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**Subject:** Jersey Child Measurement Programme 2020/2021  
**Date of report:** 18 August 2022

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## Introduction

Childhood obesity and excess weight are significant health issues for children and their families. They can result in serious implications for a child's physical and mental health, which can continue into adulthood.<sup>1</sup> The Jersey Child Measurement Programme (JCMP) data enables the government to plan services, tackle child obesity and monitor progress.

This report presents findings from the JCMP for the 2020/2021 academic year, and compares them to historical trends and to England.

The height and weight of children in Reception (Year R: 4 to 5-year-olds) and Year 6 (10 to 11-year-olds) are measured annually through the Jersey Child Measurement Programme (JCMP). The total number of children measured in 2020/2021 was 2,036 (96% of all eligible children). The proportion of children measured was 3% higher than that measured in the 2019/2020 programme (93%), and similar to the proportion measured in 2018/2019 (97%). The report contains analyses of Body Mass Index (BMI) classification rates by age, sex as well as geographic analyses.

Body Mass Index (BMI) can be calculated for each pupil from their height and weight measurements. Individuals are categorised as either 'underweight', 'healthy weight', 'overweight', 'obese' or 'severely obese'. As BMI does not measure body fat directly, it cannot be used as a diagnostic tool. BMI can be used as a measure to track weight status in populations and as a screening tool to identify *potential* weight problems in individuals. The proportions of Jersey's population that are of healthy weight or exceeding healthy weight and therefore at increased risk of poor health is calculated – see Notes for further information.

In this report, the term 'prevalence of obesity' is equivalent to the proportion of children classified as 'obese' or 'severely obese'.

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<sup>1</sup> [Childhood obesity: applying All Our Health - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/childhood-obesity-applying-all-our-health)

# Summary

In 2020/2021

- in Year R, the prevalence of obesity was higher (14%) than in 2019/2020 (10%)
- in Year 6, the prevalence of obesity was higher (25%) than in 2019/2020 (17%)
- three in ten children in Year R (30%) were overweight or obese, whilst around four in ten children in Year 6 (37%) were overweight or obese
- the proportion of Year R children classified as overweight or obese increased between the period 2018-2020 (25%) having remained at around 20% over the previous decade
- the prevalence of children classified as overweight or obese in Year 6 (33%) has remained unchanged over the last 10 years, when based on the 3-year rolling average
- the proportion of children categorised as overweight or obese both in Year R and Year 6 was similar for females and males
- children in Year 6 living in rural areas (22%) and semi-urban areas (33%) were less likely to be overweight or obese than those living in urban areas (44%)
- a higher proportion of children who attended non-fee-paying schools in Year R were overweight or obese (27% of children), than those who attended fee-paying schools (19%)
- a higher proportion of children who attended non-fee-paying schools in Year 6 were overweight or obese (38%) compared to those attending fee-paying schools (24%)
- the proportion of children in Year 6 categorised as overweight and obese in 2020/2021 was similar in to that in England (41%)

## 1. By age and sex

In the 2020/2021 academic year:

- seven in ten (70%) of Year R children had height and weight measurements that classified them as having a healthy weight, higher than in Year 6 where around six in ten (62%) were a healthy weight
- 16% of children in Year R were overweight but not obese, a similar proportion to Year 6 children where 13% were overweight but not obese (Table 1)
- in Year R, the prevalence of increased from 10% in 2019/2020 to 14% in 2020/2021, and in Year 6, obesity prevalence increased from 17% in 2019/2020 to 25% in 2020/2021
- the prevalence of obesity in Year R (14%) was lower than that in Year 6 (25%), (see Table 1 and Figure 1)
- three in ten Year R children (30%) were overweight or obese, compared to around four in ten children in Year 6 (37%) (see Table 1 and Figure 2)

Table 1. BMI classifications, percentages, Jersey, 2020/2021

	Year R	Year 6
Underweight	<1	<1
Healthy weight	70	62
Overweight	16	13
Obese	10	18
Severely Obese	4	7
<b>Combined Obese and Overweight</b>	<b>30</b>	<b>37</b>

Note: percentages rounded to the nearest integer

Figure 1. BMI categories by year group, Jersey, 2020/2021

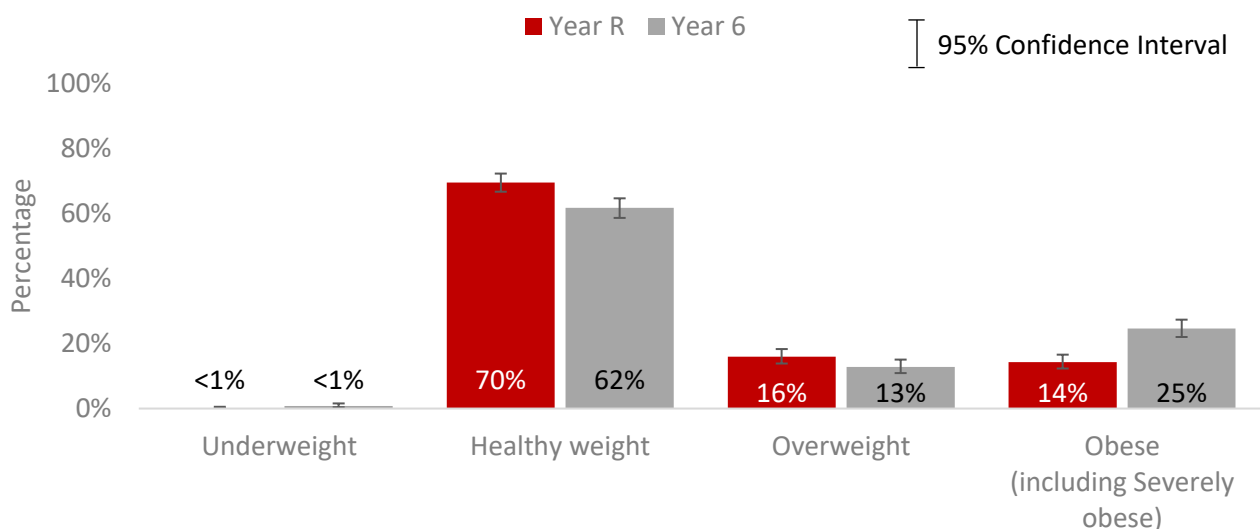


Figure 2. Prevalence of combined overweight and obese by year group, Jersey, 2020/2021



