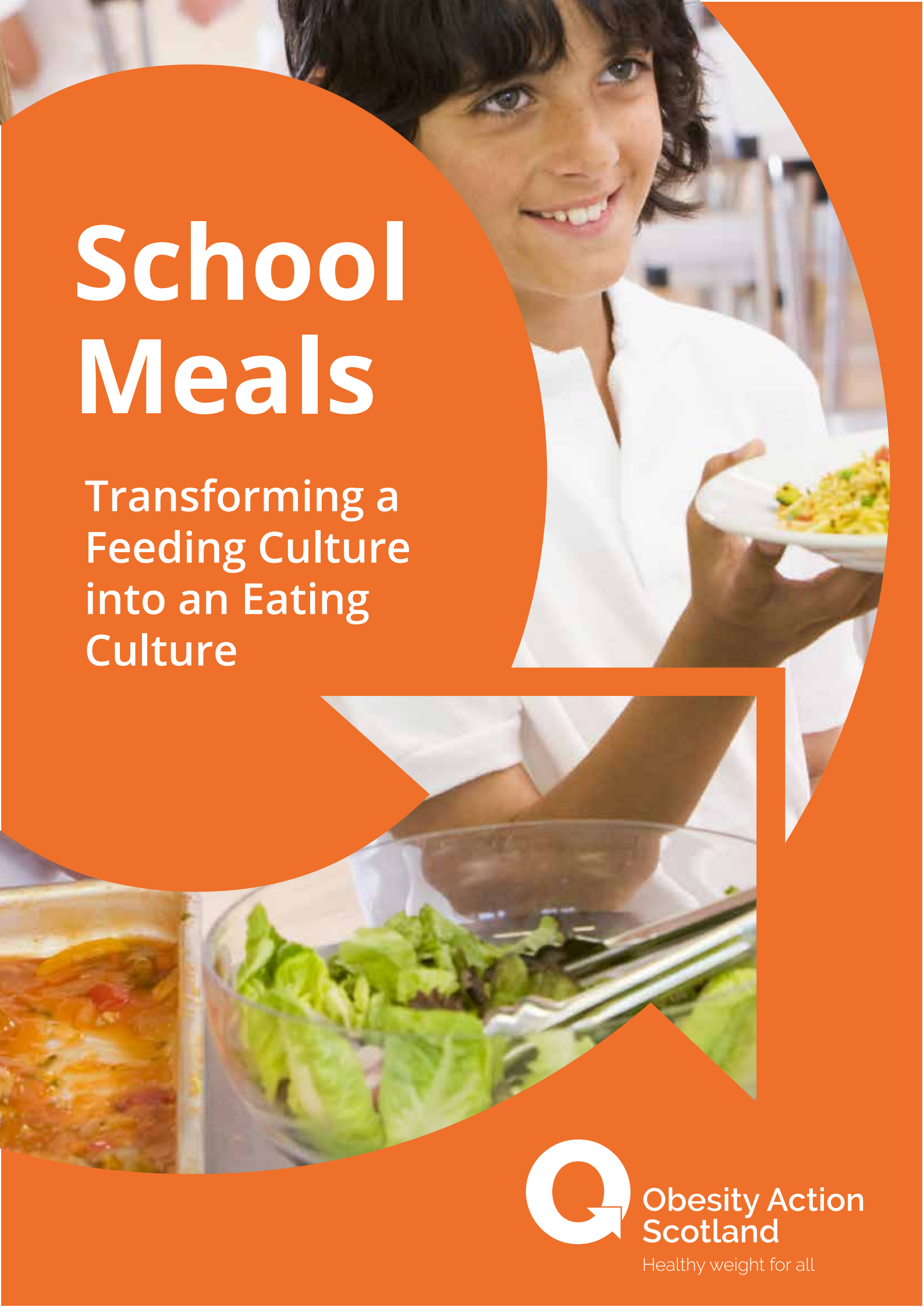


School Meals

Transforming a Feeding Culture into an Eating Culture



Obesity Action
Scotland

Healthy weight for all



Transforming a Feeding Culture into an Eating Culture

Two thirds of primary school pupils in Scotland eat school meals¹. School meals provide a unique opportunity to drive the dietary change we need in Scotland and act as an exemplar for healthy eating.

The school dining experience across Scotland varies dramatically. We found that Scottish **primary schools** frequently offer salad bars and salad bowls but serve puddings more often than soup and frequently serve red and processed meat. More consistency is required to ensure we have a positive influence on the health of children growing up across the whole of Scotland.

