



Diet & healthy eating in children & young people

Pupil Wellbeing Survey 2024

Gloucestershire County Council

2024

Introduction

Healthy eating can help prevent many chronic diseases. These include obesity, heart disease, high blood pressure, and type 2 diabetes. Healthy eating habits are more likely to stay with you if you learn them as a child.

The NHS recommends:

That to have a healthy, balanced diet, people should try to:

- eat at least 5 portions of a variety of fruit and vegetables every day
- base meals on higher fibre starchy foods like potatoes, bread, rice or pasta
- have some dairy or dairy alternatives (such as soya drinks)
- eat some beans, pulses, fish, eggs, meat and other protein
- choose unsaturated oils and spreads, and eat them in small amounts
- drink plenty of fluids (at least 6 to 8 glasses a day)

This report will investigate diet and healthy eating amongst children & young people in Gloucestershire and the wider impact on wellbeing that healthy eating can bring.



The Pupil Wellbeing Survey

The Pupil Wellbeing Survey (PWS), formerly called the Online Pupil Survey (OPS), is a biennial survey that has been undertaken with Gloucestershire school children since 2004. Children and young people participate in years 4, 5 and 6 in Primary schools; years 8 and 10 in Secondary schools; and year 12 in Post 16 settings such as Sixth Forms and Colleges. A large proportion of mainstream, special and independent schools, colleges and educational establishments take part – representing 57.2% of pupils in participating year groups in 2024. The PWS asks a wide variety of questions about children's characteristics, behaviours and lived experience that could have an impact on their overall wellbeing. The 2024 PWS was undertaken between January and April 2024.

Limitations and caveats of the survey

Not all children and young people who are resident in Gloucestershire attend educational establishments in the county and similarly not all children and young people attending educational establishments in Gloucestershire are residents in the county. It is therefore important to remember this analysis is based on the pupil population not the resident population.

Gloucestershire is a grammar authority, with a number of notable independent schools and several mainstream schools very close to the county's boundary. These all attract young people from out of county which results in the school population (particularly at secondary phase) having slightly different characteristics, especially ethnicity, to the resident young people's population. 12.3% of Gloucestershire's resident population (2021 Census) were estimated to be from minority ethnic groups, however 21.0% of Gloucestershire's school population were pupils from minority ethnic groups in January 2024 and 21.7% of the PWS cohort were pupils from minority ethnic groups in the 2024 survey.

Although a large proportion of the county's educational establishments took part in the survey some only had low numbers of students completing the survey. In contrast others had high numbers. Although this doesn't impact the overall county analysis, as demographics are represented as expected at this geography, analysis by district and education phase (i.e. primary, secondary or Post 16) might only have certain demographic

groups represented due to numbers of pupil take up (for example low numbers completing the survey in Tewkesbury at Post 16 level). Location of Post 16 colleges and sixth forms also impacts the survey as older students travel further to access Post 16 provision.

Many other local authorities do a version of a Pupil Wellbeing Survey and where possible comparisons to Gloucestershire have been given. It is important to note that not all published surveys have comparable questions and, of those that are published, some only provide certain information which might be difficult to compare with the Gloucestershire survey results. Surveys are often undertaken in different years to the Gloucestershire survey schedule, so results have been grouped to represent pre and post covid years. Survey cohorts vary in size dramatically in each LA, unfortunately base values aren't given so significance testing isn't possible.

Analysis of deprivation

Schools can be categorised into statistical neighbour groups which cluster schools with pupils of a similar social profile within the same type of school (a similar level of deprivation, affluence or personal/family characteristics).

We use Ministry of Housing, Communities and Local Government (MHCLG) Indices of Multiple Deprivation (IMD) to determine the relative deprivation of pupils. The IMD is based on the home postcode of pupils (collected in the school census). This is aggregated to give an overall IMD score for the school, reflecting the deprivation levels experienced by pupils. The schools are then split into quintiles based on their scores: quintile 1 is the most deprived and quintile 5 is the least deprived in Gloucestershire.

