SMOKING IN THE NETHERLANDS: KEY STATISTICS 2017

STATISTICS ON SMOKING AND SMOKING CESSATION IN THE NETHERLANDS

SMOKING IN THE NETHERLANDS, 2017

23.1% of Dutch adults (18 years and older) smoked.

This equals to ±3.1 MILLION adults.

35.7% of smokers made a serious quit attempt at least once in the past year.

74.6% of smokers smoked daily.
KEY STATISTICS

• In 2017, slightly less than one quarter (23.1%) of the adults of 18 years and older smoked. Most of them were daily smokers (74.6%).
• There is a downward trend in smoking in the Netherlands. While in 2014 25.7% of the adults smoked, 24.1% did in 2016. However, there was no statistically significant difference in smoking between 2016 and 2017.
• The smoking rates among people with lower (25.7%) and middle educational levels (26.7%) were higher than the smoking rates among people with high levels of education (16.8%). The rates among lower and middle educated were similar and did not differ significantly. A similar pattern is visible in rates of daily smoking (22.8%, 20.6% and 8.7% respectively).
• Most smokers (91.4%) smoked cigarettes or roll-your-own cigarettes. They smoked 10.2 cigarettes per day on average.
• Of the total adult population, 3.6% smoked at least 20 cigarettes or roll-your-own cigarettes per day (heavy smokers).
• Among smokers, 35.7% made a serious attempt to quit smoking in the past year. An attempt is considered serious if one does not smoke for at least 24 consecutive hours.
• The percentage of adult non-smokers who are exposed to tobacco smoke indoors every day, dropped from 17.7% in 2014 to 15.8% in 2017.
• In 2017, 3.1% of adults used electronic cigarettes (at least sometimes).

METHODS

The Health Survey of Statistics Netherlands (CBS) collects data on the Dutch population living in private households through an annual random sample from the Basic Registration of Individuals and provides the national key statistics on smoking in the Dutch population. Respondents are first approached to participate via the internet; non-respondents are approached for an individual interview.

This fact sheet presents the key statistics on smoking, smoking cessation, passive smoking and e-cigarette use among adults aged 18 years and older. This is in line with the ‘State of Public Health and Health Care’, which presents the key figures on which the prevention policy of the Ministry of Health, Welfare and Sport is based [2]. In 2017, data were collected among 7,853 Dutch citizens aged 18 and older. More information about the survey method of the Health Survey can be found on the website of Statistics Netherlands [3].

The term ‘smoking’ includes everyone who smokes at least sometimes (i.e., both daily and non-daily smokers). Subgroups within the Dutch population are described on the basis of gender, age and educational level. Education level is divided into three groups:

• Lower education = primary education, LBO, MAVO, VMBO;
• Middle education = MBO, HAVO, VWO;
• Higher education = HBO or university.

Level of education is defined as the highest level of education a person either attended (if aged 18 to 24) or completed (if aged 25 and over). This definition differs from that of Statistics Netherlands, whose definition is based on the highest level of education attained, thereby excluding persons under 25 years of age.

Trends are described from 2014 onwards (start of the Lifestyle Monitor). All differences between subgroups that are mentioned in the text are statistically significantly (P <0.05), unless stated otherwise. If a reported difference is not statistically significant this is explicitly mentioned.

BACKGROUND

This fact sheet describes the key statistics on smoking, smoking cessation, passive smoking and e-cigarette use among adults in 2017. All statistics are derived from the Health Survey database, which is part of the Dutch Lifestyle Monitor.

The Lifestyle Monitor is the central national data collection initiative regarding lifestyle-related behaviors including smoking [1]. The data collection is part of the Health Survey of Statistics Netherlands (see box). The Lifestyle Monitor is coordinated by the National Institute for Public Health and the Environment (RIVM) and commissioned by the Ministry of Health, Welfare and Sport and produces the national key statistics on health behaviors including smoking for the Netherlands.

