests that almost one-fifth of the UK's total greenhouse gas emissions are associated with food and drink.¹⁵²

A study on the food footprint of Wales found that it could be reduced by 30 per cent by increasing efficiency of supply chains, and changing diets towards more organic food and less meat.¹⁵³

Nurseries can help. Emissions from agriculture can be significantly reduced if nurseries increase the consumption of:

- Organic produce: production is less energy intensive than industrial farming, particularly because it avoids the use of artificial fertilisers, which use energy and water in their production, during which the powerful greenhouse gas nitrous oxide is also released.¹⁵⁴
- Local and seasonal produce: this reduces food miles and minimises the energy used in food production and storage.¹⁵⁵
- Less meat: meat and dairy produce are among the most energy-intensive and greenhouse-gas intensive food products of all. United Nations figures suggest that animal farming globally causes higher greenhouse gas emissions than all of the cars, lorries and planes in the world put together.¹⁵⁶

6.2.2 Processing, packaging and food waste

Once food has been produced there are more environmental impacts such as:

- The production of processed foods
- The manufacture and then disposal of the packaging
- The environmental costs of food waste

Using less processed food and cooking meals on site is more efficient and better for the environment.

6.2.3 Wider benefits of local, seasonal and organic food

By buying locally, nurseries can also support their local economy – every £10 spent in the local economy is worth approximately another £25 to the area whereas every £10 spent in a supermarket generates only £14 locally.¹⁵⁷

Not only is the long distance travelled by most food bad for the environment, but some studies show that long-distance transport may also be diluting the nutritional potency of our food. Some nutrient losses, in particular vitamin C, vitamin A, riboflavin and vitamin E occur, even with excellent storage conditions.¹⁵⁸ Buying more locally produced fresh food is therefore one way that nurseries can increase the nutritional quality of the food.

Buying from local farmers may also offer educational benefits. Some farms welcome farm visits, and may be willing to visit the nursery to discuss food with the children, parents and staff to help instil an appreciation of where food comes from and how it is grown.

There are many inspiring examples of nurseries that are successfully buying locally for seasonal menus. Childsplay in Newcastle, winner of the 2007 Nursery Food Awards, buys local yogurt and milk, and is looking into sourcing other produce locally, such as meat. Two other examples are set out below. They show how easy it is for nurseries to find local and organic suppliers to deliver produce cost-effectively.

Case study Abbeywood Tots, Bristol

| | |
|------------------------------------|---|
| Money spent per day per pupil: | 80p |
| Organic ingredients: | 100 per cent |
| Local ingredients: | Fruit and veg from a local wholesaler All meat from a local organic farm |
| Unnecessary processed food: | No |
| Parents given information on menu: | Yes |
| Parents involved in setting menus: | Yes |
| Comply with CWT guidelines: | No |
| Menu analysed by a nutritionist: | No |

Mike Williams is the owner of three nurseries in Bristol, which are all certified organic by the Soil Association.¹⁵⁹ They provide an average of 120 meals per day to children spread over three sites, and each day they

By buying locally, nurseries can also support their local economy – every £10 spent in the local economy is worth approximately another £25 to the area.





spend 80p per head to provide all of the food. Abbeywood Tots decided to become 100 per cent organic so that they could provide a healthy balanced diet to the children and because they wanted to source locally.

Mike explains: "It was not an easy process by any means and it did take time to find the suppliers with the right quality products and the right delivery times. We had to make the changes gradually, and not overnight."

First they looked at meat and found local companies through The Organic Directory.¹⁶⁰ Mike also trawled the internet looking for companies. Having compiled a short-list he started calling potential suppliers. Now all of their meat (beef, pork and lamb) is supplied by Cullimore Organics in Stroud. Mike orders a month in advance, and Cullimore's delivers once per month, which helps to keep delivery costs down. Most of the meat comes in fresh and the nursery freezes it to use when they need it.

In order to pay for the organic meat on the menu, Abbeywood have reduced the number of times they eat meat to two or three times per week. The rest of the time the caterer uses pulses (sourced from Essential Trading Co-operative in Bristol), pasta dishes and fish dishes.

After some initial teething problems with their initial fruit and vegetable suppliers who couldn't deliver the quality of produce or at the right time, Mike investigated the Bristol wholesale fruit market in the St Philips area of the city. Now the nurseries are supplied by MD Kidners, which delivers every Monday morning.

Mike explains: "The produce is very high quality and it lasts well. The ordering system is simple - each week the supplier sends me a fax through of what is available and where it comes from. The nursery then chooses what it wants, and makes sure that the majority of the produce is local."

To supply a fully organic menu, Abbeywood Tots found that the costs went up by 20 per cent initially. Mike explains that this was off-set by lower wastage and now this difference is down to 15 per cent as a result of reviewing the menus gradually.

Case study

The Community Fruit and Veg Project

The Community Fruit and Veg project in Hastings is a social enterprise set up as part of the Five a Day programme based at Hastings and Rother Primary Care Trust.¹⁶¹ It is run on a not-for-profit basis and is supported by external funding, although it aims to be self-sustaining in the future. It currently supplies three nurseries with either fruit boxes or veg boxes, weekly or twice weekly. It is flexible in terms of what it delivers and when - nurseries can have a £10 box of fruit twice a week, or a £15 box once a week, depending on their needs. A mixed fruit and vegetable box is also available. They also deliver organic bread from the local Judges Organic Bakery.

The Community Fruit and Veg project sources as much produce as they can locally, which they admit is sometimes a struggle for fruit. They do use imported bananas and oranges, and are exploring buying Sicilian oranges via a partnership with a local farmer in the region. The nurseries felt they could not afford exclusively organic produce. However the boxes usually contain at least one organic item.



Governments in England and Wales should make nutrient-based food standards compulsory for all day nurseries, as they have for primary and secondary schools.

7 Recommendations

All the good practice that exists throughout the UK shows just how good nursery food can be when dedicated nursery staff and parents make food a top priority. Yet few nurseries receive adequate support to do likewise, so the quality of nursery food across the country is highly variable. Any good work that does exist happens despite of, rather than because of the policy backdrop. Indeed, nurseries are operating in a policy vacuum from Governments in England and Wales, with some better progress being made in Scotland. The following are recommendations for action for Government, nurseries and parents to address these issues.

7.1 Recommendations for Government

7.1.1 Make the Department for Children Schools and Families responsible for nursery school food

In writing this report, the research team were passed from one Directorate to another within the Government's Department for Children Schools and Families (DCSF).