We are asking national and local government to place greater value on school meals as a vehicle to foster a healthy and happy experience around food.

Recommendations for Action



¹ The Scottish Government Summary statistics for attainment, leaver destinations and healthy living, 2016.

Scottish Children's Diet

The quality of Scottish children's diet is poor and failing to meet dietary goals. School meals provide the opportunity to turn this poor diet around and have a positive influence on the health of children growing up in Scotland.

In 2015 school age children² ate only 2.7 portions of fruit and vegetables per day compared to the five portions recommended³ and only 14% of school aged children ate oily fish once a week.

It is also reported that free sugar⁴ intake is highest in children aged 4 to 18 compared to all other age groups⁵. This means school age children are consuming free sugar at a rate three times the recommended level. The main sources of free sugar for children are cakes, biscuits, cereals, soft drinks, fruit juice, sugar, preserves, confectionery, yogurt, fromage frais and other dairy desserts. Our research indicates that items such as cakes, cookies, sweetened yogurts and other desserts in school meals could be significantly contributing to this excess intake of free sugars in children.

Our Research

Websites of the 32 Scottish local authorities were searched for the **primary school** lunch menus. Two authorities (Orkney and Shetland) did not offer menus on their websites re-directing to the individual schools for the information (information not sought). From the websites of 30 local authorities we chose a random week and collected information on the number of days puddings and soups were served that week, whether 'soup or pudding' choice was given and whether salad bowls or salad bars were available.

Nutritional information was available online from only 9 authorities and we have reported average weekly nutritional quality of puddings, soups and yogurts.



² 5 to 15 year olds as per Scottish Health Survey age categories

³ The Scottish Government, Scottish Health Survey. Edinburgh, 2016

⁴ Free sugar is new definition - NDNS actually reports NMES (non-milk extrinsic sugars)

⁵ National Diet and Nutrition Survey Results from Years 5 and 6 (combined), September 2016





01 Prioritising Unprocessed and Minimally Processed Food

The overriding principle in designing and preparing school meals should be to use unprocessed or minimally processed foods.

Unprocessed and minimally processed foods are defined as those not processed at all or those processed using mostly physical processes to make single whole foods more durable, accessible, convenient, palatable or safe⁶.

Examples include fresh, chilled, frozen, vacuum-packed fruits, vegetables, fungi, roots and tubers; grains (cereals) in general; fresh and dried beans and other pulses (legumes); dried fruits and 100% unsweetened fruit juices; unsalted nuts and seeds; fresh, dried, chilled frozen meats, poultry and fish; fresh and pasteurised milk, fermented milk such as plain yogurt; eggs; teas, coffee, herb infusions, tap water, bottled spring water

Better Eating, Better Learning⁷ sets the agenda for the coming decade to help drive improvements to school food. School meals provide an opportunity to serve food that drives dietary behaviour change and supports health and environmental goals. In this light, school food should be an exemplar for healthy eating by minimising food associated with unhealthy diets e.g. burgers, hot dogs, chips, pizza or products high in sugar.

⁶ Monteiro et al. A new classification of foods based on the extent and purpose of their processing. Cadernos de Saude Publica 2010, 24(11):2039-49

