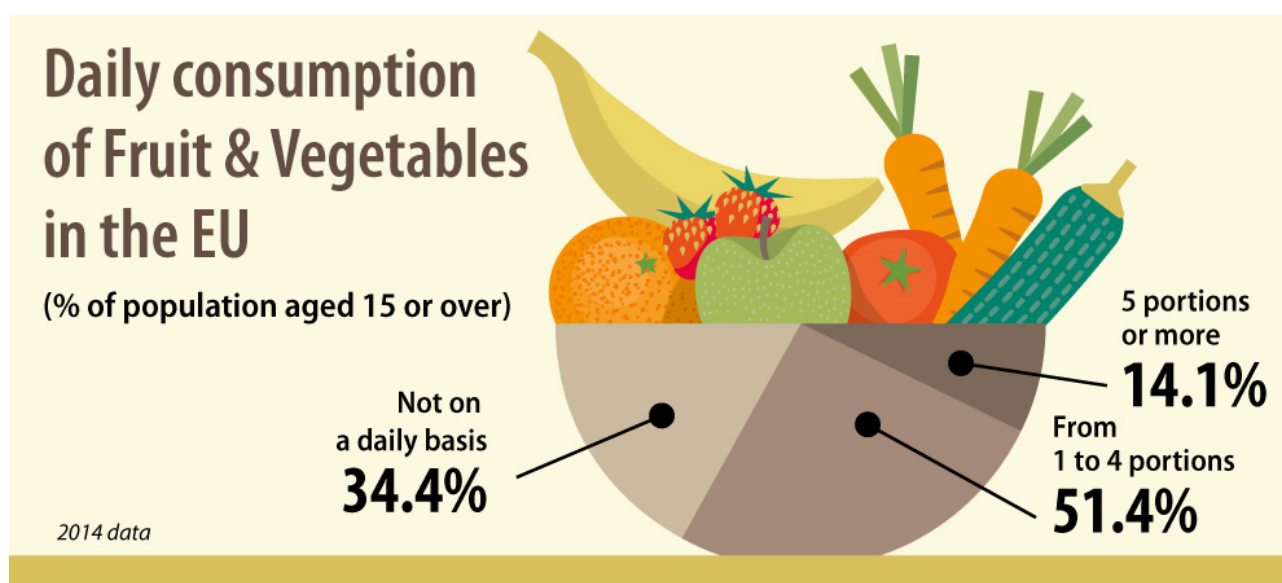


Fruit and vegetable consumption statistics

Statistics Explained

Data extracted in March 2018
Planned article update: May 2022



ec.europa.eu/eurostat

This article presents statistics on the consumption of fruit and vegetables across the [European Union \(EU\)](#). The indicators presented in the article, although reflecting only selected aspects of food habits, i.e. fruit and vegetable consumption, are used to monitor progress towards a healthy diet. They refer to the frequency of eating fruit (excluding non-fresh juice) and vegetables (excluding potatoes and non-fresh juice) as well as the number of portions of fruit and vegetables or salad consumed on a daily basis.

This article is one of a set of statistical articles concerning [health determinants](#) in the EU which forms part of an online publication on [health statistics](#).

General overview

The statistics reported in this article come from the second wave of the [European health interview survey \(EHIS\)](#), conducted between 2013 and 2015 and covering persons aged 15 and over. The data indicate differences across the EU concerning the amount and frequency of fruit and vegetables consumed, especially across sexes and different educational and income levels.