- in Year R, 69% of boys were healthy weight, a similar proportion when compared to girls (71%); in Year 6, a lower proportion of boys (58%) were healthy weight compared to 66% of girls
- in both Year R and Year 6, the proportions of females categorised as overweight or obese were statistically similar to males, (see Table 2)

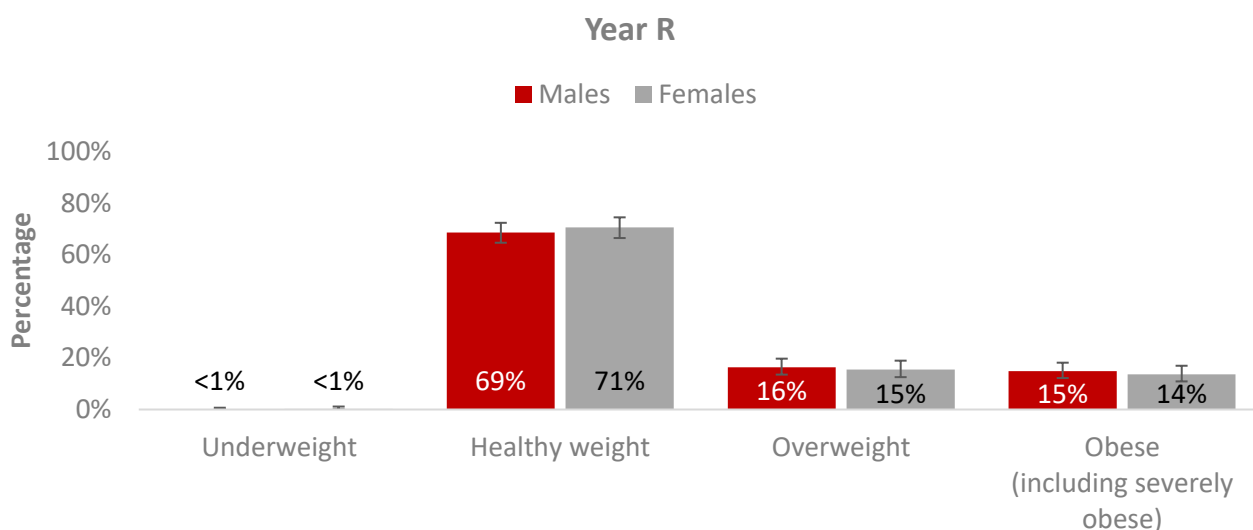
Table 2. BMI classifications by sex, percentages, Jersey, 2020/2021

	Year R		Year 6	
	Males	Females	Males	Females
Underweight	<1	<1	<1	<1
Healthy weight	69	71	58	66
Overweight	16	15	12	14
Obese	11	10	21	15
Severely Obese	4	3	8	5
<b>Combined Obese and Overweight</b>	<b>31</b>	<b>29</b>	<b>41</b>	<b>34</b>

Note: percentages rounded to the nearest integer

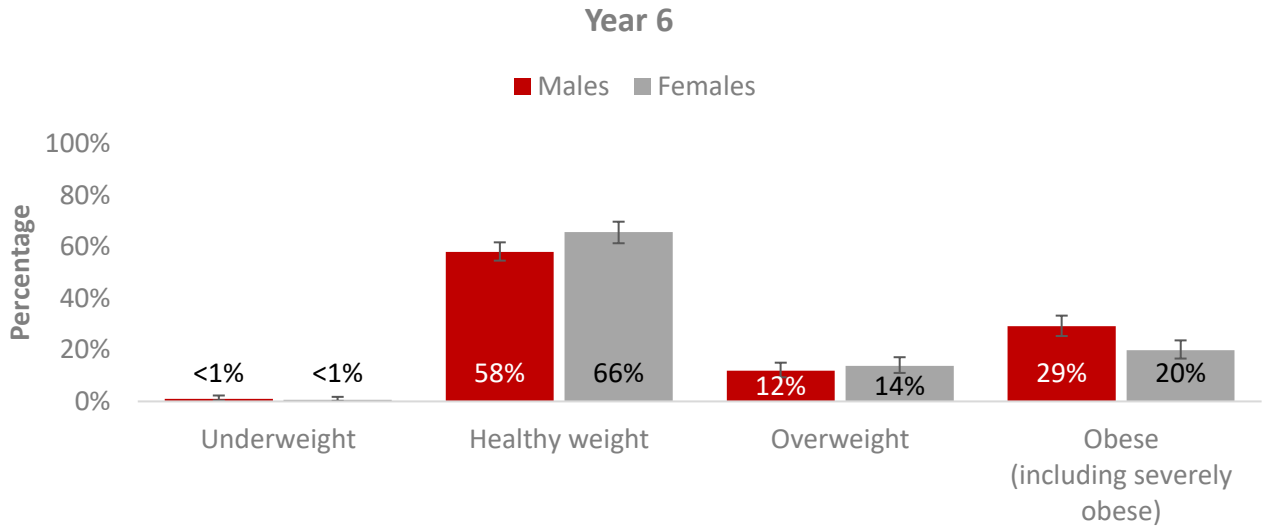
- in Year R, the proportion of females categorised as overweight or obese (29%) was similar to males (31%), (see table 2 and Figure 3)

