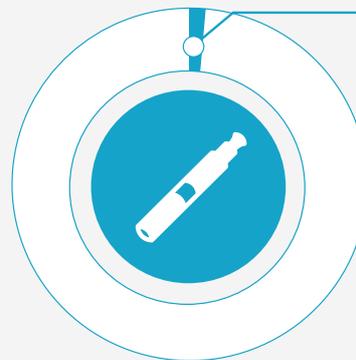
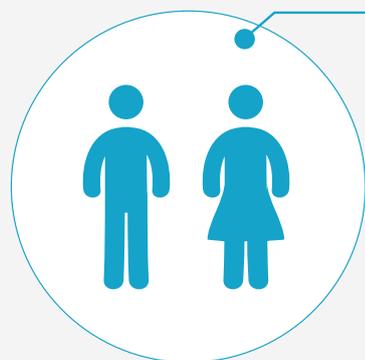
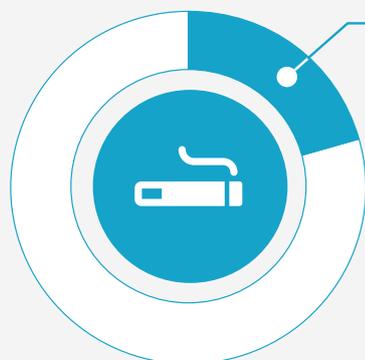


# SMOKING IN THE NETHERLANDS: KEY STATISTICS FOR 2021

STATISTICS ON SMOKING, SMOKING CESSATION, AND  
THE USE OF E-CIGARETTES IN THE NETHERLANDS

## SMOKING IN THE NETHERLANDS



## NETHERLANDS EXPERTISE CENTRE FOR TOBACCO CONTROL

The Netherlands Expertise Centre for Tobacco Control (NET) is part of the Trimbos Institute. The Centre develops, collates, and disseminates independent knowledge on all aspects of tobacco use and tobacco control to health professionals, scientists, and public officials in the Netherlands. These dissemination activities include sharing information about tobacco usage, prevention options, treatment of tobacco addiction, and policy options.



## SMOKING IN THE NETHERLANDS: KEY STATISTICS FOR 2021

This bulletin outlines key statistics on smoking, smoking cessation, tobacco smoke exposure, and e-cigarette (electronic cigarette) use among adults in the Netherlands in 2021. It is an English-language translation of the [Dutch language version](#) of the bulletin. All statistics are derived from the Health Survey database, which is part of the Netherlands Lifestyle Monitor data collection.<sup>1</sup>

### THE NETHERLANDS LIFESTYLE MONITOR

The Lifestyle Monitor consists of multiple data sources. One of these sources is the Health Survey, conducted by Statistics Netherlands. The Trimbos Institute and Statistics Netherlands are part of the Lifestyle Monitor Consortium, which is responsible for the content and data collection of the Lifestyle Monitor. This effort is coordinated by the National Institute for Public Health and the Environment (RIVM) and has been commissioned by the Ministry of Health, Welfare and Sport in the Netherlands.

### THE ANNUAL HEALTH SURVEY

The Health Survey is an annual survey of the population of the Netherlands, which has been conducted by Statistics Netherlands since 1981. Statistics Netherlands collects data on the health of the population of the Netherlands through an annual random, representative sample from the municipal population registry (Personal Records Database). Respondents are first approached to participate in the survey via internet. A selection of those who were invited to participate in the survey but did not respond were approached for a face-to-face interview.

In 2020 and 2021, the coronavirus crisis impacted Health Survey's data collection efforts. In both years, researchers were unable to conduct surveys face-to-face in respondents' homes for a number of weeks. In order to ensure that data was representative of the population in the Netherlands, the weight model was changed. More information can be found on [the website of the Trimbos Institute](#) (in Dutch).

The data provides key national statistics on smoking, smoking cessation, and the use of e-cigarettes by the population of the Netherlands. A total of 6,797 people aged 18 years or older completed the Health Survey in 2021. More information about the survey methods used to collect

data for the Health Survey can be found on [the website of Statistics Netherlands](#).<sup>2</sup>

### THE ROLE OF THE TRIMBOS INSTITUTE

The Trimbos Institute publishes key national statistics on smoking, alcohol use, and drug use. Key smoking statistics include, but are not limited to, smoking rates, trends in the number of quit attempts, and the number of adults who use e-cigarettes. Both local and national government authorities in the Netherlands use these statistics to monitor tobacco use and how control policies work. Experts at the Trimbos Institute used the data from the Health Survey to calculate the statistics presented in this bulletin.

This bulletin presents separate statistics for 'smokers' (which include both daily and non-daily smokers) and 'daily smokers' (who smoke every day); this bulletin also presents key statistics on e-cigarette use. All statistics describe the population aged 18 years and older in 2021. In many figures, 2021 data is compared with data from the year before (2020) and the year in which the Lifestyle Monitor consortium started collecting data (2014). Subgroups are compared based on gender, education, age, and migration background. A selection of the statistics have also been published on [the 'State of Public Health and Health Care' website](#) (in Dutch).<sup>3</sup> The linked website includes all relevant statistics used by the Ministry of Health, Welfare and Sport to monitor relevant health policies.

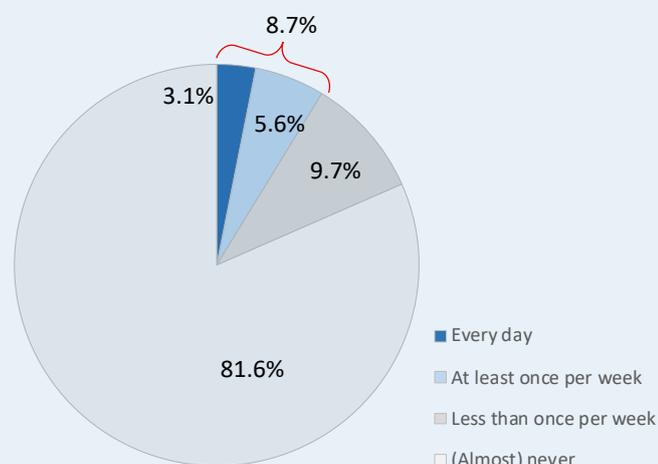
### WHAT IS MEANT BY 'SIGNIFICANT'?