The full reference to the Health Survey: Health Survey/Lifestyle Monitor, Statistics Netherlands (CBS), in collaboration with National Institute for Public Health and the Environment (RIVM) and Trimbos Institute, 2017.

NETHERLANDS EXPERTISE CENTRE FOR TOBACCO CONTROL

The Netherlands Expertise Centre for Tobacco Control (NET) is part of the Trimbos Institute. It develops, collates, and disseminates independent knowledge on all aspects of tobacco use and tobacco control. The NET provides health professionals, scientists, and public officials with information about tobacco usage, prevention, treatment of tobacco addiction, and policy options.
PREVALENCE OF SMOKING IN 2017

In 2017, slightly less than a quarter of the Dutch adults smoked\(^\text{b}\) (23.1%)

- Of all adults, 17.2% smoked daily and 5.9% smoked non-daily (see Figure 1).
- Among smokers, 74.6% smoked daily.
- In total, an estimated 3.1 million people of 18 years and older smoked in 2017 (95% confidence interval: 2,960,000 – 3,240,000).
- About one third of the adult population was an ex-smoker (32.6%) and 44.3% a never-smoker (see Figure 2).

\(^{b}\) ‘Smokers’ are all persons who reported to smoke ‘sometimes’ or ‘every day’. It therefore includes both daily and non-daily smokers.

Smoking is less prevalent among women, the elderly and the highly educated

- Fewer women than men smoke (19.2% versus 27.0%; see Figure 2). Daily smoking is also less common among women than among men (14.5% versus 19.9%).
- Smoking rates among people with lower (25.7%) and middle levels (26.7%) of education were higher than the smoking rates among people with high levels of education (16.8%). This applies to daily smoking too (20.6%, 22.8% and 8.7% respectively). There were no differences in smoking or daily smoking between people with lower and middle levels of education.

Figure 1 – Prevalence (%) of smoking in the population aged 18 and older in 2017.

Note: Daily smoking and non-daily smoking add up to “smoking” (23.1%).
• In contrast, middle-educated smokers are the largest group (46.6%) among smokers. They are followed by lower educated (28.1%) and higher educated smokers (25.3%; see Table 1). This means that there are more (daily) smokers with a middle level of education than lower educated or higher educated smokers.

• Smoking is most prevalent among 20-29-year-olds, while smoking prevalence is lowest among people of 65 years and older (see Figure 3). Daily smoking is most common among 25-64-year-olds. It is the least common among both young adults aged 18-19 years and older people aged 75 years and over (see Figure 3).

• Adults with a non-Dutch background (from Western (26.1%) or non-Western (25.5%) countries) more often are smokers compared to adults with a Dutch background (22.3%). This is similar for the rates of daily smoking (19.7%, 19.9% and 16.5% respectively).

• Figure 4 and Figure 5 show the percentage of smokers among men and women by age and level of education. Smoking is most common men with a low educational level (Figure 4) and among young adult men (Figure 5).

Table 1. Percentage and estimates of absolute numbers of high-, middle- and low-educated smokers and daily smokers of 18 years and older in 2017.

<table>
<thead>
<tr>
<th></th>
<th>Higher education</th>
<th>Middle education</th>
<th>Lower education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>Absolute numbers (95% CI)</td>
<td>%</td>
</tr>
<tr>
<td>Smoking</td>
<td>25.3</td>
<td>765.000 (689.000 – 841.000)</td>
<td>46.6</td>
</tr>
<tr>
<td>Daily smoking</td>
<td>17.7</td>
<td>395.000 (341.000 – 449.000)</td>
<td>48.7</td>
</tr>
</tbody>
</table>

