

## Original article

# The Use of Tobacco, E-Cigarettes, and Methods to Quit Smoking in Germany

A Representative Study Using 6 Waves of Data Over 12 Months (the DEBRA Study)

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## Summary

**Background:** Current data on tobacco use are a necessary prerequisite for the study of the implementation of tobacco control measures in the general population. The German Study on Tobacco Use (*Deutsche Befragung zum Rauchverhalten*, DEBRA) provides previously lacking data on key indicators of smoking behavior and on the consumption of new products such as e-cigarettes. The continual acquisition and accumulation of data permits the analysis of trends and precise statistical evaluation.

**Methods:** Data were obtained by repeated face-to-face interviews, at 2-month intervals, of representative samples of approximately 2000 persons across Germany aged 14 years and above. For this article, data from 12 273 persons that were acquired in 6 waves of the survey (June/July 2016 to April/May 2017) were aggregated and weighted.

**Results:** The one-year prevalence of current tobacco consumption was 28.3% (95% confidence interval: [27.5; 29.1]) in the overall survey population and 11.9% [8.9; 14.9] among persons under age 18. Higher tobacco consumption was correlated with lower educational attainment and lower income. 28.1% of the smokers had tried to quit smoking in the past year; the most commonly used method of quitting was e-cigarettes (9.1%). Brief physician advice or pharmacotherapy for smoking cessation were tried by 6.1% and 7.0%, respectively. 1.9% of the overall survey population but only 0.3% of persons who had never smoked were current consumers of e-cigarettes.

**Conclusion:** Tobacco consumption is very high in Germany compared to other countries in Western and Northern Europe, and its distribution across the population is markedly uneven, with a heavy influence of socioeconomic status.

### Cite this as

Kotz D, Böckmann M, Kastaun S: The use of tobacco, e-cigarettes, and methods to quit smoking in Germany—a representative study using 6 waves of data over 12 months (the DEBRA study). *Dtsch Arztebl Int* 2018; 115: 235–42. DOI: 10.3238/arztebl.2018.0235

According to the World Health Organization (WHO), an estimated 6 million people die every year as a result of tobacco-related diseases (1). The annual number in Germany is approximately 125 000 (2). Around 13% of the German mortality rate is accounted for by tobacco use, with 28% of tobacco-attributable fatalities occurring during working age (3). Moreover, tobacco smoking is the largest avoidable risk factor for a number of highly prevalent oncological, cardiovascular, and respiratory diseases (3, 4). In addition to these individual sequelae of tobacco use, smoking also puts a social burden totaling 79 billion Euro on German society, the largest portion of which is borne by the statutory health insurances (5).

Recent data from the Eurobarometer shows that, despite the known hazards of tobacco smoking, approximately 25% of the German population aged over 15 years (28% of males and 23% of females) still use cigarettes or other tobacco products—a significantly higher percentage compared with other European countries (*eTable*) (6). Added to this are pronounced socioeconomic differences, which are reflected in the fact that socially more disadvantaged subgroups of the population are more likely to smoke and less likely to succeed in their attempts to quit smoking (7, 8). Thus, tobacco smoking is responsible for the emergence and magnification of socioeconomic inequality in terms of quality of life, morbidity, and mortality (9).

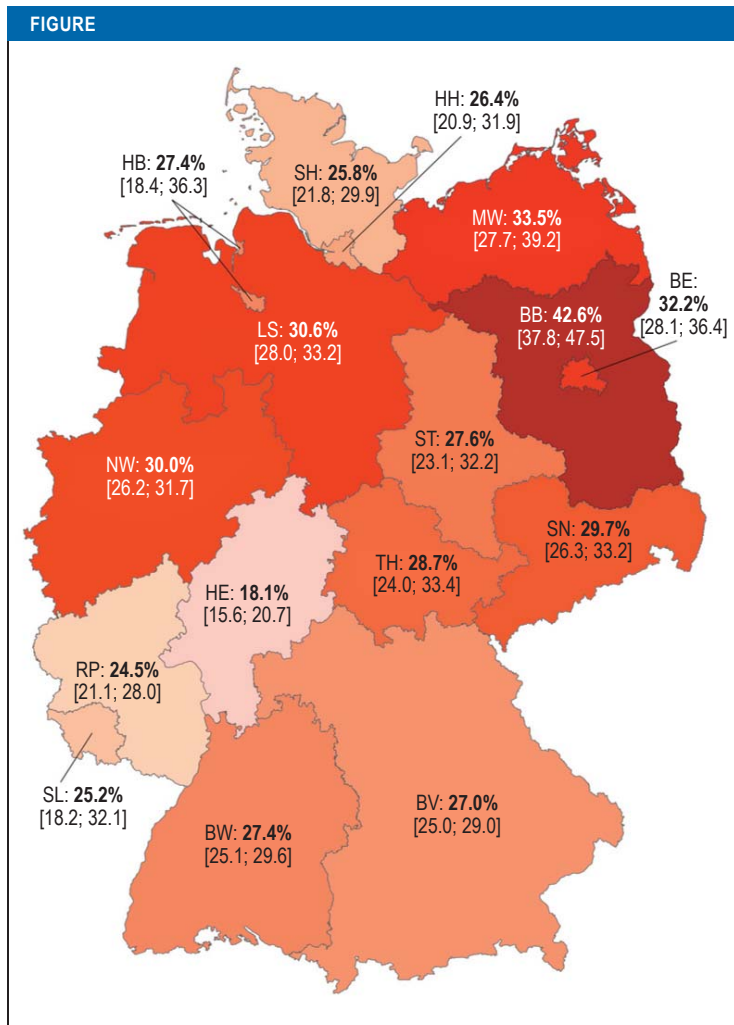
The WHO recommends monitoring smoking behavior in the population, ideally on the basis of up-to-date, representative, and regularly collected data on adolescents and adults (10). Against this background, the DEBRA study (German Study on Tobacco Use: [www.debra-study.info](http://www.debra-study.info)) was initiated in June 2016 (11). The study collects data on key indicators, such as current tobacco use, attempts to quit smoking, and the use of methods to support smoking cessation; these data can serve as a basis for political decision-making and help in the development of successful tobacco control measures. The study also takes into consideration factors that affect smoking behavior, such as age, gender, socioeconomic status, motivation, and nicotine addiction.

