Introduction

Being a healthy weight is considered important for an individual's overall health and wellbeing. Public Health England reports that obese people are at increased risk of certain types of cancer, high blood pressure and type-2 diabetes.

This report examines the most common methods of assessing whether people are of a healthy weight: body mass index (BMI) for adults and children and waist measurement for adults. As BMI does not measure body fat directly, it cannot be used as a diagnostic tool, but 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 health risk, are calculated.

The report also examines diet and physical activity of adults and children in the Island.

The data used in this report is drawn from a number of sources. The annual Jersey Opinions and Lifestyle Survey (JOLS) and biennial Jersey Children and Young People's Survey (JCYPS)[1] provides self-reported information. More quantitative data is provided by the annual Jersey Child Measurement Programme, and from data held in Jersey's Primary Health Care system, EMIS.

Summary

- based on body mass index (BMI) and waist measurement results from the 2019 Jersey Opinions and Lifestyle Survey (JOLS)…
    - almost **one in six (17%)** of the **Jersey adult** population were classed as **obese**[2] (had a BMI of 30 or more); this has remained reasonably similar since 2008
    - a similar proportion of adult males and females were classified as **obese**; however, **39%** of **males** were classified as **overweight** (had a BMI between 25 and 30) compared to **27%** of **females**, but…
    - …**three-quarters (74%)** of **males** had an ideal waist measurement compared to **half (48%)** of **females**
    - the proportion of adults classified as **overweight or obese** increased with age. Two-fifths of **16-34 year olds** were classed as such, compared to almost **three-fifths** of people aged **45 and above**
- the 2018/19 Jersey Child Measurement Programme recorded **9%** of **Reception** and **17%** of **Year 6** children as **obese**
- according to JOLS 2019, a **third (35%) of adults ate five or more portions of fruit or vegetables** the previous day; this has remained fairly constant over the last 10 years
- a **quarter (23%)** of adults **aged 16-34 years** ate **5 portions of fruit or vegetables** the previous day, compared to **two-fifths (44%)** of those aged **65 years or older**
- in 2018, **30%** of **Year 6** schoolchildren **ate 5 or portions of fruit or vegetables** the previous day compared to **25%** of **Year 8** and **20%** of **Year 10** children
- over **three-quarters (78%)** of Jersey adults described themselves as **very active** or **fairly active** in the 2019 JOLS, but…
- …only **half (51%)** of all adults met the NHS guidelines of at **least 150 minutes of moderate exercise** per week
- in 2018, **a quarter of Year 6** children (**27% of males, 23% of females**) met the NHS recommended guidelines of being physically active for **at least an hour per day** on every day of the previous week. This compares to **19% of Year 10 males** and **12% of Year 10 females**
- in 2018, over **two-fifths (46%)** of **Year 6 males** and **one-third (33%)** of **Year 6 females** had spent **3 hours** or more on **electronic 'screens'** the previous day. Around **three-quarters** of **Year 10 males (77%)** and **Year 10 females (72%)** had spent **3 hours** or more on **'screens'** the previous day

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[1] The JCYPS has previously been known as the Health Related Behaviour Questionnaire (HRBQ) and Jersey Schools Survey (JSS). This survey is now conducted every two years; prior to 2018 it was conducted every four years.

[2] Includes obese, very obese and morbidly obese.

Contents

OBESITY

1-in-6 (17%)

of **adults** were classified as obese

Body Mass Index

Overweight 39% A **greater proportion** of adult **males** were **overweight** than **females** 27%

Obese 18% **Similar** proportions were **obese** 17%

74% adult **males** had an **ideal** waist measurement

Adult **females** with an **ideal** waist measurement **48%**

Reception (aged 4-5 years)

Year 6 (aged 10-11 years)

8%
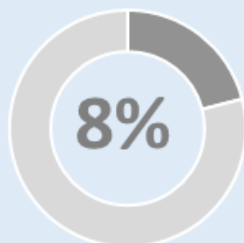
1-in-12 Reception aged children were obese, compared to around

17%

1-in-6 children in Year 6

www.gov.je/statistics @JsyStats
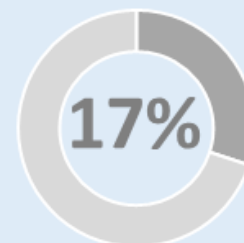
Chapter 1 - Obesity

The most common method of estimating if a person is a healthy weight is by calculating their body mass index (BMI). The BMI is calculated with a simple formula using a person's height and weight and can then be used to assess if that person may potentially have an increased risk of health problems due to their body weight[3]. BMI can be calculated for both adults and children; however, the interpretation of children's BMI is different to that of adults.

BMI is not the only method of assessing whether a person has increased health risk due to their weight. Waist measurement of adults can also be used to estimate an increased risk of cardio-vascular disease.

Adult Obesity

BMI is calculated by dividing a person's weight (mass) in kilograms by the square of their height in metres. For example, a person 1.75 metres tall with a mass of 65 kilograms has a BMI of…

$$\frac{65}{1.75 * 1.75} = 21.2$$

This BMI can then be used to categorise people in terms of being a healthy weight or not. Table 1.1 shows the standard method for classification of BMI score.

Table 1.1   ***Descriptive classifications of BMI scores***

BMI range	classification	
< 18.5	underweight	
18.5 – 24.9	normal weight	
25.0 – 29.9	overweight	
30.0 – 34.9	obese	
35.0 – 39.9	very obese	
>= 40	morbidly obese	**Source: NHS**

In Jersey, there are two methods of estimating the level of obesity in the population.

Jersey Opinions and Lifestyle Survey[4] (JOLS): Every other year, the JOLS survey asks for respondents to report their height and weight. These are used to calculate their BMI and therefore estimate a BMI profile of the entire population. While the JOLS BMI data is self-reported, and therefore perhaps less accurate than clinically collected data, it has the advantage of being part of a wider survey. This means that the BMI data can be cross-referenced against other lifestyle factors such as Diet (see Chapter 2) and Physical Activity (see Chapter 3).

JQIF obesity register: As obesity is one of the Jersey Quality Improvement Framework (JQIF)[5] health conditions, GPs are incentivised to accurately record their patients that are classified as obese (having a BMI of 30 or over). As these heights and weights are recorded by health professionals, this approach is likely to give a more accurate measure of the number of obese people in Jersey.

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[3] BMI can be used to tell if a person is carrying too much weight, but it does not differentiate between excess fat, muscle or bone. Also, the adult BMI does not take into account age, sex or muscle mass which means very muscular adults and athletes may be classed as overweight or obese even though their body fat is low. Pregnancy also affects a woman's BMI.

[4] Over 3,000 questionnaires are sent out to randomly selected households in the Island, with the person in that household aged 16 years or over and whose birthday comes next asked to complete it. While response rates have declined, they continue to be over 32%. By weighting the results (to demographic proportions seen in the 2011 Census) JOLS results can be considered to be representative of the entire Jersey adult population.

[5] Jersey Quality Improvement Framework (JQIF) is a Government of Jersey scheme whereby GPs are incentivised to accurately record patients with any of 12 long-term conditions. These JQIF 'conditions registers' are then used to track the prevalence of those conditions in the Island.

Body Mass Index: Jersey Opinions and Lifestyle Survey

Table 1.2   Percentage distribution of BMI category 2008 - 2019

classification	2008	2010	2013	2015	2017	2019
underweight	3	2	2	1	2	3
normal weight	53	48	51	47	50	47
overweight	32	34	32	37	32	33
obese	9	11	11	10	11	12
very obese	2	4	4	2	3	3
morbidly obese	1	1	1	2	1	2

Source: JOLS

This data is displayed in chart form in Figure 1.1.

Figure 1.1   Percentage of Jersey population by BMI category 2008 - 2019

Source: JOLS
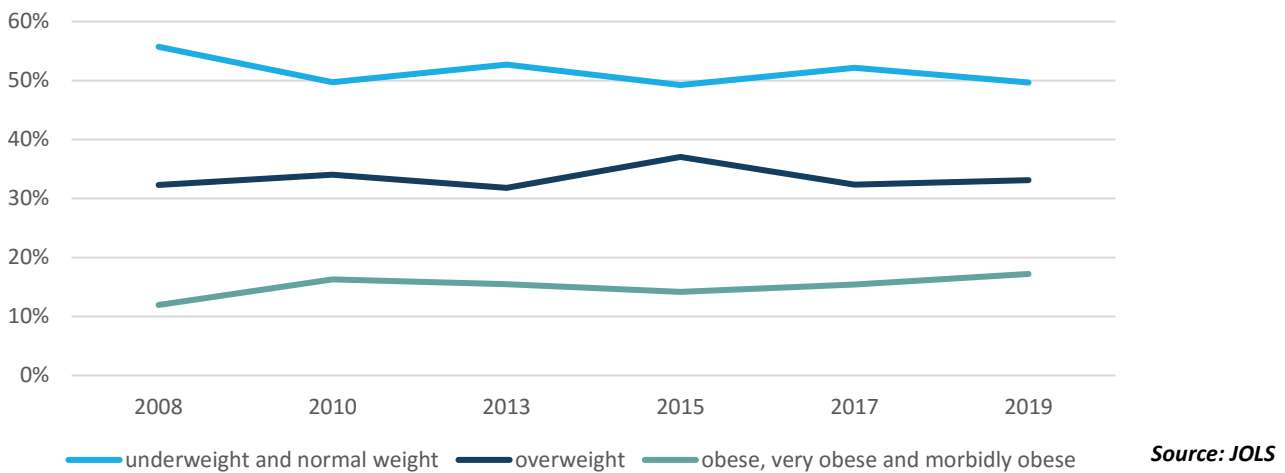
- in 2019 around one in six (17%) Jersey adults were classified as obese, very obese or morbidly obese

Figure 1.2   Percentage of Jersey population by BMI category 2008 – 2019: by sex

Source: JOLS
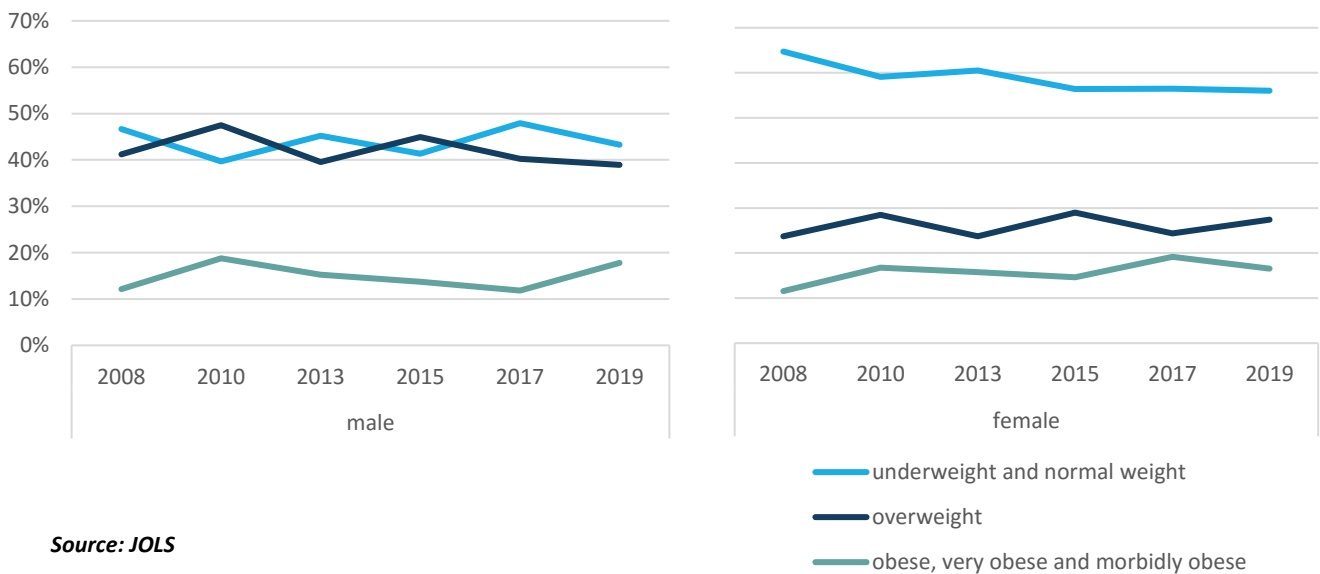
- a significantly higher percentage of males were overweight compared to females
- conversely, a significantly higher percentage of females were underweight or normal weight compared to males
- a similar percentage of males and females were classified as obese, very obese or morbidly obese

