

# A Snapshot Review of Rivington Foundations Primary School's Packed Lunches 2016



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**Red  
Cabbage**

## **1.0 Summary**

A brief snap shot packed lunch audit was undertaken in the summer term 2016 at Rivington Foundation Primary School to establish the contents of the pupils` packed lunches and it was compared to the Government`s recommended dietary guidelines for children (Public Health England, 2016).

The positive points are listed below.

- ✓ All (100%) of the packed lunches had a portion of protein.
- ✓ 70% of the children had at least one portion of fruit.
- ✓ 22% had more than one portion of fruit
- ✓ Over half of all the children had water to drink.

## 2.0 Introduction

### 2.1 Background

What we eat has a profound impact on our health both in the short term and long term and research has shown that children who eat well perform better at school (Alaimo, Olson, & Frongillo, 2001)<sup>1</sup>. It is well documented that children learn to eat just as they learn anything else; therefore, establishing a healthy relationship with food in the early years can only form a solid foundation for life (Wilson, 2015).

Obese & overweight children are more likely to become obese adults (Llewellyn, Simmonds, Owen, & Woolacott, 2016) therefore it could be suggested that a 'prevention rather than cure' approach could help prevent future ill health (Roberto et al., 2015). Risk factors from diet related diseases, such as obesity, diabetes, cardiovascular disease, cancer, dental disease, hypertension and osteoporosis can be reduced by adopting a healthier lifestyle consisting of a nutritious, balanced diet and plenty of exercise (World Health Organisation, 2003).

Meal times within the school environment are important, they are not just about consuming food but it is a time to promote good social skills, table manners and a healthy relationship with food and eating. It can also be an opportunity to promote healthy eating and encourage an interest in food as its association with diet and health.

Below is a paragraph from The School Food Plan written by Henry Dimbleby & John Vincent published by the Department of Health in July 2013.

***“Many parents mistakenly imagine that a packed lunch is the healthiest option. In fact, it is far easier to get the necessary nutrients into a cooked meal – even one of mediocre quality. Only 1% of packed lunches meet the nutritional standards that currently apply to school food.”***

The aim of this report is not encourage the uptake of packed lunches but to identify what the packed lunches contain and to compare the contents the Government's recommended dietary guidelines for children (Public Health England, 2016).

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<sup>1</sup> For a fuller list of relevant studies, see Appendix C: "Why it matters – evidence on health and achievement" from Dimbleby, H. and J. Vincent (2013). The School Food Plan. London, Crown

## 2.2 Local Statistics

The prevalence of obesity has increased since 2014/15 in both Reception and Year 6. Over a fifth of Reception children were overweight or obese and in Year 6 over a third. England's average overweight and obesity combined figure for Reception Year in 2015/16 was 22.1% and for Year six 34.2%. Chorley's school children's average for combined overweight and obesity was below England's and Bolton's was above, see table 1 below. Children's dental health for Bolton & Chorley was above the national average in 2011/12 with children having one or more decayed, missing or filled teeth (Her Majesty's Stationery Office, 2016 ).

**Table 1 Prevalence of underweight, healthy weight, overweight and obese children, by region and local authority (based on the postcode of the child) source (Her Majesty's Stationery Office, 2016 )**

	% overweight and obese combined						
England* 2015/16	Reception				Year 6		
	Prevalence	Lower CI	Upper CI		Prevalence	Lower CI	Upper CI
<b>England</b>	<b>22.1</b>	<b>22.0</b>	<b>22.2</b>		<b>34.2</b>	<b>34.0</b>	<b>34.3</b>
<i>Bolton</i>	21.5	20.2	22.8		35.4	33.8	37.0
<i>Lancashire</i>	22.5	21.8	23.2		33.2	32.4	34.0
<i>chorley</i>	19.9	17.8	22.2		32.0	29.3	34.8

\*5% confidence intervals should be taken into account when comparing prevalence figures. Where confidence intervals do not overlap, differences are statistically significant. For overlapping confidence intervals significance testing must be used to determine whether differences are statistically significant. Further details are provided in annex F of the report  
<http://content.digital.nhs.uk/searchcatalogue?productid=23381&q=national+child+measurement+programme&sort=Relevance&size=10&page=1#top>

### **2.3 Previous Packed Lunch Audit**

A previous packed lunch audit, carried out in November 2013, revealed that most of the children at Rivington Foundation Primary School were consuming a healthy balanced packed lunch and meeting most of the Government's guidelines<sup>2</sup>.

The positive points from the previous audit (2013) are listed below:

- ✓ Nearly all the children had a least 1 portion of fruit with their packed lunch
- ✓ Most had a protein food as a sandwich filling.
- ✓ Just under half of the children had 'non-white' bread.
- ✓ Just over 70% had a dairy portion.
- ✓ Over third of all the children had water to drink.

Therefore it was decided to run another audit to see how well Rivington Children are doing in 2016.

### **3. Method**

A brief 'snapshot' packed lunch audit was carried out at Rivington Foundation Primary School over 3 lunch times in June 2016 to ensure all of the children who were eating packed lunches were included/captured. The audit looked at the composition of the meal by 'macro nutrients'; the carbohydrate (bread, pasta etc), the protein (meat, fish, eggs, cheese)<sup>3</sup> the dairy (cheese, yoghurt, milk), fruit and vegetables and type of drink. Any sweet or savoury snacks were listed also.

