

Fruit and Vegetable Consumption

Key Findings:

- Residents in Stratford-on-Avon and Warwick Districts are more likely to eat more portions of fruit and vegetables on an average day.
- Females eat more fruit and vegetables than males, and the number of portions consumed increases with age.
- Those who report their health to be 'very good' are the most likely to consume five or more portions of fruit and vegetables per day, whereas those who report their health to be 'very poor' are most likely to eat none.
- There are also correlations between both Mosaic group and level of educational attainment and fruit and vegetable consumption.

'Living in Warwickshire' Survey - Background

As part of our work on Warwickshire's Joint Strategic Needs Assessment (JSNA), it was acknowledged that a lack of robust intelligence existed on the lifestyle characteristics of the local population and the perception of residents with regard to local public services. To address this gap in our knowledge, our Health & Wellbeing Board agreed to sponsor a large scale survey of local people which focussed on issues around 'Living in Warwickshire'.

The aim of the survey was to capture perceptions type data about life in Warwickshire, use and satisfaction with public services, and also health and lifestyle data and intelligence.

The following analysis presents the detailed survey results for this particular topic and forms part of a wider 'suite' of products which present the key findings and implications from the research.

During Autumn 2013, 25,000 surveys were sent out to a random stratified sample of households across Warwickshire. By the time of the closing date, 7,617 completed surveys were returned, resulting in a response rate of 30%. This was over 50% higher than our target response of 5,000 surveys.

Although paper surveys went sent out in the post, recipients were also given the option to complete the survey online if they wished. Just under 300 people, or 4% of all respondents, chose to complete the survey this way.

Introduction to Topic

In this question, respondents were asked to record how many portions of fruit and vegetables they consume in an average day and were given guidance on what constitutes as a portion.

Fruit and vegetables are part of a healthy and balanced diet and can help us stay healthy. The 5 A DAY message highlights the health benefits of getting five 80 gram portions of fruit and vegetables every day. 5 A DAY is based on advice from the World Health Organization, which recommends eating a minimum of 400g of fruit and vegetables a day to lower the risk of serious health problems such as heart disease, cancer, diabetes and obesity.

Currently, the National Diet and Nutrition Survey, includes questions about fruit and vegetable consumption. The survey uses a representative sample of around 1000 people (500 adults and 500 children per year) from the general population, and thus any results are produced at national level.

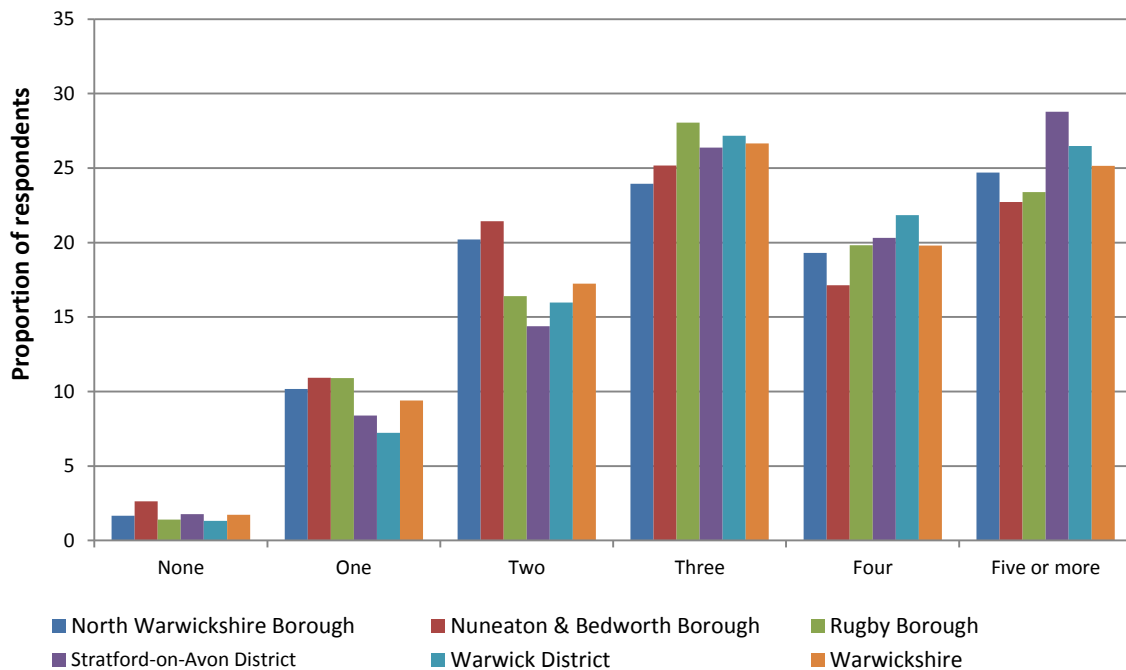
Warwickshire Overview

According to the survey respondents, 25.5% consume 5 or more portions of fruit and vegetables per day. 19.8% eat four portions and 26.6% eat three portions, indicating that 71.6% of respondents consume three or more portions of fruit and vegetables per day. 17.2% of respondents reported eating two portions, whilst 9.4% said they eat 2 portions. 1.7% of respondents reported consuming no fruit or vegetables.