In addition:

- Grammar/selective schools are compared to other grammar/selective schools in their phase without reference to the IMD.
- Independent schools are compared to other independent schools in their phase without reference to the IMD.
- Post-16 only/Further Education (FE) colleges are compared to all other Post-16 only colleges without reference to the IMD.

- Special and alternative schools are compared to all other schools of this type in the same phase without reference to the IMD.

Eating 5 portions of fruit and vegetables

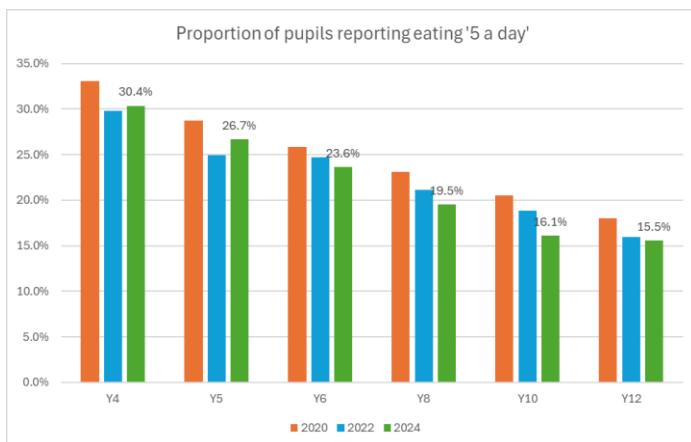
The NHS recommends that all persons eat at least 5 portions of fruit and vegetables a day¹ (5 a day).



Trend

In 2012 21% of pupils said they ate 5 or more portions of fruit and vegetables per day. The proportion reporting eating '5 a day' was highest in younger age groups; 34% of Y4 pupils compared to 15% of Y12 pupils.

In 2024 the proportion of pupils reporting eating '5 a day' whilst significantly higher than in 2012 (22.5%), was lower than in 2022, the reduction was seen in all but the youngest pupils. The proportion of pupils saying they had '5 a day' generally reduces with age.



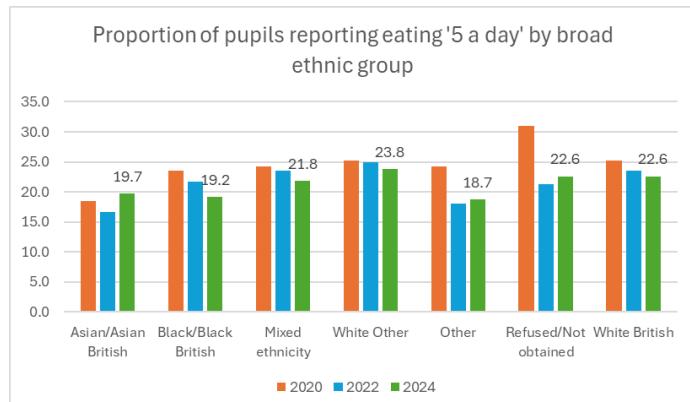
Healthy eating and biological sex

There was little difference between the proportion of females reporting eating '5 a day' than males (22.8% vs. 22.4% in 2024) this has been the same over the last 3 surveys.

Healthy eating and ethnicity

In 2024 no broad ethnic groups were significantly more or less likely to report eating '5 a day' compared to their White British peers. However, at a more granular level Black African and Pakistani pupils were significantly less likely to report eating '5 a day'.

Since the pandemic a reduction in eating '5 a day' has been observed in pupils from most ethnic groups. The reduction has been most seen in pupils from Black/Black British backgrounds.



Healthy eating and sexuality/gender

Whilst in 2022 there was a significant difference between bisexual, lesbian or gay, and 'Other' sexuality pupils and heterosexual pupils reporting eating '5 a day', in 2024 no significant difference was observed. Groups with lowest reported eating '5 a day' were non-binary (15.5%) and transgender (13.7%), asexual (11.5%) and lesbian/gay (14.5%).