Figure 1.3   Percentage of Jersey population overweight or obese 2008 – 2019: by age group

Legend: 16-34 years, 35-44 years, 45-54 years, 55-64 years, 65+ years   *Source: JOLS*
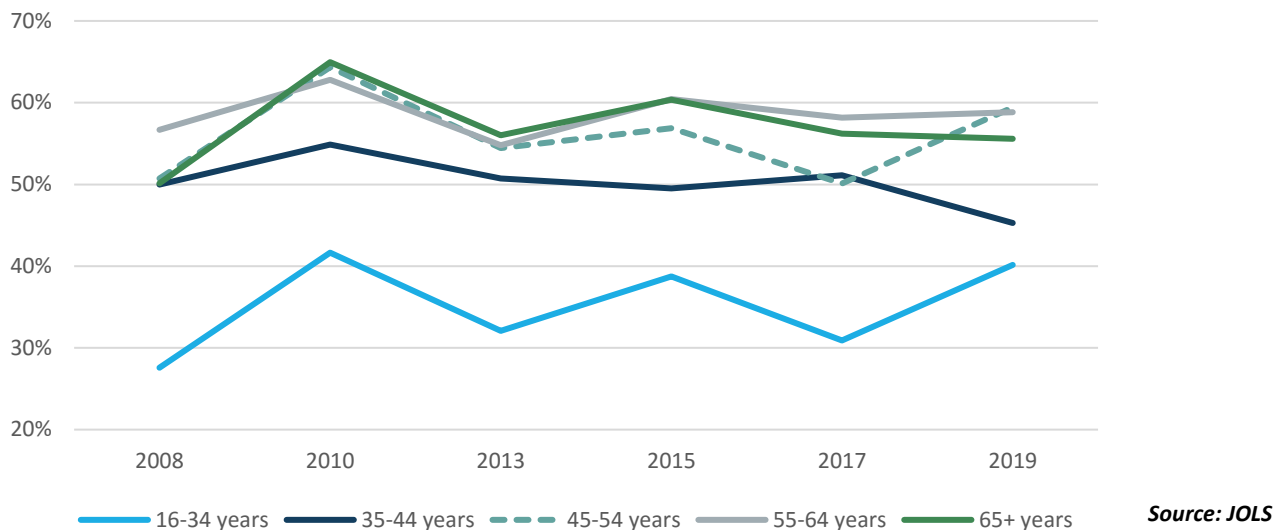
- three-fifths (60%) of 16-34 year olds were in the underweight or normal weight category in 2019, compared to almost three-quarters (72%) in 2008
- in 2019, the 16-34 year old age group contained the highest proportion (60%) of underweight and normal weight adults, compared to 44% of those aged 65 year or older, 41% of 45 – 54 year olds and 41% of 55-64 year olds. See Annex 1 for a full table of these results

Body Mass Index: Jersey Quality Improvement Framework (JQIF) register

The Jersey Quality Improvement Framework (JQIF) incentivises general practice doctors (GPs) to accurately record certain health conditions amongst their patients on the primary care information system: obesity is one of these conditions. The obesity register records patients aged 16 or over with a BMI of 30 or over.

Figure 1.4 shows the number of adult patients identified by their GP as being obese, and this number represented as a percentage of the patient population[6].

Figure 1.4   Number and percentage of Jersey GP practice patients on the JQIF obesity register

Legend: obesity register (number), obesity register (percentage)   *Source: Jersey primary care information system*
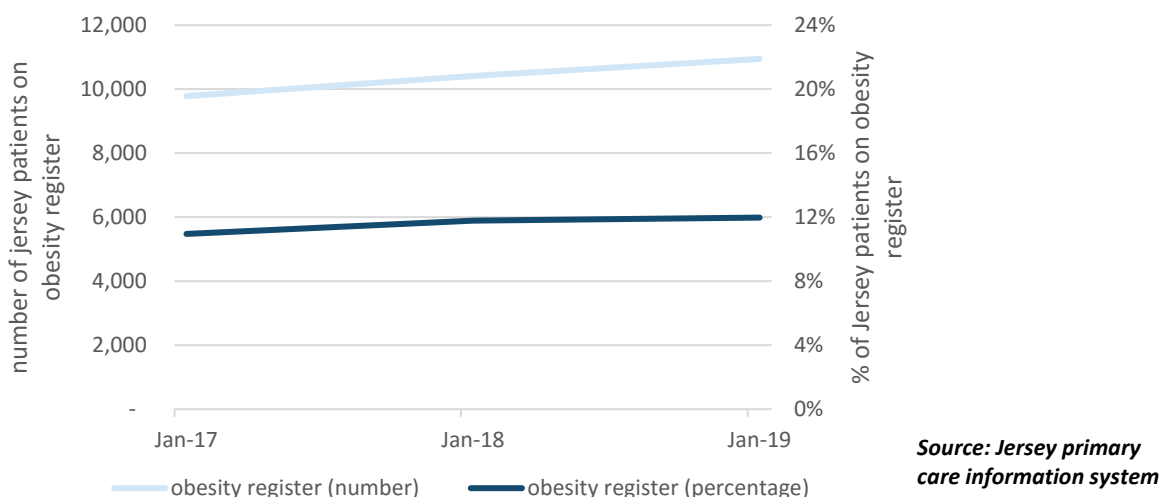
- in October 2019, almost 11,500 adult patients were recorded by their GP as being obese. This was approximately 12% of the population registered with a GP and 'active' (i.e. had seen their GP within the last four years)[7]

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[6] Calculating the actual population registered with a Jersey GP is complicated by a significant lag in the system being updated with people leaving the Island or changing GP practice. This has the effect of inflating the number of people registered with a practice on the Island. JQIF estimates the population based on people that have either (i) registered with the GP in the previous 6 months, or (ii) had an appointment with their GP in the last 4 years.

[7] The GP adult population estimated by JQIF is likely to be an overestimate, causing a slight underestimate of the percentage GP population on the obesity register. If the Statistics Jersey population projection is used, instead of the JQIF estimation, the percentage on the obesity register would be 13%.

Waist measurement

A waist measurement[8] of more than 94cm (37 inches) for men and 80cm (31.5 inches) for women has been shown to be associated with an increased risk of cardio-vascular disease[9]. Those with a waist measurement above 102cm (40 inches) for men and 88cm (34.5 inches) for women are said to be at very high risk as shown in Table 1.3.

Table 1.3   Waist measurement classification

risk factor	men	women
ideal	94cm (37 inches) or less	80cm (31.5 inches) or less
high	more than 94cm (37 inches) up to 102cm (40 inches)	more than 80cm (31.5 inches) up to 88cm (34.5 inches)
very high	more than 102cm (40 inches)	more than 88cm (34.5 inches)

Source: www.nhs.uk

Note – the boundaries of these risk factors changed between the 2013 and 2015 surveys. In 2013, females with a waist measurement of 81cm (32 inches) or more were categorised as *high* risk, and those with a measurement of at least 89cm (35 inches) were categorised as *very high* risk. For this reason, only data from 2015 and later is presented.

Figure 1.5   Percentage of Jersey population by waist measurement category 2015-19
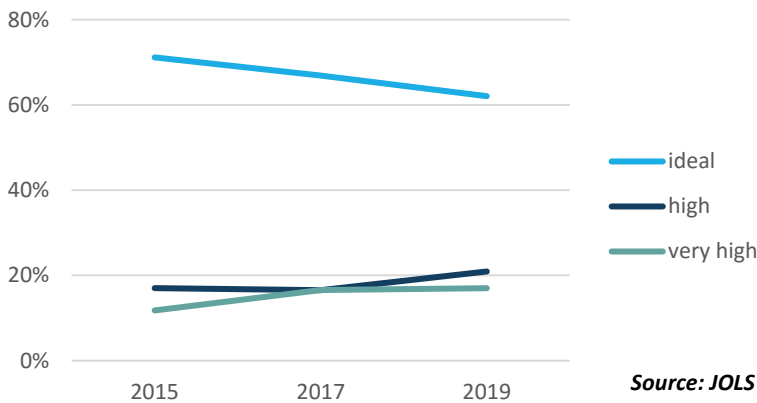
Source: JOLS

- the percentage of people with an *ideal* waist measurement decreased from 71% in 2015 to 62% in 2019
- in 2019, one in six (17%) people had a waist measurement resulting in a *very high* cardio-vascular risk factor

Figure 1.6   Percentage of Jersey population by waist measurement category 2015-19: by sex
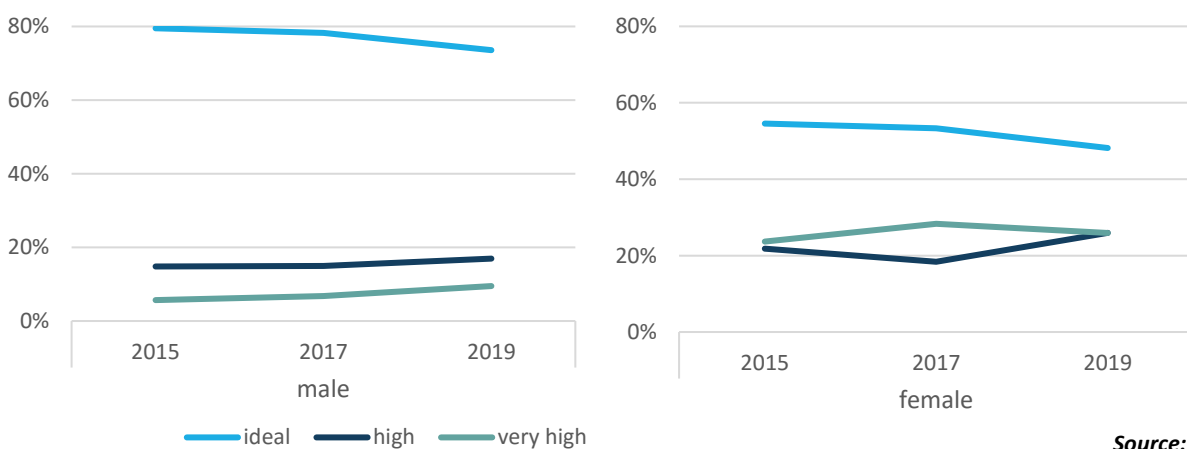
Source: JOLS

- three-quarters (74%) of males were categorised as having an *ideal* waist measurement in 2019; only half (48%) of females were in the same category

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[8] The waist is measured at the mid-point between the bottom of the ribcage and the top of the hips (which for many people is around the level of the navel) and without breathing in. It is not the same as belt size.
[9] Classifications as described by the UK National Health Service (NHS) www.nhs.uk

Figure 1.7 **Percentage of Jersey population high + very high waist measurement 2015-19: by age group**
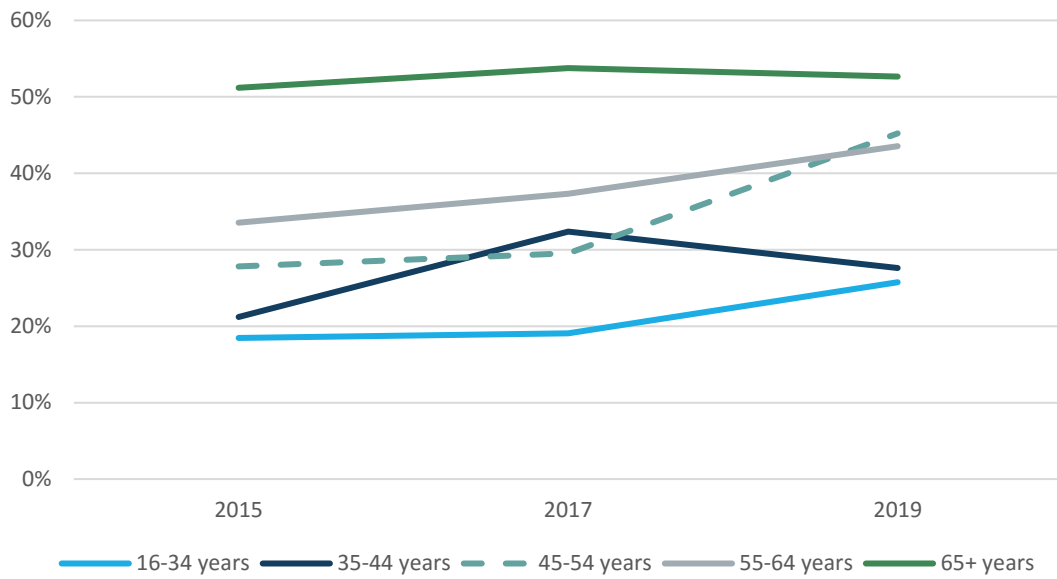
Source: JOLS

- in 2019, three quarters (74%) of 16-34 year olds had an *ideal* waist measurement, compared to fewer than half (47%) of those 65 years or older
- the percentage of people in the 45-54 years age group with an ideal waist measurement was 70% in 2017 compared to 55% in 2019, a significant change
- people in the 65 years or older age group were consistently the least likely to have an ideal waist measurement over the period 2015 to 2019

Child Obesity

While children's BMI score is calculated in a similar way as that for adults [weight (kg) / (h*eight (m) * height (m))],* these scores are not classified in the same way. To classify a child's BMI score, it is compared with the scores from a reference population[10] of similar sex and age and then classified depending on the centile of the reference population to which it corresponds[11] (see Table 1.4).