Figure 3. Proportion of Year R children classified as underweight, overweight, and obese by sex, Jersey, 2020/2021



- in Year 6, the proportion of females categorised as obese (20%) was lower than males (29%), (see table 2 and Figure 4)

Figure 4. Proportion of Year 6 children classified as underweight, overweight, and obese by sex, Jersey, 2020/2021



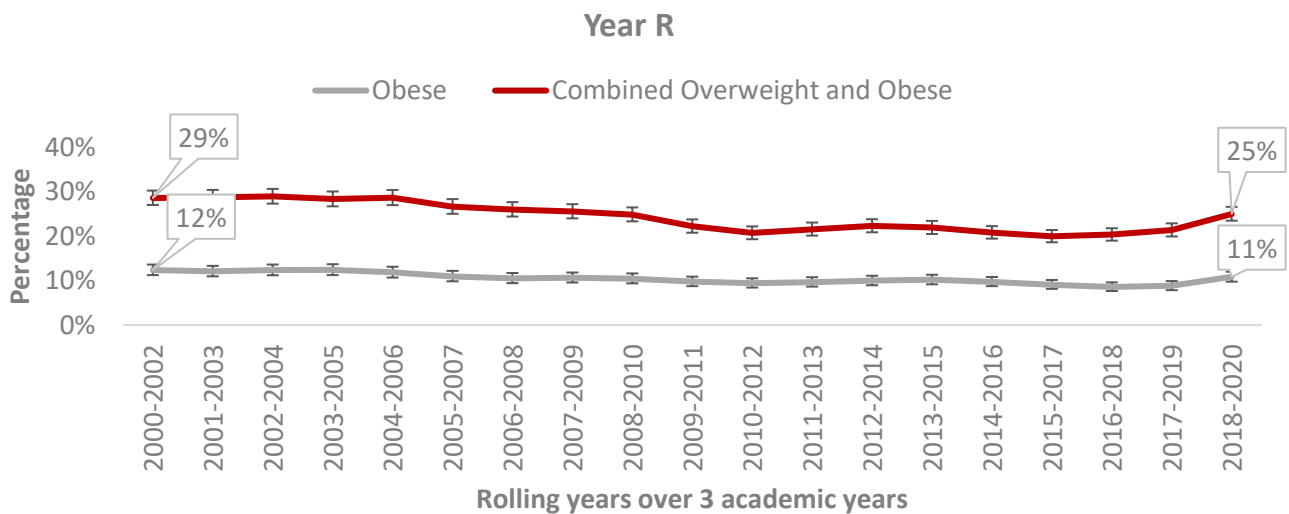
**Note:** In sections 2 to 4, data is considered as a rolling average over a period of three academic years, with the most recent three-year period shown being 2018-2020. The three-year combined data is more robust than a single year and is better for overall trend analysis.

## 2. Trends over time

### Year R

- the proportion of Year R children classified as overweight or obese has seen a 4-percentage point increase between 2017-2019 (21%) and 2018-2020 (25%)
- the proportion of children classified as obese in Year R in 2018-2020 (11%) remains statistically similar to 2017-2019 (9%)

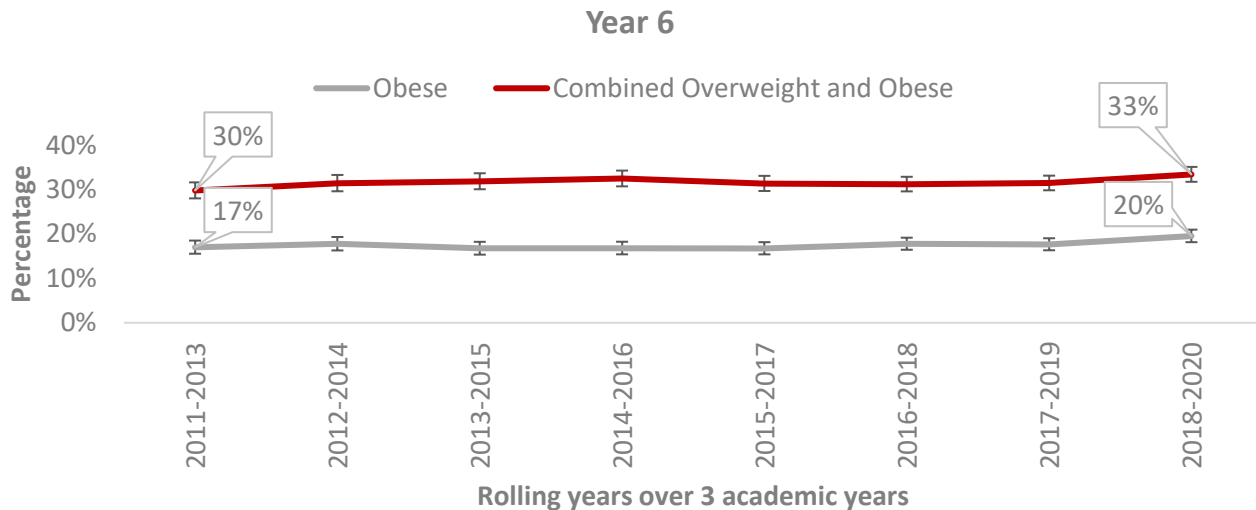
Figure 5. BMI classifications for Year R, rolling three-year averages, Jersey, 2000-2020



## Year 6

- the prevalence of overweight and obese in Year 6 was marginally higher in 2018-2020 than 2011-2013; since the Jersey Child Measurement Programme was expanded to include measurement of Year 6 children in 2011, the proportion of overweight or obese children had remained at around 30%
- the prevalence of obesity in Year 6 has not changed significantly since 2011-2013, remaining at around one in five (20%), (Figure 6)