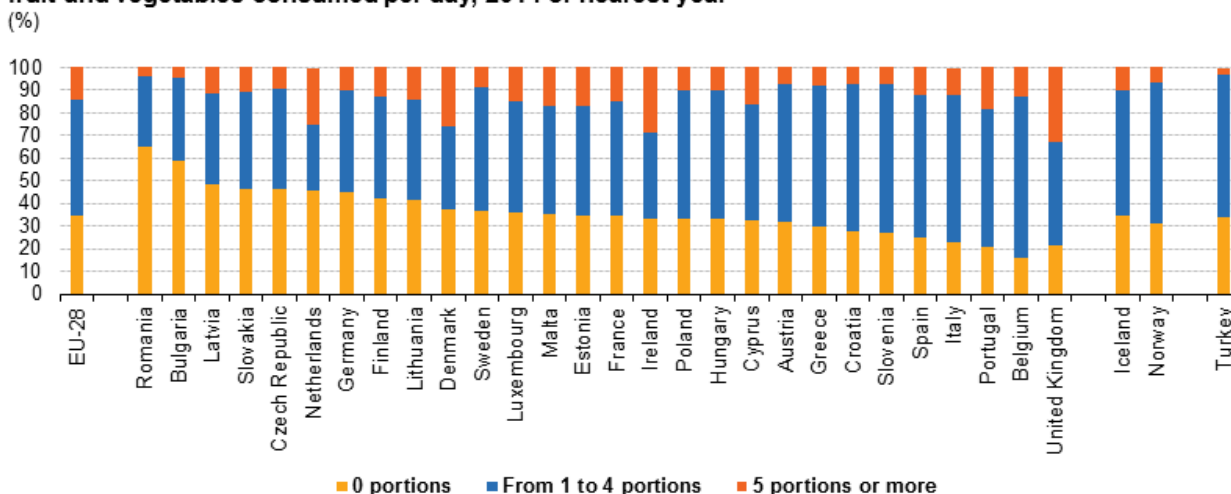
Consumption of fruit and vegetables

Almost two thirds of the EU-28 population ate at least one portion of fruit and vegetables on a daily basis

In 2014, 65.7 % of the EU-28 population aged 15 and over reported eating at least one portion of fruit and vegetables on a daily basis. This percentage varied from less than 50 % in Bulgaria and Romania to more than 75 % in Italy, the United Kingdom, Portugal and Belgium.

Figure 1 focuses on the proportion of the population according to the number of portions of fruit and vegetables consumed per day. On average, more than half of the population in the EU-28 reported that they consume from one to four portions of fruit and vegetables per day, while about one in seven persons reported a daily consumption of least five fruits and vegetables.

Distribution of persons aged 15 and over according to the number of portions of fruit and vegetables consumed per day, 2014 or nearest year



Note: ranked on the overall proportion of population consuming zero portions of fruit and vegetables per day.

Source: Eurostat (online data code: hlth_ehis_fv3e)

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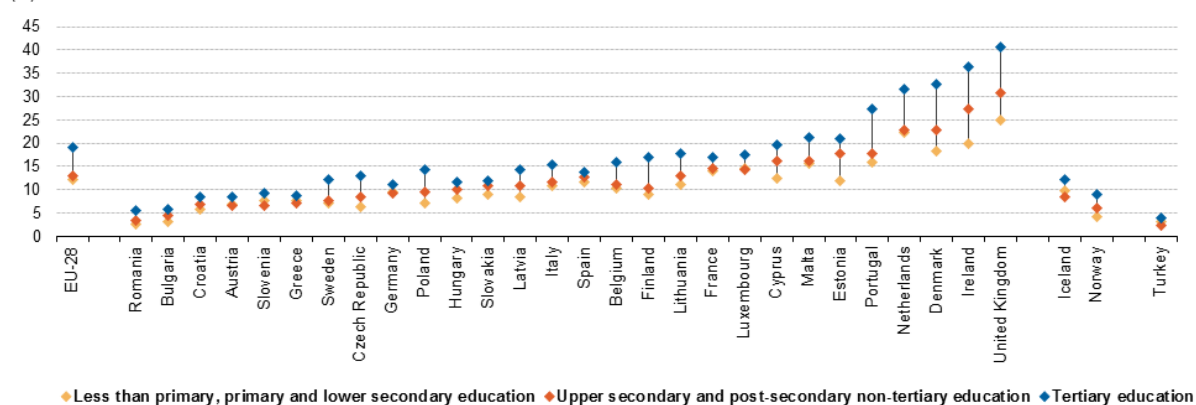
Figure 1: Distribution of persons aged 15 and over according to the number of portions of fruit and vegetables consumed per day, 2014 or nearest year (%) Source: Eurostat (hlth_ehis_fv3e)

Across the EU-28, the daily consumption of fruit and vegetables differed widely; one quarter of the population or more in the Netherlands, Denmark, Ireland and the United Kingdom consumed at least five portions of fruit and vegetables per day, compared to less than 8 % of the population in Greece, Slovenia, Austria, Croatia, Bulgaria and Romania. In contrast, more than half of the population in Bulgaria and Romania (58.6 % and 65.1 %, respectively) stated that fruit and vegetables are not included in their daily diet.

Persons with tertiary educational attainment were most likely to eat at least five portions of fruit and vegetables daily

19.0 % of the EU-28 population with high level of educational attainment reported eating at least five portions of fruit and vegetables per day in 2014, followed by those with upper secondary and post-secondary non-tertiary education (12.9 %) and those having completed at most lower secondary education (12.1 %) (see Figure 2).