When compared to the National Diet and Nutrition Survey (DH 2012) where 34% of adults consume 5 portions of fruit and vegetables per day, this indicates that residents of Warwickshire are consuming an amount of fruit and vegetables below the national average.

District/Borough Analysis

Figure 1: Average consumption of fruit and vegetables per day by district and borough



There is not a large amount of variation between the districts and boroughs, in terms of how many portions of fruit and vegetables are consumed by residents in each.

Stratford-on-Avon District has the largest proportion of the population who report eating five or more portions of fruit and vegetables per day at 28.7%, and it is the only district (along with North Warwickshire Borough) where the highest proportion of all respondents reported eating five or more portions. Nuneaton and Bedworth and Rugby Boroughs have the lowest proportion of respondents who report eating five or more portions of fruit and vegetables per day, at 22.7% and 23.4% respectively.

A lower proportion of all respondents report consuming four portions of fruit and vegetables per day than five portions and this is reflected in all districts and boroughs. Again, there is little variation between the districts and boroughs in this, but the proportion of respondents from both Nuneaton and Bedworth Borough and North Warwickshire Borough that report consuming four portions per day is lower than the Warwickshire average, at 17.1% and 24.7% respectively.

Overall, the largest proportion of respondents reported eating three portions of fruit and vegetables per day. Rugby Borough has the highest proportion of the population who report eating three portions, at 28.1%. This is followed by Warwick District (27.2%) and Stratford-on-Avon District (26.4%). Again, Nuneaton and Bedworth Borough and North Warwickshire Borough have the lowest number of respondents reporting that they eat three portions of fruit and vegetables per day, at 25.2% and 23.9% respectively and are both below the Warwickshire average.

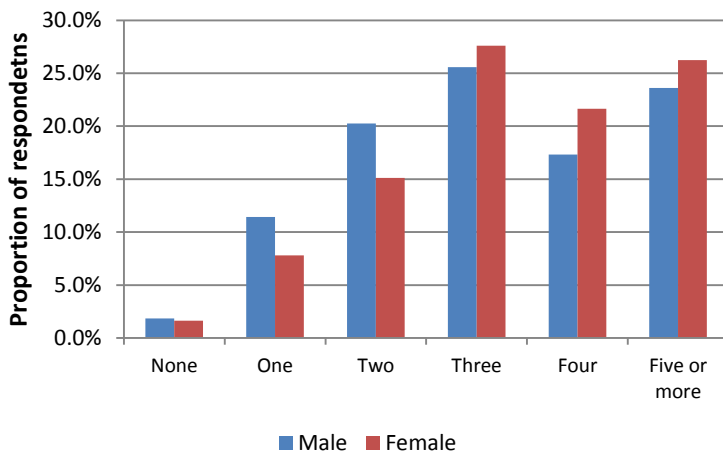
The highest level of variation in the districts and boroughs is seen in the proportion of respondents who reported eating two portions of fruit and vegetables per day. Respondents from Nuneaton and Bedworth Borough and North Warwickshire Borough represent the highest proportions in this group, with 21.4% and 20.2% of respondents who report eating two portions of fruit and vegetables per day. Both of these boroughs have a higher proportion than Warwickshire as a whole (17.2%). At 14.4% of all respondents, Stratford-on-Avon has the lowest proportion of the population who report eating two portions of fruit and vegetables per day, followed by Warwick District (16.0%) and Rugby Borough (16.4%), the three of which are all below the average proportion for Warwickshire of 17.3%.

Overall, 9.4% of the Warwickshire population report consuming one portion of fruit or vegetables on an average day. A lower than average proportion of respondents from both Warwick and Stratford-on-Avon Districts report eating one portion per day, at 8.4% and 7.2% respectively. Nuneaton and Bedworth and Rugby Boroughs both report that 10.9% of the population eat one portion of fruit and vegetables and the equivalent figure for North Warwickshire Borough is 10.1%.