This bulletin sometimes describes differences as 'significant'. By that, it is meant that these differences are *statistically* significant. Differences are statistically significant if the odds are very small that these differences are caused by mere chance. This bulletin frequently compared data of more than one year (2014, 2020, and 2021); if differences between years are significant, this is noted in the text.



## SMOKING IN THE NETHERLANDS

Figure 1. Smoking rate among adults in the Netherlands in 2021



**Note:** Approximately 20.6% of adults in the Netherlands smoked in 2021. This includes 15.2% daily smokers and 5.4% occasional (non-daily) smokers. Of people in the Netherlands who reported smoking, 73.9% smoked every day.

Table 1. Estimated number of smokers in 2021

|                      | Estimation | Lower limit | Upper limit |
|----------------------|------------|-------------|-------------|
| <b>All smokers</b>   | 2,850,000  | 2,689,000   | 3,012,000   |
| Lower education      | 723,000    | 636,000     | 810,000     |
| Middle education     | 1,194,000  | 1,084,000   | 3,884,000   |
| Higher education     | 841,000    | 749,000     | 932,000     |
| <b>Daily smokers</b> | 2,106,000  | 1,962,000   | 2,250,000   |
| Lower education      | 651,000    | 568,000     | 734,000     |
| Middle education     | 903,000    | 805,000     | 1,000,000   |
| Higher education     | 470,000    | 399,000     | 541,000     |

**Note:** About 2.9 million people in the Netherlands aged 18 and over smoked in 2021. As this is an estimation, Table 1 also shows lower and upper limits of the number of adults in the Netherlands who smoked. Since the educational attainment of some people who smoked in 2021 is not known, the totals of the three education groups do not equal the total group of smokers.

Figure 2. Smoking rates over time among adults in the Netherlands

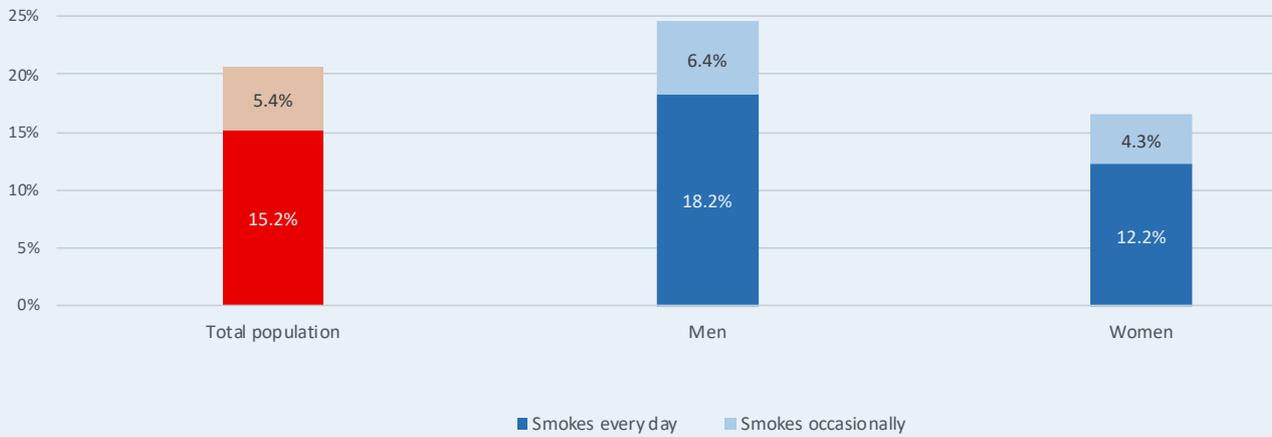


**Note:** Both the overall smoking rate and the daily smoking rates did not change significantly\* between 2020 and 2021. The adult smoking rate has decreased significantly between 2014 and 2021. As well, the proportion of people who smoke *every day* decreased significantly in that same period. The proportion of occasional smokers has not increased or decreased significantly over time.

\* A definition of significance has been provided on page 2.

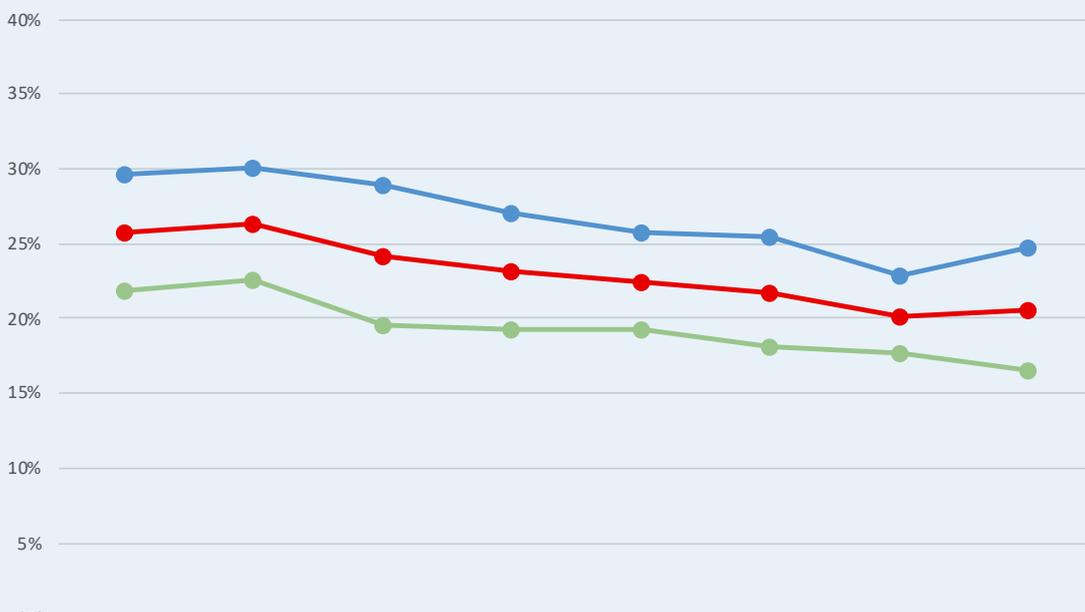


Figure 3. Smoking rates in 2021 by gender



**Note:** Significantly more men in the Netherlands reported smoking than women. In addition, more men reported smoking every day. Due to rounding, some of the percentages do not add up to their total. This figure displays the smoking rate of the total population of the Netherlands in red for comparison.