We recommend that the Department for Children Schools and Families (in both Westminster and the Welsh Assembly) take responsibility for nursery food. Within that department, the responsibility in England should sit with the School Food Trust, and in Wales with the Appetite for Life team. They would be responsible for improving nursery school food, and be obliged to be publicly accountable and report regularly on progress.

These agencies should also be responsible for routinely collecting data on the nutritional quality of food served in all types of nurseries, to allow analysis, comparisons, and regulatory improvements.

7.1.2 Introduce compulsory nutrient-based food standards for all childcare settings

Governments in England and Wales should make nutrient-based food standards compulsory for all day nurseries, as they have for primary and secondary schools. There is large-scale support for this – 82 per cent of the nurseries and 85 per cent of the parents surveyed for this report want to see compulsory standards.

Nutrient standards are simple to use, and encourage better communication and scrutiny, as the composition of foods, recipes and ingredients are clear for all to see. They allow good practice to be shared.

Perhaps most importantly, adopting nutrient-based standards would send a clear message that Government takes the health of pre-school children every bit as seriously as the health of primary and secondary school children.

The recently revised Caroline Walker Trust Guidelines for Under-5s provide the nutrient standards required. These should be adopted in England and Wales.

All nursery school inspectors should receive a copy of the guidelines and be trained on how to inspect to them.

Without nutrient-based standards there will continue to be anomalies such as the serving of high-fat and high-salt crisps that are banned in primary schools but can be served in nursery schools.

The guidelines should be introduced gradually, and funding must be made available to nurseries to help implement them. The funding could be used for example to purchase the Nutmeg menu planning software to help nurseries fulfil the requirements of nutrient-based standards or, where required, to have access to a qualified dietician.

7.1.3 Adopt a set of standards for nursery food

The Department for Children Schools and Families should adopt the Food for Life targets of 75 per cent unprocessed food, 50 per cent locally sourced and 30 per cent organic, alongside the nutritional standards produced by the Caroline Walker Trust.

The Food for Life standards would ensure that high quality food would be available to children in nurseries.

The Soil Association founded Food for Life in 2003^{162, 163} to help schools source nutritious, fresh, local and organic produce and give pupils the chance to visit farms to see how their food is produced. Food for Life resulted in a rise in awareness of the quality of school meals. This was amplified by TV chef Jamie Oliver's 'Feed Me Better' campaign, which resulted in large-scale changes in Government policy, including the formation of the School Food Trust and the adoption of food-based and nutritional standards for school meals. Food for Life has since evolved into the Food for Life Partnership, a wide ranging programme of initiatives in schools and beyond, all of which inspire people to source food with care and celebrate its real value.

There is also the Soil Association Food for Life Catering Mark, which is now being awarded to caterers providing food to schools, but which are not run by individual schools, and is currently being piloted with a range of other organisations, including nurseries. This scheme will be launched to further sectors in spring 2009.¹⁶⁴ This mark offers a clear and structured framework for nurseries to provide more local, fresh and organic food.

7.1.4 Introduce a minimum spend on ingredients for lunch for each pupil

A minimum required spend on ingredients for lunch per pupil in nursery schools should also be introduced. This should be at the very least 50p, as it is in primary schools in England.



7.1.5 Introduce compulsory training on nutrition and healthy eating for catering staff and ensure that the catering service is inspected to that level by Ofsted/Estyn



Without training, nursery school catering staff will be unable to implement any intention to improve the quality of food served in nurseries.

Without training, nursery school catering staff will be unable to implement any intention to improve the quality of food served in nurseries. Governments in England and Wales should fund the training, and Estyn and Ofsted should inspect it and check that this commitment is being implemented.

In the long term, an accredited skills training qualification should be developed specifically for nursery school cooks, which would show them how to meet the new nutrient-based standards that need to be put in place.

The following is a list of minimum training requirements for all child-care settings, including Sure Start Children's Centres:

- Hands-on cookery skills, menu planning, nutrition and the whole-school approach to food
- Level 2 training in Professional Cookery or Food Processing and Cooking at the absolute minimum. NVQs at level 2 are currently fully funded by the "Train to Gain" initiative,¹⁶⁵ and this recommendation would align with the Government's aim of ensuring that everyone goes to work with the skills they need to do their job properly¹⁶⁶
- Cooks who wanted further training could take the City & Guilds qualification, "Award in Providing a Healthier School Meals Service",¹⁶⁷ which has been developed with the Food Standards Agency and the School Food Trust
- School catering courses such as the Food Excellence & Skills Training (FEAST) would also be useful¹⁶⁸

In addition, training is needed for the nursery staff themselves:

- The Certificate in Childcare & Education should develop a module about nutrition, healthy eating and activities that can be done in the nursery setting to adopt a whole-school approach to nutrition
- The National Occupational Standards in Children's Care should be reviewed to deal explicitly with healthier food provision for nursery-age children, and give appropriate and adequate training for the staff that are to provide it¹⁶⁹

7.1.6 Implement and fund an "Early Years Healthy Food Award"

A national scheme for England and Wales for Nurseries to achieve a Healthy Food Award should be developed, drawing on the success of similar schemes in schools. Some areas such as Birmingham (described in Annex 2) have already achieved this.

The scheme should draw on the good practice of those local authorities with an award scheme. It must include the following key elements:

- A nursery food policy
- Healthy food provision, meeting Caroline Walker Trust guidelines
- Social and cultural aspects of food integrated into a child's experience
- Healthy food integrated into the curriculum and activities
- Funded time for a dietician to go into every nursery to analyse and improve menus and help them attain the Early Years Healthy Food Award
- Involvement of parents and children in learning about healthy eating

The award would have a direct impact on Government targets to reduce the prevalence of obesity in reception year children.

7.2 Recommendations for nurseries

Step 1 Create a food policy

A food policy is the bedrock of good nutrition in nurseries. Although it sounds complicated it need not be: it is simply a list of things agreed around the issue of food that a nursery will do. Many of the rules probably exist anyway but they may not be written down or turned into routine practice. Examples of what to include are how parents are told about the menu for the week, or how problem eating is dealt with, and the types of food and drink that are given throughout the day.

A food policy is a useful tool for reassuring and informing new parents, and explaining clearly the nursery policy on food. The policy can also form the start of a dialogue with parents on food provision. They should be asked for comments on it, and to input their ideas, perhaps via a school meeting. By doing this nurseries are spreading the word about good nutrition to parents too.¹⁷⁰ A good example of a nursery school food policy is shown in Annex 5.