Note: Absolute numbers are estimates. The absolute numbers have been rounded to thousands. * A 95% confidence interval gives a lower limit and an upper limit between which the actual value will be with 95% probability.
Figure 2. Prevalence (%) of smoking in 2017, by gender and by educational level.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Lower education</th>
<th>Middle education</th>
<th>Higher education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>25.7%</td>
<td>26.7%</td>
<td>16.8%</td>
</tr>
<tr>
<td>Women</td>
<td>19.2%</td>
<td>20.6%</td>
<td>8.7%</td>
</tr>
<tr>
<td>Smoking</td>
<td>27.0%</td>
<td>25.7%</td>
<td>26.7%</td>
</tr>
<tr>
<td>Daily smoking</td>
<td>19.9%</td>
<td>22.8%</td>
<td>20.6%</td>
</tr>
<tr>
<td>Non-daily smoking</td>
<td>7.1%</td>
<td>2.9%</td>
<td>6.1%</td>
</tr>
</tbody>
</table>

Note: Daily smoking and non-daily smoking add up to "smoking". The sample consists of persons of 18 years and older.

Figure 3. Prevalence (%) of smoking in 2017 by age.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Smoking</th>
<th>Daily smoking</th>
<th>Non-daily smoking</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-19</td>
<td>23.1%</td>
<td>7.9%</td>
<td>15.2%</td>
</tr>
<tr>
<td>20-24</td>
<td>32.6%</td>
<td>17.3%</td>
<td>15.3%</td>
</tr>
<tr>
<td>25-29</td>
<td>29.2%</td>
<td>19.6%</td>
<td>9.7%</td>
</tr>
<tr>
<td>30-39</td>
<td>26.6%</td>
<td>19.1%</td>
<td>7.6%</td>
</tr>
<tr>
<td>40-49</td>
<td>25.6%</td>
<td>19.9%</td>
<td>5.7%</td>
</tr>
<tr>
<td>50-64</td>
<td>23.6%</td>
<td>19.9%</td>
<td>3.7%</td>
</tr>
<tr>
<td>65-74</td>
<td>15.4%</td>
<td>13.6%</td>
<td>1.8%</td>
</tr>
<tr>
<td>75+</td>
<td>8.6%</td>
<td>7.7%</td>
<td>0.9%</td>
</tr>
</tbody>
</table>

Note: Daily smoking and non-daily smoking add up to "smoking". The sample consists of persons of 18 years and older.
Figure 4. Prevalence (%) of smoking in 2017, by gender and educational level.

Note: Daily smoking and non-daily smoking add up to “smoking”. The sample only included persons of 18 years and older.

Figure 5. Prevalence (%) of smoking in 2017, by gender and age.

Note: Daily smoking and non-daily smoking add up to “smoking”. The sample consists of persons of 18 years and older.
Smoking has decreased between 2014 and 2017

- Adult smoking rates in 2017 (23.1%) did not differ significantly from those in 2016 (24.1%). They are, however, significantly lower than those of 2015 (26.3%) and 2014 (25.7%; see Figure 6). This indicates a downward trend in smoking rates.
- The percentage of daily smokers (17.2%) decreased compared to 2016 (18.6%), 2015 (19.5%) and 2014 (19.7%; see Figure 6).
- The percentage of non-daily smokers has remained stable over the years.

Figure 6. Prevalence (%) of smoking by year.

Note: Daily smoking and non-daily smoking add up to “smoking”. The samples consists of persons of 18 years and older.
Trends by gender, level of education and age

- In the past years, the differences between men and women remained unchanged. In both groups, smoking rates and daily smoking rates decreased between 2014 and 2017 (see Figure 7).
- In all survey years, smoking rates among lower and middle educated adults were significantly higher than those among higher educated smokers (see Figure 8). From 2014 onwards, smoking rates have dropped among lower and highly educated persons (see Figure 8). Among highly educated people, there has been a decrease in daily smoking too (2014: 11.0%, 2017: 8.7%).

Figure 7. Trends in smoking prevalence (%) among men and women between 2014 and 2017.