Furthermore, the popularity and use of new products such as e-cigarettes or tobacco heating

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**Weighted 1-year prevalence [95% confidence interval] of current tobacco smokers according to German federal state**

Total sample size N = 12 273, 1-year prevalence for Germany as a whole = 28.3%.  
 BW, Baden-Wuerttemberg; BV, Bavaria; BE, Berlin; BB, Brandenburg;  
 HB, Bremen; HH, Hamburg; HE, Hesse; MW, Mecklenburg-Western Pomerania;  
 LS, Lower Saxony; NW, North Rhine-Westphalia; RP, Rheinland Palatinate; SL, Saarland;  
 SN, Saxony; ST, Saxony-Anhalt; SH, Schleswig-Holstein; TH, Thuringia

systems have risen markedly in Germany in recent years (12, 13). However, whether products of this kind are effective methods of switching from conventional tobacco use to less harmful alternatives is a question that remains as unanswered as the question of whether these products attract the younger generation more than anything, thereby potentially providing a gateway into tobacco use among adolescents in particular (14, 15).

The methodology applied in the DEBRA study enables a representative, up-to-date, and detailed analysis of the status of and trends in smoking behavior in the population, thereby expanding on other studies on tobacco use in Germany (16–19). No other study continuously collects (every 2 months) and accumulates detailed data of this kind on key indicators

of smoking behavior and the use of new products, e.g., e-cigarettes, from representative samples of the German population. As such, the study permits the analysis of trends (e.g., including those that emerge in response to policy measures on tobacco control or the introduction of novel tobacco and nicotine products in Germany), as well as precise statistical analyses.

The aim of this article is to formulate an initial and comprehensive description of the use of tobacco, e-cigarettes, and smoking cessation methods in Germany on the basis of current DEBRA data.

### Methods

The DEBRA study was reviewed by the ethics committee of the Heinrich-Heine-University Düsseldorf (ID 5386/R) and registered in the German Registry of Clinical Trials (DRKS00011322). An extended version of the methods used for this analysis can be found in the *eMethods Section 1*; a comprehensive description of the methodology used for the entire study has been published in a study protocol (11). In summary, the study is a representative, Germany-wide, computer-assisted, face-to-face household survey of individuals aged 14 years and older on general sociodemographic aspects, as well as on the use of tobacco and e-cigarettes (*eMethods Section 2* provides an overview of the precise wording of the questions). This article presents the weighted baseline data from the first six waves of the survey (June/July, August/September, October/November 2016, January, February/March, April/May 2017). As part of this, recent ex-smokers were defined as ex-smokers that had completely ceased smoking in the preceding 12 months.

### Results

In all, 12 273 individuals participated in the first six waves of the survey (June/July 2016 to April/May 2017). The 1-year prevalence of current tobacco use was 28.3% (95% confidence interval: [27.5; 29.1]) in the total sample and 11.9% [8.9; 14.9] in respondents aged under 18 years. A total of 16.9% were ex-smokers (including 1.0% recent ex-smokers) and 54.8% never-smokers. The *eFigure* shows the prevalence of current tobacco use in the individual waves. There were slight fluctuations of  $\pm 0.2$ – $\pm 1.2$  percentage points between the first five waves, and a rise of +1.4 percentage points between the fifth (February/March 2017) and sixth wave (April/May 2017).

The *Figure* shows the 1-year prevalence of current tobacco use according to German federal state. The percentage of smokers in the most densely populated federal state, North Rhine-Westphalia, was 30.3% [28.2; 31.7]. The highest prevalence was measured in Brandenburg (42.6% [37.8; 47.5]) and the lowest in Hesse (18.1% [15.6; 20.7]).

*Table 1* shows that tobacco use was associated with respondents' gender, age, school-leaving qualification, and household income (p-values of all comparisons <0.001). The prevalence of current smoking was highest among males (7.8 percentage points

TABLE 1

**A comparison of socioeconomic characteristics of current smokers, ex-smokers, and never-smokers**

Characteristic	Current smokers % (N = 3441 [3389* <sup>1</sup> ])	Ex-smokers % (N = 2051 [2158* <sup>1</sup> ])	Never-smokers % (N = 6669 [6610* <sup>1</sup> ])	P-value* <sup>2</sup>
<b>Gender</b>				
Male	32.3 (1903)	20.5 (1208)	47.1 (2773)	<0.001
Female	24.5 (1538)	13.4 (843)	62.1 (3896)	
<b>Age (years)</b>				
14–17	11.9 (53)	3.8 (17)	84.3 (376)	<0.001
18–24	35.0 (396)	6.5 (74)	58.5 (663)	
25–39	38.3 (911)	14 (333)	47.7 (1133)	
40–64	33.3 (1672)	18.0 (904)	48.7 (2450)	
65+	12.9 (410)	22.8 (724)	64.4 (2047)	
<b>Highest school-leaving qualification</b>				
No qualification	41.6 (62)	8.1 (12)	50.3 (75)	<0.001
Secondary/elementary school	32.7 (1084)	17.6 (585)	49.7 (1650)	
Secondary school-leaving certificate	32.7 (1429)	17.6 (771)	49.7 (2173)	
Advanced technical college certificate	23.0 (202)	19.0 (167)	58.0 (510)	
Higher education entrance qualification	20.0 (572)	17.5 (501)	62.5 (1791)	
<b>Net household income in Euro among over-18-year-olds</b>				
<1000	36.5 (320)	11.3 (99)	52.2 (458)	<0.001
1001–2000	29.9 (892)	15.4 (461)	54.7 (1634)	
2001–3000	29.3 (1006)	17.2 (591)	53.6 (1842)	
3001–4000	25.6 (685)	18.5 (494)	55.9 (1494)	
4001–5000	26.0 (286)	16.4 (180)	57.6 (633)	
>5000	23.2 (252)	20.8 (225)	56.0 (607)	

The denominator for calculating the percentage refers to the total number in the corresponding row (for example: 32.3% of men are current smokers). Differing total N when adding the reference cells are explained by missing data for the respective characteristics.

\*<sup>1</sup> Unweighted; \*<sup>2</sup> p-value for Pearson's chi-squared test

higher compared with females) and among 25- to 29-year-olds (38.3%). A linear association was seen both in school-leaving qualification and household income: the lower the school-leaving qualification and household income, the higher the relative percentage of smokers.

Current cigarette smokers consumed on average 14.1 cigarettes/day (standard deviation [SD] = median = 15.0; minimum = 0.03; maximum = 80). When classified according to quantity smoked, 42.5% [40.8; 44.2] smoked 10 or less cigarettes/day, 44.4% [42.7; 46.1] between 10 and 20 cigarettes/day, and 13.1% [11.9; 14.2] more than 20 cigarettes/day. In total, 13.5% smoked their first cigarette within 5 minutes of waking up in the morning, 35.5% between 6 and 30 minutes, 23.0% between 31 and 60 minutes, and 28.0% more than 60 minutes after waking up.