Case study Childsplay, Newcastle

| | |
|------------------------------------|--|
| Money spent per day per pupil: | £1.72 |
| Organic ingredients: | Yes |
| Local ingredients: | Yes – local dairy products and trying to source local meat |
| Unnecessary processed food: | No |
| Parents given information on menu: | Yes |
| Parents involved in setting menus: | Yes |
| Comply with CWT guidelines: | Yes |
| Menu analysed by a nutritionist: | Yes |

Childsplay Claremont has been a nursery for over 25 years, and all its meals are made from organic ingredients, apart from the fish, which is sustainably sourced. Currently the nursery buys food from Tesco Direct who deliver twice a week, but the organic milk and yogurts are bought from a local dairy.

They are investigating buying local produce, but the nursery manager Veronica Welsh says: "It's difficult as we are based in the middle of a city, so even finding the farmers was a challenge. Now we have to make sure the quality of the food is as high as possible, and that they can deliver twice a week."

Since June 2006, the nursery has used as much organic food as possible, as parents agreed to pay slightly higher fees to buy some organic produce.

The food provided is all based around the Caroline Walker Trust guidelines, using the CHOMP menu planner DVD (now called Nutmeg). Childsplay has taken advice from a dietician, and the nursery spends £1.72 per child on ingredients per day.

The nursery has a food policy, described by one of the judges in the Nursery Food Awards¹⁷¹ as "the best food policy I've ever seen".





The food policy's objectives are to:

- Provide the freshest, most nutritious and best quality food we possibly can
- Serve a varied diet with meat, fish, potatoes, rice, pasta, dairy products and lots of fresh fruit and vegetables
- Foster a healthy approach to healthy living
- Promote meal times as social events
- Give parents information on all aspects of food in nursery

The nursery states "Childsplay will endeavour to use organic produce wherever possible" and "Children will be encouraged to eat five child-sized portions of fruit and vegetables a day".

In terms of communication with parents, Childsplay supplies them with a full set of menus, a set of ingredients for each meal and a breakdown of the nutritional balance of each week's menu.

Encouraging social skills is also included in the policy: "Staff are encouraged to eat with children during snack time and meal times, providing a good role model for healthy eating". At the appropriate time children are "offered the opportunity to serve themselves," and they are "involved in meal preparation, table setting, clearing away and making snacks and sandwiches".

The food policy is not simply a piece of paper in a folder; it is actively used, updated and referred to. Parents were involved in writing it – they were consulted about what should be included via a core group of parents on the Executive Committee of the nursery.



Step 2 Review the menu

Ensure that the nursery's menu has been checked by a state registered dietician or a registered nutritionist, or registered public health nutritionist. See Annex 6 for details on how to find one. Ask them to check food provision against the Caroline Walker Trust Guidelines contained in the publication *Eating Well for Under-5's in Child Care*.¹⁷²

These health professionals should make recommendations to ensure the menu meets the nutrient-based standards.

Nurseries must then create an action plan to respond to those recommendations. Changes to the menu should be gradual so that the children accept them. All staff and parents need to be fully informed of the changes, and encouraged to contribute their thoughts.

Nutmeg menu-planning software will enable nurseries to design menus that meet the Caroline Walker Trust nutrient-based standards (see Annex 4).

In order to encourage the use of more local produce, menus need to be designed around the seasons, particularly for fresh produce. Not only will this reduce food miles and the nursery's carbon foot print, but also the food is likely to have higher nutritional value.

Step 3 Use local, seasonal and organic produce

Nurseries can reduce their carbon footprint, reduce their costs, and ultimately provide more nutritious food to the children in their care if they buy locally produced food that is in season.

The Local Food Links organisation in the area will have details of local producers as will other local food directories.¹⁷³ Any local farmers' markets will also showcase which foods are available locally. Ask potential suppliers to bring samples to the nursery. Encourage nursery managers to visit farms to see how and where the food is produced.

There may also be delivery co-ops or food hubs in the region that already deliver to community groups or schools – the local council's sustainable development department may be able to help.

Organic fruit or vegetable box schemes can be a very good way of getting around delivery problems and are usually very good value. Details can be found from the Organic Directory.¹⁷⁴ Arrangements can often be made for a specific weekly order if one box is not appropriate.

Aim to source as much as possible from the local area. The Food for Life scheme specifies that to achieve Gold level, at least 50 per cent of ingredients should be locally sourced.

Food and fuel prices are increasing. Making links with local producers will save nurseries money.



Step 4 Provide more food-based activities



Food can be the basis of so many fun activities in nursery schools, not just cooking. It can play a part in counting and maths, science, dance, art and many more. Food-centred activities are also a good way of introducing children to new types of food before they are presented to them on a plate at lunchtime. Some ideas for food-centred activities can be found below.¹⁷⁵

Collages: Use lentils, bay leaves, rice, oats, pasta, dried peas, etc. Tell the children the names of the different foods they are using, explore how they are grown and talk about meals you could make with them.

Vegetable printing: Take vegetables of the type that the children will be eating that day, halve them and make prints from them. Talk about the vegetable at the same time.

Food tables: Each month have a different “food table” display. Have some pictures of cows, goats and sheep and arrange it all on green crepe paper for the field. During the month, have a tasting of the different foods and talk to the children about where milk is from, and how yogurt is made. You could also do fruit tables, smells tables (e.g. onions, mustard, fresh or dried herbs, curry powder, oranges). Children smell the item from a container covered with thin cloth.

Guessing games: Put lots of different types of fruit and vegetables in a bag and ask children to put their hands in and tell you what it is they can feel.



Cooking: Children love to eat what they have made. You can try threading chunks of fruit onto straws or cocktail sticks, and then this can be pudding or their snack. You could also make bread, sandwiches, butter, soups, dips such as hummous and fruit salads.

Growing: Start a vegetable plot or plant seeds in tubs. Grow tomato plants up against the walls. The children will love eating them straight from the vine.

Adopt a local farmer: Many farmers would welcome the opportunity to come and talk to the children about what they produce, and how. Or arrange a farm visit as an end-of-term trip.

Preparing the table: Children love to do “grown-up activities” such as laying the table. Get them involved in preparing the dining area for lunch. They can count cutlery out onto the table. Invest in some tablecloths and get them to work together to put them on.

Story telling: Create a project around a food based story. Activities can include tasting and making dishes with the food featured in the story. Making models of the food, creating displays and mobiles that depict the pictures, characters and food from the story.







Case study

The Oak Tree Nursery and Pre-school, Hampshire

| | |
|------------------------------------|---------------------|
| Money spent per day per pupil: | 90p |
| Organic ingredients: | Yes - some |
| Local ingredients: | Yes - meat and eggs |
| Unnecessary processed food: | No |
| Parents given information on menu: | Yes |
| Parents involved in setting menus: | Yes |
| Comply with CWT guidelines: | Yes |
| Menu analysed by a nutritionist: | Yes |

The Oak Tree Nursery has a strong environmental ethos and the 52 children spend a lot of time outside gardening. They grow all sorts of fruit and vegetables on ten different vegetable plots. There is one plot for each age group, even including the babies!