Figure 4. Smoking rates over time by gender

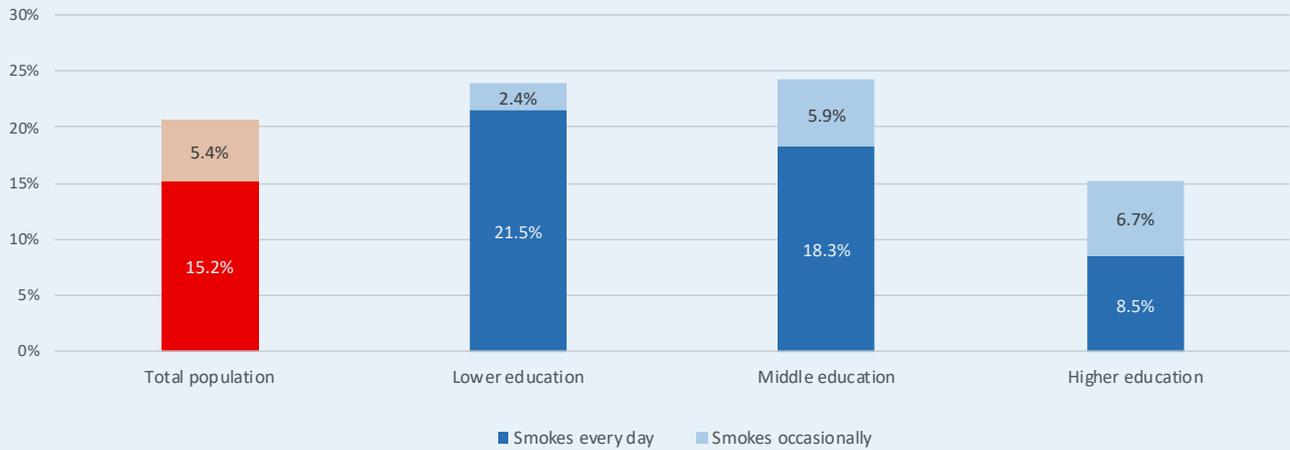


|                  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  | 2021  |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Men              | 29.6% | 30.0% | 28.9% | 27.0% | 25.7% | 25.4% | 22.8% | 24.7% |
| Women            | 21.9% | 22.6% | 19.5% | 19.2% | 19.2% | 18.1% | 17.7% | 16.6% |
| Total population | 25.7% | 26.3% | 24.1% | 23.1% | 22.4% | 21.7% | 20.2% | 20.6% |

**Note:** In the Netherlands between 2020 and 2021, the smoking rate did not change significantly for both men and women. However, smoking rates did decrease significantly between 2014 and 2021 for both men and women. This figure displays the smoking rate of the total population of the Netherlands in red for comparison.

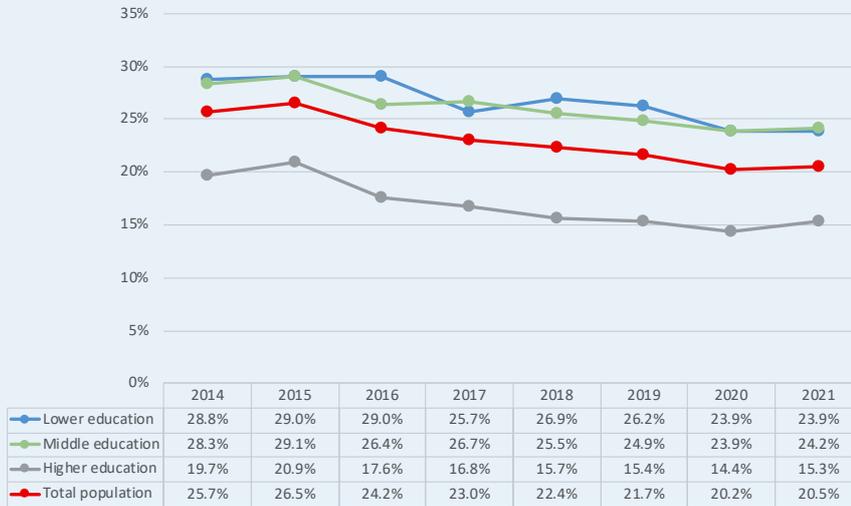


Figure 5. Smoking rates in 2021 by education



**Note:** In the Netherlands, smoking rates are significantly higher among people with lower or middle levels of education than among people with higher education. Daily smoking rates differ in all three education groups. This figure displays the smoking rate of the total population of the Netherlands in red for comparison.

Figure 6. Smoking rates over time by education



**Note:** Between 2020 and 2021, the smoking rates remained about the same in all three education groups in the Netherlands. However, smoking rates decreased significantly between 2014 and 2021 among all three groups. This figure displays the smoking rate of the total population of the Netherlands in red for comparison.