Current tobacco smokers (all forms of tobacco) and recent ex-smokers that answered the question on the

number of attempts made to quit smoking in the previous year had made on average 1.1 (SD = 13.3; median = 0 [interquartile range = 1]) attempts; 71.9% had made no attempts, 28.1% one or more attempts (15.8% one, 6.3% two, 4.7% between three and five, and 1.3% between six and maximum 365 attempts). A total of 12.1% of current tobacco smokers were either unable or unwilling to provide information on their attempts to quit smoking.

Table 2 shows the smoking cessation methods used by individuals currently still smoking and recent ex-smokers during their most recent attempt to quit smoking in the preceding year (multiple answers were possible). In all, 12.5% [10.3; 14.7] had supported their attempt to quit smoking with one or more evidence-based methods, while 87.5% [85.3; 89.7] had made attempts without such support. Brief physician advice was the evidence-based smoking cessation method most frequently used: 6.1% [4.5;

TABLE 2

Methods to support the most recent attempt to quit smoking among current smokers and recent ex-smokers trying to quit in the preceding year; multiple responses were possible, N = 888 (850<sup>\*1</sup>)

Method	% [95% CI]
a) Brief advice by a physician	6.1 [4.5; 7.6]
b) Brief advice by a pharmacist	3.1 [1.9; 4.2]
c) Behavioral counseling for smoking cessation (individual or group counseling)	1.7 [0.8; 2.6]
d) Telephone counseling for smoking cessation	0.8 [0.2; 1.4]
e) Nicotine replacement therapy (e.g., nicotine patch) on prescription from a physician	2.7 [1.7; 3.8]
f) Nicotine replacement therapy (e.g., nicotine patch) over-the-counter	3.5 [2.3; 4.7]
g) Zyban (bupropion)	0.5 [0.1; 1.1]
h) Champix (varenicline)	0.6 [0.1; 1.1]
i) E-cigarette with nicotine	4.6 [3.2; 5.9]
j) E-cigarette without nicotine	5.4 [4.0; 7.0]
k) Smoking cessation app on a smartphone or tablet PC	2.9 [1.8; 4.1]
l) Smoking cessation website	2.8 [1.7; 3.8]
m) Allen Carr's book "Easy Way to Stop Smoking"	5.0 [3.6; 6.4]
n) A different smoking cessation book	3.9 [2.6; 5.1]
o) Hypnotherapy	0.9 [0.3; 1.5]
p) Acupuncture	2.6 [1.6; 3.7]
q) Alternative medicine	2.0 [1.0; 2.8]
r) Own willpower	58.7 [55.4; 61.9]
s) Social environment (family, friends, colleagues)	18.6 [16.0; 21.1]
t) At least one evidence-based <sup>*2</sup> method (a, c, d, e, f, g, and/or h)	12.5 [10.3; 14.7]
u) At least one evidence-based <sup>*2</sup> behavioral therapy method (a, c and/or d)	7.8 [6.1; 9.6]
v) At least one evidence-based <sup>*2</sup> pharmacological method (e, f, g and/or h)	7.0 [5.4; 8.7]
w) Combined evidence-based <sup>*2</sup> behavioral therapy + pharmacological methods (u and v)	2.4 [1.4; 3.4]
x) E-cigarette with or without nicotine (i and/or j)	9.1 [7.2; 11.0]

\*1 Unweighted; \*2 evidence-based according to German guidelines (37, 38); 95% CI, 95% confidence interval

7.6]. A total of 2.4% [1.4; 3.4] had used a combination of evidence-based behavioral support methods (brief physician advice, individual/group counseling, or telephone counseling) and evidence-based pharmacotherapy (nicotine replacement therapy, bupropion, or varenicline). Apart from deploying one's own willpower and social environment, the e-cigarette with or without nicotine was the method most frequently used (9.1% [7.2; 11.0]).

As part of their previous attempt to quit smoking, 34.6% had first reduced their tobacco consumption before quitting smoking completely; 65.4% had stopped abruptly. Whereas 39.8% had planned their

attempt for a later point in time on the same day or for a day in the future, 60.2% had made their attempt in the same moment that they had made the decision to quit smoking.

The 1-year prevalence in the total sample of those that had ever used an e-cigarette was 9.8% [9.3; 10.3], and 14.6% [11.3; 18.0] in the under-18-year-olds. While 1.9% (2.8% of under-18-year-olds) currently used e-cigarettes, 1.1% (0.2% of under-18-year-olds) had regularly used them in the past and 6.7% (11.6% of under-18-year-olds) had tried them once in the past. The eFigure shows the prevalence of current e-cigarette use in the individual waves. Although the prevalence of current e-cigarette users rose continuously between the first five waves (by 0.2%–0.5% every 2 months), this figure declined from 2.6% to 1.9% between the fifth (February/March 2017) and sixth wave (April/May 2017).

Table 3 shows that e-cigarette use was associated with respondents' gender, age, school-leaving qualification, and household income (p-values of all comparisons <0.001). The prevalence of current e-cigarette use was highest among males (2.6% compared with 1.3% females) and among 18- to 24-year-olds (3.5%). E-cigarette use among respondents that had never smoked tobacco was 0.3% [0.1; 0.5].

Table 4 shows the pattern of use among current e-cigarette users. Median consumption among users of disposable e-cigarettes was 0.5 (interquartile range = 1.6) e-cigarettes or cartridges per day. Only around 50% of users of e-cigarettes with replaceable, pre-filled cartridges, or e-cigarettes with a tank that the user refills themselves, were able to estimate their own consumption: median, 3.0 ml (interquartile range = 9.3 ml) per day. While 72.1% [66.3; 77.9] of current e-cigarette consumers used (either exclusively or primarily) e-cigarettes with nicotine, 26.2% [20.5; 31.8] used them without nicotine. The average nicotine concentration in e-liquid among consumers of e-cigarettes with nicotine was 6.5 mg/ml (SD = 4.0 mg/ml; minimum = 1 mg/ml, maximum = 20 mg/ml).

Table 5 lists the reasons given for using e-cigarettes. In addition to the attractiveness of these products ("different tastes," "it's fun"), consumers focus on their economic ("cheaper than smoking cigarettes") and health aspects ("less harmful than tobacco"), as well as their potential to help achieve the desired reduction or cessation of tobacco use.