Figure 6. BMI classifications for Year 6, three-year averages, Jersey, 2011-2020



### 3. By parish of residence

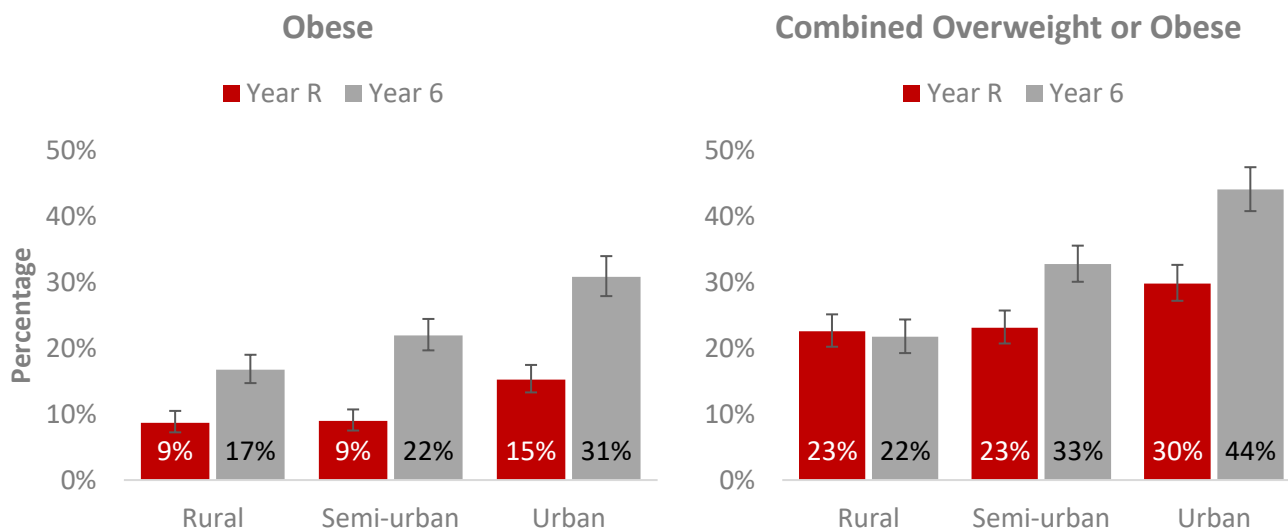
The parish of residence of each child was categorised as 'urban', 'semi-urban' or 'rural'<sup>2</sup>

- the proportion of children classified as overweight or obese in 'urban' parishes in Year R (30%) was higher than the proportion in 'rural' and 'semi-urban' areas (23% respectively)
- in 'urban' parishes in Year 6 (44%) the prevalence of children classified as overweight or obese was higher than the proportion in 'rural' (22%) and 'semi-urban' (33%) areas
- a higher proportion of children living in 'urban' parishes in Year R were obese (15%) compared to those living in 'rural' and 'semi-urban' areas (9% respectively)
- for year 6 children living in 'urban' parishes a higher proportion were obese (31%) compared to those living in 'rural' and 'semi-urban' areas (17% and 22% respectively)

<sup>2</sup> The parish of residence of each child was classified into:

- *Urban* – St Helier
- *Semi-urban* – St Brelade, St Clement, St Saviour
- *Rural* – Grouville, St John, St Lawrence, St Martin, St Mary, St Ouen, St Peter, Trinity

Figure 7. BMI classifications by parish type, Jersey, 2018-2020 (three-year average), based on home address

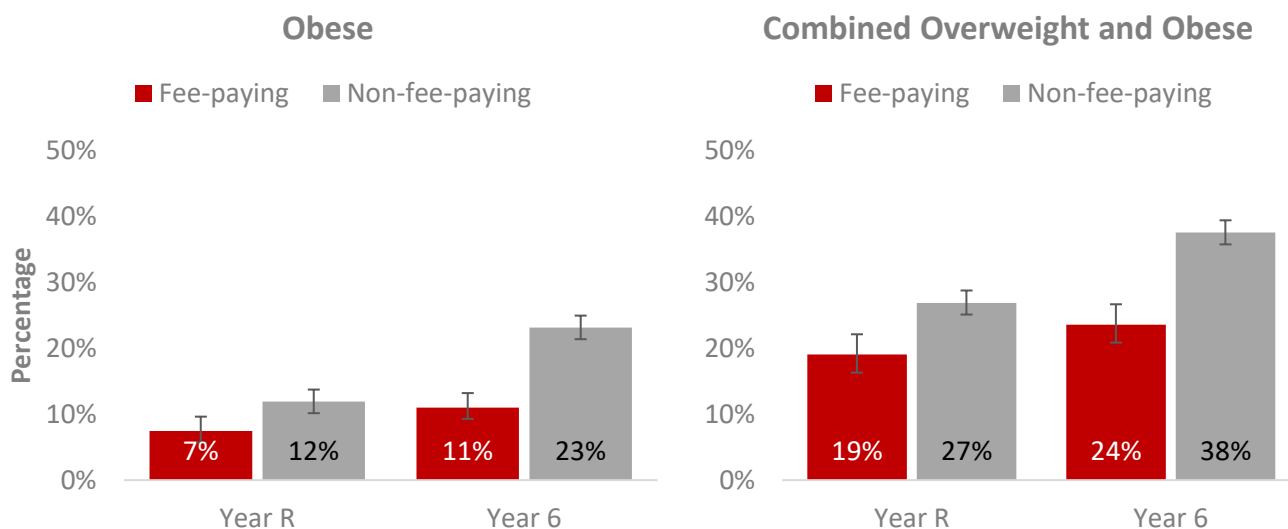


#### 4. By type of school attended

The school type of each child was categorised as ‘fee-paying’ or ‘non-fee-paying’<sup>3</sup>