Table 1.4   Centile boundaries for classification of BMI into weight category

| classification	centile boundary, %
underweight	0.0 - 1.9
healthy weight	2.0 - 84.9
overweight	85.0 - 94.9
obese	95.0 - 99.5
severely obese	99.6 - 100

Child measurement programme: BMI classifications

The Jersey Child Measurement Programme[12] (JCMP) measured the heights and weights of 2,080 Jersey schoolchildren in Reception (4 – 5 year olds) and Year 6 (10 - 11 year olds) during the 2018/19 academic year. Results are reported for 97% of all eligible children.

Table 1.5   BMI classifications, percentages 2018/19: by age

	Reception, %	**Year 6, %**
underweight	*<1*	*1*
healthy weight	*78*	*69*
overweight	*13*	*13*
obese	*6*	*13*
severely obese	*3*	*4*
combined obese & overweight	*21*	*30*

Source: Jersey Child Measurement Programme

Figure 1.8   Prevalence of underweight, overweight and obesity by age group, 2018/19
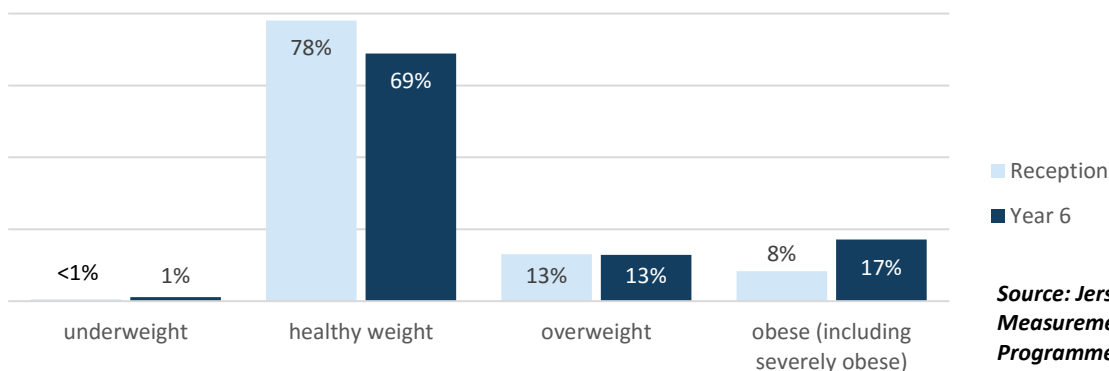
Source: Jersey Child Measurement Programme

- in the academic year 2018/19, obesity prevalence (including severe obesity) was 17% in Year 6, double that of Reception (8%)
- one in five (21%) Reception aged children were overweight or obese, compared to around one in three children in Year 6 (30%)

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[10] British 1990 growth reference (UK90) – see '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

[11] These are the epidemiological boundaries commonly used for comparison purposes at a population level. The child measurement programme also uses the clinical boundaries for some purposes – see Annex 2 for an explanation.

[12] The Jersey Child Measurement Programme began in 1995, annually measuring the heights and weights of children in Reception year of Jersey schools. It was extended in the 2011/12 academic year to include measuring the heights and weights of Year 6 children.

- around four in five (78%) Reception children had height and weight measurements that classified them as having a healthy BMI, whilst in Year 6 around seven in ten (69%) were of 'healthy weight'
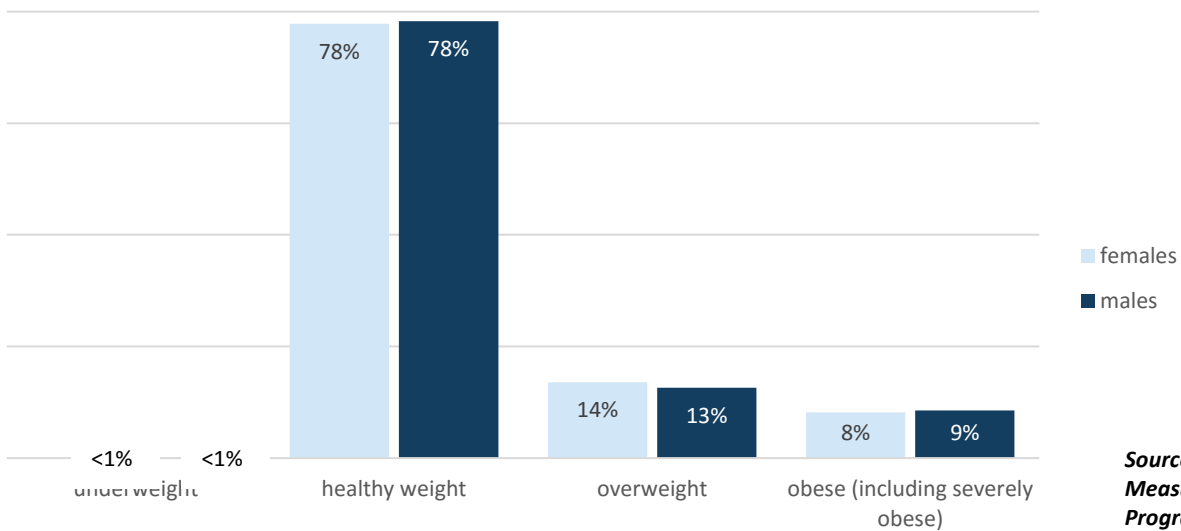
Child measurement programme: BMI classifications by age and sex

Table 1.6   BMI classifications 2018/19: by age and sex

	Reception, %		Year 6, %	
	males	*females*	*males*	*Females*
underweight	<1	<1	<1	2
healthy weight	78	78	67	70
overweight	13	14	12	13
obese	6	5	14	12
severely obese	2	3	6	2
combined obese & overweight	21	22	33	27

Source: Jersey Child Measurement Programme

Figure 1.9   Proportion of Reception aged children classified as underweight, overweight and obese 2018/19: by age group and sex

Source: Jersey Child Measurement Programme

- in Reception, the proportion of females categorised as overweight or obese (22%) was similar to males (21%). Similarly, sex did not make a significant difference in Year 6; 27% of females were categorised as overweight or obese and 33% of males
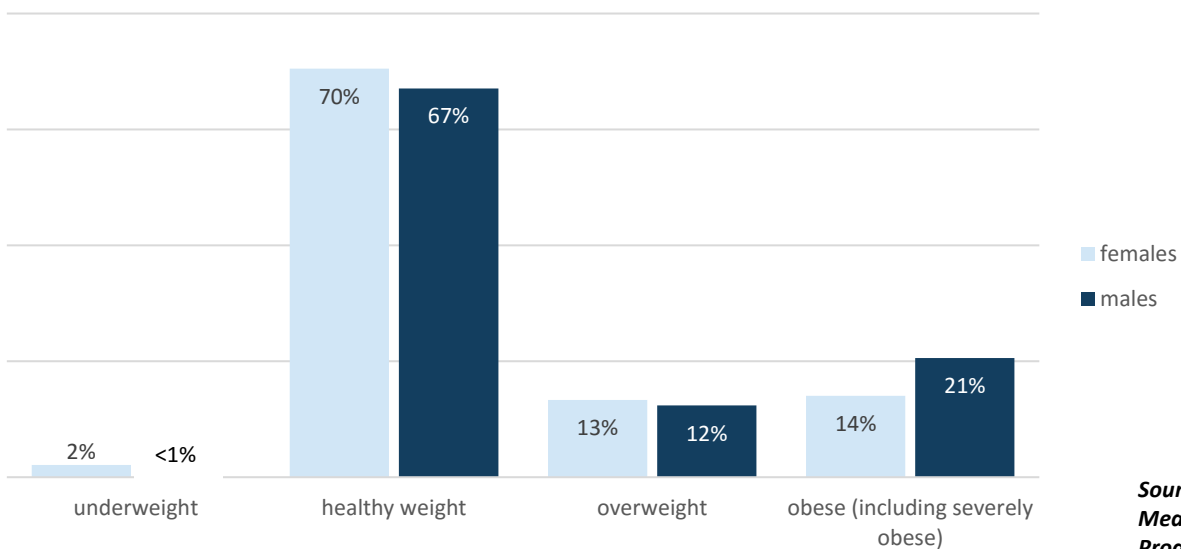
Figure 1.10   Proportion of Year 6 children classified as underweight, overweight and obese 2018/19: by age group and sex

Source: Jersey Child Measurement Programme

Child measurement programme: BMI classifications over time

Figure 1.11   BMI classifications for Reception children (4-5 year olds), three-year averages
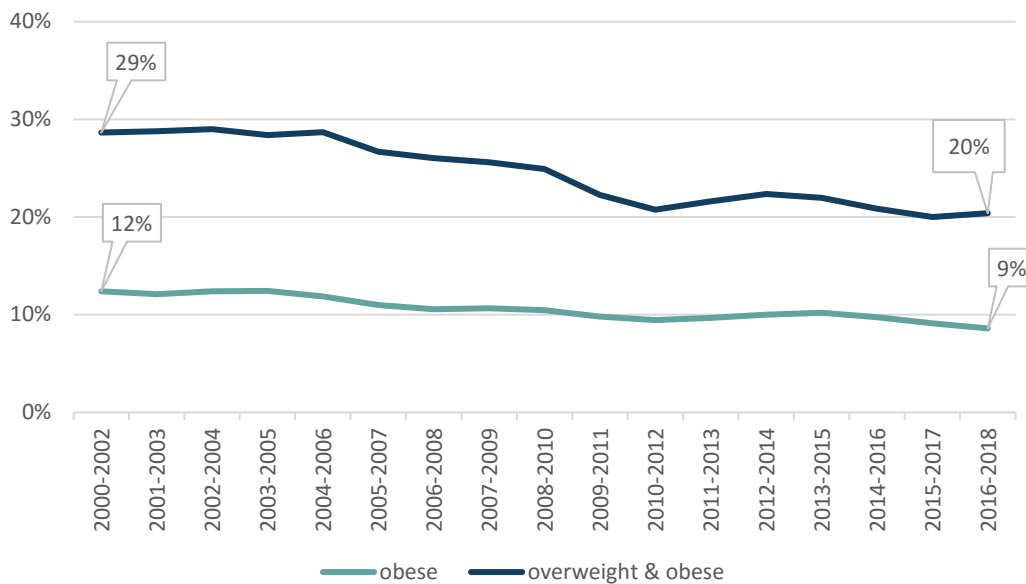
- the proportion of Reception children classified as overweight or obese has remained similar at around 20% since 2009-2011, and continued to be lower than in the period between 2000 and 2006 (29%)
- the proportion of children classified as obese in Reception has decreased marginally from 12% in 2000-2002 to 9% in 2016-2018