**WHAT ARE LOWER, MIDDLE, AND HIGHER LEVELS OF EDUCATION IN THE NETHERLANDS?**

This bulletin presents information about people who smoke and educational levels in the Netherlands. A description of the educational level categories is below:

**Lower education:**  
Elementary school, lower secondary education or lower vocational education

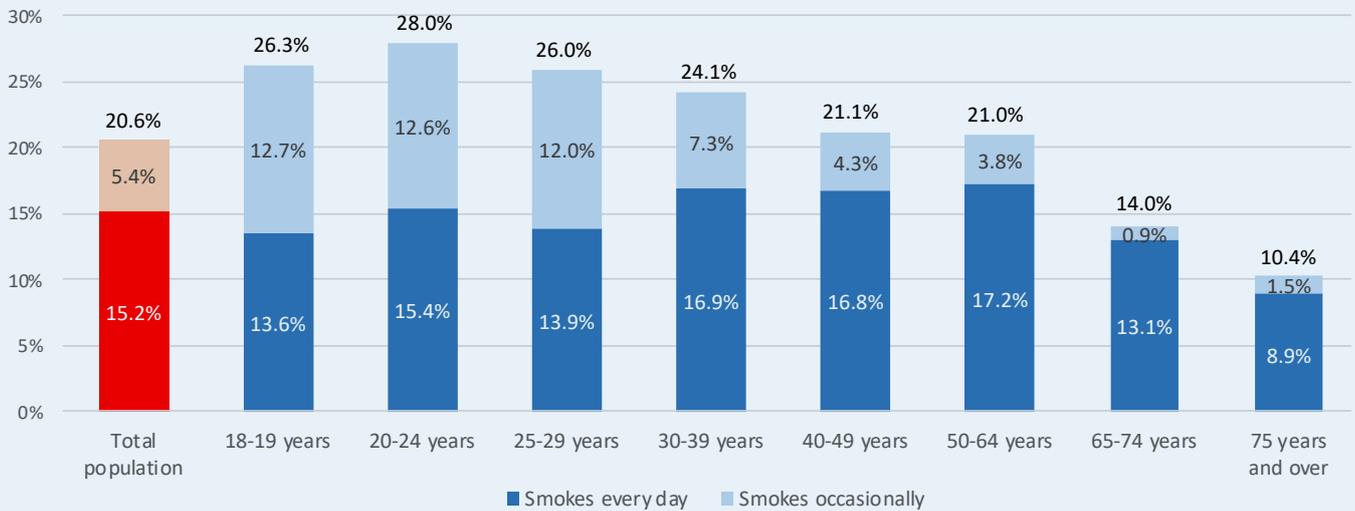
**Middle education:**  
Intermediate vocational education or higher secondary education

**Higher education:**  
Higher vocational education or university

In this bulletin, people were grouped in three levels of education. Among people aged 18 to 24, we used the highest level of education they either completed or are currently studying to attain. Among people aged 25 and over, we only used the highest level of education completed.

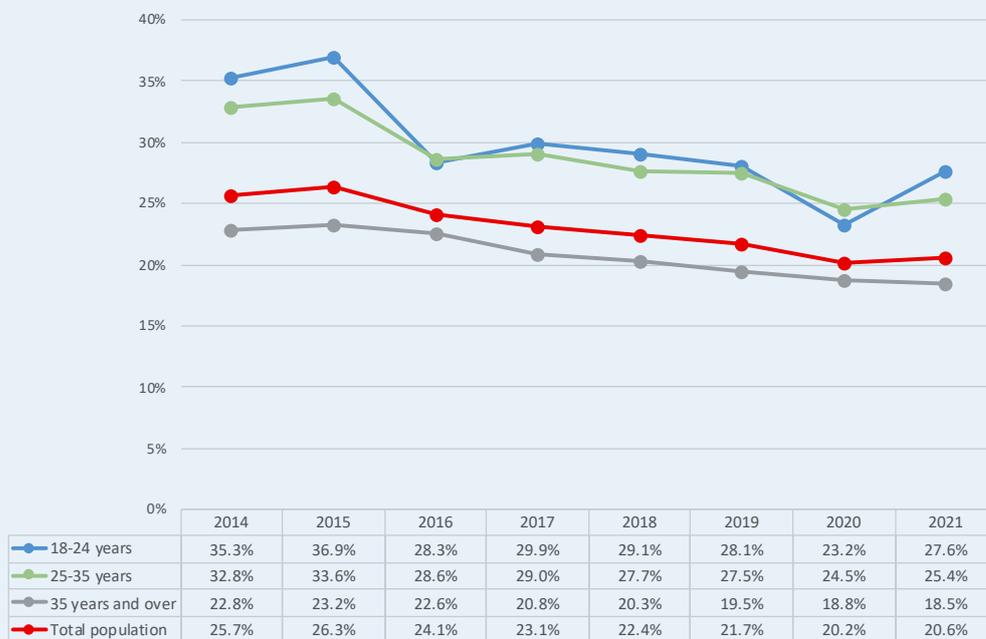


Figure 7. Smoking rates in 2021 by age



**Note:** In the Netherlands, 1 out of 4 people aged 18 to 29 reported smoking in 2021. About half of those reported smoking every day. People aged 75 and over were least likely to report smoking. In general, older smokers were more likely to smoke every day. This figure displays the smoking rate of the total population of the Netherlands in red for comparison.

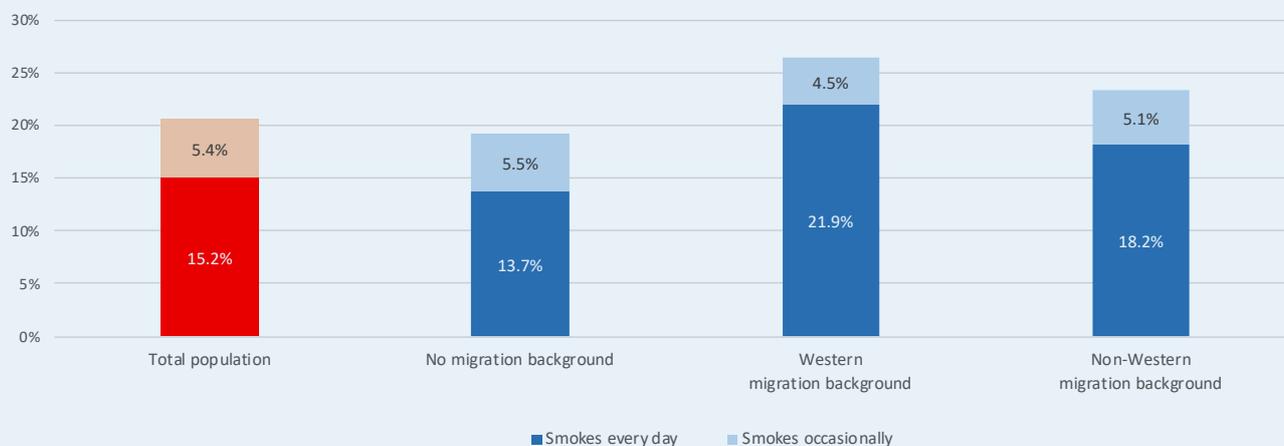
Figure 8. Smoking rates over time by age



**Note:** In none of the age groups the smoking rate changed significantly between 2020 and 2021. In the Netherlands, the smoking rates decreased significantly in all three age groups between 2014 and 2021. This figure displays the smoking rate of the total population of the Netherlands in red for comparison.

