



# postnote

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## NUTRITIONAL STANDARDS IN UK SCHOOLS

In 2006, 617 million school meals were served in England alone. The situation regarding school meals differs in the constituent countries of the UK. In England, new legislation on minimum nutritional standards in schools began in 2008 in primary schools and will come into force in secondary schools by September 2009. It consists of food- and nutrient-based standards for school food. The devolved administrations have already implemented similar legislation and face similar issues in improving school food. This note outlines children's nutritional requirements, the take-up of school meals in the UK, the capacity to enforce the standards and the impact of children's diet on behaviour and learning.

### What is Nutrition?

A variety of nutrients is needed in childhood to support growth, maintenance and repair of the body. A balanced diet contains a variety of foods and takes energy from carbohydrates, sugars, proteins and fat. Fibre, vitamins and minerals are required at differing levels for a healthy diet (Box 1). Individuals need different amounts of specific nutrients depending on age, sex, body size, level of physical activity and health status.

### Consequences of Poor Diet

Diet can be related to increased risk of developing childhood obesity, type 2 diabetes, high blood pressure, anaemia and dental decay. Psychosocial problems, such as low self-esteem and depression can also be linked to diet and body weight. Being overweight or obese in childhood may persist through to adult life. Long-term effects of a poor diet include risk of heart disease, obesity and some types of cancers.

### Diet of English School Children (Aged 4-18)

Information on what is eaten for a school meal, showed:

- in 2004, 48% of secondary pupils chose high fat main dishes such as burgers and 45% chose sugary drinks;<sup>1</sup>
- in 2007, 16.5% of children from lower income families

- were eating five or more portions of fruit and vegetable a day (versus 29% in highest income families);<sup>2</sup>
- in 2006, 50% of primary school meals contained too much added sugar.<sup>1</sup>

### Box 1. Components of a Balanced Diet

Government advice for a balanced childhood diet includes:

- at least five portions of **fruit** and **vegetables** a day but recommendations for a child portion vary (40-80g);
- at least 50% of energy from food from **carbohydrate**;
- no more than 35% of energy from food to come from **fat**. **Saturated fat** (mainly from animal sources) should not exceed 11% of food energy;
- not more than 11% of food energy from added **sugars**;
- a maximum daily **salt** intake of 3g for 4-6 yr olds, 5g for 7-10 yr olds and 6g for those aged 11 yrs and over.

### Childhood Obesity in the UK

Data from each constituent country of the UK show that:

- in **England**, 28.6% of 2-10 year olds and 33.3% of 11-15 year olds were overweight or obese in 2007 (down from 31% and 35.1% in 2005);<sup>3</sup>
- in **Scotland**, the most recent estimates are that 32.1% of 2-15 year olds are overweight or obese in 2003;<sup>4</sup>
- in **Wales**, 33% of children aged 2-15 were obese or overweight in 2008 (down from 36% in 2007);
- in **Northern Ireland (NI)**, 22% of primary children in Northern Ireland were overweight or obese in 2007.

The government's 2007 Foresight report estimates that a greater proportion of children will become obese. For instance, it projects that in 6-10 yr olds, at least 35% of boys and 20% of girls, and in 11-15 yr olds, 23% of boys and 35% of girls will be obese by 2050.

### Current School Food Policy

As outlined in Box 2, there are two main types of school food standards: those based on food types (food-based) and those based on nutritional requirements (nutrient-based). In England, interim food-based standards for school lunches were introduced in 2006, following

recommendations from the School Meals Review Panel. Standards for food other than lunch (2007) were applied to all food and drink provision up to 6pm, including breakfast clubs, vending machines, tuck shops and after-school meals. Nutrient-based standards for primary school lunches became mandatory in September 2008, and come into force in secondary schools in September 2009. These standards are supported by food-based standards for school food and apply to all provided school lunch services, including hot, cold and packed lunches. The standards apply to all local authority maintained primary, secondary, special and boarding schools and pupil referral units, in England. Independent schools are exempt from the standards although they are encouraged to comply. In England, the Schools Food Trust (SFT) is responsible for resolving confusion over to what the standards apply and when.

### Box 2. School Food Standards<sup>1</sup>

There are two main types of school food standards:

- **food-based standards** define the types of food that children and young people should be offered at school;
- **nutrient-based standards** set out the proportion of nutrients that children should receive from a school lunch.

Both are based on scientific advice and are set for children according to sex and age: 4-6, 7-10, 11-14 and 15-18 years. Growing children require increased levels of energy, protein and all vitamins and minerals. Boys require higher levels of calcium and zinc than girls and menstruating girls have increased iron needs. The standards set minimum requirements for healthier foods and restrict provision of less healthy items.