### Discussion

At 28.3%, tobacco use in Germany is very high compared with other Western European countries. This is particularly concerning when one considers that tobacco smoking is estimated to account for approximately 25%–50% of health inequalities in the population (4, 20, 21). This high tobacco consumption is likely the result of the inadequate implementation of tobacco control measures in Germany, among other aspects: in a comparison of 35 European countries,

TABLE 3

**A comparison of socioeconomic characteristics and tobacco use among current e-cigarette users, ex-e-cigarette users, and never-e-cigarette users**

Characteristic	Current e-cigarette users % (N = 235 [212* <sup>1</sup> ])	Ex-e-cigarette users % (N = 963 [891* <sup>1</sup> ])	Never-e-cigarette users % (N = 11 016 [11 107* <sup>1</sup> ])	P-value* <sup>2</sup>
<b>Gender</b>				
Male	2.6 (154)	9.2 (543)	88.2 (5220)	<0.001
Female	1.3 (81)	6.7 (420)	92.0 (5796)	
<b>Age (years)</b>				
14–17	2.9 (13)	11.9 (53)	85.2 (381)	<0.001
18–24	3.5 (39)	17.1 (193)	79.5 (898)	
25–39	3.1 (75)	12.5 (298)	84.4 (2019)	
40–64	2.0 (99)	7.4 (375)	90.6 (4580)	
65+	0.3 (10)	1.4 (44)	98.3 (3138)	
<b>Highest school-leaving qualification</b>				
No qualification	6.0 (9)	4.0 (6)	90.0 (135)	<0.001
Secondary/elementary school	2.0 (67)	6.9 (229)	91.1 (3033)	
Secondary school-leaving certificate	2.1 (91)	9.1 (399)	88.8 (3896)	
Advanced technical college certificate	1.6 (14)	11.1 (98)	87.3 (768)	
Higher education entrance qualification	1.5 (43)	6.1 (177)	92.4 (2664)	
<b>Net household income among over-18-year-olds (Euro)</b>				
<1000	1.8 (16)	10.6 (93)	87.5 (766)	<0.001
1001–2000	2.1 (64)	7.9 (237)	90.0 (2700)	
2001–3000	2.8 (97)	8.6 (296)	88.6 (3066)	
3001–4000	1.4 (37)	6.7 (179)	91.9 (2452)	
4001–5000	1.2 (13)	8.3 (92)	90.5 (1006)	
>5000	0.7 (8)	5.9 (65)	93.4 (1025)	
<b>Smoking status</b>				
Current smoker	5.1 (174)	21.0 (724)	73.9 (2542)	<0.001
Ex-smoker	1.6 (33)	7.2 (147)	91.2 (1864)	
Never-smoker	0.3 (21)	1.4 (90)	98.3 (6541)	

Data presented as weighted percentage portion (in parentheses: absolute number). The denominator for calculating the percentage refers to the total number in the corresponding row (for example: 1.3% of women are current e-cigarette users). Differing total N when adding the reference cells are explained by data provided for the respective characteristics.

\*<sup>1</sup> Unweighted, \*<sup>2</sup> p-value for Pearson's chi-squared test

Germany ranks last but one in this regard (22). For example, Germany is the only EU country in which outdoor advertising of tobacco products is still permitted. Different statutory provisions on the federal-state level permit exceptions to the anti-smoking law, such as smoking rooms in bars and restaurants. Implementation of the anti-smoking law in Germany remains comparatively poor: for example, smoking in cars when children are present has already been banned in Italy, Ireland, and Finland. Overall, therefore, there is still considerable need for additional measures.

Mild fluctuations in the prevalence of tobacco consumption were observed over the 1-year observation

period, with a relatively sharp rise seen between February/March 2017 (fifth wave of the survey) and April/May 2017 (sixth wave of the survey). At the same time, there was a comparatively sharp drop in the prevalence of e-cigarette use. In May 2017, the new EU tobacco product directive (23), which regulates e-cigarettes more rigorously, came into force following a 1-year transition phase. It is possible that there is a link here: for example, the new legislation may have led to fewer tobacco smokers using e-cigarettes, and therefore fewer people stopped smoking. Other studies have already demonstrated a similar connection (24, 25).

TABLE 4

**Consumption patterns and procurement sources among current e-cigarette users**

Indicator of consumption	
Number of days on which e-cigarettes were used in the preceding 30 days, median (interquartile range)	20 (26)
Type of e-cigarette	
Disposable e-cigarette	4.3 (10)
E-cigarette with replaceable, pre-filled cartridges	21.4 (50)
E-cigarette with a tank refilled by the user	65.6 (154)
Other <sup>*3</sup>	8.2 (19)
E-cigarette use with/without nicotine	
Only with nicotine	42.2 (99)
Mainly with nicotine	29.3 (69)
Mainly without nicotine	9.6 (23)
Only without nicotine	16.2 (38)
Unaware of whether or not e-cigarette contains nicotine	2.0 (5)
Procurement source of e-cigarettes (multiple responses)	
Specialist tobacco and e-cigarette shop	63.7 (150)
Another type of shop (e.g., gas station, kiosk)	14.7 (35)
Online	26.2 (62)
By telephone	1.5 (3)

Data presented as weighted percentage portion (in parentheses: absolute number), otherwise as shown  
<sup>\*1</sup> 100% missing portion = no data; <sup>\*2</sup> unweighted;  
<sup>\*3</sup> alternatives named: (e-)hookah and high-performance vaporizer

When comparing results with other German surveys (26–29), it is apparent that the estimates on rates of tobacco use in the DEBRA study are generally somewhat higher. This is due in part to disparate methods of sample composition and data collection. As in other surveys (3, 30), differences in tobacco use could be seen between federal states, although the studies do not show a homogeneous picture. These differences may possibly be accounted for by the differing characteristics of the populations in the various federal states, differences associated with tobacco use such as age, education, and income (31, 32).