- a higher proportion of children who attended non-fee-paying schools were overweight or obese (27%) in Year R, compared to children who attended fee-paying schools (19%) (Figure 8)
- in Year 6, a higher proportion of children who attended non-fee-paying schools were overweight or obese (38%), compared to children who attended fee-paying schools (24%) (Figure 8)

Figure 8. BMI classifications by school type, Jersey, 2018-2020 (three-year average)



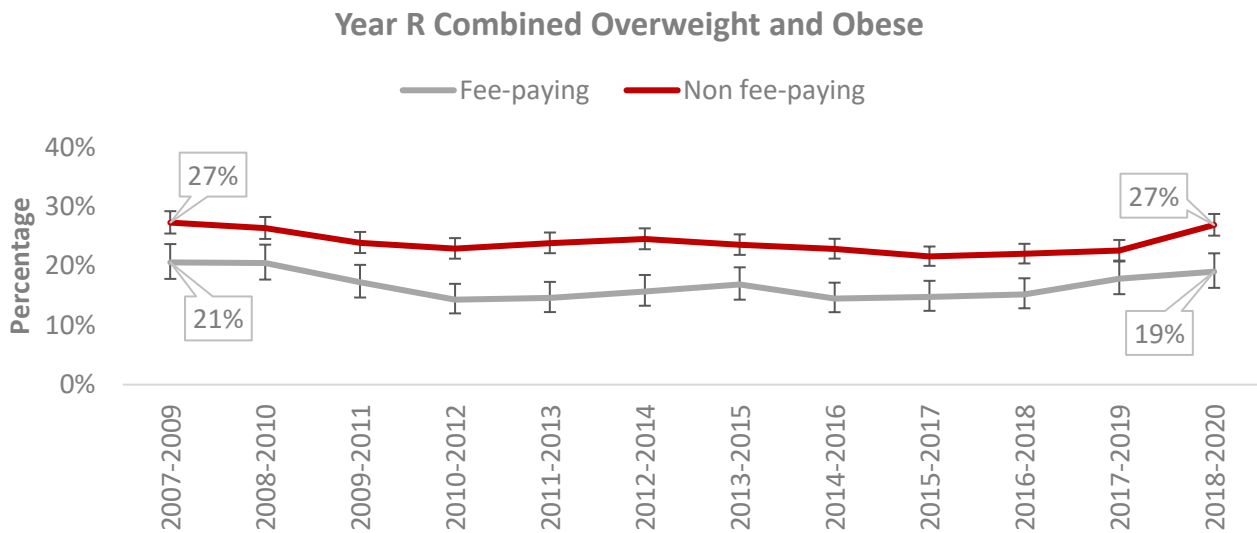
<sup>3</sup> School attended by each child were classified into: *Fee-paying* – Beaulieu, De La Salle, FCJ, Helvetia House, JCG Preparatory, St. Christophers, St. George’s, St. Michael’s, Victoria College Preparatory

*Non-fee-paying* – Bel Royal, D’Auvergne, First Tower, Grands Vaux, Grouville, Janvrin, La Moye, Les Landes, Mont Nicolle, Plat Douet, Rouge Bouillon, Samares, Springfield, St. Clement, St. John, St. Lawrence, St. Luke, St. Martin, St. Mary, St. Peter, St. Saviour, Trinity

In 2018-2020:

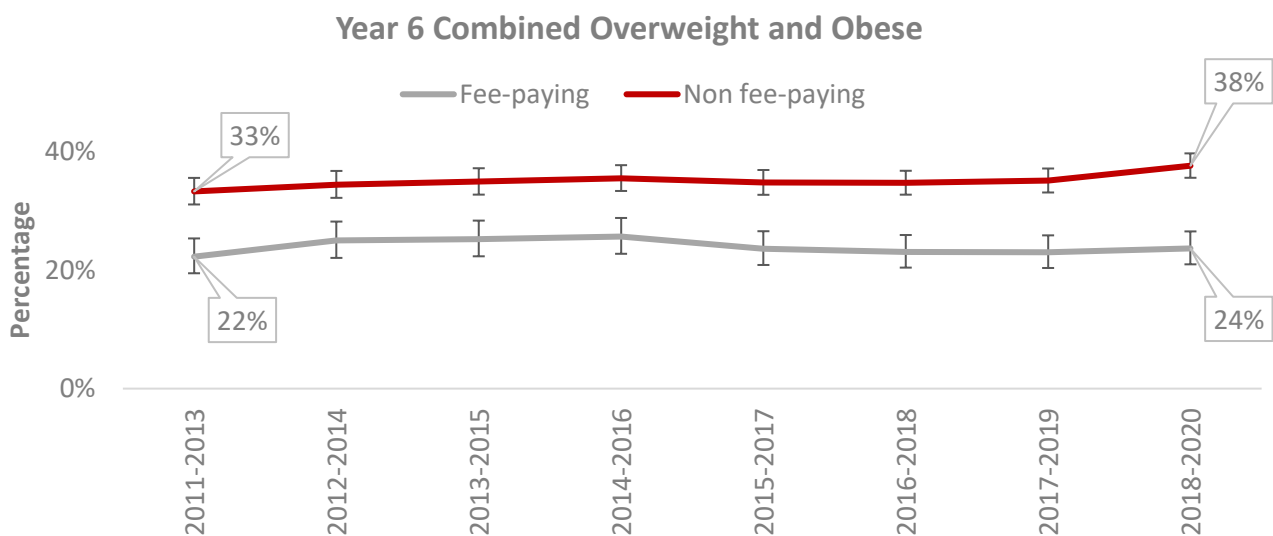
- in Year R the prevalence of overweight or obese children has remained at similar proportions in fee-paying schools; the prevalence of overweight and obese children in non-fee-paying schools (27%) was higher than in 2017-2019 (23%)
- between 2017-2019 and 2018-2020 the gap between obesity prevalence for children attending non-fee-paying schools and fee-paying schools had increased from 5% to 8% (Figure 9a)