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<sup>2</sup> The previous report & guidelines are available for viewing at: <http://rivington.lancs.sch.uk/healthy-eating>

<sup>3</sup> Where foods can be grouped into more than one group they are classed in the group where the most macronutrient is present

## 4. Results

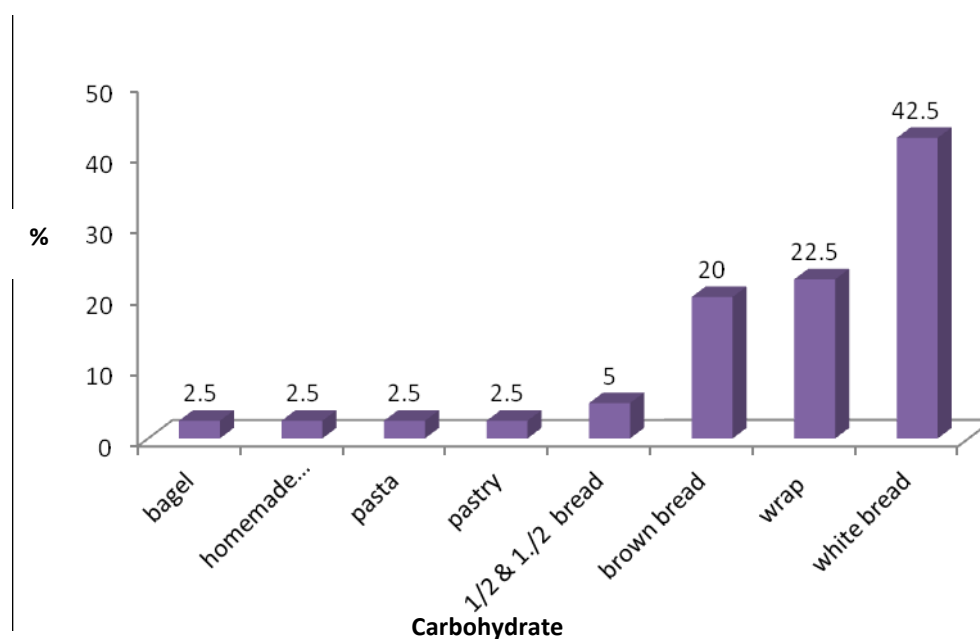
### 4.1 Number of packed lunches

There were 40 packed lunches audited in total. The Government has introduced free school dinners for Reception; Years 1 & 2 and are provided for in state funded schools in England<sup>4</sup>.

Year	P/S	R	1	2	3	4	5	6	Total
<b>No. of packed lunches</b>	4	2	1	2	4	7	7	13	40

### 4.2 Carbohydrates

All of the carbohydrate 'part' of the packed lunch was flour based, with 25% being produced from 'non- white' flour. Most of the packed lunches included mainly bread (95%) with 2.5% pasta and 2.5 % pastry. NB these calculations assume that the wraps were white flour wraps, see figure 1 below & table 2 for a detailed breakdown by year group.



**Figure 1** Percentage type of carbohydrate in each packed lunch

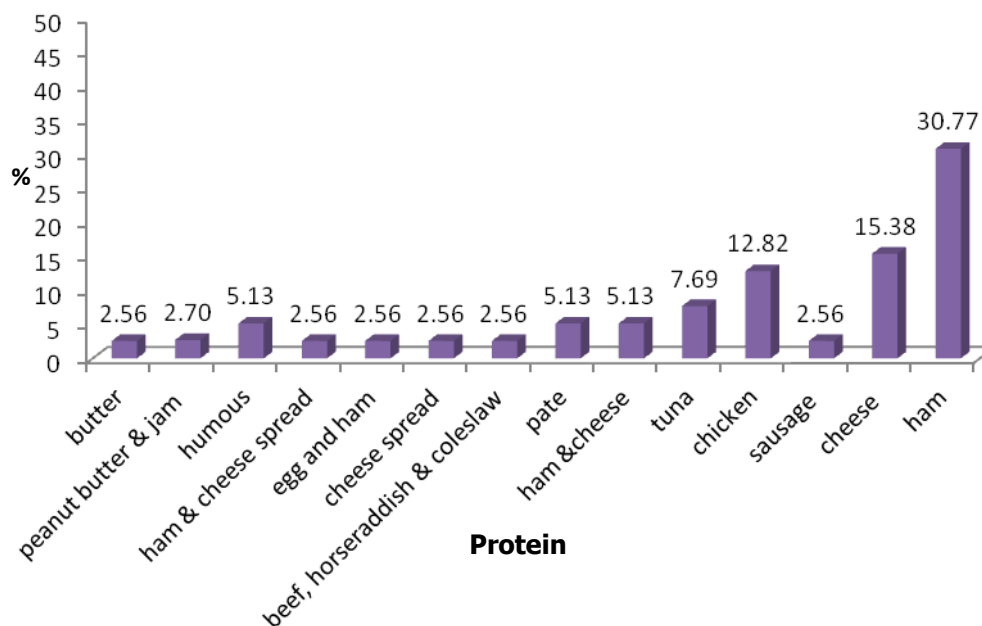
<sup>4</sup> The introduction of free school dinners for reception, year 1 & 2 may have affected the number of packed lunches so this number is not comparable to the previous audit.