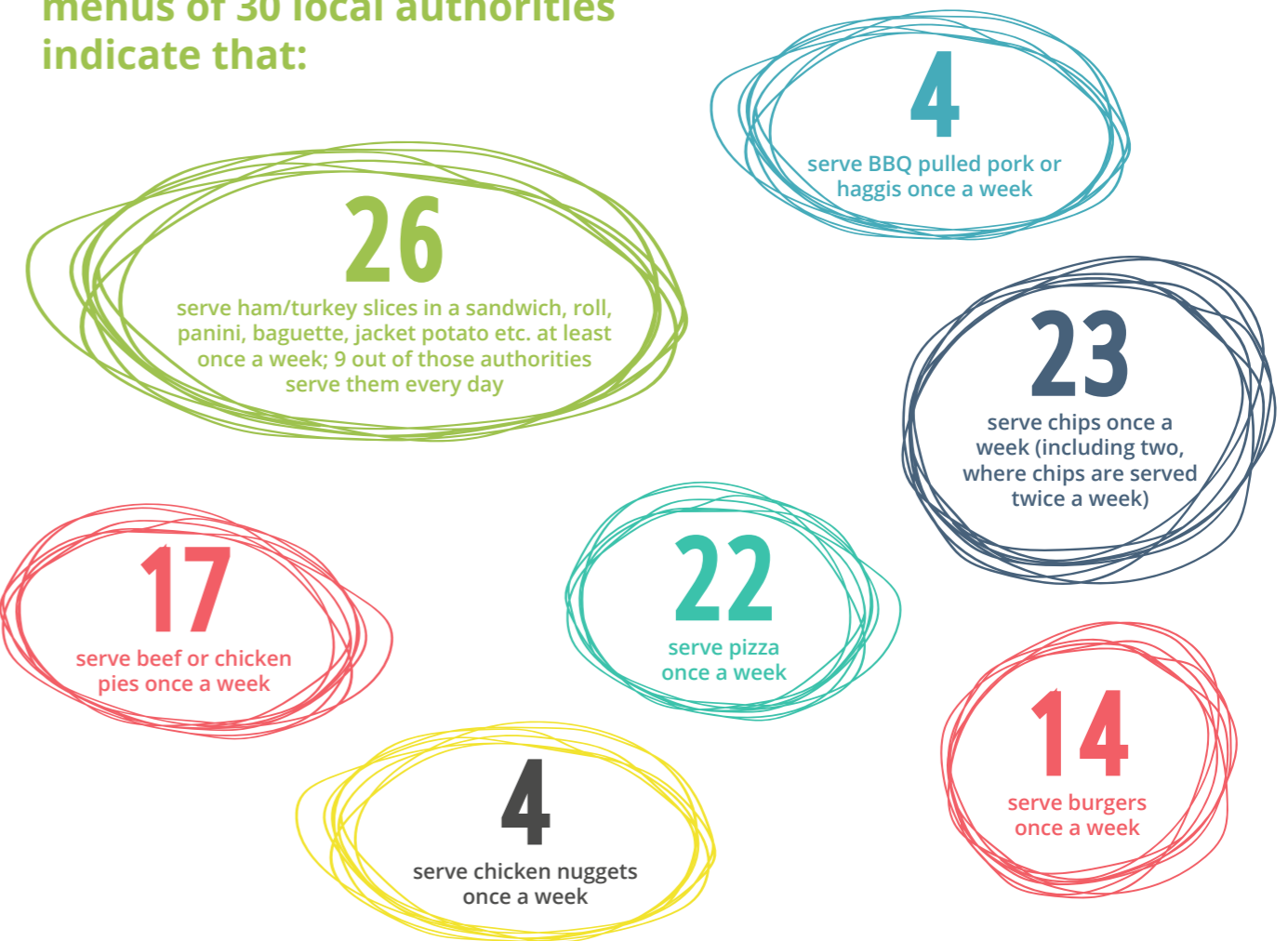
⁷ The Scottish Government. Better Eating, Better Learning. A New Context for School Food. Edinburgh, 2014.

⁸ For the purposes of this research 'processed meat' included: beef, pork or chicken burgers, pies, sausages, sausage rolls, hot dogs, chicken nuggets, BBQ pulled meats, haggis, and ham/turkey slices fillings for sandwiches.

We should reduce or eliminate any 'junk type' food from school menus. Even if these foods are of better nutritional quality than the average ones from retail or out of home sector, their presence confirms that they are acceptable on a daily basis and exposes children to the habit of consuming these types of food.

We recorded how frequently (days per week) local authorities include red and processed meat⁸, pizza and chips in school meals menu.

During a randomly chosen week, menus of 30 local authorities indicate that:



World Cancer Research Fund's dietary recommendations for cancer prevention include limiting red meat consumption and avoiding processed meat⁹.