Figure 9a. Proportion of children who were overweight or obese, by school type, Jersey, 2007-2020 (three-year averages)



- in Year 6 the prevalence of overweight or obese children had remained at statistically similar proportions in both fee-paying and non-fee-paying schools since 2011-2013 (Figure 9b)
- in 2018-2020 the gap between obesity prevalence for children attending non-fee-paying schools and fee-paying schools had increased to 14%

Figure 9b. Proportion of children who were overweight or obese, by school type, Jersey, 2007-2020 (three-year averages)





## 5. Group changes

Children in Year 6 in the academic year 2020/2021 were previously in Year R in 2014/2015. Table 3 compares the BMI classifications for those children measured in Year R in 2014/2015 in Jersey, with those measured in Year 6 in 2020/2021 in Jersey. Due to inward and outward migration between the two time points, not all of the same children in Year 6 will be included in the Year R data, and vice versa.

- a lower proportion of the group (23%) were overweight and obese when in Year R in 2014/2015 compared to the group when in Year 6 in 2020/2021 (37%)
- the prevalence of obesity (including severely obese) was lower in the Year R group in 2014/2015 (11%) compared to the Year 6 group in 2020/2021 (11%)

Table 3. BMI classifications, percentages, Jersey

	2014/2015 Year R	2020/2021 Year 6
Underweight	<1	<1
Healthy weight	77	62
Overweight	12	13
Obese	7	18
Severely Obese	4	7
<b>Combined Overweight and Obese</b>	<b>23</b>	<b>37</b>

Note: percentages rounded to the nearest integer

## 6. Comparison to England

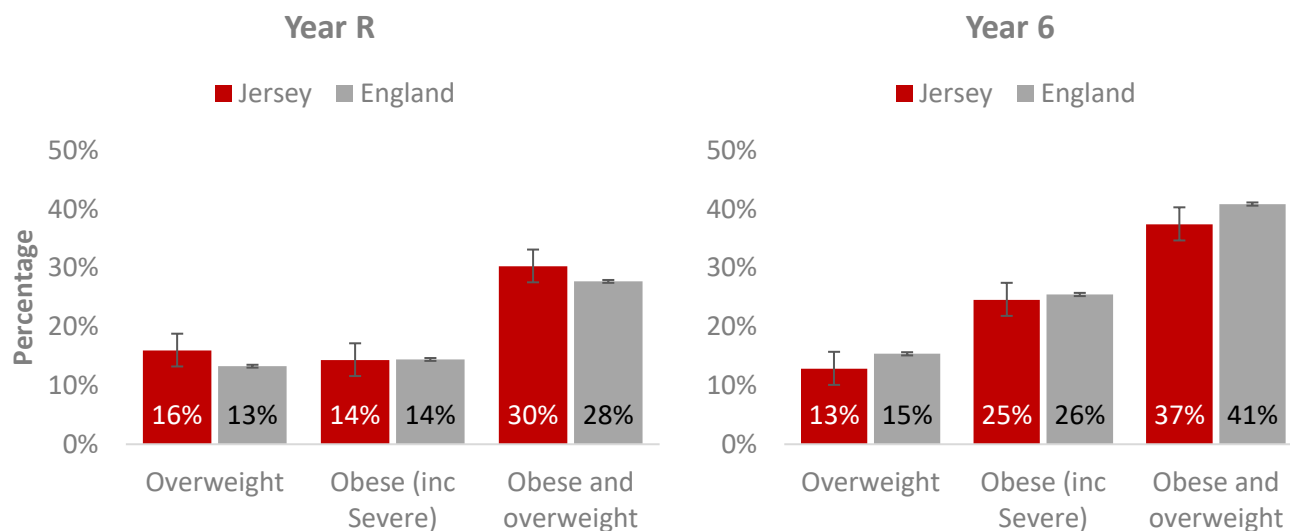
The National Child Measurement Programme (NCMP) in England also measures the height and weight of children in Reception class (aged 4 to 5) and year 6 (aged 10 to 11), to assess overweight and obese levels in children within primary schools.<sup>4</sup>

In 2020/2021:

- in Year R the proportion of overweight and obese children was similar in Jersey (30%) compared with England (28%), (see Figure 10)
- in Year 6 the proportion of overweight and obese children was marginally lower in Jersey (37%) than England (41%)

<sup>4</sup> [National Child Measurement Programme - NHS Digital](#)