Approximately every tenth person in Germany has used an e-cigarette at least once. The annual average prevalence of current use was 1.9% in the population aged >14 years (comparable to the EU average of around 2% [6]) and 2.8% in 14– to 18-year-olds. Thus, compared with a Germany-wide survey conducted in May 2016 that yielded a prevalence of 1.4% (13), the number of current e-cigarette users has risen further. Like the aforementioned study (13), as well as studies from other European countries (6), the results of our study also show that, in Germany, e-cigarettes are predominantly used by current tobacco smokers (5.1%), to a lesser extent by ex-smokers (1.6%), and by only very few never-smokers (0.3%). Smoking

TABLE 5

**Reasons for using e-cigarettes among current smokers, multiple answers possible, N = 235 (212\*)**

Reason	% (n)
1. Because there are a lot of different flavors/tastes	35.9 (85)
2. In order to smoke less tobacco without quitting smoking completely	33.5 (79)
3. Because it's cheaper than smoking tobacco	31.9 (75)
4. Because it's fun	31.8 (75)
5. Because it's less harmful than tobacco	31.4 (74)
6. Because it disturbs nearby people less than tobacco does	29.7 (70)
7. In order to quit smoking completely	27.5 (65)
8. In order to use it in places where smoking is not permitted	24.5 (58)
9. Because it tastes better than smoking tobacco	22.2 (52)
10. Because it reduces the urge (strong craving/pressure) to smoke	19.3 (45)
11. Because it's less addictive than tobacco	17.3 (41)
12. Out of curiosity	14.2 (33)
13. Because people in my environment do it too	14.6 (43)
14. Because it's cool/modern	9.3 (22)
15. Because I find it difficult to quit using e-cigarettes	2.2 (5)
16. Because people in the media or celebrities use e-cigarettes	1.3 (3)
Other reasons	12.4 (29)

Data presented as weighted percentage portion (in parentheses: absolute number), sorted in order of frequency  
 \* Unweighted

less tobacco or quitting smoking altogether are major reasons for the use of e-cigarettes; indeed, the e-cigarette is already the most frequently used method in Germany to support smoking cessation. It is important to point out in this regard that the evidence for the efficacy of e-cigarettes as a smoking cessation aid is still inconclusive (in the future, the DEBRA study will be able to provide effectiveness data in line with international standards [33] once a sufficient number of cases has been reached).

Compared with the e-cigarette, evidence-based methods of smoking cessation, e.g., brief physician advice, behavioral counseling, and nicotine replacement therapy, are scarcely made use of in Germany, being deployed in only 12.5% of attempts to quit smoking (compared with around 50% in England [34]). This low utilization rate of evidence-based smoking cessation methods is a problem inasmuch as attempts to quit smoking without using appropriate support have little chance of success; only around

3%–5% of unassisted attempts succeed long-term (35). At the same time, each additional year of tobacco use costs the smoker on average 3 months of life expectancy (36). Thus, the goal should be to attach greater significance to guideline-compliant smoking cessation in everyday medical practice in Germany.

An advantage of the DEBRA study is that its continuous, detailed collection of data using consistent methods permits in-depth analyses of trends in the evolution of smoking behavior, as well as the prompt reporting of data, not least data on new tobacco and nicotine products. However, the DEBRA study also has general methodological weaknesses, as is to be expected from large national surveys: for example, all data are self-reported. On the other hand, the refined methods of sampling and data weighting permit the analysis of data that are representative of the German population. Moreover, due to face-to-face survey, only scant data is missing.

One of the important conclusions drawn from this study is that tobacco consumption in Germany remains high—significantly higher than in other Western European countries. This consumption is influenced by education and income, among other factors, leading to a further increase in socioeconomic differences in morbidity and mortality in Germany. Therefore, the rigorous implementation in Germany of the measures drawn up in the WHO Framework Convention on Tobacco Control should be given priority in terms of health policy. As part of this, the on-going DEBRA study can serve as a monitoring instrument.

#### Acknowledgments

We would like to thank Kantar Health (Constanze Cholmakow-Bodechtel and Linda Scharf) for data collection and management, Yekaterina Pasutina for assisting in data extraction, and Sebastian Kupski for the graphic representation of tobacco use in the individual German federal states.

#### Funding

The DEBRA study is funded by the North Rhine-Westphalia Ministry of Culture and Science as part of the "NRW Return Programme" (*NRW-Rückkehrprogramm*).

#### Conflict of interest statement

The authors state that there are no conflicts of interest.

Manuscript submitted on 8 December 2017, revised version accepted on 1 March 2018

Translated from the original German by Christine Schaefer-Tsorpazidis

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#### Key Messages

- A total of 32.3% of men and 24.5% of women in Germany currently smoke tobacco—significantly more than in other Western European countries.
- There are pronounced socioeconomic differences in relation to smoking: the lower the school-leaving qualification and household income, the higher the rate of consumption.
- Altogether, 41.6% of individuals without school-leaving qualifications smoke, whereas the figure for individuals with a higher education entrance qualification is 20.0%.
- Only a small number of attempts to quit smoking are supported using evidence-based methods; the e-cigarette is the method most frequently used.

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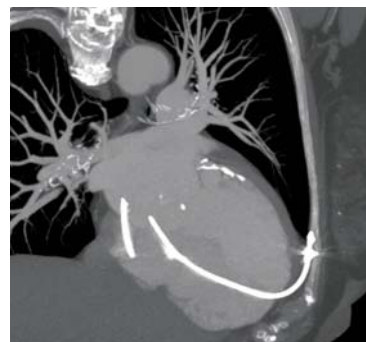
► **Supplementary material**

**eMethods, eTable, eFigure:**  
[www.aerzteblatt-international.de/18m0m0235](http://www.aerzteblatt-international.de/18m0m0235)

**CLINICAL SNAPSHOT**

**Chest Pain Due to Pacemaker Lead Perforation**

An 85-year-old woman presented complaining of chest pain one week after discharge from another hospital, where she had undergone the placement of a dual-chamber pacemaker to treat sick sinus syndrome. An ECG on admission revealed atrial fibrillation with ventricularly stimulated ventricular complexes and a heart rate of 72 beats per minute. There were no specific abnormalities on physical examination. A chest x-ray revealed dislocation of the ventricular lead, with its tip outside the cardiac silhouette. A clinically significant pericardial effusion was ruled out by echocardiography, and computed tomography confirmed that the lead tip lay in the mediastinum (*Figure*). The ventricular lead was repositioned uneventfully; preparations had been made for immediate cardiac surgical intervention as needed, but this was, fortunately, unnecessary.



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**Conflict of interest statement:** The authors state that they have no conflict of interest.

**Cite this as:** Christ M, Grett M, Trappe HJ: Chest pain due to pacemaker lead perforation. *Dtsch Arztebl Int* 2018; 115: 242. DOI: 10.3238/arztebl.2018.0242

Translated from the original German by Ethan Taub, M.D.