**Table 2 Number and percentage type of carbohydrate by year group**

Year	Carbohydrate n (%)									Total
	Pastry	White bread	wrap	bagel	Pasta	½ & ½ bread	Home-made	Brown bread		
<b>P/S</b>	1 (25)	1 (25)	1 (25)					1 (25)		4 (10)
<b>R</b>		2 (100)								2 (5)
<b>1</b>								1 (100)		1 (3)
<b>2</b>		1 (50)	1 (50)							2 (5)
<b>3</b>		1 (25)	1 (25)						2 (50)	4 (10)
<b>4</b>		3 (43)	1 (14)	1(14)			1 (14)		1 (14)	7 (18)
<b>5</b>		3 (43)	3 (43)						1 (14)	7 (18)
<b>6</b>		6 (46)	2 (15)		1 (8)	2 (15)			2 (15)	13 (33)
<b>Totals</b>	<b>1(2.5)</b>	<b>17 (42.5)</b>	<b>9 (22.5)</b>	<b>1 (2.5)</b>	<b>1 (2.5)</b>	<b>2 (5)</b>	<b>1 (2.5)</b>	<b>8 (20)</b>		<b>40(100)</b>
<b>Previous Audit</b>		52%				17%		31%		100%

#### 4.2 Protein

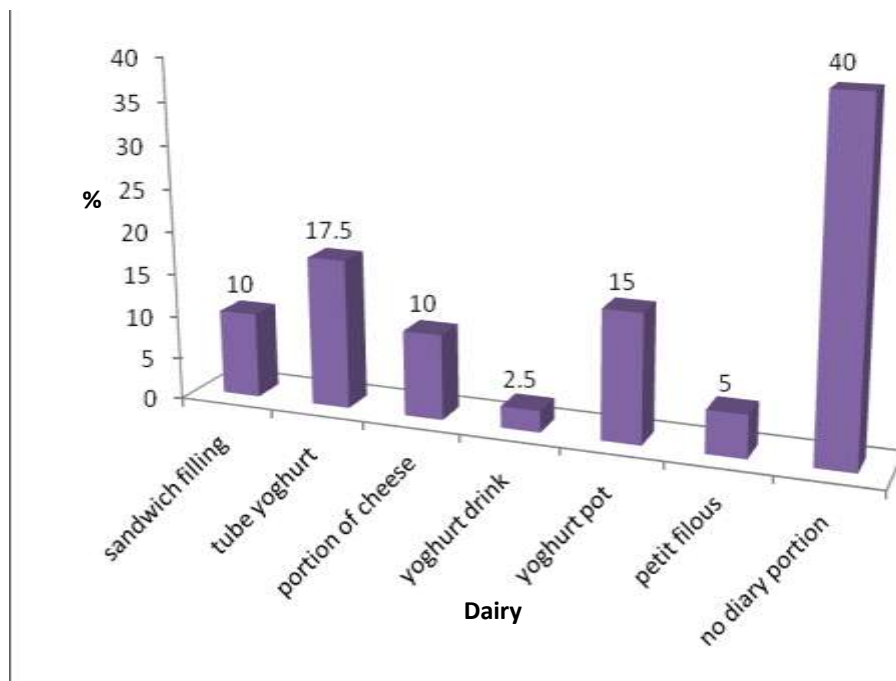
Two of the 40 packed lunches observed didn't contain a sandwich, the protein for those two meals were tuna with pasta and sausage in a sausage roll. In line with the previous audit, ham was the most popular sandwich filling, 31% of the sandwiches consisted of ham; followed by cheese at 16% and chicken 3<sup>rd</sup> with 13%, see figure 2 below.



**Figure 2 Percentage type of protein in each packed lunch**

### 4.3 Dairy

Forty percent of Rivington’s children’s packed lunches (on the days that were audited) contained no dairy products. For those that did, the most common form of dairy was tube yoghurts (Frubes, Choobs etc) at 17.5%, followed by traditional pot style yoghurts at 15%. Ten percent of the packed lunches` dairy portion was the sandwich filling of cheese, which would also be counted as the protein part of the meal, see figure 3 below. Four of the packed lunches observed had multiple dairy portions, such as a portion of cheese and a yoghurt or 2 or 3 tube yoghurts; one packed lunch had a chocolate milk as a drink.