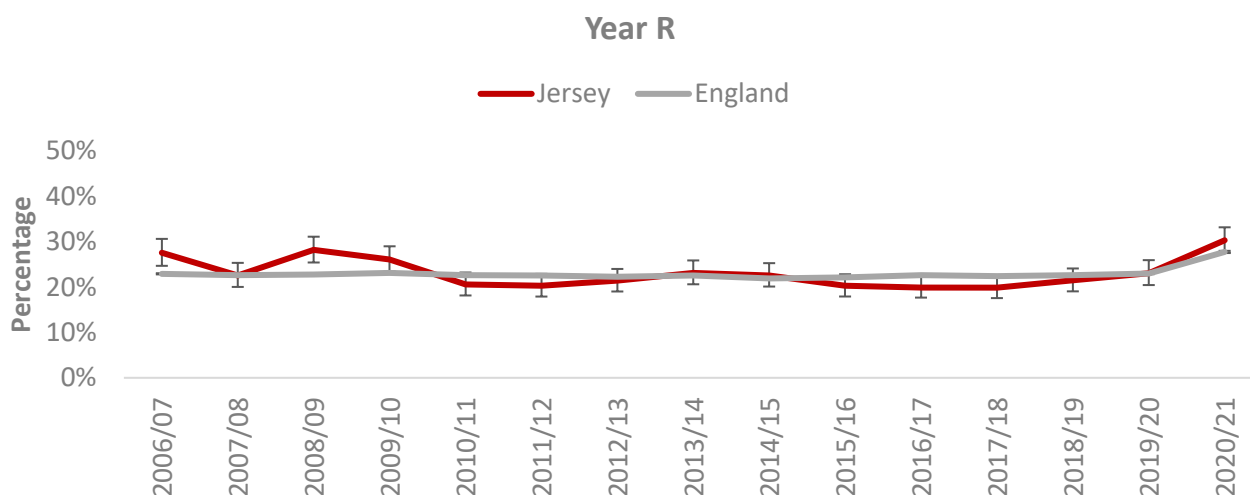
Figure 10. Prevalence of overweight and obese, comparison Jersey to England, 2020/2021



The prevalence of obesity in both reception and Year 6 aged children in England had been relatively stable since 2006/2007 but has seen an increase from 2019/2020 to 2020/2021. Similarly in 2020-2021, increases were also seen in the prevalence of obesity of children participating in the child measurement programme in Jersey.

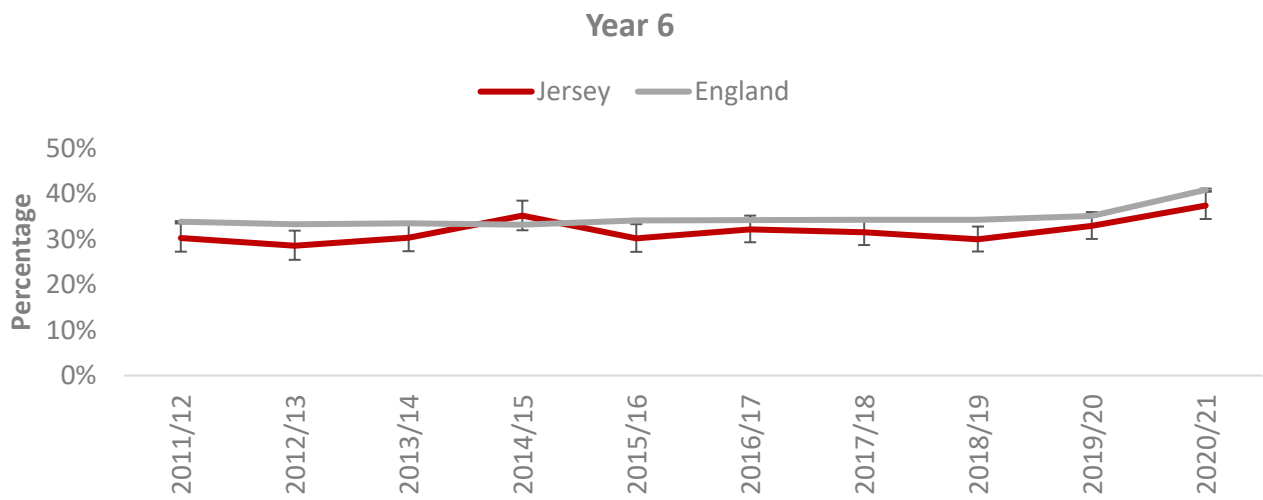
- the prevalence of children in Jersey and England who are overweight or obese in Year R has been similar since 2009/2010 (see Figure 11)

Figure 11. Prevalence of overweight and obese, Year R comparison Jersey to England, 2006-2020



- for children in Year 6, the prevalence of obesity in England was increasing slowly from 2010/2011 to 2019/2020 and then rose suddenly in 2020/2021
- on occasions the prevalence of children who were overweight or obese in Year 6 in Jersey has been lower than England, the proportions have remained broadly comparable since 2011/2012 (see Figure 12)

Figure 12. Prevalence of overweight and obese, Year 6 comparison Jersey to England, 2011-2020



## Notes

The Jersey Child Measurement Programme began in 1995, measuring the heights and weights of children attending Jersey schools in Year R. It was extended in the 2011/2012 academic year to include measuring the heights and weights of Year 6 children. Children who attend independent and special schools are excluded. The children are measured during the school year with the programme running between September and August each year to coincide with the academic year.

## BMI categories

The height and weight measurements of children are used to calculate their Body Mass Index (BMI)

$$\text{BMI} = \frac{\text{weight (kg)}}{\text{height (m)} \times \text{height (m)}}$$

The BMI is then converted into a centile, which can be used to classify each child into **underweight, healthy weight, overweight, obese, or severely obese**.

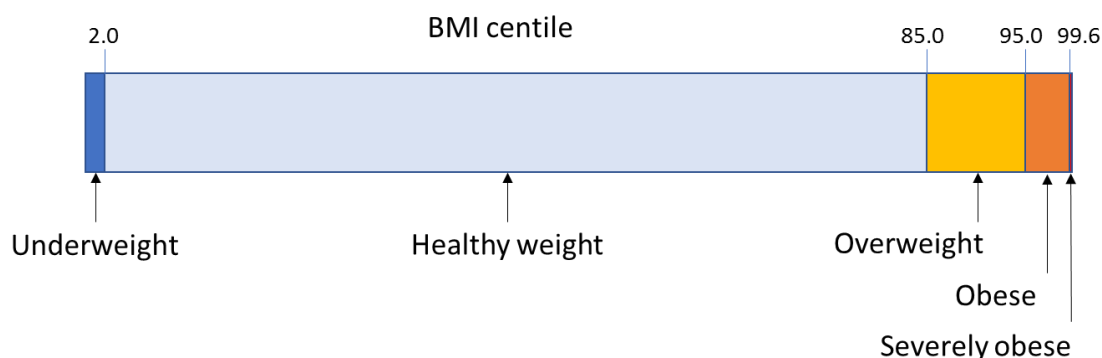
This calculation uses age and sex as well as height and weight to take into account different growth patterns in boys and girls at different ages. A child's BMI centile is a measure of how far a child's BMI is above or below the average BMI value for their age and sex in a reference population. The JCMP uses the British 1990 growth reference (UK90) to define the BMI classifications. This approach is recommended by The National Institute for Health and Care Excellence (NICE).