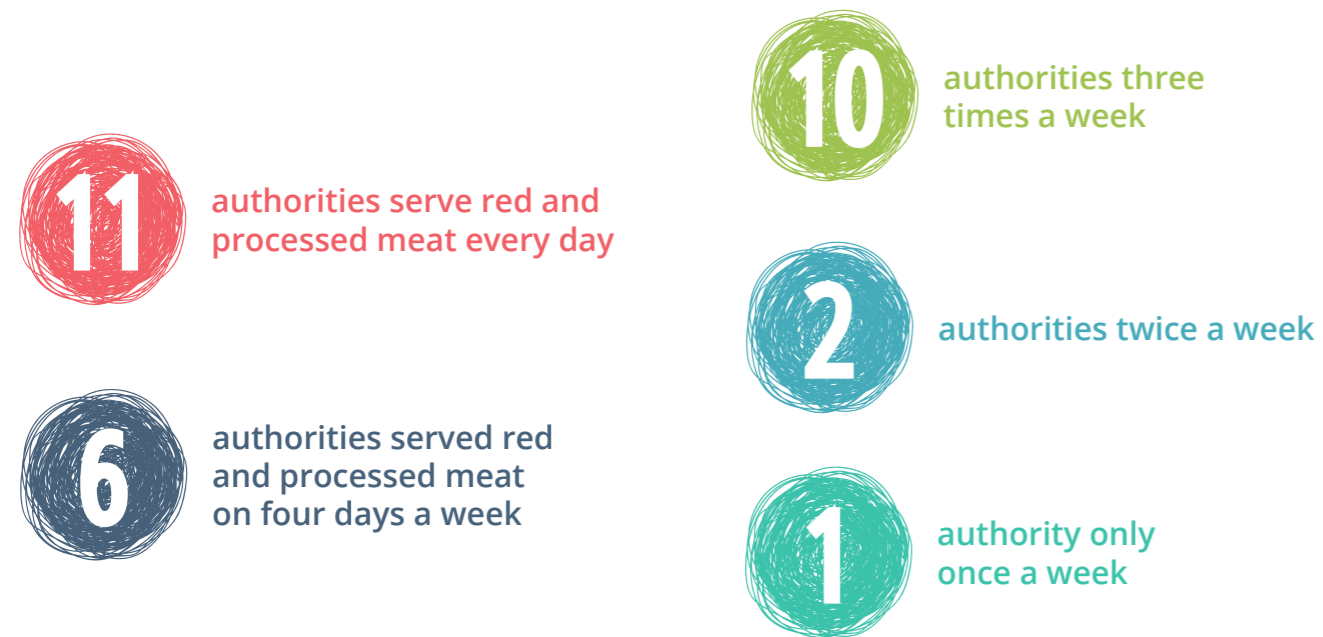
Red meat is beef, pork, lamb and goat, which includes foods like steak, hamburgers, minced beef, pork chops and roast lamb.

Processed meat has been smoked, cured or had salt or chemical preservatives added rather than having just been cooked or reformed (like most sausages and burgers). This includes bacon, salami, chorizo, corned beef, pepperoni, pastrami, hot dogs and all types of ham¹⁰.

The revised Scottish Dietary Goals state that the average intake of red and processed meat should be pegged at around 70g per person per day¹¹ and not more than 90g per person per day. Although there has been a reduction in the intake of total red meat in Scotland since 2001¹², the patterns of red vs processed meat are not known.

Currently the Scottish Dietary Goals do not specify average intake recommendations for children, but it would be prudent to limit red meat and avoid including processed meat at school meals.

Number of local authorities serving red and processed meat:





DEMONSTRATING PROGRESS
East Lothian Council offered red and processed meat on only one day of the week. Two councils (Clackmannanshire and Aberdeen City Council) offered red and processed meat on two days a week only.

⁹ World Cancer Research Fund / American Institute for Cancer Research. Policy and Action for Cancer Prevention. Food, Nutrition, and Physical Activity: a Global Perspective. Washington DC: AICR, 2009

¹⁰ <https://www.wcrf-uk.org/uk/preventing-cancer>

¹¹ The Scottish Government. Revised Dietary Goals for Scotland. March 2016.

¹² Barton KL, Wrieden WOL, Masson LF. Estimation of food and nutrient intakes from Living Costs and Food Survey data in Scotland 2001-2014.

During a randomly chosen week, local authority menus indicate that:



During a randomly chosen week, most (21) of the authorities offered fish, breaded fish, breaded haddock or breaded salmon. Some (10) offered fish fingers, fishcakes, fish bites, breaded haddock goujons or salmon nibbles and 1 offered salmon pasta. Eleven authorities had an option of fish including tuna on the menu every day of the week.



DEMONSTRATING PROGRESS
East Ayrshire, South Ayrshire, East Dunbartonshire and Moray Councils offered fish on two days of the week (excluding tuna).





02 Prioritising Soup and Vegetables

The SNP committed in its 2016 election manifesto to increasing the number of portions of fruit and vegetables served in schools to ensure children have the opportunity to receive their five a day during the school day¹³. Serving a soup containing vegetables every day is an ideal way to increase vegetable intake. Having salad bars/bowls in every school is another effective way to positively influence vegetable intake.