Figure 1.12   BMI classifications for Year 6 (10-11 year olds), three-year averages
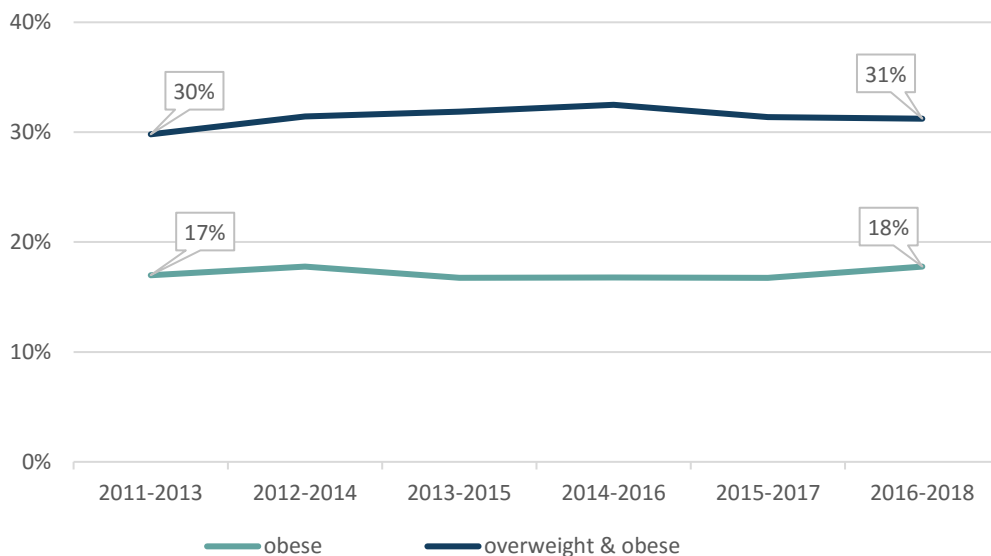
- since the Jersey Child Measurement Programme was expanded to include measurement of Year 6 children in 2011/2012, the proportion of obese or overweight children has remained at around one in three (31%) since 2011 - 2013
- the prevalence of obesity in Year 6 has remained similar, at around one in six (18%)

Child measurement programme: comparison to England

Figure 1.13   Prevalence of obesity (Reception aged children), comparison to England, 2018/19

Jersey
England

	Jersey	England
overweight	13%	13%
obese (including severely obese)	8%	10%
overweight or obese	21%	23%

Source: Jersey Child measurement programme and NCMP dataset, NHS digital
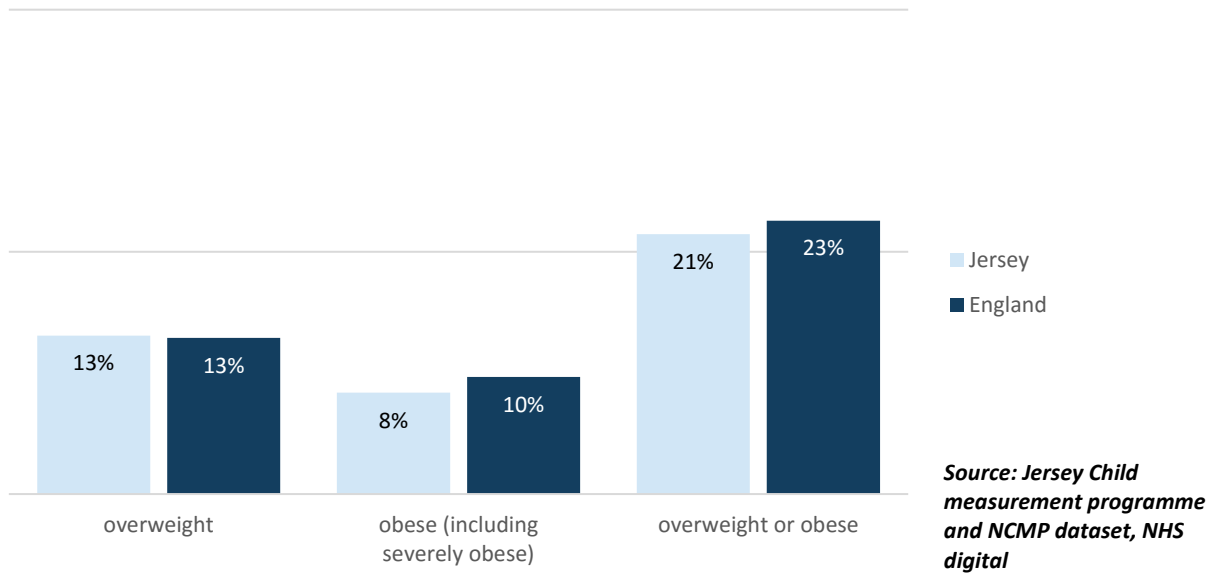
Figure 1.14   Prevalence of obesity (Year 6 children), comparison to England, 2018/19

Jersey
England

	Jersey	England
overweight	13%	14%
obese (including severely obese)	17%	20%
overweight or obese	30%	34%

Source: Jersey Child measurement programme and NCMP dataset, NHS digital
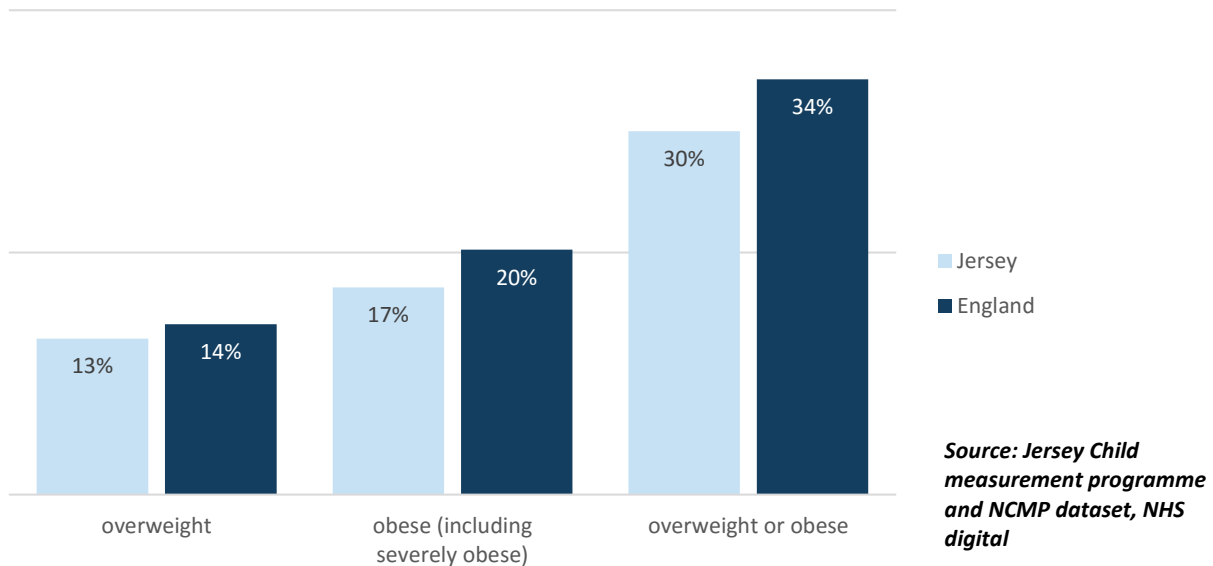
- for both Reception and Year 6 children, the proportion of overweight and obese children were similar in Jersey and England

DIET
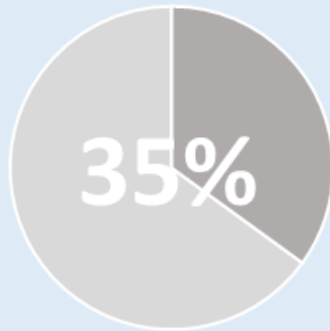
35% of Jersey adults ate the **recommended portions** of fruit and vegetables per day

5-a-day

4-in-10 females ate 5 or more portions of fruit or vegetables the previous day

3-in-10 males ate 5 or more portions of fruit or vegetables the previous day

23% of **16-34 year olds** ate 5 or more portions of fruit or vegetables the previous day, compared to **44%** of those **65 years or older**

23%

16-34 year olds

44%

65 years or older

Year 10   20%

Year 8   25%

Year 6   30%
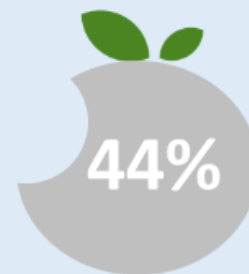
a **higher** proportion of children in **Year 6** ate 5 or more portions of fruit or vegetables the previous day compared to children in **Years 8** or **10**

www.gov.je/statistics   @JsyStats

Chapter 2 - Diet

In the UK, the NHS recommends that people eat five or more portions of fruit and vegetables each day[13]. A similar recommendation of daily fruit and vegetable consumption is common in many countries such as the USA, Germany and France.

Portions of fruit and vegetables per day: adults

The Jersey Opinions and Lifestyle Survey asks a series of questions on diet every other year. A standard question in the series is "how many portions of fruit or vegetables did you eat yesterday". Responses are categorised into 0 portions, 1-4 portions and 5+ portions (equal to or above the NHS recommended level)

Figure 2.1   Portions of fruit and vegetables eaten yesterday 2013 - 2019

Source: JOLS

- in 2019, two-thirds (65%) of Jersey adults ate fewer than the recommended number of fruit or vegetable portions the previous day, this percentage has been fairly similar over the period 2013 to 2019
- over the period 2013 to 2019, around one adult in twenty (between 4% and 6%) ate no portions of fruit or vegetables the previous day

Figure 2.2   Portions of fruit and vegetables eaten yesterday 2013 - 2019: by sex
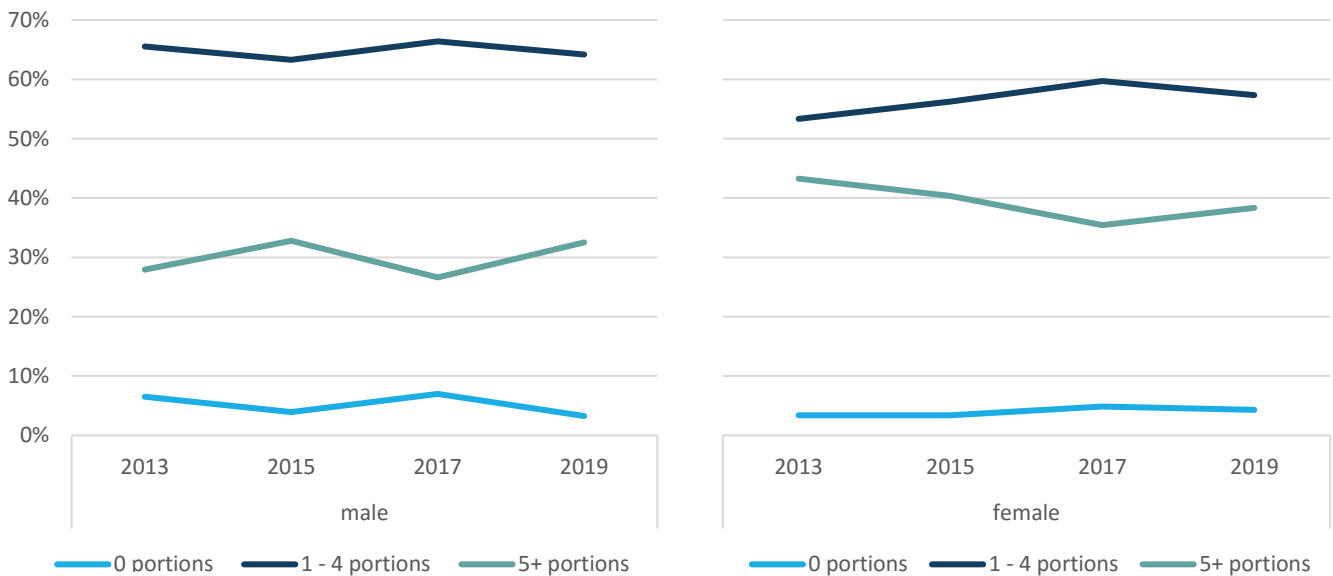
Source: JOLS