Distribution of persons aged 15 and over who consume at least five portions of fruit and vegetables per day, by level of educational attainment, 2014 or nearest year (%)



Note: ranked on the overall proportion of population consuming at least five portions of fruit and vegetables per day.
 Source: Eurostat (online data code: hlth_ehis_fv3e)



Figure 2: Distribution of persons aged 15 and over who consume at least five portions of fruit and vegetables per day, by level of educational attainment, 2014 or nearest year (%) Source: Eurostat (hlth_ehis_fv3e)

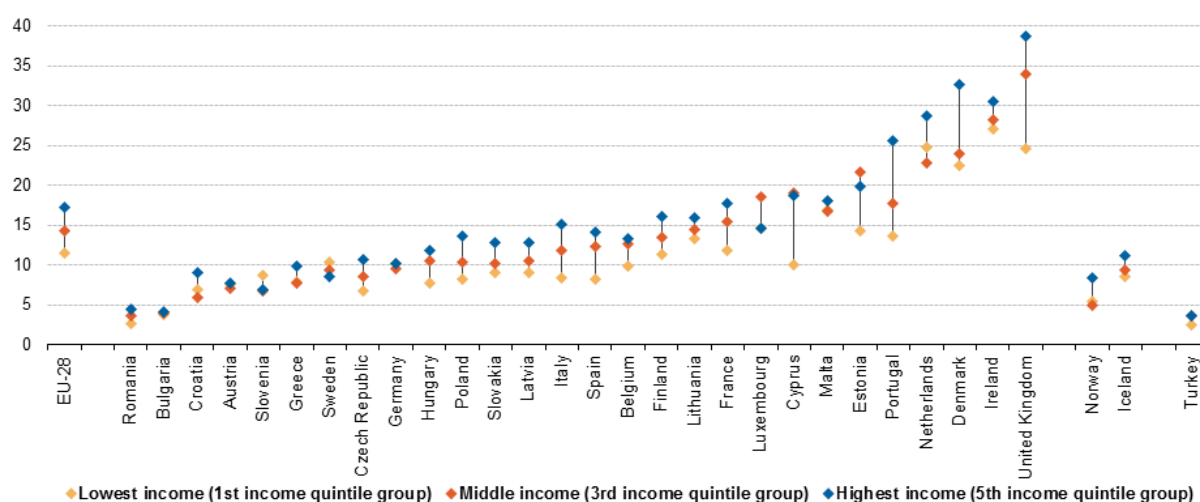
This general pattern of increasing fruit and vegetable consumption with increasing educational attainment was observed across all EU Member States, with the exception of Austria, Slovenia, Greece, Germany, Luxembourg, as well as Iceland, where the share of persons with upper secondary or post-secondary non-tertiary education was lower than that for people with a low educational level.

The largest educational gap (between those with a high and low educational level) in the share of the population reporting a daily fruit and vegetable consumption of at least five portions was recorded in Ireland (a difference of 16.5 percentage points), followed by the United Kingdom (a difference of 15.6 percentage points), Denmark (14.3 percentage points difference), Portugal (11.5 percentage points difference) and the Netherlands (9.3 percentage points difference).

The share of EU-28 population eating at least five portions of fruit and vegetables increased with increasing income

With reference to the consumption of fruit and vegetables and its relation to level of income, it is observed that, on average, the frequency of a daily intake of at least five portions of fruit and vegetables increased with increasing income (Figure 3). In 2014, 11.6 % of the EU-28 population in the first income quintile group (the 20 % of the population with the lowest income) reported a consumption of at least five portions of fruit and vegetables as part of the daily diet, compared to 14.3 % in the third income quintile group and 17.3 % in the fifth income quintile group (the 20 % of the population with the highest income).

Distribution of persons aged 15 and over who consume at least five portions of fruit and vegetables per day, by income quintile, 2014 or nearest year
(%)



Note: ranked on total proportion of population consuming fruit and vegetables on a daily basis.
Source: Eurostat (online data code: hlth_ehis_fv3i)



Figure 3: Distribution of persons aged 15 and over who consume at least five portions of fruit and vegetables per day, by income quintile, 2014 or nearest year (%) Source: Eurostat (hlth_ehis_fv3i)

In all but six EU Member States (Slovenia, Sweden, Germany, Luxembourg, Cyprus and Estonia) the highest shares were recorded in the fifth income quintile group, the lowest shares for the first income quintile group, and shares for the third income quintile group lying between these two. Among the remaining countries, an opposite pattern is observed in Slovenia and Sweden, where the highest shares were recorded for persons in the lowest income quintile group, while in Cyprus and Estonia, the respective share was higher for persons in the third income quintile group than those in either of the two other income quintile groups. In Germany and Luxembourg, the population in the first and fifth income quintile groups shared the same proportion (both 10.2 % and 14.6 %, respectively).