Healthy eating and vulnerable groups

Pupils from the following vulnerable groups were in line with their counterparts when reporting eating '5 a day':

- Young Carer (Y8, Y10, Y12)
- Minority ethnicity groups
- Non-Heterosexual/Trans

¹ <https://www.nhs.uk/live-well/eat-well/>

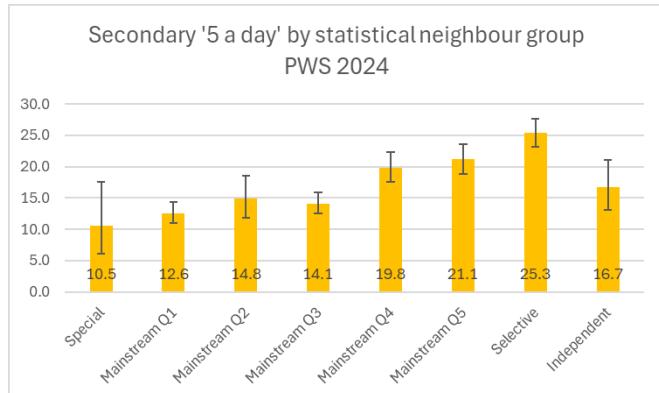
Pupils from the following vulnerable groups were significantly less likely to report eating '5 a day' than their less vulnerable counterparts:

- 4+ ACEs (Y10 & Y12 only) 10.7%
- Known to CSC (Y8, Y10, Y12) 13.9%
- Disability 16.7%
- SEN/EHCP 17.5%
- Low Mental Wellbeing 17.7%
- Eligible for FSM 19.8%

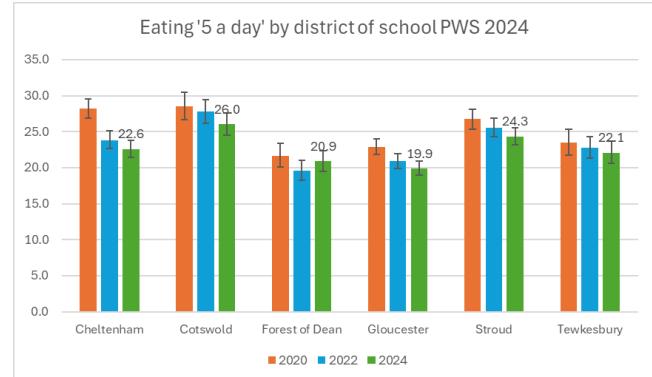
Pupils who reported being seriously bullied were significantly more likely to report eating '5 a day'. This is probably an age-related connection however because primary pupils are both more likely to eat '5 a day' and report that they have experienced being bullied.

Living situation and healthy eating

Affluence appears to be linked to likelihood of eating '5 a day'. Although seen across all phases, this was most evident in pupils from; mainstream schools with pupils living in the least deprived areas; Independent schools and Selective schools who were significantly more likely to report eating '5 a day' than pupils at mainstream schools with pupils living in more deprived areas.



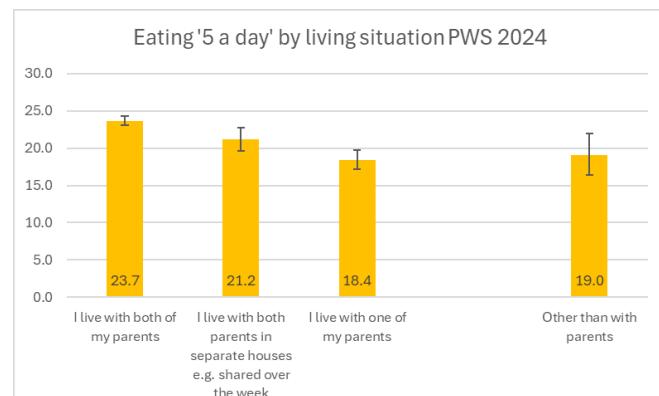
Pupils attending schools in Cheltenham, Cotswold, Stroud and Tewkesbury districts were more likely to report '5 a day' in all years than pupils attending schools in Forest of Dean and Gloucester districts.



Every district in the county saw a decrease in the proportion of pupils reporting eating '5 a day' between 2020 (undertaken pre-covid) and 2024, however, this was only a statistically significant decrease in Cheltenham and Gloucester.