Sarah Burns, manager of this innovative nursery, explains how the babies get involved: "The tomatoes are started off in pots, and then the older babies will go outside with a member of staff and dig holes, and help to plant the seedlings. It's definitely a one-to-one activity when the babies are gardening but they love it!"

The toddlers all help to plant seeds in trays, then they look after them each day by watering them. When the time is right, they plant them out. At harvest time, the children come and pick them too, ready for use in the kitchen. The older children help to prepare the beds ready for planting and take the vegetable peelings to the compost heap, so they are often out in the garden.

The Oak Tree Nursery has a strong environmental ethos and the 52 children spend a lot of time outside gardening.



The nursery has also forged strong links with the local community. For example, the local gardening group helped start the vegetable plots. The nursery also enters their vegetables into the village produce show and is very proud to have won several prizes including the Largest Potato prize and 1st prize in the Cucumber and Marrow classes.

Sarah explains: "It gives the children great satisfaction to see what they have grown win a prize, or in a dish that they are eating. We hope we are instilling in the children a love of healthy food without preaching to them about it. They are learning by doing."

This year the nursery's vegetable garden plan includes strawberries, raspberries, gooseberries, redcurrants and parsnips for the first time - as well as garlic, peas, leeks, dwarf French beans, spinach, runner beans and onions. If there is any surplus produce, this is sold to the parents to raise funds for the nursery's chosen charity.

Sarah says: "Selling the surplus to parents is another great way of reinforcing the healthy eating message at home, and it makes the children very proud to take home something they have grown themselves."

Step 5 Assess training needs

Nursery managers should find out what training all the staff have had on food preparation and healthy eating. If there are gaps, training courses for all nursery staff should be investigated with the local council's Early Years department. They will usually have nutrition and healthy eating training available which all nursery staff could take part in. If there is no local training available the nursery should ask the Local Authority to provide it.

Step 6 Join the Food for Life Catering Mark

Food for Life, the campaign to improve school meals, has developed the Food for Life Mark for catering. This guides primary and secondary schools through a process to improve their school meals and food culture. It has three levels – bronze, silver and finally to the "gold standard".¹⁷⁶ The scheme is currently in the pilot stage of development, but will soon move on to including other sectors such as nurseries.¹⁷⁷

Step 7 Make meal times more sociable

Nurseries should provide bright tablecloths, use real crockery with older children and allow more time for eating lunch. Staff should always eat with the children and eat the same as the children. Children can help lay the table in rotas, and take turns to be waiters and waitresses for the day. Bowls of food should be put on the tables so that the older children can help themselves; this helps to develop hand to eye co-ordination.

Parents could also be invited to eat with the children once a term, on a rota if space is an issue, so that they are involved in the school's meals and can be reassured about what their children are eating.



"We hope that we are instilling in the children a love of healthy food without preaching to them about it."

Sarah Burns,
nursery manager.

7.3 Recommendations for parents

By putting pressure on their nursery to improve its food offering, parents are one of the most powerful agents for change. In this section we give parents guidance on what to do.

Annex 7 provides some guidance on the types of foods that should be served in nursery.

7.3.1 Ask the right questions

The time to ask questions is before your child starts at the nursery.

Meet with the nursery manager and ask these questions. Don't feel intimidated and guilty for asking – it is your right to know what the nursery intends to feed your child. If you feel you are not getting enough answers from the manager, ask to see the cook. If they are too busy, make an appointment to come back and see them another time.

Here are some suggested questions to run through with staff.

On the menu:

- Can I see a typical weekly and monthly menu?
- How much of the food is prepared from fresh ingredients?
- Have you had the menu analysed by a nutritionist / do you have any idea if the menu fulfils Caroline Walker Trust guidelines?
- Does the cook have training in nutrition?
- Where do you source your meat? Is it organic or free range?
- How many times a week and in what form is fish provided?
- Do you serve oily fish? If yes, what kind?
- What drinks do you provide between meals and at meal times?

Snack time:

- What do the children eat at snack time?
- What do they drink at snack time?

Meal times:

- How long do children have to eat their meals?
- Do the staff eat with the children?
- Do you encourage children to eat a bit of everything, including vegetables?
- Do you allow the older children to help themselves to the food?

Food in the curriculum:

- Do the children help to prepare the snacks or do cooking lessons? If they do cooking lessons, what do they cook?
- Do the children learn about food and healthy eating - how?

“We have realised there was a real need for a nursery with good food, and parents are always grateful that their children are getting a wholesome meal when they are in our care.”

Alison Thomas,
nursery manager

Case study Salisbury

| | |
|------------------------------------|-----|
| Organic ingredients: | No |
| Local ingredients: | No |
| Unnecessary processed food: | Yes |
| Parents given information on menu: | Yes |
| Parents involved in setting menus: | No |
| Comply with CWT guidelines: | No |
| Menu analysed by a nutritionist: | No |

This case study illustrates the importance of a parent asking all the right questions regarding the food at a nursery before the child starts.

Alison Thomas, from Salisbury, explains: “The nursery seemed quite good: when we first went there we explained that we had to be careful about certain foods as my daughter Katie had allergies to nuts and milk, therefore she wouldn’t be able to eat most processed foods because of cross-contamination issues. We were assured that they had their own kitchen, which I was shown and that this wouldn’t be a problem. This was very reassuring and left me with the impression that everything was cooked from scratch in-house.”

A few months later, Alison saw a huge pile of frozen food boxes being delivered when she dropped her daughter off. She mentioned this to Katie’s key worker who said: “The food here is awful. They basically buy it all in and then reheat it on the premises, none of the staff touch it, they all bring in their own things.”

Alison has always made a conscious effort not to give her children processed ready-meals and she says: “I was pretty horrified that this was happening without my knowledge, and I felt that I had been misled. Of course I didn’t say anything, because I couldn’t for sure say they had said; ‘We cook our food from scratch’ but I felt so let down and made sure that she no longer stayed for meals and she left as soon as we could find a new nursery. I feel so lucky that she did not have a nasty reaction to one of the meals. It could have been so much worse.”