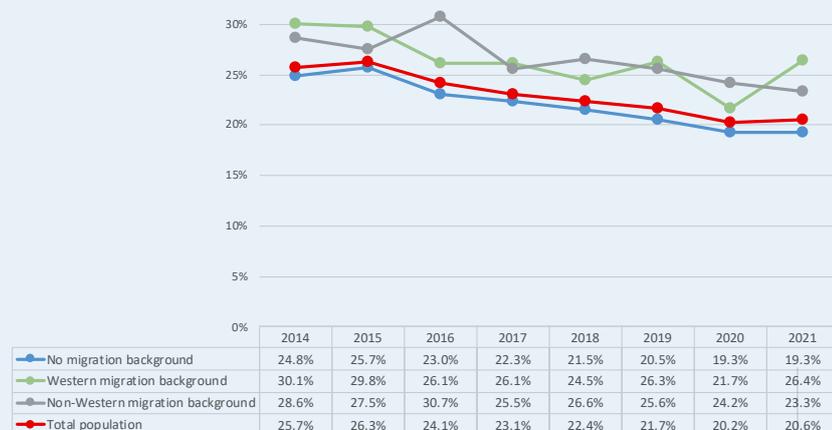


Figure 9. Smoking rates in 2021 by migration background



**Note:** In the Netherlands, both overall smoking rates and daily smoking rates were higher among people with either a Western or non-Western migration background than among people with no migration background. We found no significant differences between people with a Western migration background and people with a non-Western migration background. This figure displays the smoking rate of the total population of the Netherlands in red for comparison.

Figure 10. Smoking rates over time by migration background



**Note:** Between 2020 and 2021, smoking rates decreased significantly among people with a Western migration background. They remained about the same among people with no migration background, and a non-Western background. Between 2014 and 2021, smoking rates significantly decreased among people with no migration background and people with a non-Western migration background. It remained the about same among people with a Western migration background.

*Caution:* While a relatively small group of people with a non-Western migration background participate in the study each year (2021: 855 respondents), statistics for these groups tend to fluctuate more over time. When interpreting statistics for smaller groups such as those presented here, it is important to focus on long-term trends only. This figure displays the smoking rate of the total population of the Netherlands in red for comparison.

**WHAT IS A MIGRATION BACKGROUND?**

The group of ‘people with a migration background’ includes people who live in the Netherlands and have at least one parent who was born outside of the Netherlands. People have a Western migration background if he/she has at least one parent who has been born in a country in North America, Oceania (i.e., Australia and neighboring countries), Japan, Indonesia, or Europe. However, if a person has at least one parent born elsewhere outside of the Netherlands, that person is considered to have a non-Western migration background. This would include a parent from a country in Africa, Asia, or South America.

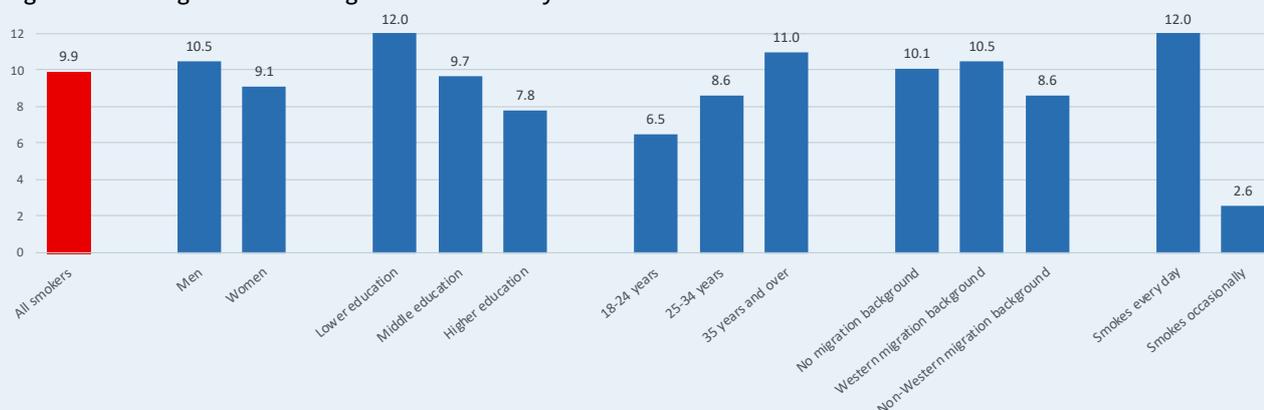
The government of the Netherlands uses statistics on people’s migration background to explain differences in cultural background, income inequalities, and other policy-related outcomes.

Want to know more on this topic? Visit the [Statistics Netherlands website](#) for more details.