Nuneaton and Bedworth Borough has the highest proportion (2.6%) of respondents who report not eating any fruit and vegetables in an average day, and it, along with Stratford-on-Avon District (1.8%), are both above the Warwickshire average (1.7%) for not consuming any fruit and vegetables.

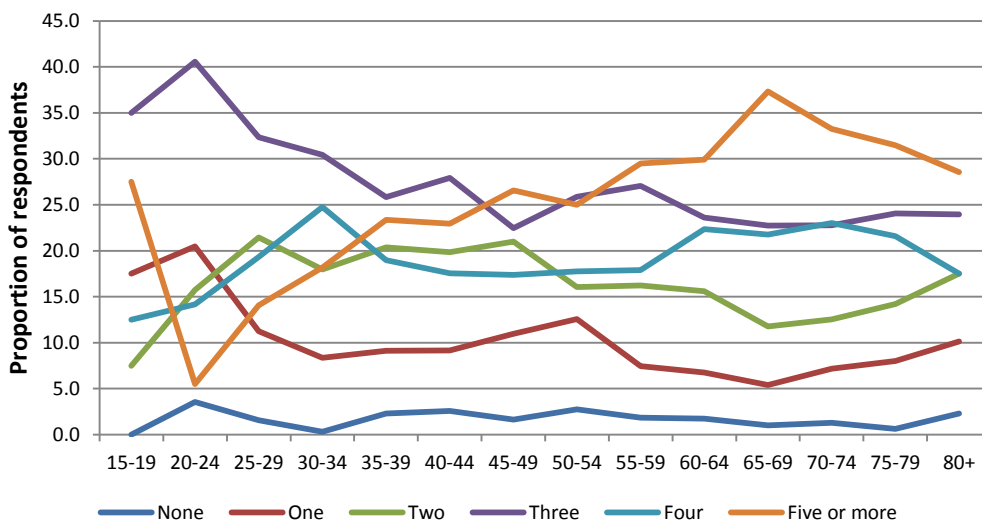
Age/Sex Breakdown

Figure 2: Average consumption of fruit and vegetables per day by gender



On average, female respondents consume more fruit and vegetables on an average day than males; in the survey, higher proportions of females than males reported eating three, four and five plus portions of fruit and vegetable per day. 75.5% of females and 66.5% of males report eating three or more portions per day. A higher proportion of males than females report eating none, one or two portions of fruit and vegetables per day, with 33.5% of males and 24.5% of females.

Figure 3: Average consumption of fruit and vegetables per day by five year age group



The proportion of respondents who report eating no fruit or vegetables on an average day generally remains fairly constant in each age band, as does, despite seeing some level of fluctuation, the proportion in each age group who report eating two or four portions.

There is a relatively clear age-related trend in the average number of fruit and vegetable portions consumed per day, and the responses indicate that as people get older, they eat more fruit and

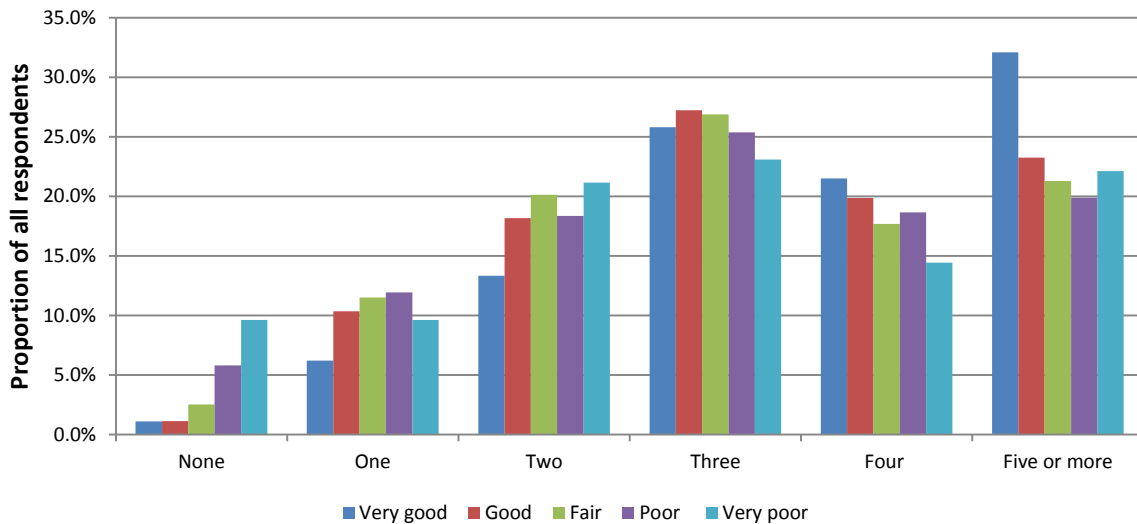
vegetables. From age 25 onwards, there is a general increase in the proportion of respondents from each age band reporting that they eat five or more portions per day.