Alison now runs her own nursery within a school that her family also runs, Chafyn Grove School in Salisbury. She explains: “At the time of Katie going to the other nursery, our nursery didn’t start until aged three, but we have now lowered the age to 2½ due to parental demand. We have realised there was a real need for a nursery with good food, and parents are always grateful that their children are getting a wholesome meal when they are in our care. I oversee all the menus and give suggestions and improvements to our chef as part of my job. We communicate with parents all the time and get their input on the menus. Pretty much everything is cooked from scratch, and those things that are bought in such as sausages are bought from a local organic company. So we do try our best.”

7.3.2 Set up a 'food advisory group' between school and parents

If your nursery doesn't have a liaison group on food, why not suggest to the nursery manager that one is set up? It could be based around the School Nutrition Action Group (SNAG) model that exists in many primary and secondary schools. A SNAG is made up of pupils, parents, teachers and caterers and the aim is to "increase the uptake of a healthier diet and ensure consistent messages from the curriculum and the food".¹⁷⁸

Some activities that the group could initially undertake are:

- Survey the parents of the nursery – what do they think about the food, are they happy, what changes would they like to see? This information can then be used to encourage the school to improve
- Encourage the school to have a typical menu analysed by a nutritionist
- Assess the food-based activities going on in school now, and make suggestions for more activities, for example vegetable printing, gardening, farm visits, and other activities suggested in section 7.2
- If the school doesn't have a food policy, start to put one together

7.4 Conclusion

For more information and updates on the campaigning work being done by Organix and the Soil Association to improve nursery food, go to www.nurseryfood.org

The issue of the quality of nursery school food provision has been largely over-looked – as identified and detailed in this report - and Governments in England and Wales will not bring obesity levels under control if they continue to ignore nursery school food.

Despite this, countless nurseries want nothing more than to provide the best for the youngsters they look after and the Government and other policy-making bodies should help them to achieve that worthy aim. Children deserve the best start in life. The health and nutrition of our youngest generation should not be left to chance.





Annexes

Annex 1: Nursery in South East England, three-weekly menu cycle

| Week 1 | Monday | Tuesday | Wednesday | Thursday | Friday |
|--------------------------|--|--|--|--|--|
| Lunch main course | Sausages and onion gravy Mashed potatoes Mixed vegetables | Beef pasta bolognaise * Salad Crusty bread | Roast pork * Roast potatoes Fresh vegetables | Chicken casserole * Diced potatoes Vegetables | Crispy cod bites Chips Peas and sweetcorn |
| Vegetarian option | Quorn Sausage | Tomato and basil pasta | Quorn roast | Vegetable casserole | Macaroni cheese |
| Pudding | Vanilla and marmalade sponge and custard * Fresh fruit | Dutch apple pie and custard * Fresh fruit | Ice creams Sauce Fresh fruit | Peach crumble and custard * Fresh fruit | Trifle Fresh fruit |
| Tea | Cheese straws Cherry tomatoes Cucumber Fruit | Scrambled egg on toast Fruit cake | Pizza Jaffa Cakes Fromage Frais | Sandwiches Crisps | Crumpets Jam tarts |
| Week 2 | Monday | Tuesday | Wednesday | Thursday | Friday |
| Lunch main course | Spaghetti bolognaise * Garlic bread (Sainsbury's own brand) Salad | Minced steak and onion pie* Mashed potatoes Fresh vegetables | Roast beef and Yorkshire pudding * Roast potatoes Vegetables | Cheese and potato pie * Salad French bread | Fish fingers Hash browns Peas |
| Vegetarian option | Tomato and basil pasta | Cheese and potato pie | Quorn roast | | |
| Pudding | Rice pudding Fresh fruit | Yoghurt Fresh fruit | Stewed apples and custard Fresh fruit | Pineapple upside down sponge with cream Fresh fruit | Fresh fruit salad Fresh fruit |
| Tea | Sandwiches Crisps Jaffa cakes | Beans on toast Fruit cake | Cheese straws Cherry tomatoes Cucumber Fromage frais | Sausage rolls Carrot sticks Jam tarts | Pizza Cake Fresh fruit |
| Week 3 | Monday | Tuesday | Wednesday | Thursday | Friday |
| Lunch main course | Stew and dumplings Mashed potatoes Peas | Tagliatelli carbonara Salad French bread | Vegetable curry Rice Poppadoms | Roast pork Roast potatoes Vegetables | Toad in the hole |
| Vegetarian option | Vegetable stew | Tomato tagliatelli | As above | Quorn roast | Vegetable sausage toad in the hole |
| Pudding | Peaches and ice-cream Fresh fruit | Plum crumble Custard Fresh fruit | Trifle Fresh fruit | Home made apple pie and cream Fresh fruit | Strawberry smoothie Meringues Ice-cream Fresh fruit |
| Tea | Veggie rolls Tomatoes and cucumber Sponge cake | Toast with jam or Marmite Jaffa Cakes | Pizza Cherry tomatoes Carrot sticks Fromage frais | Pitta bread Salad Ham and cheese Jam tarts | Sandwiches Crisps Cakes |

Annex 2: Birmingham's Healthy Eating Standard

The Healthy Eating Standard is part of the Birmingham Early Years Healthy Settings Award developed with the Health Education Service. The Award supports Early Years settings in meeting their Ofsted self-evaluation criteria.

Eleanor McGee, Public Health Nutrition Lead for the NHS in Birmingham explains:¹⁷⁹

“Achieving the Healthy Eating Standard helps nurseries become examples of best-practice and helps make them an attractive option to parents seeking childcare. Most importantly, implementing a healthy eating policy should have health and education benefits for the children, their parents, and ultimately the wider community.”

To achieve the standard, nurseries work through an action plan which includes, for example, setting up a steering group on food in the nursery, developing a food policy, reviewing all the current food provision and menus, and collecting baseline data so that nurseries can show the changes that they have made have been effective. The action plan helps the settings meet ten standard criteria, which need to be fulfilled to gain the standard.

Since 2006, 26 state or private nurseries have achieved the Birmingham Healthy Eating Standard along with four Children's Centre Nurseries. A further 24 Children's Centres are also currently working towards the standard.

Securing sufficient funding for the work has often been challenging and it has come from a variety of sources including the Birmingham City Council's Children, Young People and Families Department, and Neighbourhood Renewal Fund and, more recently, Heart of Birmingham Primary Care Trust.