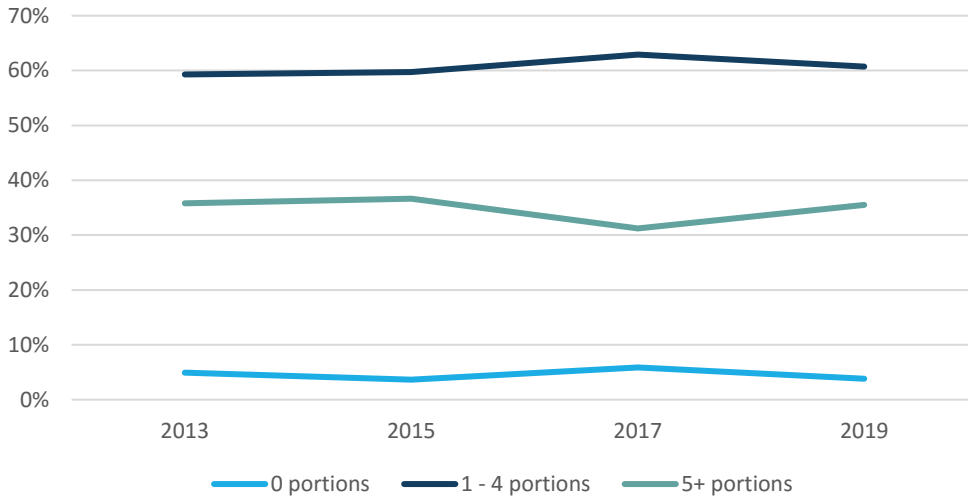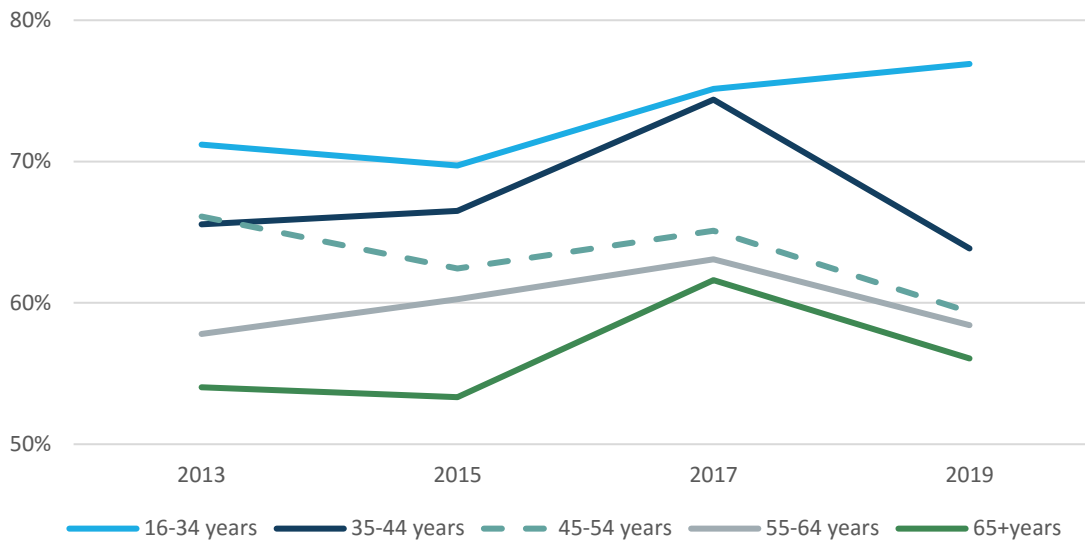- in 2019, 38% of females ate 5 or more portions of fruit or vegetables the previous day, compared to 33% of males
- a fairly similar percentage of females (4%) ate no portions of fruit or vegetables the previous day as males (3%)

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[13] https://www.nhs.uk/live-well/eat-well/

Figure 2.3   Percentage reporting fewer than 5 portions of fruit and vegetables eaten the previous day 2013 – 2019: by age group

- in 2019, a quarter (23%) of 16-34 year olds ate 5 or more portions of fruit or vegetables the previous day compared to over two-fifths (44%) of those aged 65 years or older
- Figure 2.3 shows the percentage of adults reporting they had eaten fewer than 5 portions of fruit or vegetables the previous day by age group. The proportion that reported eating fewer than the recommended 5 portions, decreased with age

BMI category and diet: adults

Figure 2.5 shows the number of portions of fruit and vegetables eaten the previous day by Jersey adults in each BMI category. Due to relatively small numbers of people in the underweight, very obese and morbidly obese categories, these have been combined with other BMI categories for analysis purposes.

Figure 2.5   Portions of fruit and vegetables eaten yesterday by BMI category: JOLS 2019
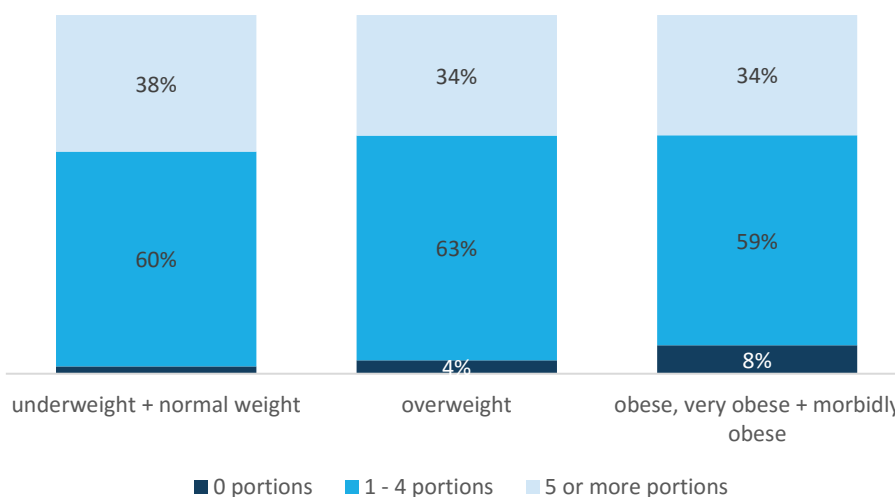
- two-fifths (38%) of underweight and normal weight adults ate 5 or more portions of fruit or vegetables the previous day. This was a fairly similar proportion to overweight (34%) and obese, very obese and morbidly obese (34%) adults
- one in twelve (8%) of adults classified as obese, very obese or morbidly obese ate no portions of fruit or vegetables the previous day, compared to one in fifty (2%) of adults classified as underweight or normal weight

Portions of fruit and vegetables per day: children

Figure 2.6   *Percentage reporting have eaten fewer than 5 portions of fruit or vegetables eaten the previous day: by year group*
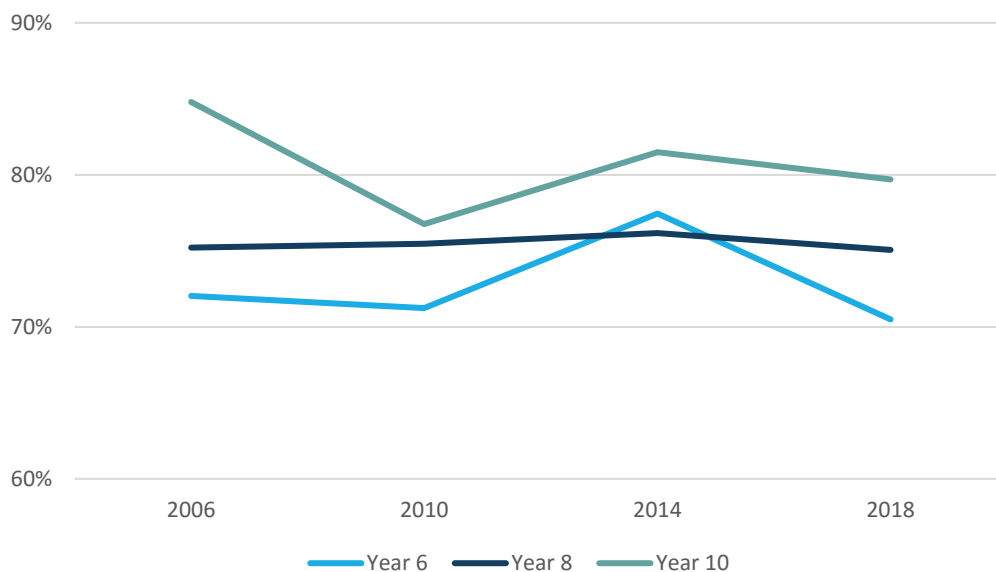
Source: JCYPS

- in 2018, a lower proportion of secondary school children (25% in Year 8 and 20% in Year 10) ate 5 or more portions of fruit or vegetables the previous day compared to primary school children (30% in Year 6)

PHYSICAL ACTIVITY

51%
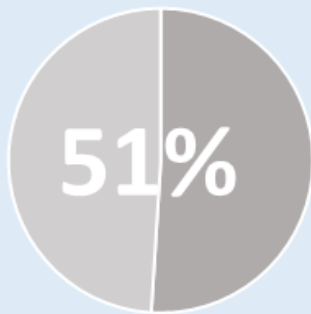
Half of Jersey adults are meeting recommended guidelines of **150 minutes or more** of moderate physical activity in a typical week
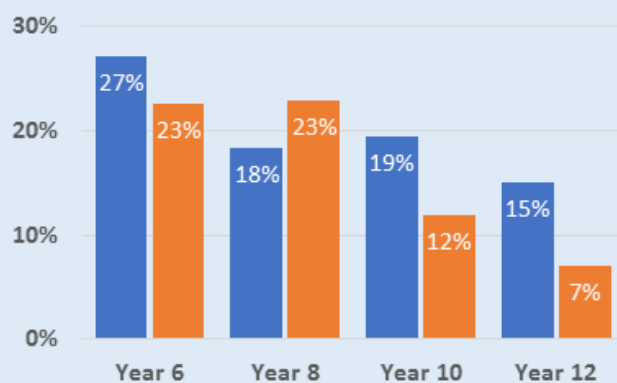
A **quarter** of Year 6 children

27% males, 23% females

met the NHS recommended guidelines of being physically active for **at least an hour per day** on every day of the previous week.

Bar chart:

	Year 6	Year 8	Year 10	Year 12
Males	27%	18%	19%	15%
Females	23%	23%	12%	7%

3 Hrs

- over **two-fifths (46%)** of **Year 6 males** and **one-third (33%)** of **Year 6 females**
- **three-quarters** of **Year 10 males (77%)** and **Year 10 females (72%)**

...spent **3 hours** or more on **'screens'** the previous day.

65%

of **Year 6** children travelled to school by **car** or **van**

School

www.gov.je/statistics   @JsyStats
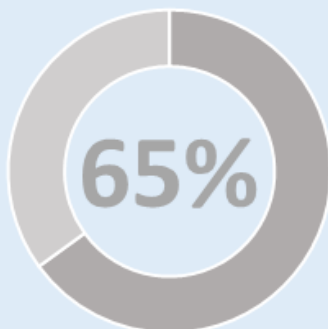
Chapter 3 - Physical Activity

Activity levels: adults

The JOLS survey regularly asks adults to assess their own level of physical activity.

In addition, the 2019 JOLS survey asked the number of minutes of moderate and vigorous exercise a person would do in a typical week. This gave a more objective measure of whether a person met Public Health England's recommendation of 150 minutes of moderate level activity per week[14].

Adults physical activity level: self-assessment

Figure 3.1   Adults: level of self-assessed physical activity 2013-19

Source: JOLS
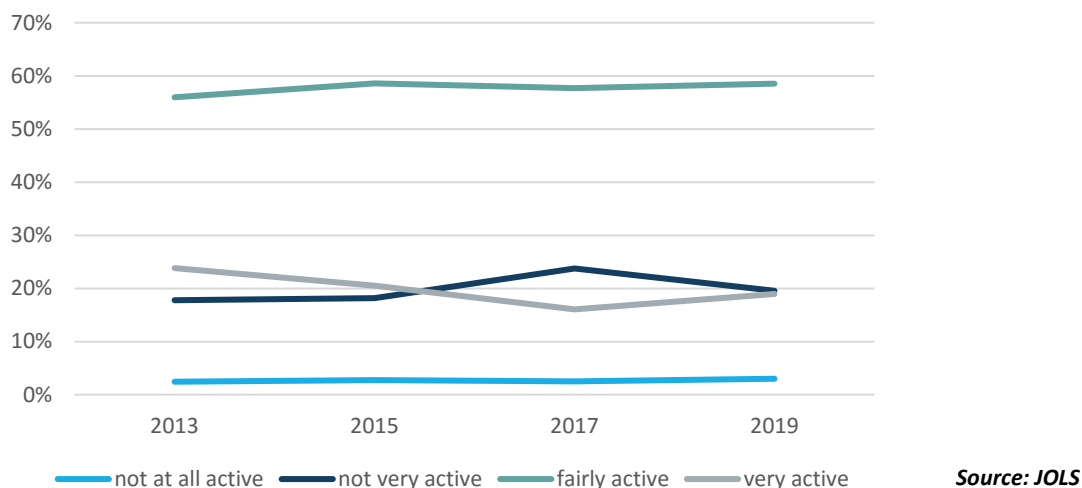
- there was no significant change in the percentages of adults self-reporting different levels of physical activity over the period 2013 to 2019