Living with both parents appears to be linked to likelihood of eating '5 a day'. Pupils who said they lived with both parents were significantly more likely to report eating '5 a day' than those living with only one parent and those living with someone other than a parent. This may be linked to economic factors associated with different living situations.



Sleep and healthy eating

Research by the Sleep Foundation² suggests there is

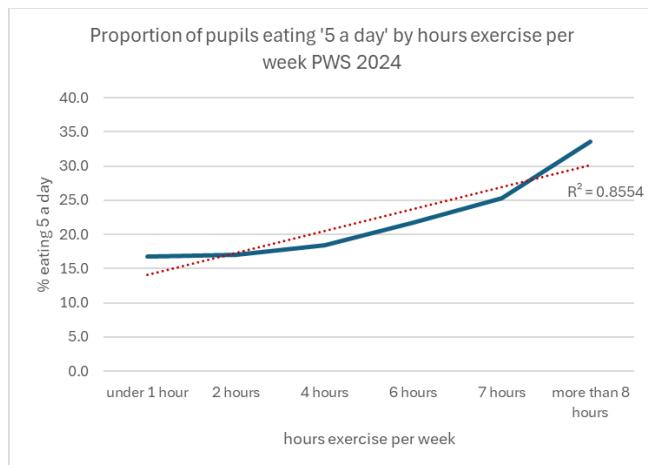
“...growing evidence indicates that sufficient nutrient consumption is important for sleep. One large study found a lack of key nutrients, such as calcium, magnesium, and vitamins A, C, D, E, and K to be associated with sleep problems. While this research does not prove cause-and-effect, it supports the likelihood that diet affects hormonal pathways involved in sleep.”

Pupils who got the recommended hours sleep were significantly more likely to report eating ‘5 a day’ (24.6%) than those who didn’t get the recommended hours sleep (21.4%).

Healthy eating and exercise

In 2024 the proportion of pupils who reported eating ‘5 a day’ was significantly higher if they also did the recommended amount of exercise (27.8%), compared to those who didn’t do the recommended exercise per week (17.6%).

There appears to be a strong correlation between healthy eating and exercise.



It is likely that healthy behaviours are bi-directional and that access to healthy food and exercise are linked to socio-economic status.



Academic attainment and healthy eating

Research published in 2021³ found;

“...a low educational level is connected to diets high in carbohydrates and low in fibres. ... it is also associated with higher consumption of sweets and red meats, while high educational level is linked to a greater consumption of fruits, vegetables, and fish.”

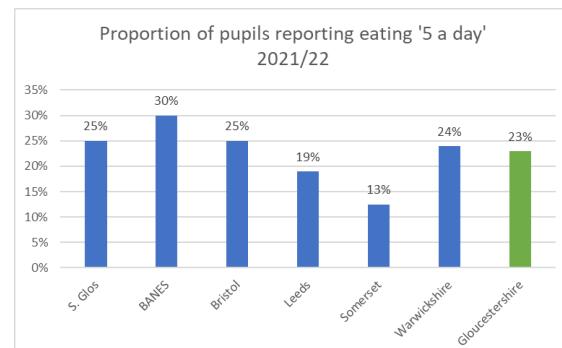
Pupils who reported eating ‘5 a day’ were more likely to say they enjoyed school, tried their best and learnt a lot at school than those who did not eat ‘5 a day’. Pupils *agreeing/strongly agreeing* that they enjoyed school and tried their best and learnt a lot at school increased in a linear fashion as the number of fruit and vegetable portions increased.

Proportion Agree/Strongly agree	Portions of fruit and veg a day		
	None	<5	5+
I enjoy school	36.5%	55.0%	64.5%
I try my best at school	64.2%	79.0%	84.7%
I learn a lot at school	49.3%	69.2%	76.1%

50.5% of pupils who ate ‘5 a day’ reported achieving top grades at school compared to 27.7% of those who ate no portions of fruit and veg a day.

Benchmarking healthy eating

It appears Gloucestershire is in line with local comparator authorities.