#### The Food-based Standards for Food and Drinks

Guidelines on **portion size** have varied requirements for different ages. For example, three heaped tablespoons of vegetables are one portion for a secondary school student. The SFT has issued guidance on the **frequency** of serving some foods, for example:

- fruit and vegetables of at least two portions per pupil per day (to encourage intake);
- food cooked in fat or oil not to be provided more than three times a week (to discourage intake).

Some drinks contribute to increased sugar and energy intake and can cause tooth decay and weight gain. The food-based standards and the voluntary Drinks Code from the SFT permit healthier fruit and vegetable juices (with minimum juice content), low sugar milk and water, but no sugary soft drinks.

#### The Nutrient-based Standards

There are 14 nutrient-based standards. These include:

- maximum intake levels for fat, saturated fat, salt and added sugars (as these are harmful in excess);
- minimum intake levels for calcium, carbohydrate, fibre, folate, iron, protein, vitamins A and C and zinc (as too little of these can be harmful);
- energy intake from a school lunch (for example, 530 ± 5% calories for primary pupils in England).

Specific guidance is provided to meet diverse dietary needs like food intolerance or allergy and for special schools.

### School Food Policy in the Devolved Administrations

After its 2002 report *Hungry for Success*, the Scottish Government developed its own nutritional standards with advice from the Food Standards Agency Scotland. The Schools (Health Promotion and Nutrition) (Scotland) Act in 2007 consolidated the approach to improving food and health promotion in schools. These standards are currently mandatory in primary schools and come into force in secondary schools in August 2009. The Welsh Assembly Government's "Appetite for Life" action plan

sets out the strategic direction and actions required to improve the nutritional standards of food and drink provided in Welsh schools. In 2001, Northern Ireland's "Catering for Healthier Lifestyles" set compulsory nutritional standards for school lunches, with updated standards in effect from September 2007 to cover school meals and other school food.

### Healthy Eating Initiatives for Schoolchildren

Healthy eating and nutrition is emphasised in the curriculum to provide a consistent approach across the school day (Box 3). Cooking bus initiatives (from Focus on Food and the Food Standards Agency, FSA) and the lottery-funded "Let's Get Cooking", provide instructions on food sourcing and preparation for children, catering staff and parents. The "Food for Life" partnership (from the Soil Association) encourages sustainable approaches to school food, covering food origin and quality, food education and community involvement.

### Box 3. Food and Nutrition in the Curriculum

The four UK administrations take different approaches to teaching children about healthy eating and nutrition. In England, Wales and Northern Ireland (NI), primary children are taught about healthy eating in personal, social and health education and Design and Technology (D&T). Food in D&T and learning to cook is compulsory for 8-14 year olds (in Wales) and 11-14 year olds from 2011 (in England). In NI primary children receive specific information in science and health education and secondary pupils are supported by a learning for life and work programme. In Scotland, guidelines are given to teaching 5-14 year olds in environmental studies and health education.

### Financial Support for School Food

The school lunch grant entitles each Local Authority (LA) in England to a share of £80m a year, from 2008 to 2011 (£240m total). The grant can be used to pay for catering staff labour (but not training), equipment, lunch ingredient costs (which averaged 62p in primary schools in 2008) and nutrient analysis software. The government's "Building Schools for the Future" plan allocates £21bn to building and improving English secondary school facilities. Money is not specifically allocated for school canteens but an additional £150m is available to LAs (from 2008-2011) to improve kitchens and dining rooms. However primary schools lacking in-house catering facilities would not benefit from this. In NI, £3m a year is available to schools to improve food.

### Free School Meals

In England and Wales, children from non-working families that receive certain welfare payments are entitled to free school meals (FSMs). In England, 15.9% of nursery and primary pupils and 13.4% of secondary pupils were eligible.<sup>5</sup> From August 2009, the Scottish Government will extend the FSM allowance to families with tax credit of £6,420 or less. By 2010, Scotland will provide FSMs to all primary pupils aged 5-7 at an estimated cost of £30m for a 70% take-up level. Some English councils (such as Islington) are set to provide FSMs to all primary children in their borough. Universal provision of FSMs in England would cost £1,068m in primaries and £816m in secondary schools a year at current take-up levels.<sup>1</sup>

## Increasing the Take-up of School Food

### Current Take-up of Schools Meals (Including FSMs)

Successful implementation of the new standards sits hand in hand with encouraging more children to eat the improved food. Schools face challenges to improve school meals and increase take-up.