Figure 3.2   Adults: level of self-assessed physical activity: by sex and year

Source: JOLS
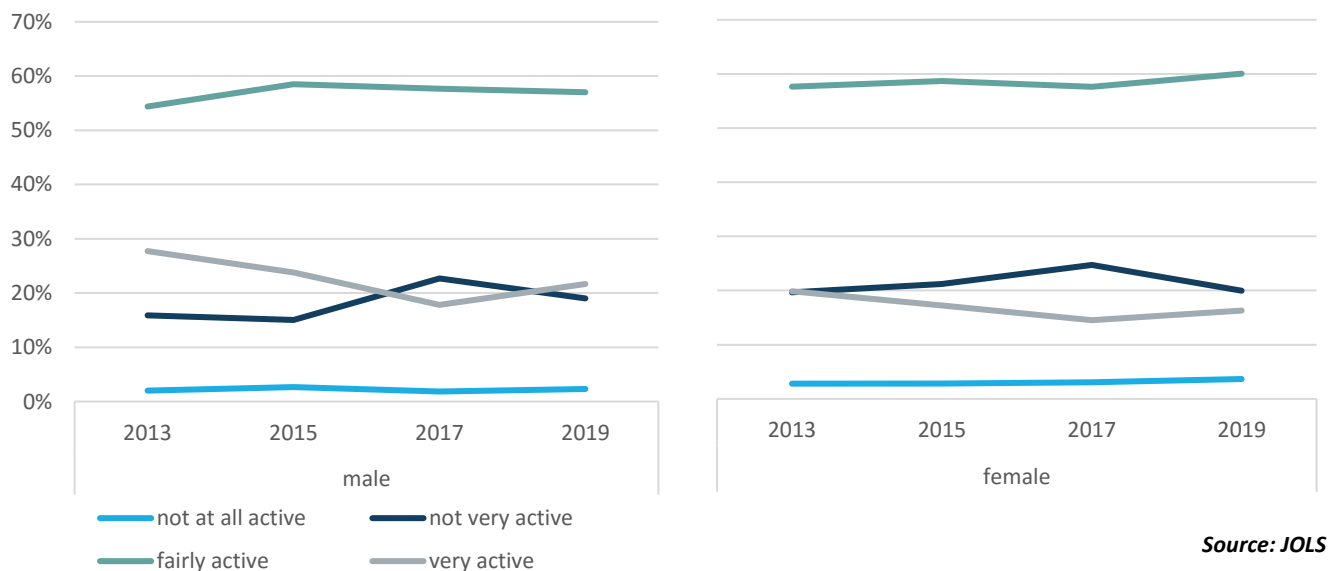
- there was no significant difference between the self-reported physical activity levels of males and females in 2019

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[14] Public Health England, 'Everybody active, every day': October 2014 – see Annex 2 Notes for details

Figure 3.3   ***Adults with self-assessed level of physical activity not very active or not at all active, 2013-2019: by age group***
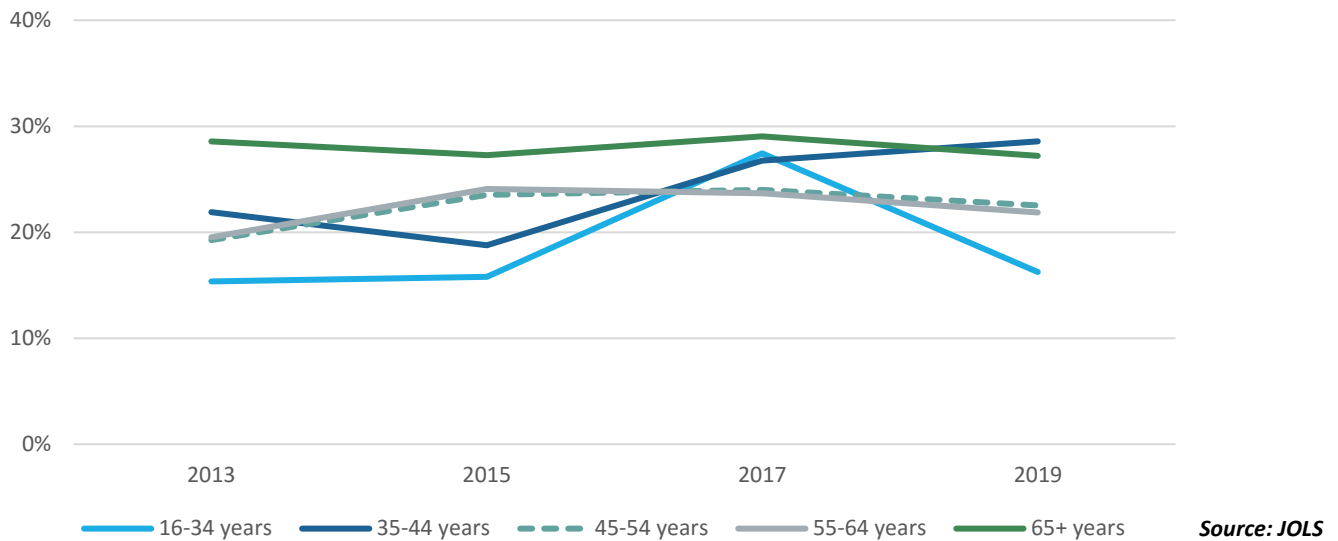
- the differences between age groups was not significant, indicating that people responded to this question relative to their age (i.e. "I am *very active* <u>for a 65 year old</u>") rather than in relation to an objective scale.

Physical activity levels, adults: recommended levels

Figure 3.4   ***Median average minutes of moderate physical activity in a typical week 2019: by sex***
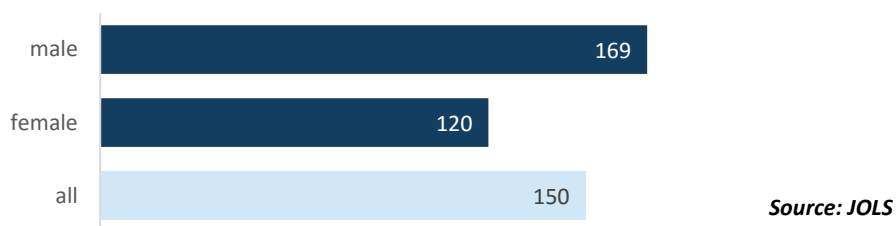
- across the entire Jersey adult population, the average (median) amount of moderate physical activity (or equivalent) in a typical week was 150 minutes

Figure 3.5   ***Percentage of adults meeting the recommended activity levels per week 2019: by sex***

- half (51%) of Jersey adults met the PHE recommended guidelines of 150 minutes or more of moderate physical activity (or equivalent) in a typical week

Table 3.1   *Median average minutes of moderate physical activity in a typical week 2019:*
                   by age group

	16-34 years	35-44 years	45-54 years	55-64 years	65+ years	All
Median average minutes of equivalent moderate physical activity	180	120	179	136	90	150
Percentage meeting recommended weekly physical activity guidelines	60%	45%	52%	49%	41%	51%

Source: JOLS

- the average (median) amount of moderate exercise undertaken in a typical week by those aged 16-34 years was 180 minutes, double the amount of those aged 65 years or older (90 minutes)
- the median amount of moderate exercise undertaken by the 35-44 years age group is significantly less than the amount undertaken by those aged 16-34 years and those aged 45-54 years
- the percentage of adults doing the recommended level of moderate exercise (150 minutes or more) in a typical week generally reduced with age. The exception was the 35-44 year old age group

BMI category and physical activity

For each BMI category, the JOLS data can be analysed to compare: the self-assessed activity level (Figure 3.6); the (median) average minutes of moderate level activity (Figure 3.7); and percentages of population meeting the recommended level of physical activity in a typical week (Figure 3.8).

Due to relatively small numbers of people in the underweight, very obese and morbidly obese categories, these have been combined with other BMI categories for analysis purposes.

Figure 3.6   *Level of self-assessed physical activity by BMI category: JOLS 2019*
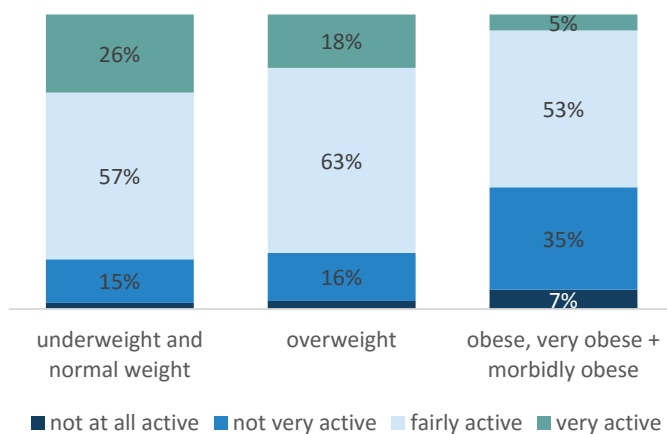
Source: JOLS

Figure 3.7   Median average minutes of moderate level activity by BMI category: JOLS 2019

Source: JOLS
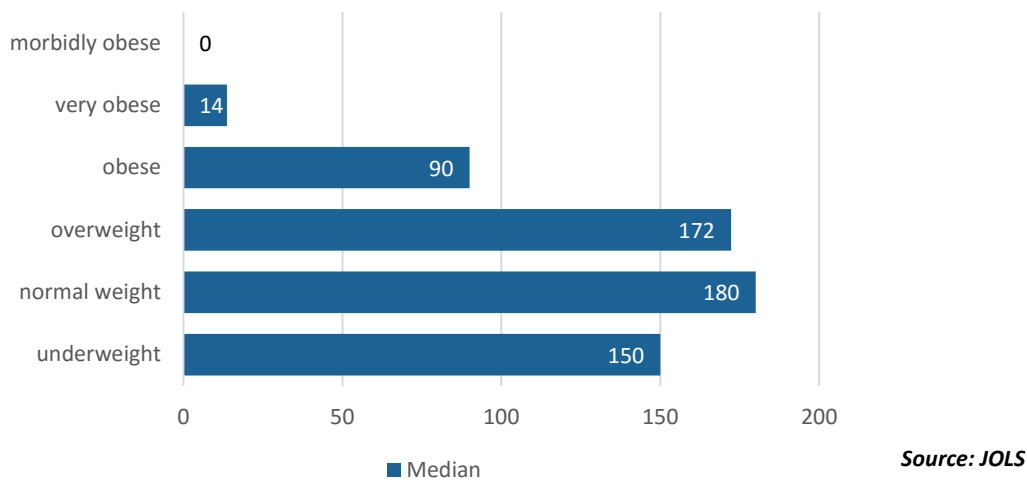
- the median average number of minutes of moderate physical activity for underweight, normal weight and overweight adults were all at or above 150 minutes
- the median average minutes of moderate physical activity for morbidly obese adults was zero minutes (i.e. over half of morbidly obese adults do no physical exercise in a typical week)

Figure 3.8   Percentage of adults meeting recommended level of physical activity in a typical week by BMI category

Source: JOLS
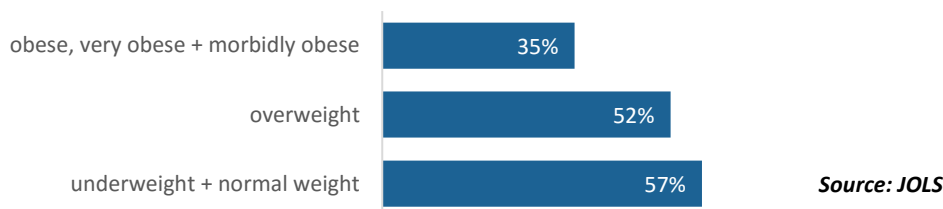
- three-fifths (57%) of underweight and normal weight adults met the recommended weekly level of physical activity compared to one-third (35%) of obese, very obese and morbidly obese adults

Active transport: adults

One method of building moderate physical activity into adults' weekly schedule is by increasing the level of physical activity in their daily commute to work, e.g. encouraging walking or cycling rather than driving. Figure 3.9 shows the main methods of commuting for Jersey workers over the period 2010 to 2019.