² <https://www.sleepfoundation.org/nutrition>

³ <https://epjdatascience.springeropen.com/articles/10.140/epjds/s13688-021-00273-y>

Additional indicators – 2024



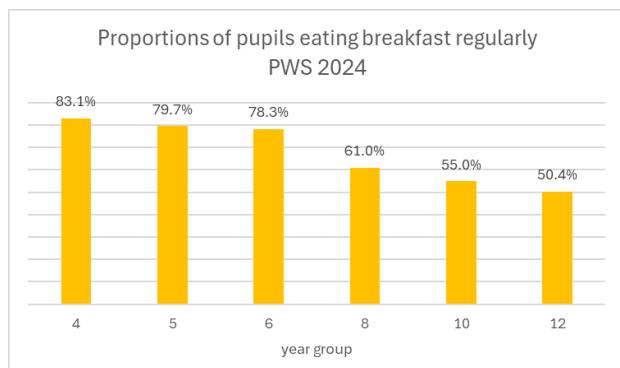
Eating Breakfast

Family Action published a review of evidence report in 2019⁴ that concluded:

“Breakfast consumption in children has been found to:

- **Improve cognitive function, particularly memory, attention, and executive function**
- **Improve academic performance, including school grades and achievement test scores**
- **Increase on-task behaviour in the class”**

The proportion of pupils saying they ate breakfast regularly has reduced slightly since 2012 (73.2% vs. 69.4% in 2024). The proportion of pupils reporting eating breakfast regularly reduces as children and young people age, from 83.1% in Y4 to 50.4% in Y12.



Generally, girls eat breakfast less frequently than boys. Overall, 12.0% of boys reported that they never, or did not often, eat breakfast, compared to 19.1% of girls.

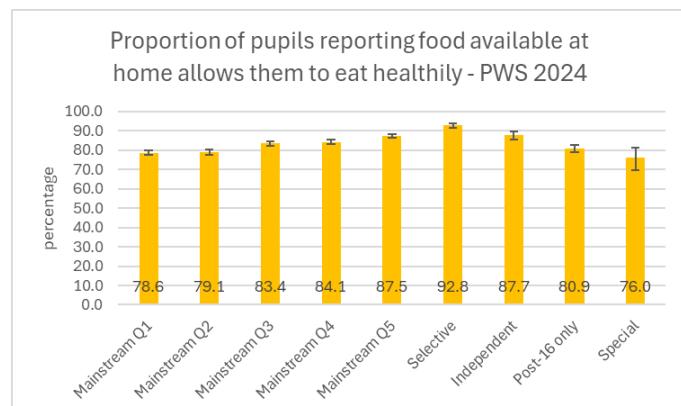
Pupils eligible for Free School Meals (FSM) were significantly less likely to report eating breakfast

regularly, than those not eligible. Pupils eligible for FSM in 2024, as in 2022, were significantly less likely to report eating breakfast than those eligible for FSM pre-pandemic in 2020. This potentially reflects the continued economic hardship experienced by families following recent global economic shocks.

77.9% of pupils who reported eating breakfast *Usually/Most days* also said they ate ‘5 a day’, compared to only 10.2% of those who said they *Never/Not often* ate breakfast.

Healthy food at home

8 out of 10 pupils said the food available at home or the place where they lived allowed them to eat healthily *Usually/Most days*, this has remained similar since 2012. In contrast to the likelihood of eating ‘5 a day’ there was little variation by age of pupil; however, the link between deprivation and healthy eating was observed. Pupils at Mainstream quintile 5 (least deprived), Independent and Selective schools were significantly more likely to have healthy food at home than all other groups.



Pupils attending schools in Stroud District were most likely to report having healthy food at home (86.0%), pupils attending schools in Forest of Dean and Gloucester were the least likely to report having healthy food at home (79.9% and 81.9% respectively).