## NUMBER OF CIGARETTES PER DAY

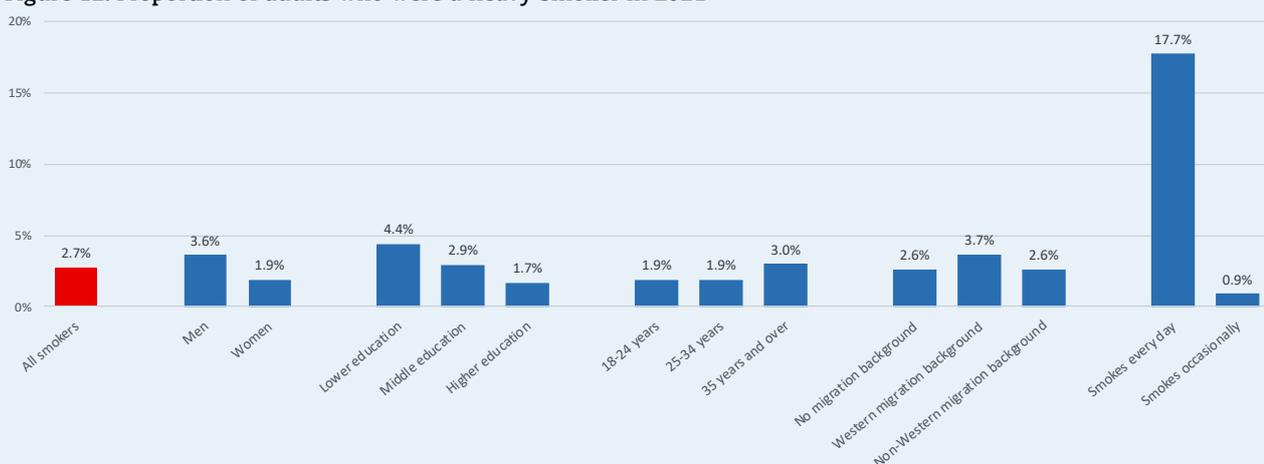
Figure 11. Average number of cigarettes smoked by smokers in 2021



**Note:** Figure 11 presents data only from people who reported smoking cigarettes in 2021. It displays the average number of cigarettes smoked each day.

In the Netherlands, men, people with a lower education, people age 35 and over, and daily smokers reported smoking the greatest number of cigarettes per day. The analysis found no significant differences by migration background. This figure displays the smoking rate of the total population of the Netherlands in red for comparison.

Figure 12. Proportion of adults who were a heavy smoker in 2021



**Note:** In the Netherlands, only a small portion of people (2.7%) reported smoking more than 20 cigarettes a day, which classifies them as heavy smokers. People who reported being heavy smokers tended to be men, have had a lower educational attainment, and reported smoking every day. We found no effect of age or migration background. This figure displays the heavy smoking rate of the total population of the Netherlands in red for comparison.

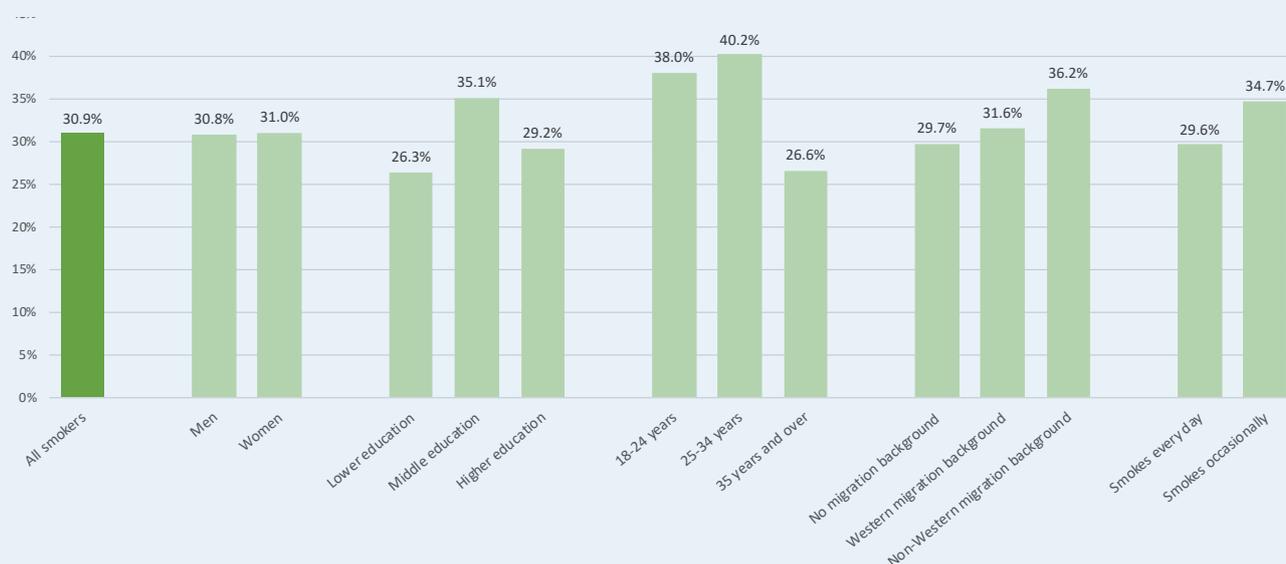
### WHAT IS A HEAVY SMOKER?

Someone who smokes 20 cigarettes or more on average each day is called a 'heavy smoker'.

It is important to know how many heavy smokers there are and whether their number of cigarettes increases or decreases over time. Heavy smokers are more likely to become ill or to die due to their smoking. People who smoke heavily for their entire life tend to live 13 years less than those who never smoked. People who smoke every day, but who are not heavy smokers, reduce their life expectancy by 9 years on average. Occasional smokers, defined as people who do not smoke every day, tend to live on average 5 years fewer than non-smokers.<sup>4</sup>



**Figure 13. Proportion of smokers who made a serious quit attempt in the past 12 months in 2021**



**Note:** In the Netherlands, about 1 out of 3 smokers reported having made a serious quit attempt in the past 12 months in 2021. A quit attempt is considered a serious one if someone tries to quit smoking and does not smoke for at least 24 hours. People with a lower level of education were less likely to having made a serious quit attempt than people with a middle or high level of education. People aged 35 and over were less likely to make a serious quit attempt than those in younger age groups. We found no significant difference between men and women, between the three migration groups, or between daily and non-daily smokers. This figure displays the smoking rate of the total population of the Netherlands in dark green for comparison.