- The Local Authority Caterers Association (LACA) reported in 2009 that 41% of English primary pupils eat a school meal.
- SFT 2007-8 figures show take-up in primary schools rose from 41.3% to 43%.
- The SFT reports a 37.6% take-up of school meals in secondary schools in 2008 (37.7% in 2007).
- Scotland saw a 47.1% take-up in primary schools (up from 46.1% in 2007) but decreased take-up in secondary schools to 42.9% (from 44.9%).
- In NI, 51% of children ate school food in 2008.
- In England, it is estimated that of the 1.4m pupils entitled to a FSM, 24% (334,000) are not registered.<sup>1</sup>

### Provision of Free School Meals

Providing FSMs to primary school children in Hull saw take-up of meals increase from 36% to 64% and showed that children also made healthier food choices. A Scottish study of 5-7 year olds saw take-up rise from 53% to 75%. A new £20m pilot study funded by the Department for Children, Schools and Families (DCSF) and the Department of Health (DH) will assess the long-term impact of providing FSMs for primary school pupils in Durham, Newham and Wolverhampton. Funding will be matched by LAs. Complex issues surround take-up of FSMs in primary and secondary school settings (Box 4).

#### Box 4. Choosing to Eat School Food

Research shows that reasons other than food quality discourage children from eating school food. Various approaches to combat these are advocated:

##### Problem 1: negative opinion of canteen atmosphere

Solution: refurbish canteens with additional seating for all pupils, provide fresh decoration and increased supervision.

##### Problem 2: long queues to receive or pay for food

Solution: support a quicker service, with more service points, better layout and improved payment methods (like smartcards).

##### Problem 3: stigma associated with FSMs or eating school food

Solution: introduce anonymous payment (smartcards/ fingerprint ID) for all pupils, regardless of status.

##### Problem 4: food not competitively priced with local shops

Solution: promote and market food to children by reducing the price of healthy options and introducing 'meal deal' offers and healthy vending machines.

##### Problem 5: limited food availability and choice

Solution: use staggered lunch breaks (to increase eating time), give pre-order options for 'grab and go' style service, create a tuck shop or breakfast club.

##### Problem 6: offers food children do not like or want to eat

Solution: involve pupils in menu planning with food tasting sessions, to encourage children to eat a wider range of food.

### Factors Involved in Eating School Food

Schools face different challenges to improve school meals and increase take-up (differences in student numbers, competition from nearby businesses, cultural preferences and advertising food to children). Research shows children's food choices during the school day are driven by many factors. Schools in the "Food for Life"

partnership increased take-up by 16% in 2008 through programmes designed to improve the whole approach to school food, from food origin to canteen environment. The SFT's "Million Meals" campaign and "Food for Life" share good practice to improve take-up and advocate healthy behaviour (Box 4).

### The Price of School Food

Children cite the price of a lunch as a reason not to eat school food (Box 5). School food campaigners argue that the price of an average school lunch is excessive and that school meals should be run as an education service, not as a profit-making, commercial venture. The LACA voices concern that if school meal take-up remains low, many LAs will be running meal services at an unsustainable deficit. Large private companies such as Sodexo are better able to cope with short-term profit drops. The Food for Life Partnership is calling for a 50p per pupil per meal subsidy, which at a 100% take up would cost £734m a year. Campaigners argue that the potential to reduce obesity and diet-related diseases outweighs the cost of free or subsidised school meals.

#### Box 5. How Much Does a School Lunch Cost?

In 2008 the average price to the pupil of a school meal increased by 4.5p from 2007 to:

- £1.67 in primary schools;
- £1.77 in secondary schools.

The labour costs averaged 63% (in primary schools) and 48% (in secondary schools) of the total cost to the pupil.<sup>1</sup>

### Stay on Site Policies

Keeping children in school at lunch time may reduce access to unhealthy food options. Early evidence indicates that children buy unhealthy foods from local stores before and after school. One London study indicated 23% of children's daily energy intake came from food purchased in convenience stores near to school. Restricting children to school premises can be difficult for larger schools with multiple entrances and may not lead to increased take up of school food.

### Packed Lunches

Children's food preferences, the desire to eat with friends, negative impressions of school food quality and reduced costs drive the decision to eat a packed lunch. The new standards do not apply to food brought into schools by children or parents. Some schools successfully market packed lunches made by their caterers that meet the standards. The FSA, SFT and BNF provide advice on how packed lunches can meet food standards.

### Support and Training for School Food Providers

Stakeholders agree that improving the knowledge, skills and attitudes of staff associated with school catering (including caterers and head teachers) is a key factor. Training is available from a number of organisations.

- The LACA promotes education and development of those in the catering service.
- The School Food Excellence And Skills Training (FEAST) network (established by the SFT), provides access to training and qualifications.
- The Training Development Agency, helps school leaders and support staff identify training and development.