Supplementary material to:

# The Use of Tobacco, E-Cigarettes, and Methods to Quit Smoking in Germany

A Representative Study Using 6 Waves of Data Over 12 Months (the DEBRA Study)

by Daniel Kotz, Melanie Böckmann, and Sabrina Kastaun

Dtsch Arztebl Int 2018; 115: 235–42. DOI: 10.3238/arztebl.2018.0235

**eTABLE**

**A comparison of the prevalence rates of tobacco use in the 28 EU countries in 2017 (data from the Eurobarometer 458)**

Country	Current smokers	Ex-smokers	Never-smokers	No response
Greece	37% (369)	19% (193)	44% (448)	0
Bulgaria	36% (376)	13% (129)	51% (536)	3
France	36% (361)	22% (216)	42% (427)	0
Croatia	35% (368)	16% (162)	49% (515)	3
Latvia	32% (323)	23% (228)	45% (452)	0
Poland	30% (299)	18% (177)	52% (527)	5
Lithuania	29% (291)	18% (180)	53% (528)	2
Czech Republic	29% (306)	19% (197)	52% (554)	2
Romania	28% (289)	14% (145)	58% (600)	0
Slovenia	28% (287)	19% (199)	53% (541)	0
Spain	28% (281)	22% (228)	50% (514)	1
Cyprus	28% (138)	17% (87)	55% (276)	0
Austria	28% (283)	19% (187)	53% (531)	0
Hungary	27% (280)	14% (153)	59% (620)	0
Portugal	26% (272)	14% (149)	60% (640)	0
EU 28 total	26% (7293)	20% (5632)	53% (14 858)	1% (118)
Slovakia	26% (267)	17% (169)	57% (547)	4
Germany	25% (391)	21% (318)	52% (805)	2% (24)
Italy	24% (252)	14% (139)	62% (630)	1
Malta	24% (120)	19% (95)	57% (285)	0
Estonia	23% (237)	24% (243)	53% (537)	0
Luxembourg	21% (107)	22% (113)	57% (289)	1
Finland	20% (204)	23% (294)	51% 514	0
Belgium	19% (196)	24% (246)	57% (581)	0
Denmark	19% (186)	33% (329)	48% (458)	0
Ireland	19% (198)	18% (185)	63% (637)	1
The Netherlands	19% (197)	32% (322)	49% (494)	1
Great Britain	17% (234)	22% (300)	60% (801)	1% (10)
Sweden	7% (72)	41% (409)	52% (526)	0

Percentage (in parentheses: absolute number), sorted according to prevalence of current tobacco consumption (in descending order). The denominator for calculating the percentage refers to the total number in the corresponding row (for example: 25% of Germans are current tobacco smokers). Data taken in modified form from (6): European Union, Eurobarometer, [https://data.europa.eu/euodp/data/dataset/S2146\\_87\\_1\\_458\\_ENG](https://data.europa.eu/euodp/data/dataset/S2146_87_1_458_ENG) ("The European Union does not endorse changes, if any, made to the original data and, in general terms to the original survey, and such changes are the sole responsibility of the author and not the EU.")

## eMETHODS Section 1

### The Use of Tobacco, E-Cigarettes, and Methods to Quit Smoking in Germany—A Representative Study Using 6 Waves of Data Over 12 Months (the DEBRA Study)

#### Methods

The DEBRA study was reviewed by the ethics committee of the Heinrich-Heine-University Düsseldorf (ID 5386/R) and registered in the German Registry of Clinical Trials (DRKS00011322). A detailed description of the methods used for the entire study has been published in a study protocol (11). In summary, the study is a Germany-wide, computer-assisted, face-to-face household survey of participants aged 14 years and older. Over a period of 3 years, representative samples of around 2000 participants will be interviewed at 2-month intervals as part of a multi-topic omnibus survey (18 waves in total and approximately 36 000 interviews). Interviewees are selected on the basis of stratified multistage random sampling (sampling details are published in Study Protocol [11]). In a first step, this sample answers questions on general sociodemographics as well as on the prevalence of tobacco and e-cigarette consumption. Each wave of the survey is expected to interview approximately 500–600 current smokers and recent ex-smokers (<12 months without smoking), who will answer detailed questions on smoking and smoking cessation (see below). This group will be invited to take part in a telephone follow-up interview after 6 months. This article presents the weighted baseline data from the first six waves (June/July, August/September, October/November 2016, January, February/March, April/May 2017). By aggregating these data, collected at 2-month intervals over a period of 1 year, it is possible to precisely estimate the 1-year prevalence, as seasonal effects have little influence.

#### Measurements

The *eMethods Section 2* provides an overview of the exact wording of questions included in the multi-topic omnibus survey conducted for the DEBRA study (questions that are asked as standard in this omnibus survey, e.g., German federal state, age, gender, highest school-leaving qualification, and household income, are not given). Data on German federal state, age, gender, highest school-leaving qualification, household income, as well as on daily or occasional use of tobacco and e-cigarettes, were collected from all respondents. Current smokers and recent ex-smokers (defined as ex-smokers that had completely ceased smoking in the preceding 12 months) were asked to estimate the

average number of cigarettes consumed daily and the number of attempts made to quit smoking in the preceding year.

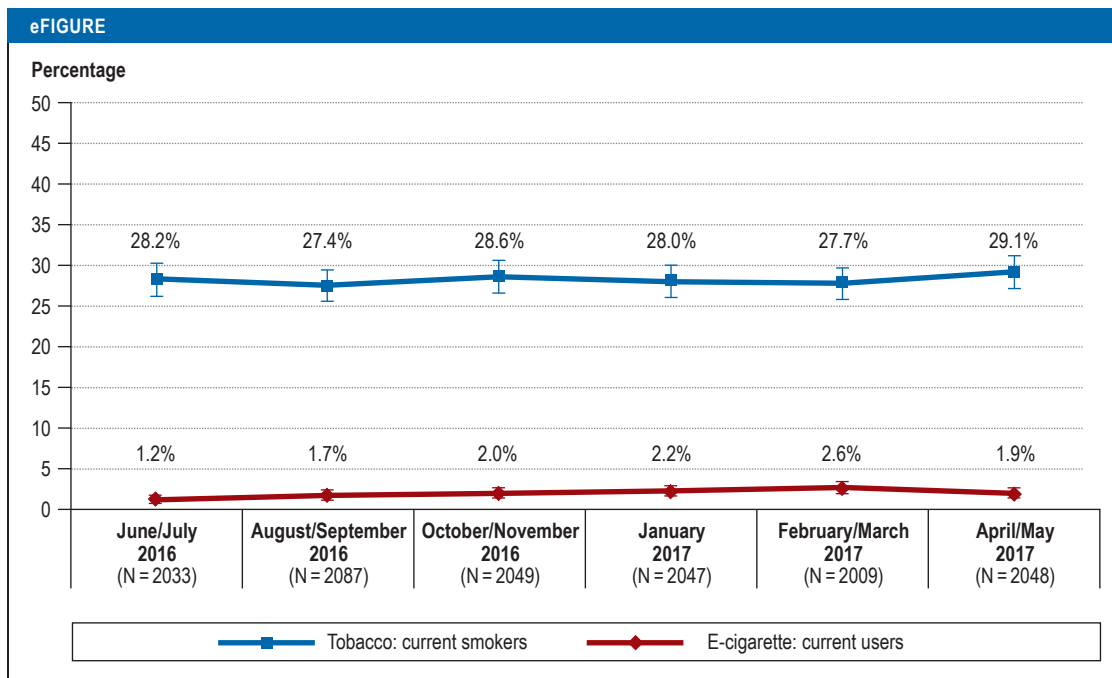
Current smokers were additionally asked about the time to their first cigarette in the morning (as an indicator of the degree of nicotine dependence). Respondents that had attempted to quit smoking in the previous year were asked about: which smoking cessation methods they had used; whether they had gradually reduced their tobacco consumption or stopped abruptly; and whether their attempt to quit smoking had been planned or spontaneous. Finally, current e-cigarette smokers were asked about: their reasons for using these devices; frequency of use in the preceding 30 days; type of e-cigarette; where it had been purchased; average daily use of liquid; use of nicotine in liquids; and amount of nicotine.