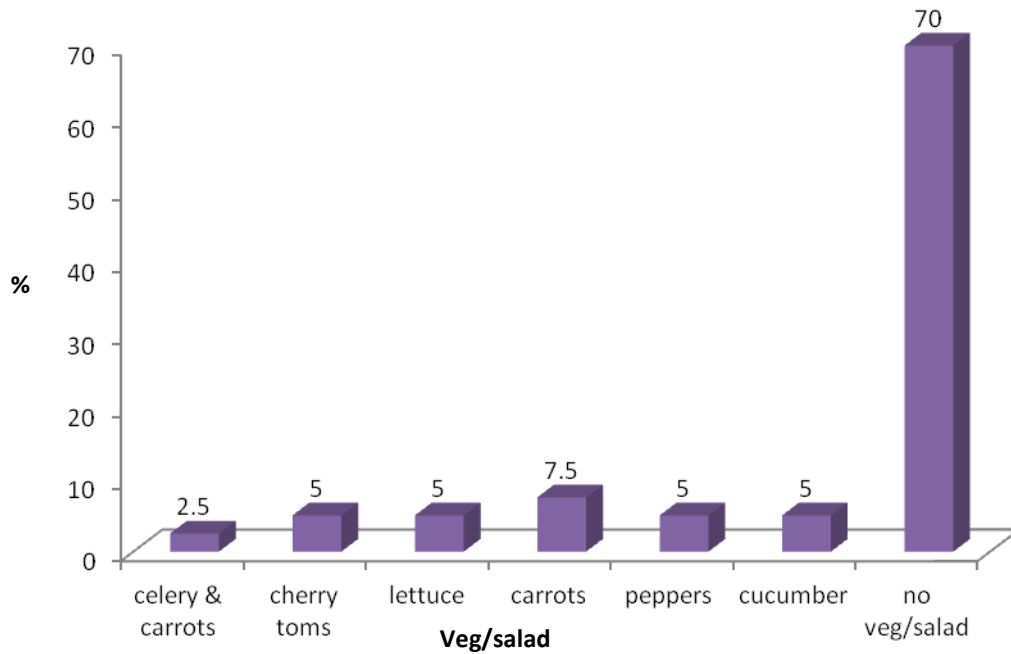


**Figure 3 Percentage type of dairy in each packed lunch**

### 4.4 Vegetables

Seventy percent (n=28) of the packed lunches observed did not have a portion of salad or vegetable. Of the 30% that did, carrots were the most popular salad/vegetable component followed by lettuce, peppers and cucumber. One packed lunch contained 2 salad items, see below for a detailed breakdown figure 4 below.

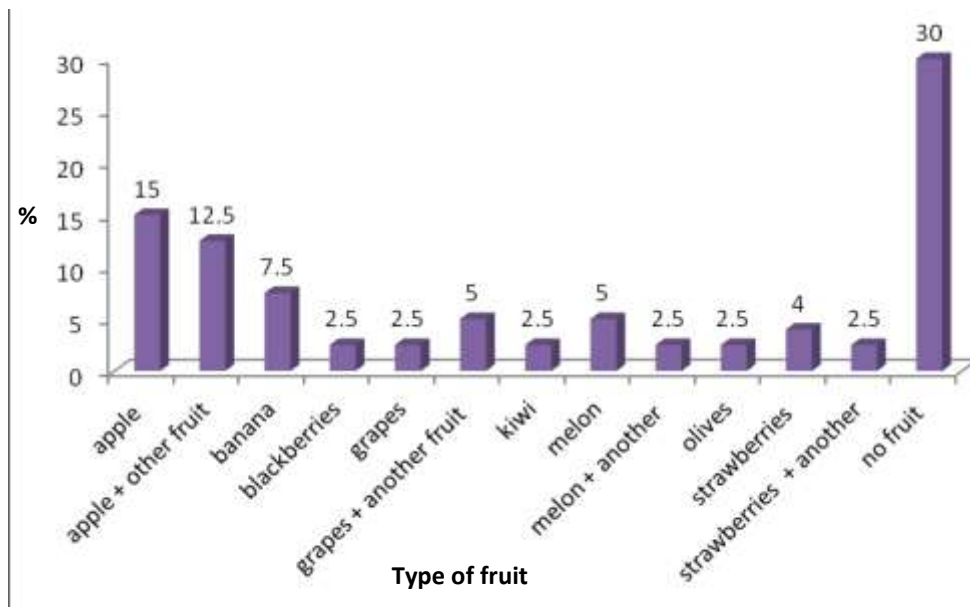




**Figure 4 Percentage type of vegetable or salad in each packed lunch**

#### 4.5 Fruit

Seventy percent of the packed lunches contained a least one portion of fruit and 22% contained more than one portion of fruit. Apples were the most popular followed by an apple plus another type of fruit. There were at least 8 different types of fruit, see below figure 5 for a details<sup>5</sup>.

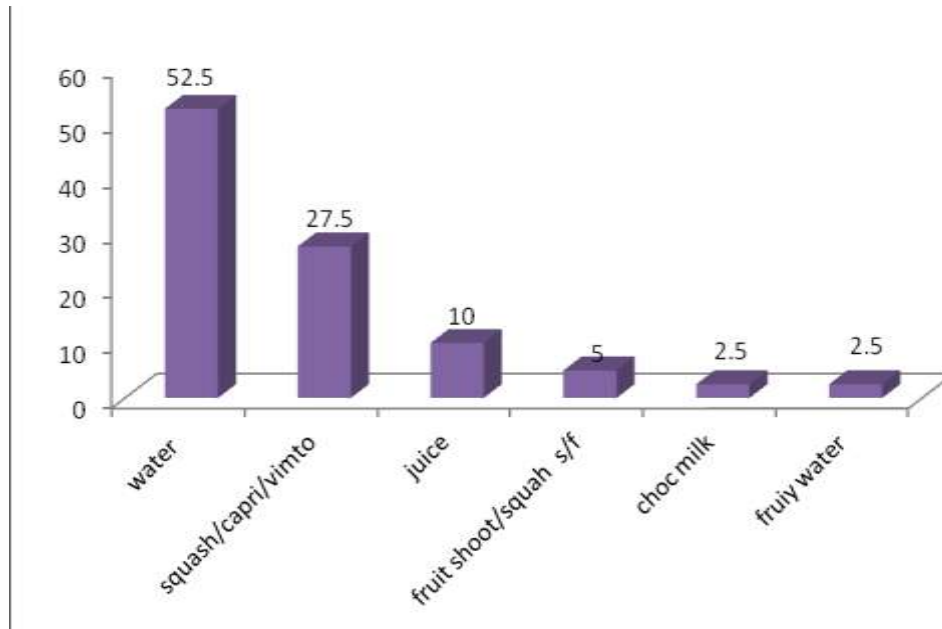


**Figure 5 Percentage type of fruit in each packed lunch**

<sup>5</sup> It was summer time audit when there are more fruits available & in season