Annex 3: The survey questionnaires

Parents survey

1 How old are your children?

- Under six months
- Six months to a year
- One
- Two
- Three
- Four
- Five

2 How old were your children when they first attended a nursery?

- Under six months
- Six months to a year
- One
- Two
- Three
- Four
- Five

3 What type of nursery did your children attend?

- Private
- Sure Start
- Montessori
- Pre-school

4 How much did you pay per day for nursery care (if you only paid for half days please multiply the figure by two)?

- £20
- £30
- £40
- £50
- £60
- £70
- £25
- £35
- £45
- £55
- £65

5 When choosing a nursery, what were the two factors you considered most important? Please tick.

- Location
- Affordability

- Number of staff
- Number of children
- Play facilities
- Security facilities
- Classroom activities
- Healthy food
- Friendliness of staff
- Garden/outdoor area
- Staff qualifications
- Friends' recommendations

6 Did you provide your children with food to take to nursery?

- Yes
- No

7 If yes, what did you provide? Please give details:

.....

8 Do you know what your children eat when they are at nursery?

- Yes, the nursery informs me
- Yes, my children tell me
- No

9 Do you feel that your children were given healthy food at nursery?

- Yes
- No
- I don't know

10. If no, what kind of food is your child given at nursery? Please give details:

.....

11 When at nursery, does your child have any of the following? Please tick all that apply:

- Crisps
- Biscuits
- Sweets

- Chocolate
- Cake
- Pudding
- Fizzy drinks
- Ready meals
- Processed food
- None of the above

12 Do you know if any of the staff at your children's nursery have any qualifications in food preparation or food hygiene?

- Yes, they do
- I don't know

13 Would you feel confident enough to challenge nursery staff if you were unhappy with the food your child received at nursery?

- No, I wouldn't have the nerve
- No, I wouldn't know what to say
- Yes
- Other: please specify

.....

14 If you have challenged nursery staff about the food provision at your nursery, please tell us what happened:

.....

15 Does your child do any cooking activities at nursery?

- Yes
- No

16 Does your child learn about food and where it comes from at nursery?

- Yes
- No

Nursery staff survey

1 What type of nursery do you work in?

- State maintained
- Sure Start
- Private
- Voluntary
- Other

2 Does your nursery allow parents to bring in food?

- Yes No

3 Does your nursery tell parents what food is served during the day?

- Yes No

4 Do you feel that the children are given healthy food at your nursery?

- Yes No

5 Does your nursery serve any of the following? Please tick all that apply:

- Crisps
- Biscuits
- Sweets
- Chocolate
- Cake
- Traditional puddings
e.g. cake, sponge puddings
- Fizzy drinks
- Ready meals
- Processed food
- Oily fish
- Powdered soup
(like Cup-a-soup)
- Fruit or vegetables
at snack time
- None of the above

6 Do you or any of the other staff at your nursery have any qualifications in food preparation or nutrition?

- Yes, they do

- No, they don't

7 How long does your nursery allow for children to eat at lunchtime? In minutes:

- 20

- 30

- 45

- 60

8 Do children at your nursery do any cooking activities?

- Yes No

9 Do children at your nursery learn about food and where it comes from at nursery?

- Yes No

9 Does your nursery have a food policy?

- Yes No

- Don't know

10 Do you think there should be compulsory nutritional guidelines for nursery food?

- Yes No

11 Please tick the option that best describes the food in your nursery:

- Lots of processed food such as biscuits, burgers etc and sugary drinks like orange squash

- Some home-made meals but also sugary puddings and unhealthy snacks

- Mostly freshly prepared and not many sugary puddings or unhealthy snacks

- Food freshly prepared from scratch, very few sugary puddings or unhealthy snacks

12 Does your nursery use the Caroline Walker Trust publication Eating Well for Under 5s in Childcare?

- Yes No

13 Does your nursery source its food ingredients locally?

- Yes No

14 How much does your nursery spend on food per child per day? In pounds

- 0.25

- 0.5

- 0.75

- 1

- 1.5

- 2

- 2.5

- 3

- I don't know

15 Does your nursery grow any of its own food? e.g. vegetables

- Yes No

16 Does your nursery ever serve food associated with other cultures or countries? e.g. Indian food

- Yes No

17 Has your nursery had any complaints from parents about its food? If so, what were they, please tell us:

.....
.....

18 Have you had any particularly good or bad experiences with nursery food? Please tell us all about it:

.....
.....

Annex 4: Examples of training materials available and Healthy Eating Award schemes

Training materials

Caroline Walker Trust training materials

As well as the practical and nutritional guidelines mentioned throughout this report the Caroline Walker Trust produces a training pack, which can be used for all early years workers – such as nursery managers, catering staff, nursery nurses and those who inspect early years settings.¹⁸⁰ It has been distributed to 1,500 organisations and individuals in the UK. Some local authorities and Primary Care Trusts such as Kent, Rotherham and Carmarthenshire have ordered multiple copies to distribute to their early years workers. It is the gold standard of training materials for the under-fives. It covers why eating well matters, good nutrition for one- to four-year-olds, how to plan menus, encouraging eating well and putting eating well into practice. It also includes a CD-ROM which provides a database of foods and recipes to help with menu planning. Details can be found at www.cwt.org.uk.

Nutmeg Menu Planner for Under-5s in Child Care

The Nutmeg computer program¹⁸¹ uses the Caroline Walker Trust guidelines (see above) as the basis for recommendations on healthy menus for the under-fives. The program offers recipe analysis, menu planning, and instant nutritional analysis of menus, comparing the levels of 11 nutrients with the recommended standards for one- to four-year-olds. The analysis is shown on screen in a bar chart or table for each part of the day depending on whether children are attending a morning session with snack and lunch, an afternoon session with snack and tea, or having a snack, lunch or tea only.

Full of Beans, Bromley

The London Borough of Bromley provides bespoke training on food and nutrition. Their scheme is called “Full of Beans” and is an information and training pack on feeding the under-fives. It has been given to all nurseries and childcare settings in Bromley, and every nursery was also offered practical training.¹⁸² The pack includes sample menus with recipes, details of local farmers’ markets and organic producers, what’s in season when and nutritional comparisons of products, such as children’s yogurts.

HENRY (Health Exercise Nutrition for the Really Young Programme)

HENRY is a programme designed to tackle early childhood obesity. Since its inception in 2004 it has focused on training professionals in Children's Centres and it is funded by the Department of Health and the Department for Children Schools and Families.

The training focuses on four areas:

- Parenting and relationship skills
- Healthy eating (nutrition and eating habits)
- Physical activity
- Emotional well-being

Whilst HENRY is a good training programme for giving confidence to childcare professionals to tackle obesity with parents of young children, it would benefit from including more training on nutrition and it should be offered to all nurseries, not just Children's Centres.

Healthy Eating Awards

Healthy Eating Awards have also been set up in some areas to encourage better nutrition in childcare settings. Some examples are included below.