Soup is likely to provide one or two portions of vegetables and it is a part of tradition in Scotland. Currently just over 50% of local authorities offer soup on 4 or 5 days of the week. 6 local authorities offer soup only once a week or not at all. Scottish primary schools currently serve puddings more often than soup. A majority of local authorities (27) offer salad bowls/bars in addition to their standard vegetable offering.

Soup on the school lunch menus is generally low in salt. However, one authority offered soup with an average sodium content of 426mg per portion. For comparison, the daily Reference Nutrient Intake (RNI) for sodium is 700mg/d for children 4-6 years and 1200mg/d for children aged 7-10. Authorities should make sure that served soup has low levels of sodium.

50% of local authorities are practising a “soup or pudding” offering. The nutritional characteristics of these are not equal and this practice should cease immediately.

Vegetables, soup and salads should receive higher priority in menu planning than puddings and the practice of offering soup or puddings should cease.

¹³ <https://www.snp.org/manifesto>

Number of local authorities offering soup as a part of a school meal:



DEMONSTRATING PROGRESS

Glasgow City Council and South Ayrshire Council offer soup and salad bar/bowls on every day of the week and don't have a 'soup or pudding' ultimatum. Scottish Borders Council offers soup 4 days a week, salad bar/bowl every day and don't have a 'soup or pudding' choice.





03 Free Sugar Content of School Meals

The current maximum recommended levels of NMES¹⁴ (Non Milk Extrinsic Sugars) in an average school lunch (16.3g for primary school pupils and 19.5g for secondary school pupils) should be changed to 'free sugars' and reduced over time to be in agreement with the updated Scientific Advisory Committee on Nutrition (SACN) recommendations¹⁵ and the revised Scottish Dietary Goals¹⁶:

Updated SACN recommendations for the maximum levels of free sugars are:

- 19g/day for children 4-6 years old
- 24 g/day for children 7-10 years old
- 30g/day for 11 years old and older

In the light of the updated SACN recommendation for free sugar intakes and subsequently updated Scottish Dietary Goals, offering puddings at school makes it almost impossible for children to stay within the range of their daily recommendations.

As the '...nutrient standards for school lunches have been calculated to ensure that the school lunch provides a third of the daily nutritional requirements of primary and secondary school pupils¹⁷', school lunches should ideally contain no more than

- 6g for primary school pupils aged 5 and 6
- 8g for primary school pupils aged 7-10
- 10g for secondary school pupils.

An average school pudding (from the nutritional information available on the local authorities' websites) has over 3 teaspoons of sugar (14g). An average yogurt served at school is low in fat but has high sugar content: there are three teaspoons of sugar (12.7g) in an average portion.

To achieve the Scottish Dietary Goals, any puddings, cakes, biscuits and sugary yogurts should be minimised on school menus. This change will help to form healthy eating habits from a young age. Puddings are a discretionary food which means they are not needed for the good of our health. Food Standards Scotland suggested that Scots need to cut their intake of discretionary foods by half¹⁸.

Number of local authorities offering puddings¹⁹

12 authorities offered puddings every day of the week

2 on three days a week

14 offered it four days a week

2 on two days a week



DEMONSTRATING PROGRESS

Edinburgh City Council (Edinburgh Catering) offer puddings on only 2 days a week and provide nutritional information that their yogurts have 3g of free sugars (NMES) per portion.

Calculation of Nutritional Values of School Meals

Currently, regulations allow the nutritional value of a school meal to be averaged across the weekly offering. However this appears to mask some very high daily offerings in sugar.

By way of an example from a current menu: a lunch of sweet and sour chicken (free sugars 6.6g), a lemon sponge (19.2g), and a strawberry milkshake (10.6g) could provide over 36g of free sugars. This is close to double the maximum daily intake for children aged 4-6 (19g).

We strongly recommend that a third of the SACN maximum daily limit on free sugar is applied to every potential combination of school meal options. This could be implemented over time.

This would ensure that every child is protected from excess sugar consumption at school.

Whilst this report does not cover total fat and saturated fat, the same concept should be considered in those categories to be in line with the Scottish Dietary Goals. In most schools children will make their own daily choices so it is reasonable to assume that some children may, knowingly or unknowingly, choose the least healthy combination of options every day.