### Providing Milk, Fruit and Vegetables in School

The European Union school milk subsidy is open to all UK schools to part-subsidise provision of milk and other dairy products. The Welfare Food Scheme, run by the Department of Health, entitles under-fives in England to free school milk. Under a separate scheme the National Assembly for Wales provides free school milk to all 5-7 year olds. The government's School Fruit and Vegetable Scheme in England gives children aged 4-6 a free piece of fruit or a vegetable snack each school day.

### Issues with School Food Legislation

#### The Food- and Nutrient-based Standards

There is general consensus on the nutritional needs of children of different ages, though the data for some nutrients may be less established than for others. The guidelines are set to ensure the nutritional needs of almost every individual, even those with high needs are met. Some caterers and nutritionists question the inclusion of some micronutrients (such as zinc) in the school meal standards given the small requirements for them and the lack of information on content in different products and meals. Acid in fruit juices and flavourings (for example, in diet soft drinks) can contribute to tooth erosion. There is some concern that increased intake will cause problems. It has been suggested intake should be controlled. Sections of the population who are commonly deficient in some nutrients (such as vitamin B12 in vegetarians) may benefit from consuming fortified foods.

#### Responsibility for Meeting the Standards

Evidence of compliance involves providing menu details, portion sizes and nutrient profiles for an average school lunch to school inspectors. Responsibility for provision of school meals and for ensuring the standards are met lies with LA, or with school heads or governors (who often act in a voluntary capacity). The SFT and FSA (with the then National Governors Council) have developed guides for school governors on a whole school approach to food, including lunch standards. The government highlights the importance of involving the school community in implementing and monitoring food standards.

#### Monitoring of the Standards

This differs across the various county administrations, but involves monitoring by state inspectors and/or nutritional experts (Table 1). The LACA suggests that 66% of the secondary school caterers it represents will not comply with the new standards by September 2009. It has expressed concern about the resources of monitoring organisations (numbers of trained staff, time available to inspectors and power to force change).

**Table 1. Monitoring School Food Across the UK**

England	<b>Ofsted</b> self-evaluation form. Inspectors will have nutritionist support in some cases only.
Scotland	<b>Inspectorate of Education</b> with nutritionists
Wales	<b>Estyn</b> (Welsh Education Inspectorate) inspection with nutritionists
Northern Ireland	<b>Education and Training Inspectorate</b> with nutritionists to evaluate school meal quality and examine approaches to promotion of healthy eating

Support exists for 'light-touch' monitoring during the early implementation years while long term behaviour is altered. The "Healthy Schools" scheme (from DH/DCSF) promotes aspects of health and wellbeing, with self-

assessment criteria. The Food for Life Partnership's award scheme for schools employs self-assessment and external verification, with a "Catering Mark" accreditation scheme for caterers with healthy and sustainable menus.

### Effects of School Food on Health and Behaviour

Parents and teachers report improvements in behaviour and concentration after children eat a healthy school meal, although such anecdotal evidence is highly subjective and inconclusive. Measuring short and long-term effects of improved diet is complex and results can be difficult to compare. Many studies use a short report time (five days to six months) which does not measure long-term behavioural change. Early studies suggest a link between schools that are supportive of changes, including those in the school canteen, and overall behaviour and performance improvements. It remains unclear whether this relates specifically to the changes in food or changes in the wider supportive environment.

A large percentage of school children still does not consume daily recommended amounts of nutrients and is obese.<sup>2,3</sup> The effects on obesity and diet-related diseases due to changing children's diet will not be apparent for another 5-15 years. Stakeholders agree that consistent messages about healthy eating in schools, at home and in the community, such as the transformation of school food and the DH's "Change4Life" initiative, are needed to establish lifelong healthy behaviours.

### Overview

- Food and nutrient-based standards for school food, will be mandatory in all state schools by September 2009.
- Children often opt to buy unhealthy food off school premises. Improving the take-up of school meals and free school meals is fundamental to the success of the new standards scheme in improving children's diet.
- It is unclear whether schemes to monitor and enforce the new school food standards will be adequate.
- Improved school food and educating children about food and nutrition is likely to influence the dietary choices children make now and into adulthood.

#### Endnotes

- 1 The Schools Food Trust (SFT) provides information on the standards, scientific studies and statistics relating to school food. All data quoted in this note are available from [www.schoolfoodtrust.org.uk/index.asp](http://www.schoolfoodtrust.org.uk/index.asp)
- 2 Food Standards Agency, *Low Income Diet and Nutrition Survey (LIDNS)*, 2007
- 3 National Health Service, *Statistics on Obesity, Physical Activity and Diet: England*, February 2009
- 4 The Scottish Government, *Healthy Eating, Active Living: An action plan to improve diet, increase physical activity and tackle obesity (2008-2011)* June 2008 at [www.scotland.gov.uk/Publications](http://www.scotland.gov.uk/Publications)
- 5 Department of Children Schools and Families, *School Workforce in England*, January 2009

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