#### 4.6 Drinks

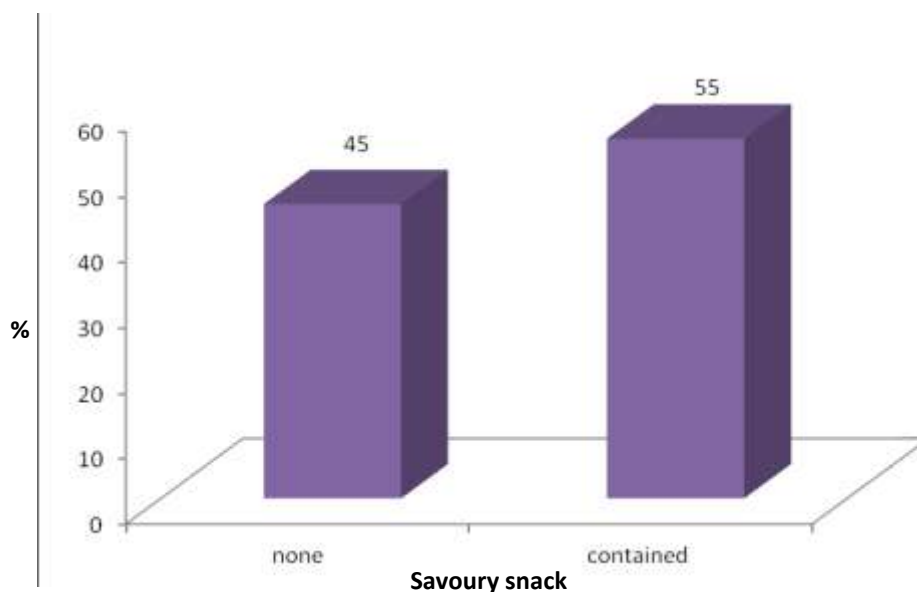
Water was the most common drink at 52.5%, followed by squash, Capri sun and Vimto (it was assumed that unless the children knew & stated the drinks were NOT sugar free). Juice came 3<sup>rd</sup> at 10% followed by choc milk, sugar free squash (5%) and fruity water (2.5%), see figure 6 below.



**Figure 6 Percentage type of drink in each packed lunch**

#### 4.7 Savoury Snack

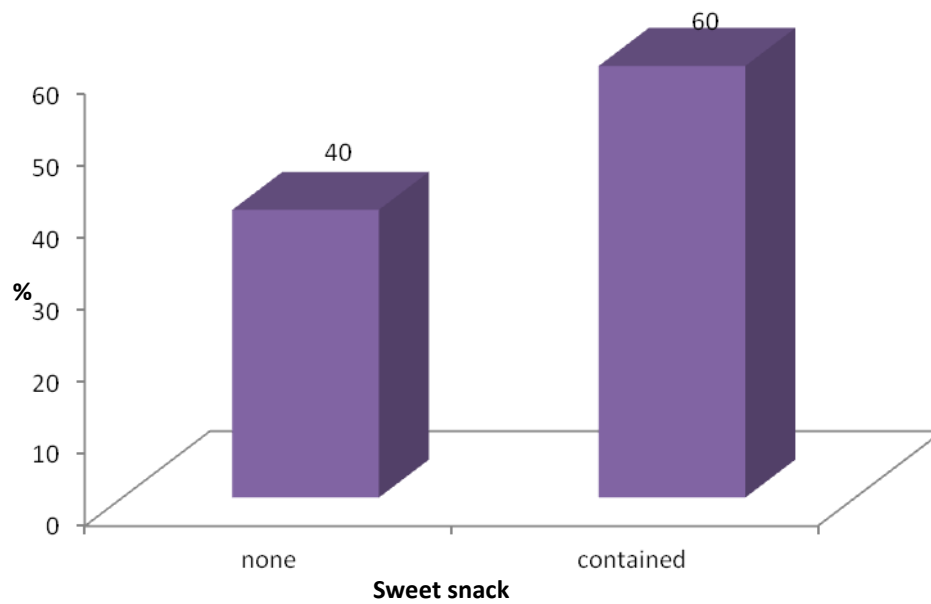
More than half (55%) of the packed lunches contained a savoury snack. There was a wide variety such as Monster Munch, Hula Hoops, French Fries, Pop Corn, Walkers Crisps And Wotsits, see figure 7 below.



**Figure 7 Percentage of packed lunches containing a savoury snack**

#### 4.8 Sweet Snack

Sixty percent of the packed lunches observed had a sweet snack and some had more than one, see figure 8 below.



**Figure 8 Percentage packed lunches that contained a sweet snack**

## **5.0 Rivington's Packed Lunch Contents Compared To The Government Department of Health Guidelines<sup>1</sup>.**

The previous audit used the Government Department of Health (DH) guidelines based on The Foods Standards Agency (Food Standards Agency) Eatwell Plate (see appendix 1). Since then the Eatwell Plate has been updated by Public Health England (PHE) and become the Eatwell Guide (Public Health England, 2016) and some guidelines have changed (see appendix 2.) This report compares the packed lunches to the latest Eatwell Guide (Public Health England, 2016).