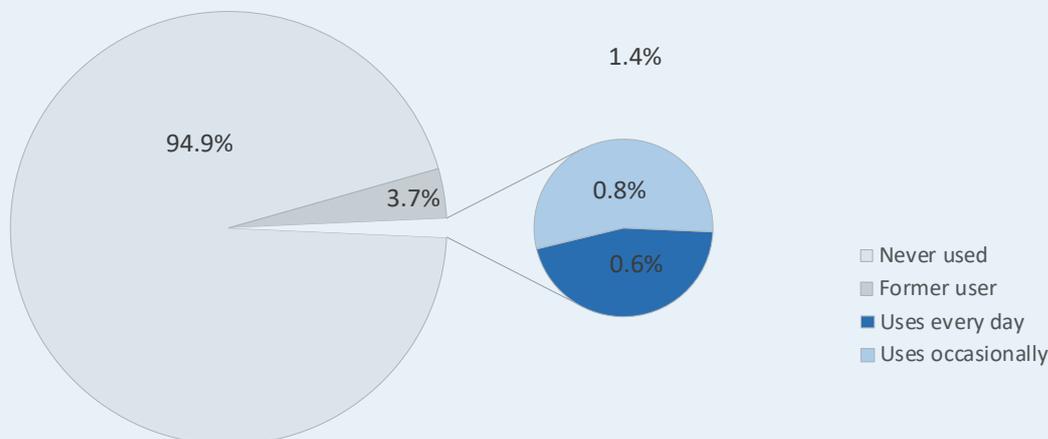
**Figure 14. Proportion of smokers who had made a serious quit attempt in the past 12 months over time**



**Note:** In the Netherlands, the rate of smokers who had recently made a serious quit in the past year dropped significantly between 2020 and 2021. The rate remained about the same between 2014 and 2021.

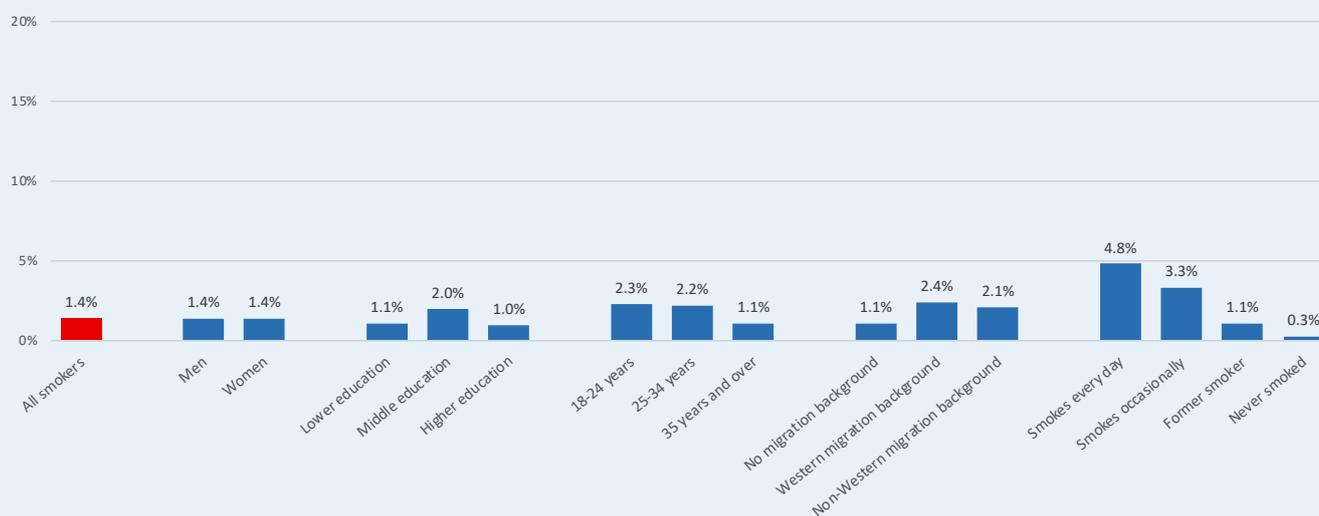


Figure 15. Prevalence of electronic cigarettes use in 2021



**Note:** Figure 15 presents information about e-cigarette (electronic cigarette) use among all adults in the Netherlands. About 1.4% of adults in the Netherlands used an e-cigarette regularly in 2021. This includes 0.6% daily users and 0.8% non-daily users. E-cigarettes have been available for sale in the Netherlands since 2007. The contents of e-cigarettes and the sale of e-cigarettes is regulated by the [Dutch Tobacco Act](#). In the Netherlands, the sale of nicotine and non-nicotine e-cigarette liquid is restricted to adults (18+).

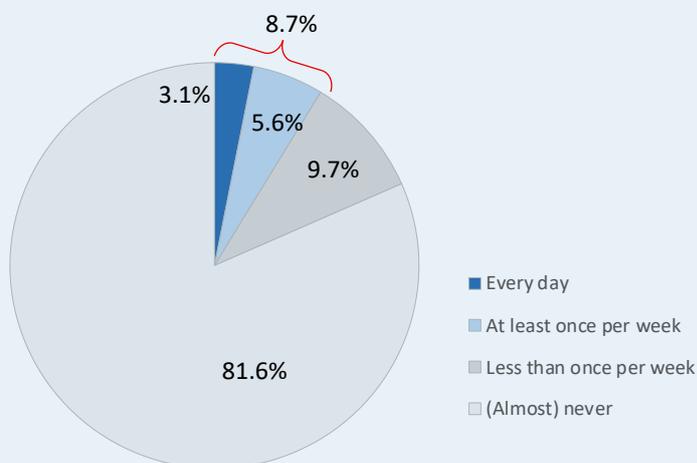
Figure 16. Prevalence of regular e-cigarettes use



**Note:** Figure 16 presents information about e-cigarette use among all adults in the Netherlands. People with a middle level of education, people aged 18 to 24, people with a Western migration background, and people who smoke (tobacco products) every day were most likely to report regularly using an e-cigarette. The survey also asked respondents if they used heated tobacco products; only 0.4% of those surveyed reported using such products. This figure displays the smoking rate of the total population of the Netherlands in red for comparison.