In Bedfordshire, over 100 childcare settings and 50 childminders have obtained an award which shows they have had training and met nutritional targets for the foods they serve at meal times.¹⁸³

The London Borough of Hillingdon runs a 'Healthy Choices Award' scheme.¹⁸⁴ It is open to all caterers, including nursery schools. It rewards caterers who promote healthy choices on their menus. Menu options must contain no added salt, must be low in fat and provide a certain number of portions towards the recommended five-a-day.

Annex 5: A sample food policy, from training materials of the Caroline Walker Trust¹⁸⁵

- The weekly menu will be on display in advance.
Recipes will be available to parents
- The weekly menu will provide children in child care with a tasty, varied diet
- All the children in child care will have suitable food made available for them
- Children who do not receive breakfast at home will be offered this when they arrive if this is agreed with parents or guardians
- Milk will be served with morning and afternoon snacks
- Soy milk drinks will only be given as a substitute for cow's milk with the parent's agreement and then only those fortified with calcium will be given
- Water will be available at all times
- Diluted fruit juice will be served with the main meal
- Children will be allowed to have second helpings of fruit- or milk-based desserts
- Children will still receive dessert if they refuse their main course
- Sweets and soft drinks will not be served
- Parents or guardians will be advised if their child is not eating well
- Parents of children who are on special diets will be asked to provide as much information as possible about suitable foods and in some cases may be asked to provide the food themselves
- A specific allergy plan will be in place to deal with any child having an allergic reaction
- Carers will sit with children while they eat and will provide a good role model for healthy eating
- Withholding food will not be used as a form of punishment
- Children will be encouraged to develop good eating skills and table manners and will be given plenty of time to eat
- Advice will be given to parents about suitable foods to bring from home
- Children will be encouraged to play outside every day, weather permitting. This will ensure that they have an opportunity to be exposed to summer sunlight which helps their bodies to make vitamin D.

Annex 6: Useful sources of information

- Caroline Walker Trust, which publishes nationally recognised guidelines for food provided to the under-fives in childcare settings, along with training guidance and a menu-planning tool: <http://www.cwt.org.uk>
- Food for Life Partnership, a network of schools and communities across England committed to transforming food culture. The Soil Association Food for Life Catering Mark, is helping caterers to work through different stages of adopting healthy and sustainable food principles: <http://www.foodforlife.org.uk>
- Nutmeg UK Ltd produce a software package that includes 1,600 recipes and enables nurseries to design menus and check that they meet the CWT standards. The software is simple to use so users do not need to be an expert and its also reasonably priced (£200 initially for one nursery with an annual fee of £100 to cover costs of support and updates): <http://www.nutmeg-uk.com>
- Sustain: the alliance for better food and farming, publishes 'Seven Principles of Sustainable Food': <http://www.sustainweb.org/sustainablefood/> and also runs a training scheme for catering training in the public sector, see: <http://www.sustainweb.org/page.php?id=380>
- Ashlyns Training Kitchen offers courses for catering staff, see: <http://www.ashlynsorganics.co.uk/training-kitchen/>
- Ofsted and Estyn – the regulatory authorities in England and Wales that inspect schools and early years childcare providers. See: <http://www.ofsted.gov.uk> and <http://www.estyn.gov.uk>
- To find an organic fruit or vegetable box delivery scheme: http://www.whyorganic.org/involved_organicDirectory.asp
- There are many websites and other services that can help people and organisations to source local foods, for example:
 - Local food links groups: <http://www.sustainweb.org/foodlinksuk/>
 - Making Local Food Work: <http://www.makinglocalfoodwork.co.uk>
 - In London, Local Food Finder: <http://www.localfoodfinder.org>
- To download a free poster that shows what fresh foods are in season, see the School Food Trust website at: http://www.schoolfoodtrust.org.uk/doc_item.asp?DocId=72
- To find someone with a recognised qualification to offer appropriate nutrition advice:
 - A state registered dietitian: <http://www.bda.uk.com/> or <http://www.dietitiansunlimited.co.uk>
 - A registered nutritionist: <http://www.nutritionistsociety.org.uk/membership/register/>

Annex 7: What children should be eating in nursery - a practical guide



The following guidance is based on the Caroline Walker Trust guidelines for Eating Well for Under-5s in Child Care. For full nutrition and practical guidance we strongly recommend that nurseries invest in this publication, which costs only £20.¹⁸⁶ The Trust also publishes training materials for people working with under-5s in childcare (described in section 6.3 above), which includes a CD-rom database of recipes.¹⁸⁷

1 Supporting breastfeeding

Nurseries should support mothers wanting to breastfeed their baby by providing a quiet private room where they can breastfeed at any time of the day. Nurseries also need to ensure that they provide fridge space for labelled bottles of expressed breast milk.

2 Weaning

Current guidance is that weaning should begin at about 6 months. Up until 6 months milk provides a baby with all the nutrients they need. However, some parents may begin to wean before 6 months, based on advice from a health visitor or community dietician or nutritionist. At a minimum, weaning should not begin before four months (17 weeks) as before this age, it can have long-term detrimental effects on health.

If babies are weaned before 6 months it is imperative that they are not given foods that could cause an allergic reaction. Foods that should be avoided include all foods that contain wheat (which contains the common allergen gluten) such as bread, pasta, and wheat noodles; also oats and barley, all dairy produce other than breast or formula milk; and nuts, seeds, eggs, fish and shellfish. Babies under one year should not be given honey.

3 Breakfast

With parents often dropping their child off at nursery before going to school, many nurseries now provide breakfast.

Most breakfast cereals are fortified with vitamins and minerals. These can be important providers of vitamins and minerals, particularly iron, which many children in this age group do not get enough of in their diet. Only low-sugar cereals should be provided. These are cereals that contain less than 10g of sugar per 100g – information that can be found in the nutrition panel. Unfortunately, many cereals that appear to be suitable for children – for example, those with cartoon characters on the packet – are very high in sugar. High-fibre cereals such as all bran and bran flakes are not ideal options for this age group, as their high fibre content may fill children up without giving them the necessary energy they need. Low-sugar cereals and porridge are better options. Giving breakfast cereal is also a good opportunity for older children, who have stopped milk feeds, to have some milk. If children do not eat breakfast cereal, they can be given yogurt with chopped fruit and toast.

Toast, ideally wholemeal or granary, can also be given at breakfast time alongside breakfast cereal. Spread with butter alone is fine, as jam will encourage a sweet tooth.

Breakfast can be accompanied with 100 per cent pure fruit juice, diluted with water. The vitamin C in fruit juice is healthy in its own right, but also helps increase iron absorption in the body.