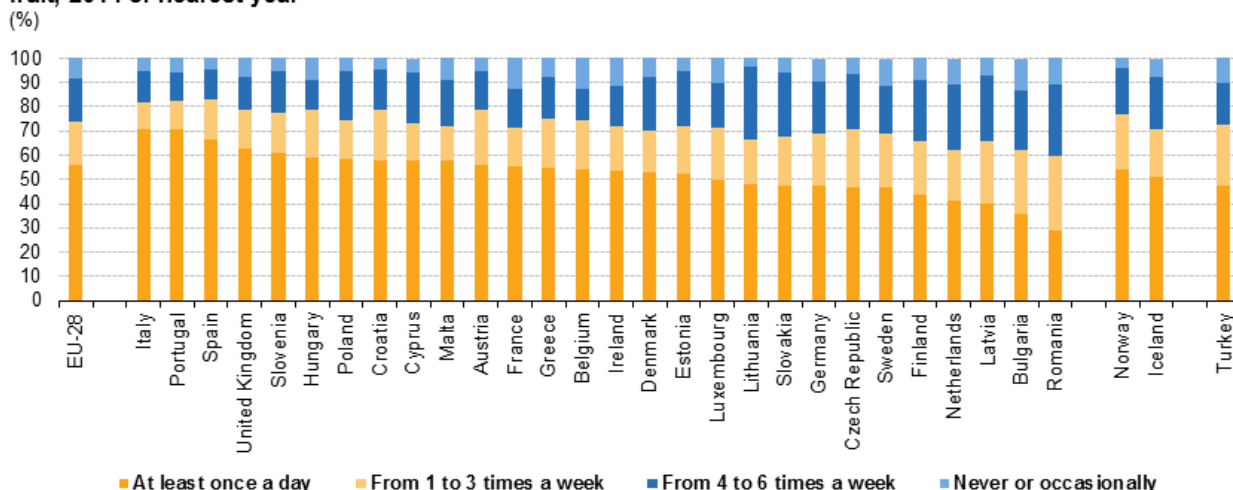
Fruit consumption

In most EU Member States, more than half of the population ate fruit at least once a day

Focusing solely on the frequency of fruit consumption, it is observed that the percentage of the population aged 15 and over who reported consuming fruit occasionally or never doing so, did not exceed 14 % in any of the EU countries.

More specifically, in 17 out of 28 EU Member States the share of the population eating fruit at least once a day exceeded 50 %. This share varied from more than 65 % in Spain, Portugal and Italy to less than 40 % in Latvia, Bulgaria and Romania (see Figure 4). In the latter three countries, more than one quarter of the population reported a less frequent consumption of fruit ranging from one to three times a week. On the other side of the spectrum, the lowest proportions of fruit consumption at a frequency of one to three times per week were recorded in Italy (11.1 %), Portugal (11.7 %), Malta (14.2 %) and Cyprus (14.9 %).

Distribution of persons aged 15 and over according to the frequency of consumption of fruit, 2014 or nearest year



Note: ranked on the overall proportion of population consuming fruit at least once a day.

Source: Eurostat (online data code: hlth_egis_fv1e)

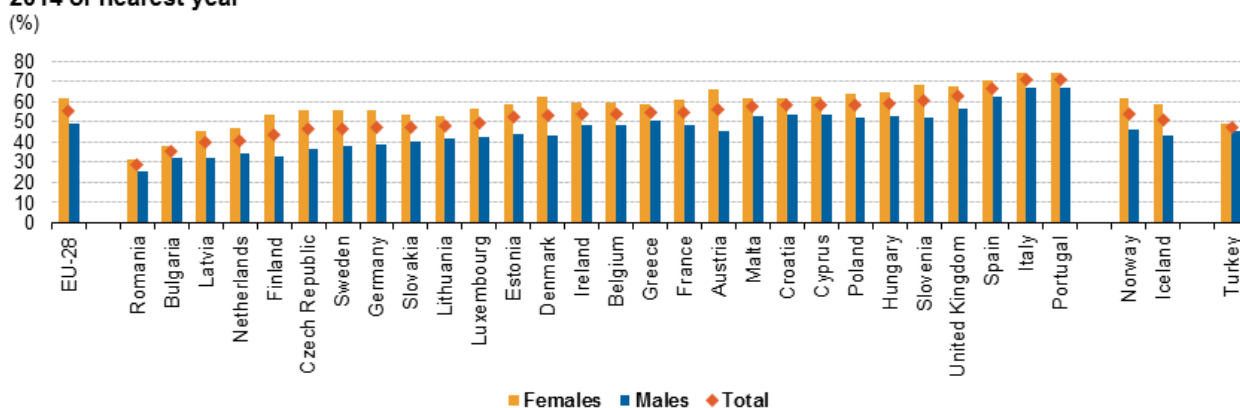
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Figure 4: Distribution of persons aged 15 and over according to the frequency of consumption of fruit, 2014 or nearest year (%) Source: Eurostat (hlth_egis_fv1e)

More women than men consume fruit on a daily basis

Women were more likely than men to report eating fruit at least once a day. On average, the percentage of women reporting at least daily fruit consumption was 61.5 %, while the respective share for men was slightly less than 50 % — see Figure 5.