#### Statistical methods

All data in this article are presented in weighted form. With design weights on a household level, weighting makes up for absences from the gross sample and gives frequently absent respondents a higher factor, since they have a lower selection probability. The household sample is then converted into a sample of individuals. Finally, age, gender, region, and other demographic characteristics are adjusted to the level of the individual. The details of weighting can be found in the study protocol (11).

Descriptive statistics were predominantly used to present results. Pearson's chi-squared test was also used to analyze the (unadjusted) associations between socioeconomic characteristics of respondents and their use of tobacco and e-cigarettes.

Individual analyses were performed using the data that was available, i.e., individuals for whom data was lacking in the respective analysis were not taken into consideration. However, since the study is based on face-to-face interviews, the rate of lacking data is extremely low (less than 1%–2% for most questions), this being attributable merely to the fact that respondents were either unwilling or unable to provide information. The question on the number of smoking cessation attempts in the preceding 12 months was the only exception here, with 12.1% either unwilling or unable to provide data.



Weighted prevalence of current tobacco and e-cigarette users per survey wave. Total sample size N = 12 273

## Deutsche Befragung zum Rauchverhalten (DEBRA) – Baseline Befragung

**Stichprobe: Alle Personen über 14 Jahre in Privathaushalten in Deutschland**

### Erklärungen

K.A. = keine Angabe

Fragen, die sich nur auf eine Subgruppe beziehen sind **in hellroter Farbe gekennzeichnet**.

Anweisungen an den Fragesteller sind **in hellblauer Farbe und in hellvioletter Farbe gekennzeichnet**.

Fragen/ Statements, die zu einem späteren Zeitpunkten (Folgewellen) oder nur bei einem Teil der Wellen gefragt werden sind **in hellgelber Farbe gekennzeichnet**.

Prüffragen **in hellgrüner Farbe gekennzeichnet**

**Z02.** Darf ich fragen wie alt Sie sind?

Bitte geben Sie nochmals das Alter ein

Jahre [Wert zwischen 14-99 erlauben] [„keine Angabe“ = 999]

### Themawechsel!

**1.** Welcher der folgenden Zustände trifft am besten auf Sie zu? Bitte beachten, dass das Rauchen von Tabak gemeint ist und nicht von elektrischen Zigaretten. **Bitte Liste RV01 vorlegen!**

1. Ich rauche Zigaretten, und zwar jeden Tag
2. Ich rauche Zigaretten, aber nicht jeden Tag
3. Ich rauche gar keine Zigaretten, aber ich rauche Tabak in anderer Form (zum Beispiel Pfeife oder Zigarre)
4. Ich habe in den vergangenen 12 Monaten vollständig mit dem Rauchen aufgehört
5. Ich habe vor mehr als einem Jahr vollständig mit dem Rauchen aufgehört
6. Ich habe nie geraucht (nie länger als ein Jahr)
7. K.A.

Die folgenden Fragen beschäftigen sich mit elektrischen Zigaretten (E-Zigaretten) oder ähnlichen Produkten wie E-Shisha, E-Zigarre oder E-Pfeife. Dies sind Produkte, die das Rauchen mit technischen Mitteln nachahmen, ohne dabei Tabak zu verbrennen. Bei der Nutzung wird eine aromatisierte Flüssigkeit (Liquid) verdampft und eingeatmet.

2. Haben Sie jemals eine elektrische Zigarette (E-Zigarette) oder ein ähnliches Produkt benutzt (wie zum Beispiel E-Shisha, E-Zigarre oder E-Pfeife)? **Vorgaben bitte vorlesen!**
1. Ja, ich benutze diese bis heute [definiert aktuelle Nutzer]
  2. Ja, ich habe diese früher regelmäßig benutzt, aber heute nicht mehr [definiert Ex-Nutzer]
  3. Ja, ich habe diese früher mal ausprobiert, aber benutze heute keine mehr [definiert Experimentierer]
  4. Nein, ich habe diese nie benutzt [definiert Nicht-Nutzer]
  5. K.A.

[Wenn Frage 0 = 1]

Bei den folgenden Fragen sprechen wir von E-Zigaretten und meinen damit auch E-Shishas, E-Zigarren, E-Pfeifen oder ähnliche elektrische Inhalationsprodukte.

3. In welchem Jahr oder in welchem Alter haben Sie mit dem Konsum von E-Zigaretten begonnen? Machen Sie bitte nur eine Angabe: geben Sie daher bitte entweder das Jahr oder das Alter an. Für „Weiß nicht“ oder „Keine Angabe“ bitte Button oben anklicken!
1. Jahr: <Jahreszahl> [Einen Wert zwischen 2000-2016]
  2. Alter: <ganze Zahl> [Einen Wert zwischen 10-90]
  3. Weiß nicht
  4. K.A.

Prüffrage, wenn Jahr <Geburtsjahr+10, wenn Alter >derzeitiges Alter, oder wenn unerlaubter Wert:

Sind Sie sicher, dass die von Ihnen gemachte Angabe korrekt ist? – Ja/Nein

Bei „Ja“: Fragebogen läuft normal weiter

Bei „Nein“: Wiederholung der Frage

4. Was würden Sie schätzen: an wie vielen der letzten 30 Tage haben Sie E-Zigaretten benutzt? Bitte wählen Sie einen Wert zwischen "0" (an keinem Tag) und "30" (an allen Tagen). Für „Weiß nicht“ oder „Keine Angabe“ bitte Button oben anklicken!
1. Anzahl der Tage: <ganze Zahl> [Einen Wert zwischen 0-30 erlauben]
  2. Weiß nicht
  3. K.A.
5. Was für eine Art von E-Zigarette benutzen Sie normalerweise? **Vorgaben bitte vorlesen!**
1. Eine Einweg-E-Zigarette
  2. Eine E-Zigarette mit ersetzbaren, bereits gefüllten Patronen
  3. Eine E-Zigarette mit einem Tank, den man selber mit einem Liquid befüllen kann
  4. Eine andere Art, nämlich: <freier Text>
  5. K.A.