4 Daily food groups

| High quality protein | |
|--|--|
| What and how often | Other information |
| <p>Lean unprocessed meats: beef, lamb, pork or chicken (chicken thigh meat contains double the amount of iron compared to breast), eggs, fish (both white fish and oily fish), lentils, beans, tofu or soya mince. Sausages should only be served once per week and high quality versions should be used, which include at least 42per cent meat. Processed meat, which is particularly high in saturated fat and salt, and in some cases, mechanically recovered meat, should be avoided. This includes frankfurters; crumb coated chicken products, pies, beef burgers, spam, corned beef, salami and cured ham.</p> <p>Processed meat that contains added water and preservatives should also be avoided as these foods will have a lower content of high quality protein.</p> <p>Like their meat alternatives, vegetarian sausages and formed products can be high in salt, which should be kept to a minimum for this age group.</p> <p>Fish products like fish fingers or fish bites should be served no more than once a week. Ideally, to encourage children to accept fish in different forms, if these products are served children should still be given homemade fish dishes such as fish pie, fish cakes, risottos or fish with pasta. Oil rich fish should be included in the menu such as trout, salmon, herring, mackerel or sardines.</p> | <p>Organic soya mince will not contain any GM material. Non organic soya can contain up to 0.9per cent GM soya without it being labelled. Look for fish that carries the MSC (Marine Stewardship Council) logo as this will have been sustainably sourced.</p> |

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| Milk and dairy foods | |
| What and how often | Other information |
| <p>Within a day children need to have 2 to 3 portions of dairy foods. These include milk, yoghurt, cheese (hard or cream) and cream. Full fat milk is suitable for children under two years and for children over two who are fussy eaters. If children over two eat well, they can be offered semi skimmed milk.</p> | <p>Avoid ready made milkshakes and milkshake syrups and powders with added sugar or sweeteners. Instead make fresh fruit milkshakes. Avoid unpasteurised cheeses for food safety reasons.</p> |
| Starchy foods | |
| What and how often | Other information |
| <p>Children should be offered 3-4 portions of starchy carbohydrates a day. They should be a mixture of bread and other staples such as potatoes, rice, noodles, pasta or couscous. These should be given at every meal-time and at least one snack time as they are important energy providers. A mixture of whole grain and white versions of these will accustom children to variety in their diet, and ensure that they are getting a good mixture of vitamins and minerals as well as fibre.</p> | <p>While manufacturers have reduced salt levels in their bread, it is a product that is often high in salt. Try to find lower salt varieties or make bread in the nursery with the children.</p> <p>As a guide recommended MAXIMUM intakes for salt and sodium are: 2.0g salt (0.8g sodium) for children aged 1-3 years and 3 g salt (1.2 sodium) per day for 4-6 year olds (SACN 2003).</p> |

Fruit and vegetables

What and how often

Children in full daycare should be offered at least 4 to 5 different fruits and vegetables each day. This equates to a minimum of 1 to 2 types of fruit and 2 to 3 types of vegetables. At this age, the focus is not so much on children having a portion but more about being offered a variety of different types of fruit and vegetables.

Other information

The different types that can be given include fresh, frozen and canned vegetables. Fruit should be fresh, canned (not in syrup) or stewed (only with added sugar if it is very sour, eg gooseberries). Dried fruit can be given after meals and can be used in other dishes and recipes, but should not be served as a snack, to protect teeth.

5 Lunch

Lunch should be a combination of high quality protein, starchy carbohydrate, and one or two portions of vegetables.

6 Puddings

Puddings should be fruit and/or milk based. A fruit-based pudding could be, for example, apple crumble or banana muffin. Other nutritious puddings include yogurt, fromage frais or rice pudding with stewed apple or raisins. Avoid fromage frais that has 15g or more sugar per 100g as this is too high in sugar.

7 Tea

Many nurseries fail to provide a high quality protein at tea time. For some children this could be their main evening meal and they may only have a snack when they get home. Nurseries therefore need to provide the same balance as served at lunchtime: high quality protein, starchy carbohydrate, vegetables, followed by a milk- or fruit-based pudding.

8 Drinks

Water is the ideal drink to give throughout the day and at snack time. Children need to have access to drinking water throughout the day. Milk is also a good drink to have at breakfast time and at snack time. Diluted fruit juice provides one portion of fruit and should be served once a day at a mealtime to help with iron absorption. Ideally milk should not be served at mealtimes as this may encourage some children to drink milk rather than eat a variety of different foods.

9 Snacks

Children usually have a mid-morning snack and a mid afternoon snack at nursery. These ideally should provide a variety of fruit, vegetables, dairy foods and starchy/wholegrain carbohydrates.

Examples of possible snacks include: vegetable sticks and dips, breadsticks and dips with milk, fruit scone and sliced apple, fruit and yogurt, wholemeal pancakes and sliced fruit, wholemeal toast fingers with cream cheese and apple slices or a fresh fruit milkshake.

10 How often do children need to eat?

Children of nursery school age have small stomachs and high energy needs. They therefore need to be given small amounts of food regularly over the course of a day, around every 2 to 3 hours. So for example snack time could be at about 10 to 10.30am, followed by lunch at 12 to 12.30pm, with an afternoon snack at 2 to 2.30pm followed by tea at 4 to 4.30pm.

Company references



Organix

Organix is a pioneering children's food company that consistently campaigns to raise standards in the quality of food fed to children. We work in partnership with the Soil Association to produce regular reviews and reports into what children eat. In 2007, we established the Nursery Food Awards to celebrate the UK nurseries that are providing healthy, fresh, local and organic foods for young children. We have also established the Organix Foundation: a grant-giving body that makes funds available for research projects that focus on the links between food quality and children's health.

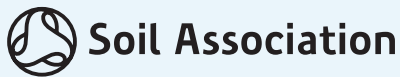
www.organix.com

www.organixfoundation.org

The Soil Association

The Soil Association is the UK's leading campaigning and certification organisation for organic food and farming. It exists to research, develop and promote sustainable relationships between the soil, plants, animals, people and the biosphere, in order to produce healthy food and other products while protecting and enhancing the environment.

www.soilassociation.org



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- 165 See <http://www.traintogain.gov.uk>. "Train to gain" is employer led training. "Brokers" from the Learning and Skills Council talk to people within companies or Local Authorities and determine what training is required.
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- 169 http://www.ndna.org.uk/C2B/document_tree/ViewACategory.asp?CategoryID=187
- 170 In the Caroline Walker Trust's Training Materials for Under 5s there is an excellent sample food policy and advice on writing a nursery food policy. See <http://www.cwt.org.uk>
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