Figure 3.9   Main modes of transport to work[15]: 2010 - 2019

Source: JOLS
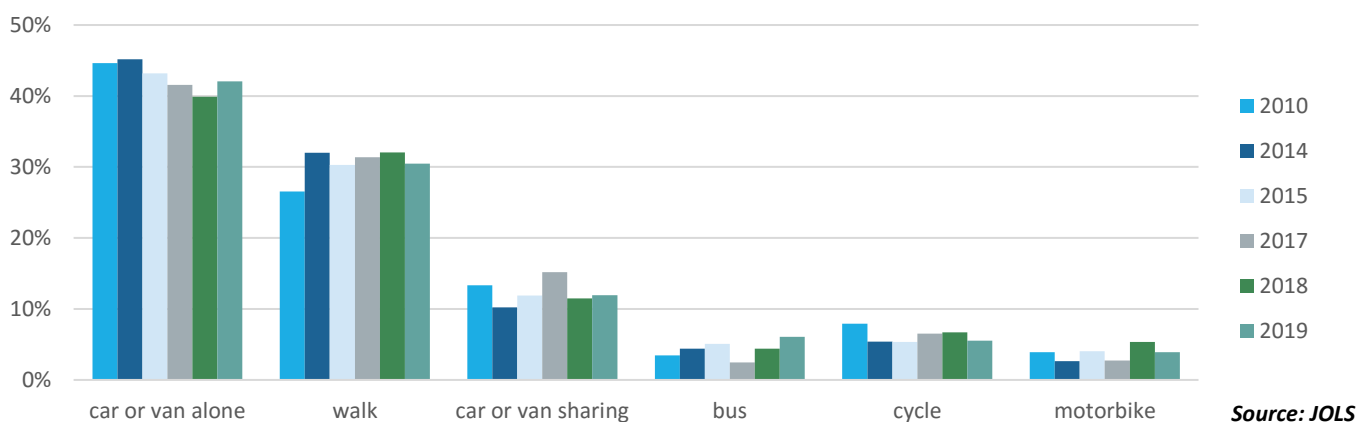
- over the period 2010-2019, the main mode of transport used by adults to get to work was consistently by *car or van alone*

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[15] Employed or self-employed adults that don't work from home

- while small changes were evident in the percentages of people travelling to work by *car or van alone*, or by *walking* over the period, these were not significant

Figure 3.10   Proportion of adults that use active transport (walking and cycling) to work[16]: 2010 - 2019
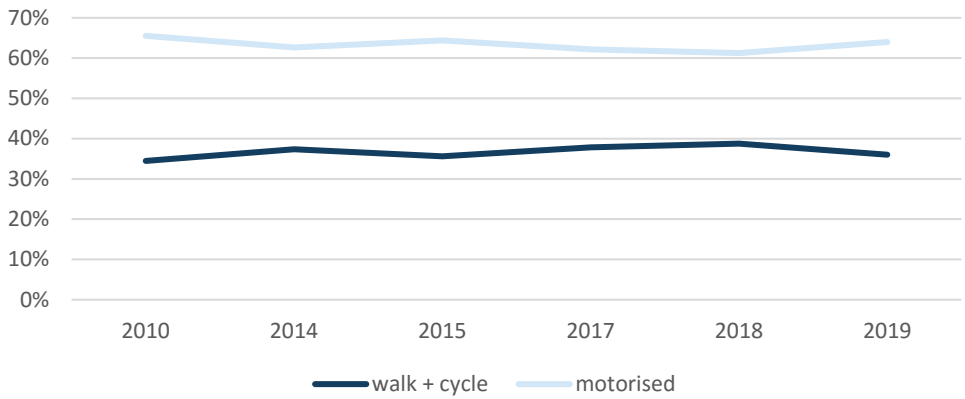
walk + cycle   motorised   *Source: JOLS*

- although the percentage walking or cycling to work over the period showed a small change, from 34% in 2010 to 36% in 2019, this was not a significant difference

Figure 3.11   Main modes of transport to work 2019: by age group
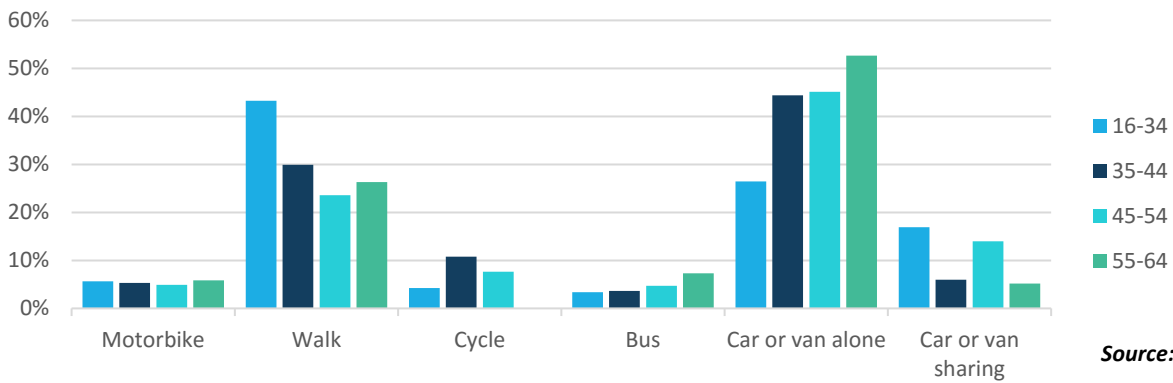
16-34   35-44   45-54   55-64   *Source: JOLS*

- over two-fifths (43%) of 16-34 year olds walked to work compared to a quarter (26%) of 55-64 year olds

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[16] Employed or self-employed adults that don't work from home

Activity levels: children

Physical activity levels, children: recommended levels

According to NHS guidelines, children between the ages of 5 and 18 years are recommended to do at least 60 minutes of physical activity per day. Figure 3.12 shows the proportion of children in year groups 6, 8 and 10 meeting this recommended level over the period 2010 to 2018.

Figure 3.12   Percentage of children that are physically active for at least one hour each day, 2010 - 2018

Source: JCYPS
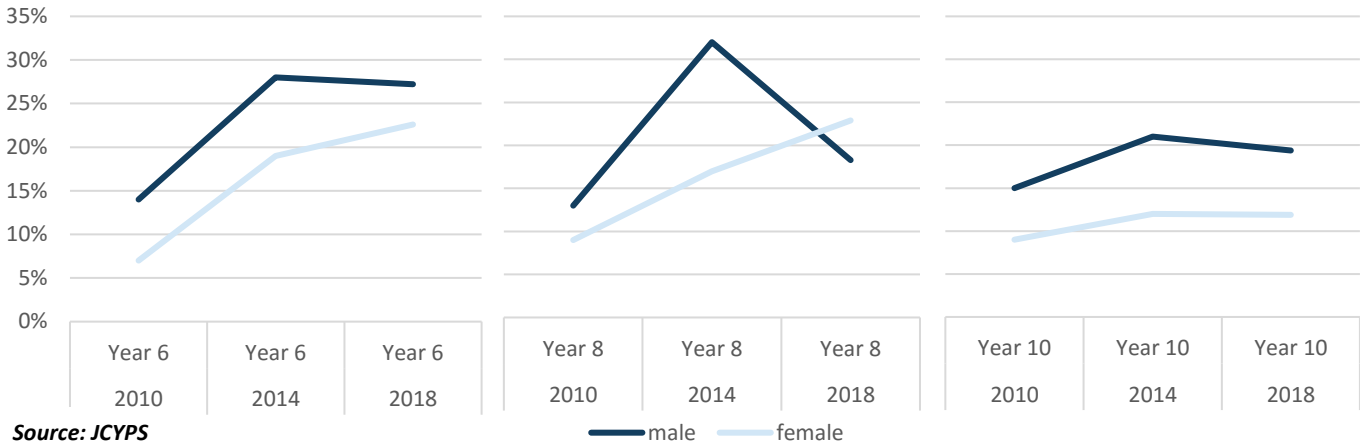
- more males (27%) and females (23%) in Year 6 were active for at least an hour each day of the previous week in 2018 compared to 2010 (14% of males and 7% of females)
- almost a quarter (23%) of Year 8 females were active for at least an hour each day in 2018, compared to one in ten (9%) in 2010
- the proportion of Year 10 children being active for at least an hour each day increased slightly between 2010 and 2018

Physical activity levels, children: levels of sedentary behaviour

Excessive sedentary behaviour, the opposite of physical activity, is seen as a potential driver of obesity and health problems. Figure 3.13 combines the responses from three questions in the Jersey Children and Young People's Survey (time the previous day spent: *watching TV*; *computer gaming*; and *on internet / social media*) to produce a figure for *total screen-time* the previous day[17].

Figure 3.13 Total screen-time, percentage who spent 3 or more hours on screens the previous day: by year group

Source: JCYPS
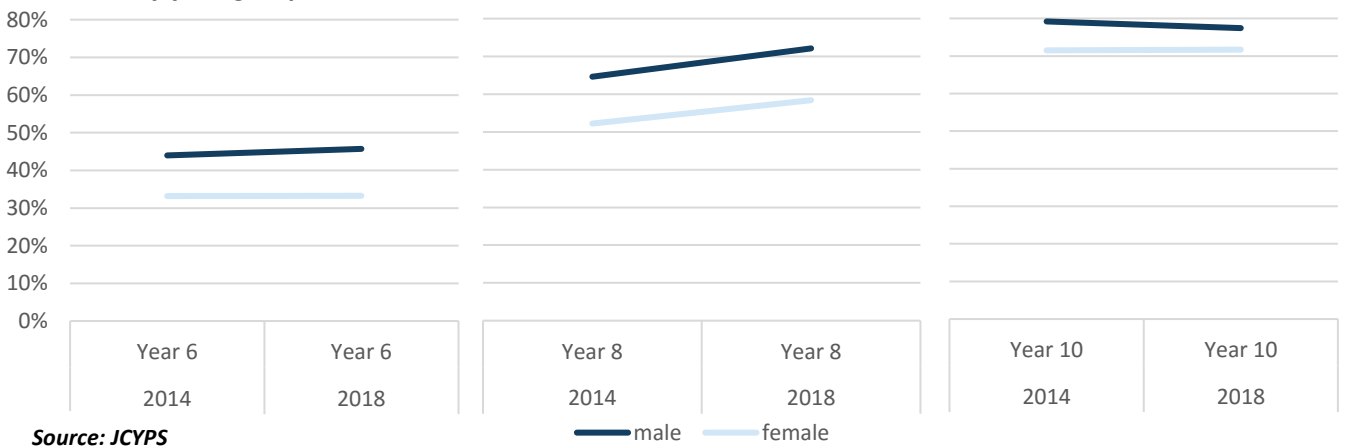
- in 2018, around three-quarters of Year 10 males (77%) and Year 10 females (72%) spent over 3 hours on screens the previous day, these are similar proportions to 2014

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[17] These surveys were, in the majority, not carried out on a Monday, so figures relate to a week day during the school term.

- for each age group, in both 2014 and 2018, a higher proportion of males spent 3 hours or more on screens the previous day than females
- the proportion of Year 10 males who spent two or more hours watching television the previous day fell from 51% in 2014 to 31% in 2018. The proportion of Year 10 females watching two or more hours of television, also fell over the period, from 47% to 36%
- the proportion of Year 8 males that spent two or more hours playing computer games the previous day increased from around half (48%) to almost two-thirds (63%) between 2014 and 2018
- the proportion of children that spent 2 hours or more on the internet, emailing or online chatting the previous day, was significantly higher in Year 10 than Year 6

Active transport: children

As with adults, children may increase their daily level of physical activity by incorporating active transport into their journey to school rather than being taken by car or van. Figure 3.20 shows the proportion of school children in year groups 6, 8 and 10 being taken to school by car over the period 2010 to 2018.