Figure 17. Proportion of non-smokers exposed to secondhand smoke indoors in 2021

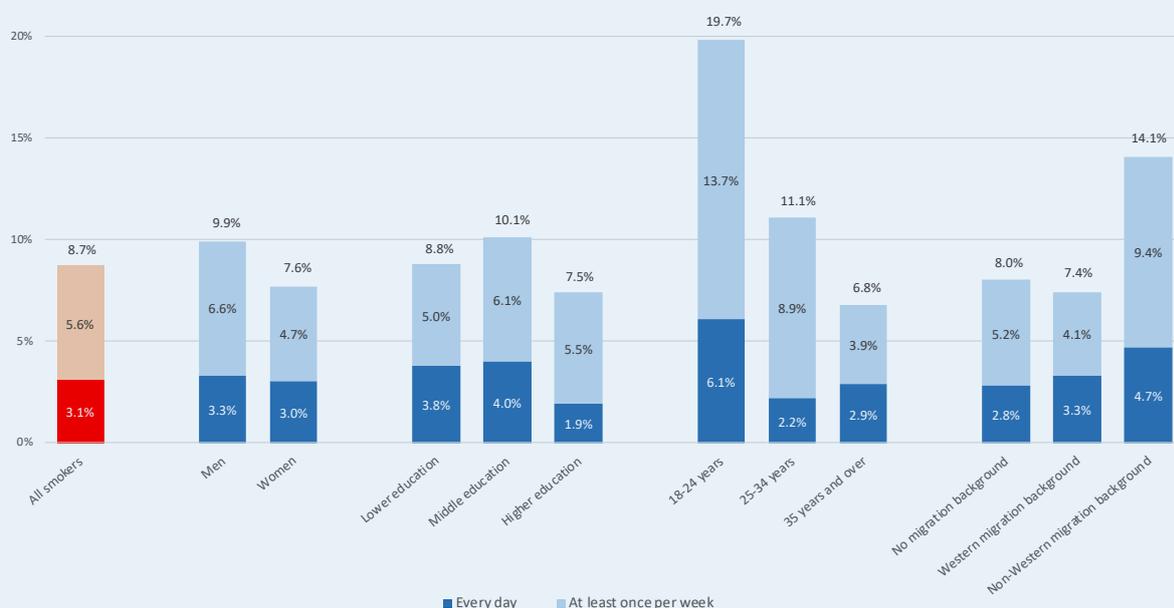


**SECONDHAND SMOKE:  
BREATHING SOMEONE  
ELSE'S TOBACCO SMOKE**

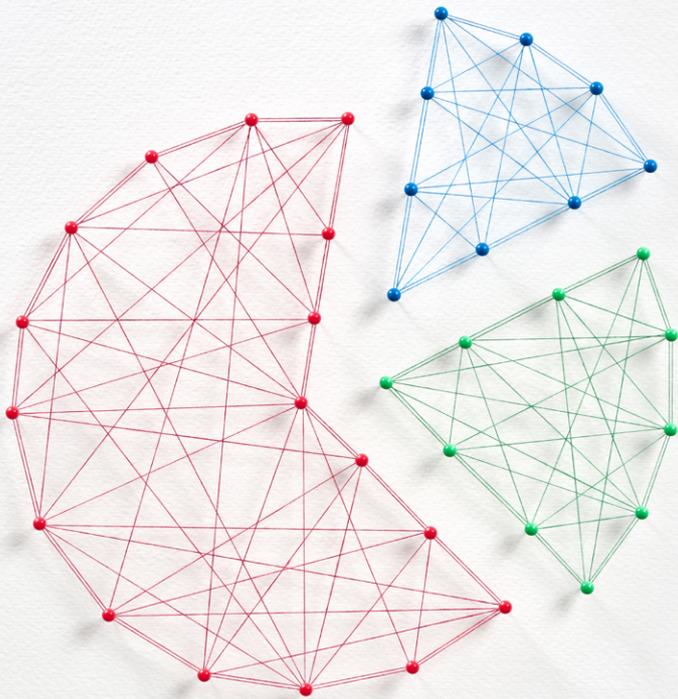
Secondhand smoke is tobacco smoke from burning tobacco products and smoke that has been breathed out by a person smoking. Exposure to secondhand smoke harms health. Secondhand smoke contains toxins similar to those in tobacco smoke and causes illnesses similar to those that smoking does. It is particularly harmful to children. Exposing children to secondhand smoke increases their chance of getting lung infections, ear infections, and other illnesses.<sup>5</sup>

**Note:** Figure 17 contains information only about non-smoking adults, which includes former smokers and those who never smoked. It shows the proportion of non-smokers in the Netherlands that reported having been exposed to secondhand smoke indoors (inside homes or other indoor spaces). In 2021, 8.7% of non-smokers were regularly exposed to tobacco smoke. Of those, 3.1% were exposed every day and 5.6% were exposed at least once per week.

Figure 18. Proportion of non-smokers exposed to secondhand smoke indoors in 2020 by subgroup



**Note:** Figure 18 contains information only about non-smoking adults in the Netherlands. It shows the proportion of non-smokers in the Netherlands that reported having been exposed to secondhand smoke indoors (inside homes or other indoor spaces). Due to rounding, some of the percentages do not add up to their total. This figure displays the smoking rate of the total population of the Netherlands in red for comparison.



### FURTHER READING...

Want to know more about tobacco use and exposure to tobacco smoke in the Netherlands? The following publications may be interesting:

- [Smoking cessation counselling in maternity care in the Netherlands](#)
- [Dutch Youth Health Care: From smoke-free houses to smoke-free parents](#)
- [Local tobacco control policies in the Netherlands](#)

### OUR MISSION...

The Netherlands Expertise Centre for Tobacco Control continues to monitor tobacco use in the Netherlands. We publish the most recent key statistics on tobacco use, alcohol use and drugs use on our website: [trimbos.nl/kennis/cijfers](https://trimbos.nl/kennis/cijfers) (in Dutch).

Please contact Jeroen Bommel  ( [jbommele@trimbos.nl](mailto:jbommele@trimbos.nl) ) if there are any questions regarding this bulletin.

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2. Health Survey as of 2014. <https://www.cbs.nl/en-gb/our-services/methods/surveys/korte-onderzoeksbeschrijvingen/health-survey-as-of-2014>.
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### Colophon

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