### **5.1 Carbohydrates**

The Eatwell Guide advises that starchy carbohydrates such as bread, pasta, rice and potatoes should be just over a third of what we eat. All of the packed lunches had a carbohydrate portion, mostly in the form of bread as part of a sandwich, therefore meeting guidelines. PHE recommends that we should try to choose higher-fibre, wholegrain varieties, when you can, by choosing whole-wheat pasta, brown rice, or simply leaving the skins on potatoes because of the higher fibre content. Foods high in fibre help us feel fuller for longer, contain more vitamins and minerals and keep our digestion-system healthy. Eight packed lunches were comprised of brown bread and 2 were 'half and half,' this equates to a quarter of the packed lunches<sup>6</sup>. For more information about starchy carbohydrates visit: <http://www.nhs.uk/Livewell/Goodfood/Pages/starchy-foods.aspx>

### **5.2 Protein**

Proteins are the building blocks of body tissue, and energy and nutrient sources. We should aim to eat about 2 portions of protein a day, this can be meat, fish, or a vegetarian option, such as eggs, cheese or humous (see appendix 2 for the Governments Reference Guide). Nearly every packed lunch had a portion of protein with the exception of one sandwich which only contained butter<sup>7</sup>, therefore the

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<sup>6</sup> This assumes that the wraps were not made with wholemeal flour.

<sup>7</sup> Butter is classed as a dairy product but is also a provides protein but for this audit it was not classed as the protein portion of the part of the meal

majority of packed lunches met Government guidelines. Ham was the most popular sandwich filling (31%) followed by cheese at (16%) and then chicken (13%). The Guidelines advise choosing lean cuts of meat and mince and advise we eat less red and processed meats such as bacon, ham and sausages. Processed meats tend to be high in salt and saturated fat. For more details on what sources of protein to choose visit: <http://www.nhs.uk/Livewell/Goodfood/Pages/the-eatwell-guide.aspx>.

Nuts are a fantastic source of protein, 'good' fats, vitamin and minerals and a great snack BUT are not allowed in school due to the allergy risk.

### **5.3 Dairy**

Dairy food such as cheese, milk and yoghurts provide the protein and calcium needed for healthy bones, teeth and nerve function and therefore are part of a balanced diet. They can be high in fat, sugar and salt so portion size and frequency of consumption should be monitored. Sixteen (40%) of Rivington's packed lunches did not contain a dairy portion and 4 packed lunches had multiple dairy portions. The gold standard for yoghurt is plain yoghurt served with fruit or a little honey to sweeten, more information at: <http://www.nhs.uk/Livewell/Goodfood/Pages/the-eatwell-guide.aspx>.

### **5.4 Vegetables and Fruit**

The Government's message 'At least 5-a-day' was launched in 2003 and was based on a recommendation from The World Health Organisation (WHO) that arose from research that showed an association between the consumption of more than 400g of FV and lower levels of death from chronic disease (World Health Organisation, 2003). We should aim to eat 5 or more portions of fruits or vegetables a day, this will provide vitamins and minerals essential for a healthy immune system and for growth and development. Be mindful that fruit juices and smoothies are high in sugar, the best way to consume fruit is to eat it in its natural state. Juicing or blending fruit causes the (fructose) sugar to be released from cells and then it is 'free' to attack teeth.

For more information: <http://www.nhs.uk/LiveWell/5ADAY/Pages/5ADAYhome.aspx>.

Seventy percent of the packed lunches did not contain a vegetable or salad portion, on the other hand, 70% of the packed lunches contained a portion of fruit & 22% had more than one portion of fruit.

### **5.5 Savoury Snacks**

Savoury snacks tend to be high in salt and saturated fat and are not grouped with the eatwell guide, they sit outside under the title '*Eat less often and in small amounts*' (Public Health England, 2016). More than half (55%) of the packed lunches contained a savoury snack. Try to choose the unsaturated, low salt versions and use the labels to help make choices. For advice about reading food labels look here: <http://www.nhs.uk/Livewell/Goodfood/Pages/food-labelling.aspx>.

### **5.6 Sweet Snacks**

More than half of the children`s packed lunches contained a sweet snack and some had multiple packets. PHE advises that foods that are high in fat, sugar and salt should be eaten less often and in small amounts. For some ideas to reduce sugar intake follow: <http://www.nhs.uk/Livewell/Goodfood/Pages/how-to-cut-down-on-sugar-in-your-diet.aspx>

### **5.7 Drinks**

Water was the most common drink at 52.5% and it is the most sustainable and cost effective. We need to stay hydrated and there is evidence that children who are hydrated perform better (Edmonds & Burford, 2009; Fadda et al., 2012). Try to avoid sugary, soft, and fizzy drinks that are high in added sugars and calories. Even unsweetened fruit juice and smoothies are high in free sugar, so limit how much you drink to no more than one 150ml glass of fruit juice each day.