Obesity levels in Reception children living in Stroud were significantly below the county and national average in 2022/23, and whilst obesity levels in Reception children living in Forest of Dean and Gloucester were higher⁵ than the other district, they weren’t significantly higher. In Y6 children

⁴ <https://www.family-action.org.uk/our-voices/2019/10/04/the-impact-of-breakfast-on-learning-in-children/>

⁵<https://www.glos.gov.uk/media/en5p01d4/ncmp-2022-23-annual-report-summary-copy-2.pdf>

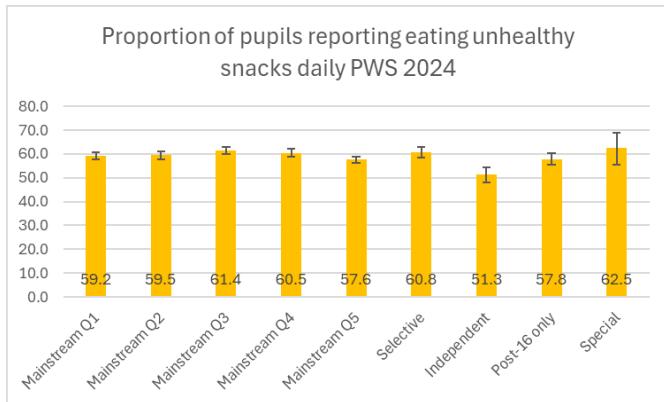
Gloucester is the only district with a statistically significantly higher rate of obesity compared to the county, regional and national average. Cotswold is the only district where the rate of obesity in Year 6 children is significantly lower than the county, regional and national average.

Eating unhealthy snacks

59.2% of pupils reported eating snacks such as sweets, chocolate, biscuits and crisps every day. This was significantly lower than in 2014 (70.3%) and in line with 2022. Pupils in Cheltenham, Cotswold and Stroud districts were the least likely to report eating unhealthy snacks every day (58.4%, 57.0% and 58.7% respectively).

Generally, more pupils report eating unhealthy snacks every day as children and young people age, peaking in Y10 where 61.6% of pupils reported eating unhealthy snacks every day.

Pupils at Independent schools were significantly less likely to report eating unhealthy snacks every day, there was less variation in other statistical neighbour groups.



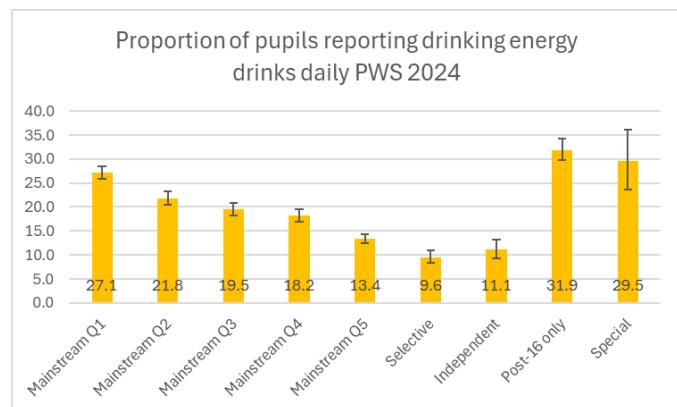
Drinking high sugar drinks

1 in 5 pupils (19.5%) reported drinking sugary drinks e.g. full sugar fizzy drinks, milkshakes, hot chocolate every day (*Once or twice a day/3 or more times a day*). This is a significant reduction since 2014 when over a third (35.4%) of pupils reported drinking sugary drinks.

Pupils in Y12 were again most likely to report drinking sugary drinks every day (1 in 4).



Likelihood of drinking sugary drinks appears to be strongly linked to deprivation. In mainstream schools the highest proportion of pupils drinking sugary drinks every day was reported in schools where the majority of pupils lived in Quintile 1 and reduced as deprivation decreased. The proportion of pupils in Independent and Selective schools (who are less likely to live in deprived areas) reporting drinking sugary drinks every day was significantly lower than in all mainstream schools. Pupils from Special schools and Post 16 colleges were significantly more likely to report drinking sugary drinks every day than every other statistical neighbour group.



Energy drinks

The UK Government confirmed that it will ban the sale of energy drinks to children under 16 years old in 2019⁶, however the legislation is not yet in place. Instead there is an industry understanding that they will not promote energy drinks to anyone under 16.

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<https://www.gov.uk/government/consultations/advancing-our-health-prevention-in-the-2020s>



The Association of UK Dietitians (BDA) found⁷,

"The mounting body of evidence demonstrates that the consumption of energy drinks is detrimental to both the physical and mental wellbeing of young people, as well as encouraging other risky behaviours such as alcohol use"

They also concluded that males are more likely to consume higher amounts of energy drinks than females, while females who skip breakfast are more likely to then rely on energy drinks later in the day.