Percentage of persons aged 15 and over who consume fruit at least once a day, by sex, 2014 or nearest year



Note: ranked on the overall proportion of population consuming fruit on a daily basis.

Source: Eurostat (online data code: hlth_egis_fv1e)

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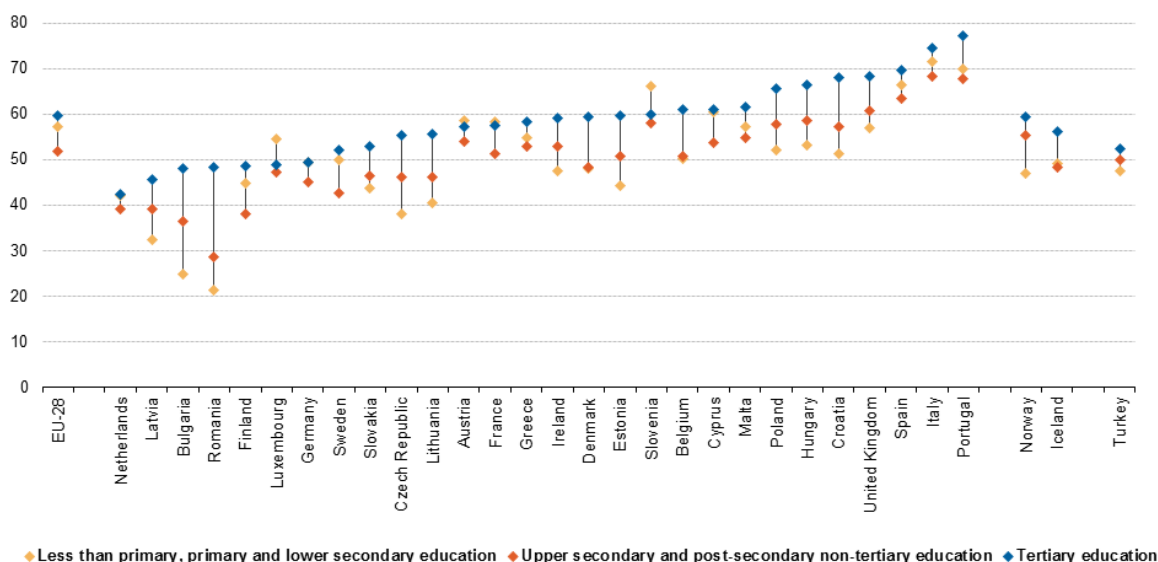
Figure 5: Percentage of persons aged 15 and over who consume fruit at least once a day, by sex, 2014 or nearest year (%) Source: Eurostat (hlth_egis_fv1e)

At country level, data indicate that women consistently recorded higher percentages than men concerning at least daily fruit consumption. The difference in the proportions of women and men eating fruit at least once per day was larger in Denmark, the Czech Republic, Finland and Austria (a difference of 18 percentage points or more). By contrast, the lowest gender gaps were observed in Romania, Bulgaria and Italy (a difference of 7 percentage points or less).

The highest educational gap between low and high educated persons eating fruit at least once a day was recorded in Romania

In 2014, fruit consumption habits differed by the level of education attained by the population. When the highest level of education completed was at most upper secondary and post-secondary non-tertiary education, the percentage of the EU-28 population aged 15 and over who reported eating fruits at least once a day was 52 % (Figure 6). The same proportion was 5.4 percentage points higher for those having completed at most lower secondary education (57.4 %) and 7.7 percentage points higher for persons with tertiary educational attainment (59.7 %).

Percentage of persons aged 15 and over who consume fruit at least once a day, by level of educational attainment, 2014 or nearest year (%)



Note: ranked on the proportion of population with higher education attainment consuming fruit on a daily basis.
Source: Eurostat (online data code: hlth_ehis_fv1e)



Figure 6: Percentage of persons aged 15 and over who consume fruit at least once a day, by level of educational attainment, 2014 or nearest year (%) Source: Eurostat (hlth_ehis_fv1e)

A closer look at country level reveals that this pattern was universal across all EU countries, except for Slovenia, Luxembourg, Austria, France and Germany, where the highest shares were recorded for low educated persons, followed by high educated persons and persons having completed upper secondary or post-secondary non-tertiary education.