Note: The sample consists of persons of 18 years and older.

Figure 8. Trends in smoking prevalence (%) among lower, middle and higher educated adults between 2014 and 2017.

Note: The sample consists of persons of 18 years and older.

- The change in smoking rates differs between age groups (see Figure 9). Since 2014, there has been a downward trend among younger age groups (18 to 30 years) and among 50-64-year-olds. Daily smoking rates decreased among 18 to 25 year-olds only. However, in no age group there was a significant difference in smoking or daily smoking between 2016 and 2017.
Figure 9. Trends in smoking prevalence (%) between 2014 and 2017 by age.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-19 years</td>
<td>32.0%</td>
<td>30.9%</td>
<td>26.7%</td>
<td>23.1%</td>
</tr>
<tr>
<td>20-24 years</td>
<td>36.5%</td>
<td>39.1%</td>
<td>28.9%</td>
<td>32.6%</td>
</tr>
<tr>
<td>25-29 years</td>
<td>35.8%</td>
<td>37.1%</td>
<td>28.1%</td>
<td>29.2%</td>
</tr>
<tr>
<td>30-39 years</td>
<td>27.6%</td>
<td>30.1%</td>
<td>29.1%</td>
<td>26.6%</td>
</tr>
<tr>
<td>40-49 years</td>
<td>26.6%</td>
<td>26.0%</td>
<td>26.3%</td>
<td>25.6%</td>
</tr>
<tr>
<td>50-64 years</td>
<td>26.3%</td>
<td>26.9%</td>
<td>25.9%</td>
<td>23.6%</td>
</tr>
<tr>
<td>65-74 years</td>
<td>17.6%</td>
<td>17.7%</td>
<td>16.0%</td>
<td>15.4%</td>
</tr>
<tr>
<td>75+ years</td>
<td>8.7%</td>
<td>8.4%</td>
<td>10.3%</td>
<td>8.6%</td>
</tr>
</tbody>
</table>

Note: The sample consists of persons of 18 years and older.
Low-educated smokers smoke most cigarettes per day
- The majority of smokers (91.4%) smoke factory made cigarettes or roll-your-own cigarettes. They smoked 10.2 cigarettes or roll-your-own cigarettes per day on average.
- The average number of smoked cigarettes per day has not changed significantly since 2014 (averaging 10.8 cigarettes per day).
- Men smoke on average 10.4 cigarettes per day and women 9.9. This difference is not statistically significant.
- The number of cigarettes per day varies between educational levels and is lowest among higher educated smokers (7.2 cigarettes per day), followed by middle educated smokers (10.3 cigarettes per day) and lower educated smokers (12.5 cigarettes per day).
- Cigarette smokers between the ages of 40 and 74 smoke most cigarettes per day (11.1 to 13.0). The youngest smokers (18-19 years) smoke fewest cigarettes per day (4.0).

One in five daily smokers smokes 20 or more cigarettes per day (“heavy smokers”)
- Of all persons aged 18 and older, 3.6% are a heavy smoker (20 or more cigarettes or roll-your-own cigarettes per day).
- Among smokers aged 18 and older, 15.5% are heavy smokers (see Figure 10).
- The percentage of heavy smokers has not changed statistically significant since 2014 (17.4%).
- The percentage of heavy smokers is strongly correlated with education: lower educated smokers are most often heavy smokers (23.9%), followed by middle educated (13.7%) and higher educated smokers (9.1%; see Figure 10).
- The percentage of heavy smokers is highest among 40-74 year-olds (20.3 to 21.4%) and the lowest among young people aged 18 and 19 (2.6%; see Figure 10).

Figure 10. Prevalence (%) of heavy smoking* among smokers in 2017, by gender, educational level and age.

* On average 20 or more cigarettes or roll-your-own cigarettes per day.