Figure 3.20   Percentage of children that travel to school by car or van 2010 – 2018: by sex

Source: JCYPS
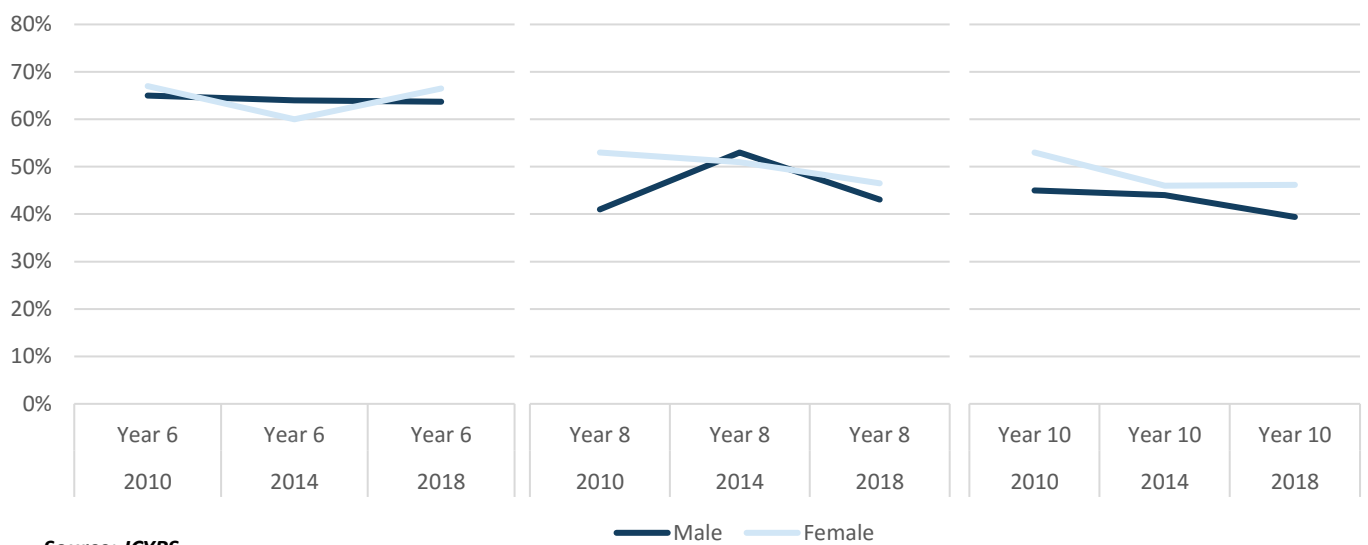
- in 2018, two-thirds (65%) of Year 6 children travelled to school by car

Annex 1: data tables

Obesity

Different BMI categories by sex, 2008 – 2019, percentages

		underweight and normal weight	overweight	obese, very obese and morbidly obese
male	**2008**	47	41	12
	2010	40	44	17
	2013	45	40	15
	2015	41	45	14
	2017	48	40	12
	2019	43	39	18
female	**2008**	65	24	12
	2010	59	25	16
	2013	60	24	16
	2015	56	29	15
	2017	56	24	19
	2019	56	27	17

Different BMI categories by age group, 2008 - 2019, percentages

		underweight and normal weight	overweight	obese, very obese and morbidly obese
16-34 years	**2008**	72	22	6
	2010	64	29	13
	2013	68	20	12
	2015	61	31	8
	2017	69	22	9
	2019	60	29	11
35-44 years	**2008**	50	35	15
	2010	49	34	21
	2013	49	34	17
	2015	50	37	13
	2017	49	35	16
	2019	55	33	13
45-54 years	**2008**	49	34	17
	2010	40	45	19
	2013	46	38	16
	2015	43	40	17
	2017	50	33	17
	2019	41	36	23
55-64 years	**2008**	43	41	16
	2010	43	42	21
	2013	45	37	17
	2015	40	38	22
	2017	42	37	21
	2019	41	38	21
65+ years	**2008**	50	39	11
	2010	41	47	18
	2013	44	38	18
	2015	40	43	17
	2017	44	40	16
	2019	44	33	22

Diet

Adults: portions of fruit and vegetables eaten the previous day, by sex: 2013-2019, percentages

		0 portions	1 - 4 portions	5+ portions
male	2013	7	66	28
	2015	4	63	33
	2017	7	66	27
	2019	3	64	33
female	2013	3	53	43
	2015	3	56	40
	2017	5	60	35
	2019	4	57	38

Adults: portions of fruit and vegetables eaten the previous day, by age group: 2013-2019, percentages

		0 portions	1-4 portions	5+ portions
16-34 years	2013	8	63	29
	2015	5	65	30
	2017	7	68	25
	2019	3	74	23
35-44 years	2013	4	61	34
	2015	3	64	33
	2017	6	68	26
	2019	3	61	36
45-54 years	2013	4	62	34
	2015	4	59	38
	2017	7	58	35
	2019	6	53	41
55-64 years	2013	3	55	42
	2015	4	56	40
	2017	6	57	37
	2019	5	53	42
65+years	2013	2	52	46
	2015	2	52	47
	2017	3	59	38
	2019	2	54	44

Children: portions of fruit and vegetables eaten the previous day: 2006-2018, percentages

		Portions fruit & veg	Year			
			2006	2010	2014	2018
year 6	male	0	8	6	6	3
		1-4	63	64	71	71
		5	29	30	24	26
	female	0	5	4	5	2
		1-4	68	69	74	65
		5	27	27	21	32
year 8	male	0	10	8	6	2
		1-4	67	71	71	77
		5	23	22	22	20
	female	0	5	3	5	1
		1-4	68	69	70	70
		5	27	28	25	30
year 10	male	0	11	10	7	2
		1-4	72	67	74	79
		5	17	24	19	19
	female	0	11	7	10	1
		1-4	75	70	72	79
		5	14	23	18	20

Physical activity

Self-assessed level of physical activity by sex: 2013 – 2019, percentages

		not at all active	not very active	fairly active	very active
male	2013	2	16	54	28
	2015	3	15	58	24
	2017	2	23	58	18
	2019	2	19	57	22
female	2013	3	20	58	20
	2015	3	21	59	17
	2017	3	25	58	15
	2019	4	20	60	16

Self-assessed level of physical activity by age group: 2013 - 2019, percentages

|		not at all active	not very active	fairly active	very active
16-34 years	2013	2	13	54	31
	2015	0	15	62	22
	2017	2	26	57	16
	2019	1	16	68	16
35-44 years	2013	1	21	59	19
	2015	1	18	56	26
	2017	1	26	53	20
	2019	4	24	47	25
45-54 years	2013	2	17	55	26
	2015	3	20	54	23
	2017	2	22	59	17
	2019	3	19	58	20
55-64 years	2013	3	17	58	23
	2015	5	19	61	15
	2017	3	21	60	16
	2019	4	18	57	21
65+ years	2013	5	23	56	15
	2015	6	21	59	14
	2017	5	24	60	11
	2019	5	22	59	14

Annex 2 -Notes

Children's BMI categories: epidemiological and clinical definitions

The height and weight measurements of children are used to calculate their Body Mass Index [BMI=height (m) * height (m) / weight (kg)]. This value is then converted into a centile, which can be used to classify each child into **underweight, healthy weight, overweight, obese or severely obese**.

There are two classification systems: clinical and epidemiological. Both of these systems use the British 1990 growth reference (UK90)[18] to determine weight status according to a child's age and sex. However, the two systems use slightly different boundaries to classify the weight categories (see diagrams below).

The **epidemiological** definition, which is used exclusively in this report, is normally used for summaries of whole cohort and population groups. The **clinical** boundaries are child-orientated and more appropriate when exploring individual movements; these are not used in this report.

Centile boundaries for each weight category – epidemiological
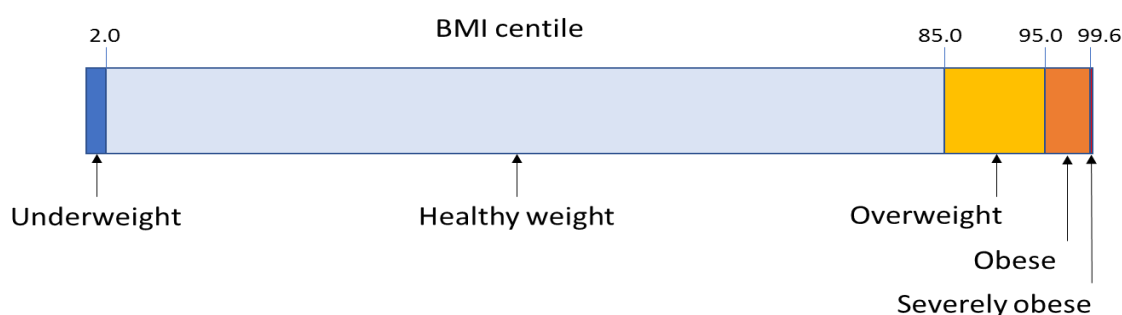
Centile boundaries for each weight category – clinical
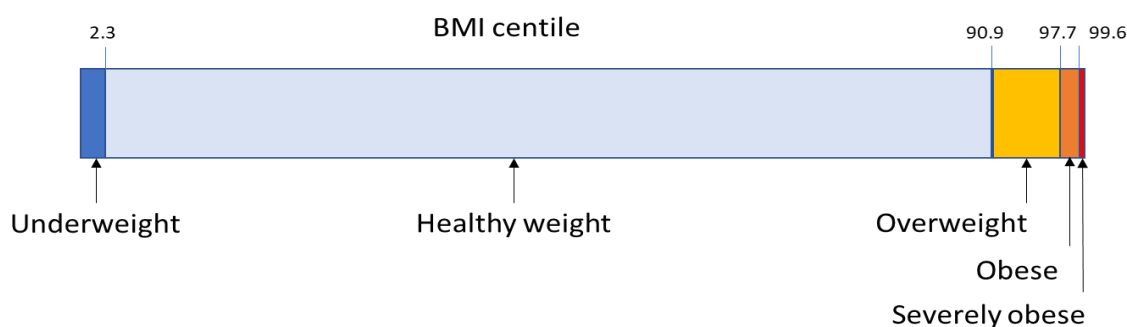
Physical activity guidelines

The UK Chief Medical Officer's physical activity guidelines published 7 September 2019 include the following:

Physical activity guidelines for children and young people
- children and young people should engage in moderate or vigorous physical activity (MVPA) **for an average of at least 60 minutes per day across the week**. This can include all forms of activity such as physical education, active travel, after-school activities, play and sports.
- children and young people should engage in a variety of types and intensities of physical activity across the week to develop movement skills, muscular fitness and bone strength.
- children and young people should aim to minimise the amount of time spent being sedentary, and when physically possible should break up long periods of not moving with at least light physical activity.

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[18] '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.

Physical activity guidelines for adults

- for good physical and mental health, adults should aim to be physically active every day. Any activity is better than none, and more is better still.
- adults should do activities to develop or maintain strength in the major muscle groups. These could include heavy gardening, carrying heavy shopping or resistance exercise. Muscle strengthening activities should be done at least two days a week, but any strengthening activity is better than none.
- **each week, adults should accumulate at least 150 minutes (2.5 hours) of moderate intensity activity** (such as brisk walking or cycling); or 75 minutes of vigorous intensity activity (such as running); or even shorter durations of very vigorous intensity activity (such as sprinting or stair climbing); or a combination of moderate, vigorous and very vigorous intensity activity.
- adults should aim to minimise the amount of time spent being sedentary, and when physically possible should break up long periods of inactivity with at least light physical activity.

Confidence intervals

Confidence intervals in public health

A confidence interval gives an indication of the likely statistical uncertainty around a value that has been calculated. A confidence interval indicates the range within which the true value for the population as a whole could be expected to lie, taking natural random variation into account.

Confidence intervals are considered when interpreting results. Comparisons between groups or over time have been tested for statistical significance. Only those differences calculated as statistically significant have been described in this report using terms such as 'increase', 'decrease', 'higher' or 'lower'.

Confidence intervals in sample surveys

The principle behind a sample survey is that by asking questions of a representative subset of a population, inferences can be drawn about the overall population without having to approach every individual. Provided the sample is representative, the results will be unbiased and accurate. However, the sample results will always have an element of statistical uncertainty because they are based on a sample and not the entire population.

For example, the statistical uncertainty on results in JOLS which refer to the whole adult population is ± 3.0 percentage points.

This means that for a question which gives a result of 50%, the 95 percent confidence interval is 47.0% to 53.0%. Rounding to zero decimal places, the result can be more simply expressed as 50 ± 3%. Put another way, it is 95% likely that the true population figure lies within ± 3% of the estimate.

For sub-samples of the population, e.g. by age band, the sampling fractions within each sub-category will vary; therefore different confidence intervals will also apply. The tables below give a summary of the confidence intervals calculated for the sub-groupings in JOLS and JCYPS (note the confidence intervals are much smaller for JYCPS as a much higher proportion of the populations in the relevant year groups completed the surveys).

JOLS Confidence Intervals in 2019

Group	95% confidence interval
all adults:	± 3%
age-band:	between ± 5% (age 65+ years) and ± 10% (age 16-34 years)
sex:	± 4% for females ± 5% for males

JCYPS Confidence Intervals in 2018

Year group and gender	95% confidence interval
Year 6 male	± 2%
Year 6 female	± 2%
Year 6 all	± 1%
Year 8 male	± 2%
Year 8 female	± 2%
Year 8 all	± 1%
Year 10 male	± 2%
Year 10 female	± 2%
Year 10 all	± 2%
male	± 1%
female	± 1%
all	± 1%