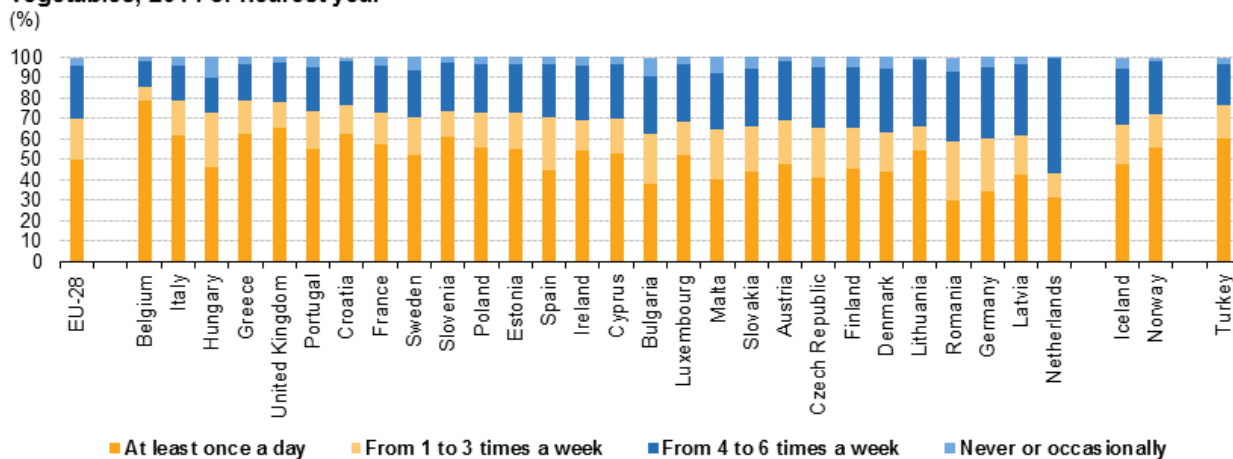
Differences between higher and lower educated people exceeded 15 percentage points in Lithuania, Estonia, Croatia, the Czech Republic and Bulgaria, peaking at 27 percentage points in Romania.

Vegetable consumption

More than three quarters of the population in Belgium consumed vegetables at least once a day

In 2014, slightly more than half of the population aged 15 and over across the EU-28 reported eating vegetables at least once a day, 19.5 % of the same population consumed vegetables from one to three times a week, and another 26.2 % declared a less frequent consumption ranging from four to six times a week — see Figure 7. In comparison with fruit consumption, vegetables are more widely included in the diet of Europeans, since the percentage of those either not eating vegetables at all or only occasionally doing so was 4.1 % (the respective share for fruit was 8.2 %).

Distribution of persons aged 15 and over according to the frequency of consumption of vegetables, 2014 or nearest year



Note: ranked on the overall proportion of population consuming vegetables at least once a day.

Source: Eurostat (online data code: hlth_egis_fv1e)



Figure 7: Distribution of persons aged 15 and over according to the frequency of consumption of vegetables, 2014 or nearest year (%) Source: Eurostat (hlth_egis_fv1e)

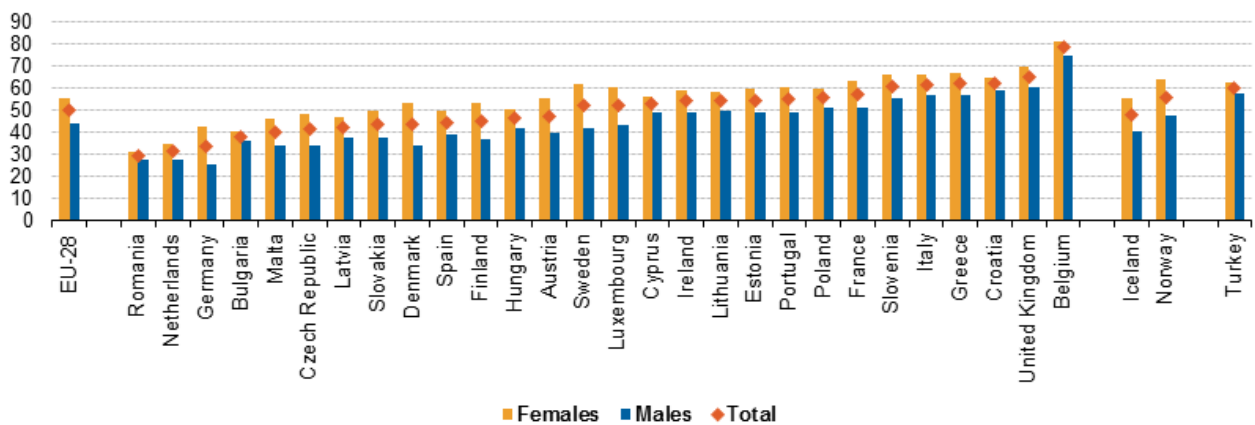
At Member State level and with reference to the frequency of consumption of vegetables presented in Figure 7, it should be noted that the vast majority of countries recorded their highest percentages for persons whose diet included a daily consumption of vegetables, while in the Netherlands, Germany and Romania, the highest rates were observed among people eating vegetables from four to six times a week.