The gold standard drinks for children are water or milk as they do not damage teeth or increase children`s risk of dental decay. Although diluted fruit juice or sugar-free cordials are acceptable with meals (***Artificial sweeteners or colours are not permitted to be added to foods designed for infants and young children (0-5yrs)***(Children's Food Trust, 2012)); milk or water are the better choices to avoid the children developing a sweet tooth. Pure fruit juice (including from concentrate) do provide vitamins such as vitamin C but they also contain fruit sugar

'fructose' and are acidic, both of which can cause tooth decay and encourage a sweet tooth. Avoid fruit juice drinks – these are not the same as fruit juice. Products labelled as "fruit juice drinks" generally contain only a small proportion of fruit juice with water and added sugar, and provide little nutritional value<sup>7</sup>. Check the ingredient list on product labels and avoid products containing "added-sugar", see appendix 3 for sugar content of popular drinks and appendix 4 about artificial sweeteners.

### **5.8 Packed Lunches, Snacks and Rivington's Healthy Eating Policy and Home School Agreement**

One of the Family Responsibilities we agree to when we sign the home school agreement is to "uphold the ethos of the School's Healthy Eating Policy and to reflect this in our child's packed lunch, where appropriate". Rivington's Healthy Eating Policy can be found here: <http://rivington.lancs.sch.uk/healthy-eating>.

Mid-morning snack is a perfect opportunity to put-in one of your '5-a-day,' Key Stage 1 children have fruit provided and Key Stage 2 are requested to only bring in fruit or raw vegetables. This ensures the children still have an appetite for their lunch.

### **6.0 Marketing Can Be Misleading,**

Watch out for other names for sugar such as: fructose, lactose, sucrose, dextrose, corn-syrup, galactose, glucose, honey, invert sugar, malt, maltose, Maple Syrup, Molasses, Muscovado or Barbados Sugar.

Avoid "fruit juice drinks" – these are not the same as fruit juice. Products labelled as "fruit juice drinks" generally contain only a small proportion of fruit juice with water and added sugar, and provide little nutritional value.

## 7.0 Final comments

Choosing what we eat or what we give our children to eat could not be harder, there is a plethora of food choice out there and numerous food outlets ranging from discount supermarkets to bespoke menus delivered to your door designed and shopped for specifically for you. Then, you are bombarded with advertising & marketing; on the TV, your tablet, mobile phone, radio & in newspapers and magazines all with numerous health claims, benefits and sometimes conflicting information – no wonder we are confused. With evidence from research suggesting that childrens food habits and tastes affect their lifelong preferences (Fisk et al., 2011) and to develop a healthy food choice at a young age can only be a benefit to themselves as children and later as adults, thus making what we choose to feed ourselves and our children significant. Promoting healthier food habits and preferences is a challenging task and has to be met with tact and diplomacy.

So where do you go for advice or information? A good place to start for sound evidence based advice go NHS live well website at: <http://www.nhs.uk/livewell> or for more information go to the Schools Food Trust at: <http://www.childrensfoodtrust.org.uk> and appendix 5 that follows has some ideas, hints and tips.



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# Appendices

## Appendix 1 Eat well plate

### The eatwell plate



Use the eatwell plate to help you get the balance right. It shows how much of what you eat should come from each food group.



## Appendix 2 Eatwell Guide



Source: Public Health England in association with the Welsh Government, Food Standards Scotland and the Food Standards Agency in Northern Ireland

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### Appendix 3 Sugar content of popular foods and drinks

Drinks	Usual portion	gram	teaspoons
Coca Cola	330ml can	34.98g	7
Diet Coke	330ml can	0g	0
Fruit shoot (Apple/blackcurrant)	200ml bottle	22g	4.5
Fruit shoot - Low Sugar (Apple/blackcurrant)	200ml bottle	1.6g	0.3
Tropicana original smooth orange juice	250ml glass	25g	5
Innocent smoothie (strawberry/banana)	250ml glass	26g	5
<b>Orange</b>	<b>1 whole</b>	<b>8.5g</b>	<b>1.5</b>
Tinned fruit in fruit juice	100g portion	10g	2
Tinned fruit in syrup	100g portion	15g	3
Digestive biscuit	1 biscuit	2.5g	0.5
Mars bar	62.5g bar	43.1g	8.5
Kit Kat bar	21g bar (2 fingers)	10g	2
Chocolate buttons	Small pack	18g	3.5
Giant chocolate buttons	½ large bag	44g	8.5
Muller Amore Yoghurt (strawberry)	120g pot	24g	5
Mullerlight yoghurt (strawberry)	175g pot	8.6g	1.5

#### **Appendix 4 Artificial Sweeteners & Food Preservatives**

Artificial sweeteners or colours are not permitted to be added to foods designed for infants and young children (0-5yrs). Food and drinks labelled as 'low sugar', 'reduced sugar', 'sugar free', 'no added sugar' or 'low fat' as they are often sweetened using artificial sweeteners, such as:

- aspartame (E951)
- saccharin (E954)
- sorbitol (E420)
- acesulfame K (E950)
- sucralose (E955)

The Food Standards Agency (FSA) advises that the colours and preservatives listed below may affect behaviour in some children, and that eliminating certain artificial colours from their diets might have some beneficial effects on their behaviour. Where products contain any of the colours listed below, they are required to carry the warning 'may have an adverse effect on activity and attention in children'. Some manufacturers have already removed these colours from their products.