The second largest proportion of respondents in the youngest age group, 15-19 reported eating five or more portions per day. Interestingly, this proportion reduces considerably within respondents from the 20-24 year age group. This perhaps reflects a change in the eating habits of young people who shift from being provided for by parents to shopping and cooking independently.

Other breakdowns

Health Status

Figure 4: Average consumption of fruit and vegetables per day by self-reported health status



There is a general positive correlation between those who self-reported their health as ‘very good’, and to a lesser extent those who report their health to be ‘good’, and portions of fruit and vegetables consumed per day. The majority of people who eat five or more portions per day report their health as ‘very good’, and amongst the ‘very good’ group, the largest proportion of respondents report eating the recommended five or more portions. However, within the ‘five or more’ group, a large proportion report themselves as having ‘very poor’ health, although this is also reflected in the no fruit or vegetables consumed group, where the majority of respondents self-reported their health as being ‘very poor’.

Mosaic Group

There is some variation in the number of fruit and vegetables consumed on an average day between Mosaic groups, which reflect some of the other findings.

The group: "young people renting flats in high density social housing" are most different to the others based on the amount of fruit and vegetables they consume. They also account for the

majority of those who report eating no or one portion of fruit and vegetables on an average day, reflecting the age profile analysis of fruit and vegetable consumption, again suggesting that, on average, younger people are less likely to eat larger amounts of fruit and vegetables.

The group: "lower income workers in urban terraces in often diverse areas" account for the largest proportion of respondents who report eating two and three portions of fruit and vegetables on an average day, along with the group: "young, well-educated city dwellers" also in the latter consumption category, again reflecting the age profile of fruit and vegetable consumption as mentioned earlier. This, along with a high proportion of "young people renting flats in high density social housing" eating no fruit and vegetables per day, also suggests a link between fruit and vegetable consumption and levels of deprivation.

The majority of respondents who report eating four portions of fruit and vegetables per day are from the: "successful professionals living in suburban or semi-rural homes" and "wealthy people living in the most sought-after neighbourhoods" groups, again indicating a link between socioeconomic status and fruit and vegetable consumption. The latter group are also represented in the 'five or more vegetables consumed per day' group, as well as the: "active elderly people living in pleasant retirement locations" and "residents of isolated rural communities" groups.

Other comparators:

- There is no strong relationship between the daily number of fruit and vegetables consumed and disability or long standing condition.
- A slightly higher proportion of respondents who report eating four or five or more portions of fruit and vegetables per day are those with the highest levels of educational qualification, and amongst those who report eating no or one piece of fruit and vegetables the majority are those with the lowest level of educational attainment. Despite this trend, the correlation between the two is not very strong.

What does this mean?

From a national perspective, Public Health England (PHE) is committed to helping people make healthier life choices – which supports the government ambition to reverse rising obesity levels by 2020.

In January 2014, PHE launched its [Change4Life campaign](#) to promote healthier eating habits – specifically encouraging people to replace sugary and fatty foods with fruit and vegetables. The National Institute for Health and Care Excellence (NICE) has also recently issued recommendations and guidance to promote [healthy behaviour changes](#) at an individual level, which includes diet.

Locally, Warwickshire County Council is committed to protecting the health and wellbeing of all its citizens – and supports the notion of people making healthier lifestyle choices.

Yet in the context of limited resources, local policymakers and commissioners may not be able to prioritise fruit and vegetable consumption above other behaviour changes such as smoking cessation or alcohol reduction, which have more evidenced health benefits. A specific fruit and vegetable campaign could also present financial risks to the Council should it be unsuccessful – for

example, if people were to buy more fresh produce but then not actually consume it, waste volumes would increase and the Council would be liable for increased disposal costs.

In summary, the survey yields limited evidence to warrant a change in policy or shift in resources. However, the County Council will continue to communicate the benefits of fruit and vegetable consumption as part of its wider Public Health activity and behaviour-change initiatives.

References

Department of Health. 2012. *Statistical Press Notice: National Diet and Nutrition Survey: headline results from years 1, 2 and 3 combined (2008/09 – 2010/11)*. [online] Available at: <http://www.gov.uk/government/news/statistical-press-notice-national-diet-and-nutrition-survey-headline-results-from-years-1-2-and-3-combined-2008-09-2010-11> [Accessed: 9 January 2014]