More specifically, persons consuming vegetables at least once a day accounted for between 29.6 % in Romania to 78.5 % in Belgium. High rates for the population eating vegetables from one to three times per week were observed in Romania (29.3 %), Hungary (26.5 %), Spain (26.3 %) and Germany (26.0 %).

A higher proportion of women than men consumed vegetables at least once a day in each of the EU Member States

Figure 8 explores the relation between vegetable consumption and gender. Gender is a factor that is related to vegetable consumption since there is a clear picture as regards differences between the two sexes. Similarly to fruit consumption, the proportion of females eating vegetables at least once a day in 2014 was higher than that for males across all EU-28 countries. On average, the difference between the two sexes was 11.7 percentage points, while at national level such differences varied from 3.7 percentage points in Romania to 19.4 percentage points in Sweden.

Percentage of persons aged 15 and over who consume vegetables at least once a day, by sex, 2014 or nearest year
(%)



Note: ranked on the overall proportion of population consuming vegetables on a daily basis.
Source: Eurostat (online data code: hlth_ehis_fv1e)

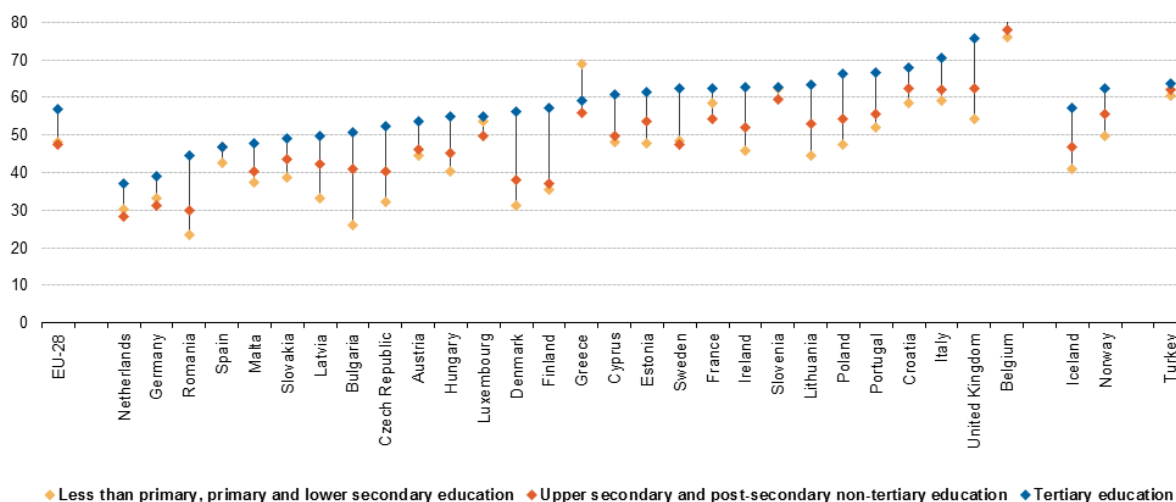


Figure 8: Percentage of persons aged 15 and over who consume vegetables at least once a day, by sex, 2014 or nearest year (%) Source: Eurostat (hlth_ehis_fv1e)

More persons with tertiary educational attainment ate vegetables at least once a day compared to people with either of the two lower educational levels

Similarly to the pattern observed for fruit consumption, in the EU-28, 47.4 % population having completed upper secondary or post-secondary education reported eating vegetables at least daily in 2014; this share reached 48.2 % for those having completed at most lower secondary education and 56.9 % for those with tertiary education (Figure 9).

Percentage of persons aged 15 and over who consume vegetables at least once a day, by level of educational attainment, 2014 or nearest year (%)



Note: ranked on the proportion of population with higher education attainment consuming vegetables on a daily basis.
Source: Eurostat (online data code: hlth_ehis_fv1e)



Figure 9: Percentage of persons aged 15 and over who consume vegetables at least once a day, by level of educational attainment, 2014 or nearest year (%) Source: Eurostat (hlth_ehis_fv1e)

This general pattern, where the share of persons with upper secondary and post-secondary non-tertiary education was lower than for people in either of the two other educational levels, was evident across all the EU Member States. A notable exception was Greece, where people having completed at most lower secondary education reported eating vegetables at least once a day (69.0 %) more frequently, as compared to those with tertiary education (59.3 %) and those with upper secondary and post-secondary non-tertiary education (55.8 %).