In Gloucestershire just under 1 in 5 pupils (18.6%) reported ever drinking energy drinks and 4.1% of pupils reported drinking energy drinks every day. Both have been reducing since 2014 when recording began although there has been slight increases in 2022 and 2024.

Daily consumption of energy drinks was highest in pupils in Y12 (6.6%) and lowest in pupils in Y6 (2.0%).

In Gloucestershire, as is seen nationally, males were significantly more likely to report ever drinking energy drinks than females and more likely to report drinking energy drinks every day (4.9% vs. 3.1%).

Pupils who reported *Never/Not often* eating breakfast were more than twice as likely to report ever drinking energy drinks than those who regularly ate breakfast (36.0% vs. 13.3%).

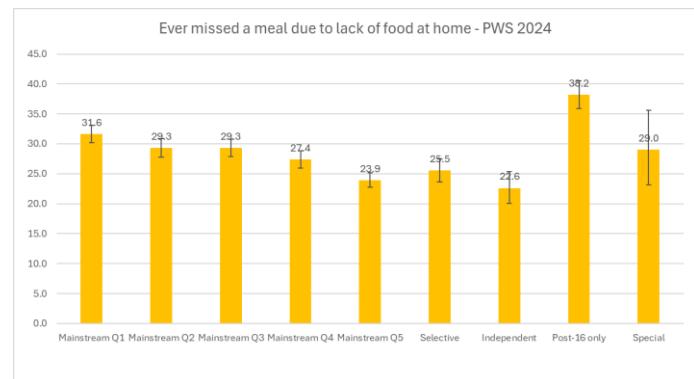
Males who didn't eat breakfast were five times as likely to say they drank energy drinks every day than those who ate breakfast regularly (18.5% vs. 3.4%). In females this was higher again with 9 times more females reporting drinking energy drinks every day

who didn't eat breakfast compared to those who eat breakfast regularly (13.6% vs. 1.5%).

Likelihood of drinking energy drinks also appears to be linked to deprivation. Pupils from Mainstream quintile 5, Independent and Selective schools were the least likely to report drinking energy drinks every. Pupils attending schools where the majority of pupils lived in more deprived areas had the highest recorded level of pupils drinking energy drinks every day and was significantly higher than all other mainstream statistical neighbour groups. High daily consumption of energy drinks was also reported in Special schools although this was not significantly higher than those in more deprived schools.

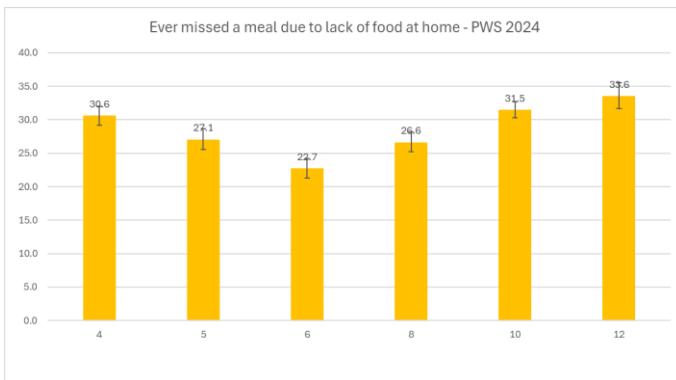
In 2024 we introduced a new question to the survey asking if pupils ever skipped a meal because there wasn't enough food at home. Overall, a quarter (28.3%) of pupils reported they had ever missed a meal because there wasn't enough food at home.

The prevalence of missing a meal due to a lack of food appears to be linked to deprivation, reducing as deprivation decreases.



There was no significant difference between the sexes, however there is a 'V' shaped trend when looking across age groups. Food poverty appears to reduce during primary school, but increases as pupils go through secondary to Post 16 phases.