Note: The sample consists of persons of 18 years and older.
More than one in three smokers made a serious attempt to quit smoking

- In 2017, 41.0% of smokers aged 18 and older made at least one quit attempt in the previous year. The large majority of them (87.1%) made at least one serious quit attempt (i.e., lasting at least 24 hours). So, in total, 35.7% of all smokers in 2017 made one or more serious quit attempts in the past year (see Figure 11).
- The percentage of smokers who made a serious attempt to stop smoking did not differ from 2014 (32.9%). However, the percentage is higher than in 2016 (32.5%) and 2015 (32.1%).
- Fewer lower educated smokers made a quit attempt (31.6%) than higher educated smokers (38.7%; see Figure 11). There were no other differences by educational level.
- The percentage of smokers who made a serious quit attempt was highest among 25-39 year-olds (39.8% to 44.1%) and the lowest among smokers aged 65 and older (27.1%; see Figure 11).

**Figure 11. Percentage of smokers who made at least one serious quit attempt* in 2017, by gender, education, age, and being a daily or non-daily smoker.**

Note: The sample consists of persons of 18 years and older.
* A quit attempt is considered ‘serious’ if it lasted at least 24 hours.
The percentage of non-smoking adults exposed to second-hand smoke indoors decreased between 2014 and 2017.

- More than one in ten (15.8%) non-smoking adults aged 18 and older are exposed to tobacco smoke from others indoors every day (see Figure 12).
- While 69.5% of these passive smokers were exposed less than one hour per day, 30.5% were exposed one hour or more per day.
- Second hand exposure rates have decreased compared to 2014 (17.7%) and 2016 (17.5%), but there is no statistically significant difference with 2015 (17.0%).
- The prevalence of second hand exposure is lowest among women, the elderly and higher educated people (see Figure 12).
- Second hand exposure is more prevalent among adults who smoke themselves (40.0%) than among non-smokers (15.8%). Daily smokers are more likely to be exposed to tobacco smoke from others (43.8%) than non-daily smokers (28.8%).
- The Lifestyle Monitor does not measure whether (and to what extent) people are exposed to tobacco smoke outdoors.

**Figure 12. Indoor second hand exposure (%) among non-smoking adults in 2017, by gender, education, age, and being a daily or non-daily smoker.**

Note: The sample consists of persons of 18 years and older. Those not shown here were ‘never or almost never’ exposed to second hand smoke.
One in 33 Dutch adults used an electronic cigarette

- In 2017, 3.1% of adults aged 18 and older used an e-cigarette (at least sometimes) (see Figure 13).
- The rate of e-cigarette use does not differ from that in 2016 (3.5%). E-cigarette use has not been measured in the Lifestyle Monitor in 2014 and 2015.
- E-cigarette usage is lower among higher educated adults (2.5%) than among middle educated people (3.7%, see Figure 13). There were no other differences between educational levels.
- E-cigarettes are the least used by people aged 75 years and older (0.5%; see Figure 13).
- Current smokers in particular used an e-cigarette (at least sometimes; 10.0%; see Figure 13). Daily smokers used an e-cigarette more (12.0%) than non-daily smokers (4.1%).
- Three quarters (74.8%) of electronic cigarette users also smoked regular tobacco products.
- The frequency of e-cigarette use (i.e., daily or non-daily) has not been measured in the Lifestyle Monitor.

Figure 13. Prevalence (%) of e-cigarette use (at least sometimes) in 2017, by gender, educational level, age, and smoking status.

Note: The sample consists of persons of 18 years and older.
REFERENCES


Colophon

Authors
Jeroen Bommelé
Linda Springvloet
Marc Willemsen
Margriet van Laar

Design & Production
Canon Nederland N.V.

Images
www.istockphoto.com

This publication is published at www.trimbos.nl/webwinkel and has record number AF1636.

© 2018, Trimbos Institute, Utrecht

All rights reserved. No part of this publication may be reproduced or published in any form or by any means without prior permission from the Trimbos Institute.