#### **Food additives:**

##### **Preservatives to avoid:**

- Sodium benzoate (E211)

##### **Colours to avoid:**

- Tartrazine (E102)
- Quinoline yellow (E104)
- Sunset yellow (E110)
- Carmoisine (E122)
- Ponceau 4R (E124)
- Allura red (E129)

## **Appendix 5 Suggestions for food to include in a healthy packed lunch:**

- A starchy food such as bread, pasta, rice, noodles, potatoes or other type of cereals every day; this will provide energy.
- Meat, fish or other source of non-dairy protein (e.g. lentils, beans, soya or hummus,) every day (usually as part of a sandwich, roll or salad). Protein is needed for growth, strong bones and teeth.
- Oily fish, such as pilchards, salmon or tuna occasionally. Fish is very good for brain development and contains vitamin D needed with calcium to build healthy bones and teeth.

### ***We should aim to eat 5 or more portions or fruits or vegetables a day.***

- At least one portion of vegetable or salad every day, this will provide vitamin and minerals essential for growth and development.
- At least one portion of fruit every day, try to eat a rainbow to ensure a range of vitamins and minerals to keep our immune system healthy.
- Dairy food such as milk, cheese, yoghurt, fromage frais or custard, dairy foods provide calcium needed for healthy bones, teeth and nerve function. Dairy also provides energy.
- A drink: water is best followed by semi-skimmed or skimmed milk. It is essential that children stay hydrated, just 2% dehydration can cause lack of concentration.
- Pretzels, seeds, fruit, crackers and cheese, and vegetable or bread sticks with a dip. **Variation is key to developing a healthy relationship with food.**

### **Suggestions for food to include less often in a healthy packed lunch**

- Snacks such as crisps.
- Chocolate coated biscuits or wafers.
- Cakes
- Meat and pastry products such as sausage rolls or pies

### **Suggestions for food to not include in a healthy packed lunch**

- Confectionery such as chocolate bars.
- Sweets cause tooth decay
- Nut or nut products (although they can be very healthy) because of the danger to other children with allergies.
- Fizzy drinks as these are very unhealthy and have no nutritional value.

## Appendix 6 Table 1 Government recommendations for food energy, macronutrients, salt and dietary fibre for males and females aged 1 -18 years<sup>h</sup>

Age (yrs)	1		2-3		4-6		7-10		11-14		15-18	
Gender	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Energy Kcal/day	765	717	1088	1004	1482	1378	1817	1703	2500	2000	2500	2000
Energy MJ/day	3.2	3.0	4.6	4.2	6.2	5.8	7.6	7.1	10.5	8.4	10.5	8.4
Macronutrients												
Carbohydrate g/day (at least)			145	134	198	184	242	227	333	267	333	267
Protein g/day	14.5	14.5	14.5	14.5	19.7	19.7	28.3	28.3	42.1	41.2	55.2	45.0
Fat g/day (less than)	-	-	-	-	58	54	71	66	97	78	978	78
Saturated Fat g/day(less than)	-	-	-	-	18	17	22	21	31	24	31	24
Monosaturated Fat g/day	-	-	-	-	11	10	13	12	18	14	18	14
Fibre g/day	-	-	15	15	15 (4yr) 20(5-6 yr)	15 (4yr) 20(5-6 yr)	20	20	25	25	30	30
Free sugars g/day (less than)	-	-	15	13	20	18	24	23	33	27	33	27
Salt g/day (less than)	2.0	2.0	2.0	2.0	3.0	3,0	5.0	5.0	6.0	6.0	6.0	6.0

<sup>h</sup>The figures in this table should be used in conjunction with the following information:

Energy figures were derived from SACN Dietary Reference Values for Energy (2011). Figures for all age groups, with the exception of one year olds were averaged accordingly. Figures for 11 - 18 year olds have been capped at 10.5 MJ (2500kcal)/day for males and 8.4MJ (2000kcal)/day for females to help address issues of overweight and obesity. The figures for energy in this table relate to the general population and individual requirements may vary.

Protein figures were obtained from Dietary Reference Values for Food Energy and Nutrients for the United Kingdom (1991).

Fat figures were calculated using the energy figures from SACN

Dietary Reference Values for Energy (2011). The percentages for which to calculate grams per day of fat (35% food energy); saturated fat (11% food energy); polyunsaturated fat (6.5% food energy) and monounsaturated fat (13% food energy) were obtained from Dietary Reference Values for Food Energy and Nutrients for the United Kingdom (1991). Carbohydrate figures were calculated using the energy figures from SACN Dietary Reference Values for Energy (2011). The percentage for which to calculate grams of carbohydrate per day (50% food energy) was obtained from Dietary Reference Values for Food Energy and Nutrients for the United Kingdom (1991).

Free sugars are any sugars

added to food or drinks, or found naturally in honey, syrups and unsweetened fruit juices. The figures for free sugars were calculated using the energy figures from SACN Dietary Reference Values for Energy (2011). The percentage for which to calculate grams of free sugars per day (5% food energy) was recommended in SACN Carbohydrate and Health (2015). No recommendation was made for free sugars for those under 2 years of age.

Salt figures were obtained from SACN Salt and Health report (2003). These target salt intakes do not represent ideal or optimum consumption levels, but achievable population goals.

Dietary fibre figures were obtained from SACN Carbohydrate and Health (2015). These figures are based on evidence in which the consumption of a variety of foods rich in dietary fibre as a naturally integrated component is associated with beneficial health outcomes [SACN Carbohydrate and Health (2015)]. No recommendations were made for children aged under 2 years, however it is recommended that from about six months of age, gradual diversification of the diet to provide increasing amounts of whole grains, pulses, fruits and vegetables should be encouraged.