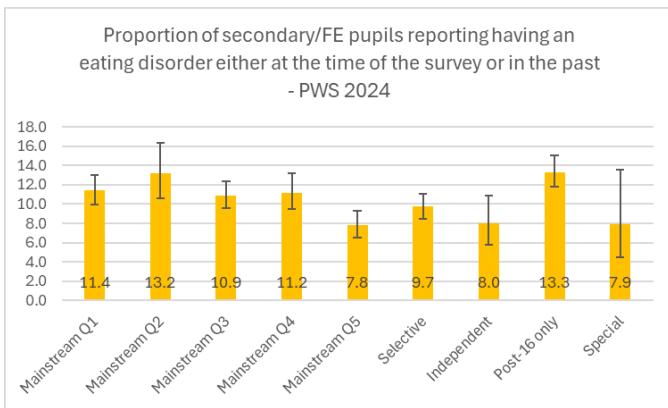
⁷ <https://www.bda.uk.com/resource/energy-drinks-and-young-people>



3.2% reported they regularly skipped a meal due to a lack of food. This was highest in the most deprived pupils (4.7%) who were significantly more likely to have skipped a meal due to a lack of food at home than any other statistical neighbour group except post-16 pupils (4.7%) and those at special schools (6.0%). Pupils in Y4 were the most likely to report they skipped meals regularly due to a lack of food, all other year groups were in line.

There was also a question introduced in 2024 asking if secondary and Post 16 pupils had ever had an eating disorder. 1 in 10 pupils reported they had currently or had ever had an eating disorder.

Females were significantly more likely to report experiencing an eating disorder (16.7%) compared to males (5.3%). Experience of an eating disorder increased as pupils aged and appeared to have a loose correlation to deprivation. Pupils in quintile 1 schools (most deprived) were significantly more likely to report experience of an eating disorder than those in quintile 5 schools (least deprived).



Wanting more advice in areas linked to healthy eating

In 2024 16.6% of pupils said they wanted more advice about *Healthy eating*. Females were more likely to say they wanted advice about *Healthy eating* than males (17.9% vs. 16.6%) although this wasn't statistically significant. The proportion of

pupils reporting wanting more advice about *Healthy eating* reduced as pupils aged, the highest proportion was observed in Y6 (21.8%) and the lowest in Y10 (10.3%). Pupils attending schools where the majority of pupils lived in more deprived areas were more likely to want advice about *Healthy eating* and this reduced as deprivation levels reduced (18.1% in quintile 1 schools vs. 11.0% in selective schools).

1 in 6 pupils wanted more advice about *Losing weight*. Females were significantly more likely to want advice about *Losing weight* than males (21.3% vs. 15.1%). Generally, pupils are more likely to want advice about *Losing weight* as they age, however this peaked in Y6 in 2024 (20.0%), rather than Y10 as previously, and was similar throughout secondary and Post 16 phases. This indicates a lowering in the age pupils want advice to *Lose weight healthily*. Pupils at Independent schools (17.9%) and the least deprived schools (15.4%) were significantly less likely to want advice about *Losing weight* than most other statistical neighbour groups. Pupils at Selective schools (20.4%) were the most likely to want advice about *Losing weight*.

Pupils in Y8, Y10 and Y12 were asked if they would like advice about *Feeling positive about my appearance*. 1 in 4 (17.1%) of pupils reported they would like advice about *Feeling positive about my appearance*, although this was more than twice as high in females (26.1%) than males (10.8%).

The proportion of pupils wanting more advice about *Feeling positive about my appearance* had been increasing since recording began in 2016 but has reduced between 2022 and 2024 and is now in line with the 2014 level (18.1%).

Pupils in Y10 were the most likely to report wanting advice about *Feeling positive about my appearance*. There appears to be little correlation between socio-economic status and wanting advice about *Feeling positive about my appearance* although pupils in Mainstream quintile 1 (most deprived) (14.2%) and Special schools were the least likely to want this advice (14.3%).



In 2024 around a quarter of pupils wanted more help with *Cooking skills* (29.1%), this has been consistent since 2014. Wanting help with *Cooking skills* reduces as pupils age and is lowest in Y12 (17.5%). Pupils from the most deprived quintile were significantly more likely to want to learn *Cooking skills* than those at selective schools.