¹⁴ The Nutritional Requirements for Food and Drink in Schools (Scotland) Regulations 2008

¹⁵ SACN, Carbohydrates and Health, 2015

¹⁶ The Scottish Government, Revised Scottish Dietary Goals, March 2016

¹⁷ The Scottish Government, Healthy Eating in Schools – A guide to implementing the nutritional requirements for food and drink in schools (Scotland) regulations 2008

¹⁸ FSS, The Scottish Diet It Needs to Change. December 2015

¹⁹ For the purposes of our analysis a pudding is defined as any pudding offering excluding fruit and yogurt.



04 The Dining Experience: Building a Healthy Eating Culture

The experience of eating a school meal is crucial as it may determine whether pupils choose to eat at school. Lunchtime is an opportunity to take a break from the lessons, socialise with friends, build relationships across school and learn about other cultures and dietary needs (i.e. food allergies and national dishes). It is also an opportunity to introduce new tastes, learn about Scottish food heritage, what a lunch should look like, where food comes from, what food is in season, as well as to find out about health, sustainability, recycling and environment.

We must positively influence children's diets in school and this must include consideration of the dining experience so that school meals are delivered in positive and vibrant physical and social environments.

A range of factors can determine how positive the school meal experience is (based on Better Eating, Better Learning):

1. **Safe and welcoming** eating environment that demonstrates positive attitude towards food
2. Friendliness, approachability and positive interaction with the **staff serving food**
3. Sufficient **time** to enjoy lunch: unhurried, sociable and enjoyable
4. **Appealing food** that shows quality and careful preparation, with attractive colour, texture, taste
5. Appropriate **environment**: short queuing times and conditions, comfortable seating arrangement and space, good cleanliness of the dining area, positive perception of standards of the school kitchen, appropriate noise levels, proper plates and cutlery
6. **Choice and freedom**: a range of healthy options as well as asking for regular feedback and views on the menu
7. **Values of school food** should be clear, each local authority should support their healthy school meal menu with a strong narrative (marketing) aimed at both children and parents, highlighting the school meal as an example of good nutrition, and learning about diet and environment

The positive experience of eating in school should include not only school meals but all food eaten throughout the school day.

We must ensure that action is taken to provide the best physical and social environments possible in every school.

Food for Life Scotland: case study: Doune Primary School

Food for Life Scotland's education framework and materials are helping Silver Catering Mark holder, Doune Primary School, use food as a medium for learning, health and wellbeing across the school²⁰. The eggs from the school's eight happy hens are much more than cooking ingredients, they are history, maths, science, language, biology, technology and social studies rolled into one. By taking small steps, and recognising that everyone, from kitchen to community, is vital, Doune Primary School and all those involved with it, are finding out that good food doesn't just taste nice. It nourishes minds, bodies and communities.

²⁰ Soil Association, 2017





International Best Practice – Learning from Copenhagen

Today in Copenhagen around 90% of the food in public kitchens is organic²¹. This was not always the case. Copenhagen decided to transform public procurement and shift to organic food to eliminate pesticides which polluted drinking water.

The conversion process was to be zero cost but this would be a challenge as a change to organic, without changing anything else, would cost 20-30% more. Copenhagen had to change what was cooked and how the food was presented, so it was tasty and sustainable with as little waste as possible. To achieve low cost change they had to procure healthier, cheaper, organic products and start cooking frugally, for example stewing cheaper cuts of meat. Also, food had to look good and be a pleasure.

The main focus of the project was vocational staff training. The staff became valued as the key asset needed to deliver this change but their skills had been eroded over time. Staff were involved in evaluations and seminars and co-produced solutions. As it turned out it was cheaper to cook at schools (no transport and packaging), and the staff were left to plan the menus. Through the training they gradually re-captured professional skills: such as baking bread or butchering pig into smaller portions. School food started attracting chefs and prestige returned to school kitchens and canteens.

The pupils are involved as well. In years 5, 6 and 7, each student spends a week in the school kitchen with culinary advisors and chefs cooking, serving and cleaning. Importantly, the kitchen staff are in dialogue with the students explaining the menus and receiving regular feedback.

Copenhagen improved not only food but also the experience of eating. Today school meals have to compete with fast food outlets and cafes – so schools involved children to create spaces they wanted to spend time in focusing on lighting, colours, access, sounds, and smells.

Copenhagen transformed a feeding culture into an eating culture.

²¹ Anya Hultberg's talk Public meals: Making a step change on 21st Oct 2016, University of Edinburgh. Anya worked at the Haus of Food in Copenhagen, Denmark, for eight years, which was established to improve the quality of meals served in Copenhagen's public kitchens. Her work focused on generating a cultural shift in public kitchens and ensuring the market was there to meet the demand.