The **epidemiological** classification system uses the British 1990 growth reference (UK90)<sup>5</sup> to determine weight status according to a child's age and sex and is used for this report for summaries of whole cohort and population groups.

The **epidemiological** definition is as follows:

- BMI centile  $\leq 2$ : Underweight
- BMI centile  $> 2$  and  $< 85$ : Healthy weight
- BMI centile  $\geq 85$  and  $< 95$ : Overweight
- BMI centile  $\geq 95$ : Obese
- BMI centile  $\geq 99.6$  Severely obese. Note: "Severely obese" is a subset of "Obese". Children with a BMI centile of between 95 and 100 are classified as "Obese" and those with a BMI centile of between 99.6 and 100 are classified as "Severely obese"

Figure 13. Centile boundaries for each weight category – epidemiological



<sup>5</sup> 'Growth monitoring with the British 1990 growth reference'. Cole Arch Dis Child.1997; 76: 47-49 as used by ONS in the National Child Measurement Programme.

## Participation

Participation in the JCMP is not compulsory and each year a small number of parents choose for their children not to take part.

Potential bias due to non-participation was investigated for the English National Child Measurement Programme by NHS Digital, who found that obesity prevalence was underestimated by around 1 percentage point.<sup>6</sup> This bias was found to decrease as the participation rate increased.<sup>7</sup> Any potential effect from non-response bias in the JCMP is anticipated to be of a similar magnitude given the high participation rates observed.

## Impact of COVID-19 on the National Child Measurement Programme (NCMP) in England, 2020/2021

Following the disruption to the 2019/2020 collection due to the COVID-19 pandemic, NCMP did not officially open as usual at the start of the 2020/2021 school year in September 2020, therefore Local Authorities were not required to start collecting child measurement data at this stage.<sup>8</sup>

At the end of March 2021, following a period of school closure, Local Authorities were asked to use the remainder of the academic year to collect a representative sample of child measurement data to enable a national estimate of children's weight status (including obesity prevalence) for 2020/2021 and contribute towards assessing the impact of the COVID-19 pandemic on children's physical health.

The sample of schools was stratified by deprivation and ethnicity, taking every 9th school, to yield 10% of children in the local area, after factoring in that there could be a higher-than-normal level of pupil absence. The aim was to have a representative sample of children measured in England in terms of deprivation and ethnicity mix. Many Local Authorities measured in additional schools and data on 299,000 pupils was submitted (approximately 24% of pupils).

Statistical weighting was applied to all the data collected (to retain the most measurements) to produce a dataset representative of the population measured by NCMP in England in previous years. Estimates of body mass index (BMI) classification rates, e.g., the proportion who are obese, are broadly comparable to previous years.

Only a small number of breakdowns at Local Authority level were included for 2020/2021, therefore comparisons between most local authorities and Jersey is not possible.

## Confidence intervals, significance, and disclosure control

Confidence intervals are quoted in the publication and included in the tables to indicate this variation.

Comparisons between groups and over time have been statistically tested to determine whether differences are likely to be genuine (i.e., statistically significant) or the result of random natural variation. Only statistically significant differences have been described with terms such as "higher", "lower", "increase" or "decrease". When a comparison does not show a statistically significant difference, this will be described using terms such as "similar to" or "the same as".

In the statistical publication text and excel tables, percentages are rounded. Differences are calculated from the rounded figures in the Excel tables and then shown in the text.

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<sup>6</sup> NHS Digital: National Child Measurement Programme: England, 2015/16 school year. Published November 2016. Available from: [www.content.digital.nhs.uk](http://www.content.digital.nhs.uk)

<sup>7</sup> For a participation rate of 80 per cent in 2006/2007, it was estimated that the obesity prevalence was underestimated by 1.3 percentage points (pp); and for a participation rate of 88 per cent in 2007/2008, the underestimate of obesity prevalence reduced to 0.8 pp

<sup>8</sup> [National Child Measurement Programme - NHS Digital](#)

## Ethnicity

Ethnicity is not used as a variable of analysis in this report, as the ethnicity data held is not of suitable quality. The lack of standardised, self-identified race and ethnicity is a critical limitation of the available data.

## Data Validation

The accuracy and reliability of the dataset underpinning the analyses in the report is ensured by a validation procedure.

Submitted records are checked to ensure that all mandatory data items have been provided and data validation rules have been met:

- duplicates are rejected; duplicates are defined as records with the same reference and/or first name, surname, sex and date of birth
- valid date of birth ranges are set each year as part of collection year set up, these ranges ensure that only children aged 4, 5, 10 or 11 years of age can be included in the JCMP
- records with missing data items are rejected
- invalid data items (e.g. children's height and weight measured at separate times) are rejected
- unexpected data items (e.g. "extreme" heights) generate warning flags that require FNHC confirmation
- measurements should not be rounded to the nearest whole or half kilogram or whole or half a centimetre; the proportion of records where the recorded height is exactly a centimetre or half a centimetre should not exceed 20%

**Contact details** - Please forward any comments or feedback to the Public Health Intelligence Team:  
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