Source data for tables and graphs

- [Fruit and vegetables consumption: tables and figures](#)

Data sources

The data come from the second wave of the [European health interview survey \(EHIS\)](#) . The second wave of the EHIS was conducted in all EU Member States during 2013–2015 according to [European Commission Regulation \(EU\) No 141/2013](#) and its subsequent amendment to take account of the accession of Croatia to the EU ([European Commission Regulation \(EU\) No 68/2014](#)).

The general coverage of the EHIS is the population aged 15 or over living in private households residing in the national territory. This source is documented in more detail in this [background article](#) which provides information on the scope of the data, its legal basis, the methodology employed, as well as related concepts and definitions.

The EHIS measures a range of indicators in relation to health determinants aside from fruit and vegetable consumption, such as tobacco and alcohol consumption, the body mass index (BMI), as well physical activity performance.

Limitations of the data

According to article 4.3 of the [European Commission Regulation \(EU\) No 141/2013](#) implementing EHIS, the data collection period of the survey should be spread over at least three months, including at least one month of the autumn season. Across countries, the data collection period was spread over 2013 and 2015, and lasted from three to 21 months. Overall, the vast majority of responses were collected during the autumn season, followed by winter

(December–February), spring (March–May) and summer (June–August) season. Since fruit and vegetables ripen during a certain season each year, seasonal variation in which the survey was undertaken across countries may have affected reports on consumption behaviours.

Context

A well-balanced diet including daily consumption of fruit and vegetables is an important determinant of health contributing to the prevention of chronic diseases, such as heart diseases, cancer, diabetes and obesity.

The [European platform for action on diet, physical activity and health](#), a forum established by the [European Commission](#) in 2005 for supporting the sharing of initiatives among European-level organisations, sets out priorities on nutrition and physical activity. Among others, those include the increase in the consumption of fruit, vegetables, nuts and grains, and the reduction of salt, sugar and fats. More specifically, the [World Health Organisation](#) recommends a daily intake of five portions (400 g) of fruit and vegetables.

In 2007, the White Paper on a [Strategy for Europe on nutrition, overweight, and obesity-related health issues](#) (COM(2007) 279 final) was adopted in order to promote an integrated EU approach focusing on healthy diets and physical activity. The White Paper establishes actions for the promotion of the consumption of fruit and vegetables especially in schools and in the workplace.

In view of monitoring the progress made towards the implementation of the Strategy, an evaluation process was undertaken during the period 2007–2011 which is reflected in the 2013 report on the [Evaluation of the implementation of the Strategy for Europe on Nutrition, Overweight and Obesity related issues](#). [Council Conclusions on Nutrition and Physical Activity](#) were published in 2014.

Indicators on the consumption of fruit and vegetables are included in the determinants of health chapter of the [European core health indicators \(ECHI\)](#).

See also

Online publications

- [Health in the European Union – facts and figures](#)
- [Disability statistics](#)

Methodology

- [European health interview survey](#)

General health statistics articles

- [Health statistics introduced](#)
- [Health statistics at regional level](#)
- [The EU in the world — health](#)

Database

- [Health determinants \(health_det\)](#)

Consumption of fruits and vegetables (hlth_cfv)

Dedicated section

- [Health](#)
- [Health status and determinants](#)

Publications

- [Health statistics — Atlas on mortality in the European Union](#)
- [1 in 7 persons aged 15 or over eats at least 5 portions of fruit or vegetables daily — News release](#)

Methodology

- [European health interview survey \(EHIS\) \(ESMS metadata file — hlth_det_esms\)](#)
- [European Health Interview Survey \(EHIS wave 2\) — Methodological manual — 2013 edition](#)

External links

- [Evaluation of the implementation of the Strategy for Europe on Nutrition, Overweight and Obesity related issues](#)
- [European Commission — Directorate-General for Health and Food Safety — European Core Health Indicators \(ECHI\) \(ECHI 49 'Consumption of fruit' \)](#)
- [European Commission — Directorate-General for Health and Food Safety — European Core Health Indicators \(ECHI\) \(ECHI 50 'Consumption of vegetables' \)](#)
- [European Commission — Directorate-General for Health and Food Safety — Public health — Nutrition and physical activity](#)
- [World Health Organisation — Unhealthy diet](#)
- [World Health Organisation — Promoting fruit and vegetable consumption around the world](#)