[Wenn Frage 5 = 1 oder 2]

6. Wie viele Einweg-E-Zigaretten oder Patronen verbrauchen Sie derzeit durchschnittlich? Machen Sie bitte nur eine Angabe: geben Sie die Menge pro Tag oder, wenn Sie gelegentlicher Nutzer sind, pro Woche oder pro Monat an. Für „Weiß nicht“ oder „Keine Angabe“ bitte Button oben anklicken!

1. Anzahl pro Tag: <ganze Zahl> [Einen Wert zwischen 1-50 erlauben]
2. Anzahl pro Woche: <ganze Zahl> [Einen Wert zwischen 1-300 erlauben]
3. Anzahl pro Monat: <ganze Zahl> [Einen Wert zwischen 1-500 erlauben]
4. Weiß nicht
5. K.A.

Prüffrage, wenn unerlaubter Wert

[Wenn Frage 5 = 3]

7. Wie viel Milliliter Liquid verbrauchen Sie derzeit durchschnittlich? Machen Sie bitte nur eine Angabe: geben Sie die Menge pro Tag oder, wenn Sie gelegentlicher Nutzer sind, pro Woche oder pro Monat an. Für „Weiß nicht“ oder „Keine Angabe“ bitte Button oben anklicken!

1. Milliliter pro Tag: <ganze Zahl> [Einen Wert zwischen 1-30 erlauben]
2. Milliliter pro Woche: <ganze Zahl> [Einen Wert zwischen 1-100 erlauben]
3. Milliliter pro Monat: <ganze Zahl> [Einen Wert zwischen 1-200 erlauben]
4. Weiß nicht
5. K.A.

Prüffrage, wenn unerlaubter Wert

[Wenn Frage 0= 1]

8. Benutzen Sie normalerweise E-Zigaretten mit oder ohne Nikotin? Vorgaben bitte vorlesen!

1. Ausschließlich mit Nikotin
2. Hauptsächlich mit Nikotin
3. Hauptsächlich ohne Nikotin
4. Ausschließlich ohne Nikotin
5. Ich weiß nicht, ob meine E-Zigarette Nikotin enthält.
6. K.A.

[Wenn Frage 8= 1 oder 2 oder 3]

9. Wie hoch ist die Nikotinkonzentration in den von Ihnen verwendeten Patronen oder Liquids?

Für „Weiß nicht“ oder „Keine Angabe“ bitte Button oben anklicken!

1. Milligramm pro Milliliter: <ganze Zahl> [Einen Wert zwischen 1-30 erlauben]
2. Weiß nicht
3. K.A.

Prüffrage, wenn unerlaubter Wert

[Wenn Frage 0= 1]

**10.** Wo kaufen Sie normalerweise Ihre E-Zigarette oder Ihre Liquids? [Mehrfachnennung möglich.]

Vorgaben bitte vorlesen!

1. In einem Geschäft, das auf Tabak oder E-Zigaretten spezialisiert ist
2. In einem sonstigen Geschäft (z.B. Tankstelle, Kiosk)
3. Im Internet
4. Telefonisch
5. K.A.

[Wenn Frage 0= 1 und wenn Alter >= 18]

**RV1109.** Haben Sie jemals einen elektrischen Joint (E-Joint) oder eine E-Zigarette geraucht, die mit Cannabis (Gras oder Haschisch) gefüllt war, also mit dem Ziel eine stimmungsverändernde Wirkung zu erzielen?

6. Ja, das habe ich mal ausprobiert
7. Ja, auf diese Art rauche ich gelegentlich oder regelmäßig Cannabis
8. Nein, noch nie
9. K.A.

[Wenn Frage 0= 1]

Bitte drehen Sie den Laptop so, dass die/der Befragte mit auf den nächsten Bildschirm sehen kann.

**11.** Warum benutzen Sie E-Zigaretten? [Mehrfachnennung möglich. Die Reihenfolge der Antwortmöglichkeiten variieren um order bias zu reduzieren.]

1. Um mit dem Rauchen von Tabak ganz aufzuhören
2. Um weniger Tabak zu rauchen, ohne ganz mit dem Rauchen aufzuhören
3. Weil es weniger schädlich ist als Tabak
4. Weil es weniger abhängig macht als Tabak
5. Weil es das Rauchverlangen (starker Drang/Druck) verringert
6. Um sie an Orten zu benutzen, wo das Rauchen von Tabak verboten ist
7. Aus Neugierde
8. Weil es Spaß macht
9. Weil es viele verschiedene Aromen/Geschmacksrichtungen gibt
10. Weil andere in meinem Umfeld es auch tun
11. Weil es mir besser schmeckt als das Rauchen von Tabak
12. Weil es cool/modern ist
13. Weil es billiger ist als Rauchen von Tabak
14. Weil es Leute in der Umgebung weniger stört als Rauchen von Tabak
15. Weil es mir schwer fällt, mit dem E-Zigarettenkonsum aufzuhören
16. Weil Personen in den Medien oder bekannte Persönlichkeiten E-Zigaretten benutzen
17. Aus anderen Gründen
18. K.A.

Bitte den Laptop so drehen, dass die/der Befragte nicht mehr mit auf den Bildschirm sehen kann!

[Wenn Frage 1 = 1, 2 oder 3] und [Wenn Frage 0 = 1 oder 2]

**12.** Wie hat sich Ihr Nutzungsverhalten entwickelt? Bitte Liste RV12 vorlegen!

1. Ich habe früher nur Tabak geraucht, habe dann mit E-Zigaretten angefangen, und benutze jetzt Tabak und E-Zigaretten.
2. Ich habe früher nur Tabak geraucht, habe dann mit E-Zigaretten angefangen, und benutze jetzt wieder nur noch Tabak.
3. Ich habe früher nie Tabak geraucht, habe dann mit E-Zigaretten angefangen, und benutze jetzt nur noch Tabak.
4. Ich habe früher nie Tabak geraucht, habe dann mit E-Zigaretten angefangen, und benutze jetzt Tabak und E-Zigaretten.
5. K.A.

[Wenn Frage 1 = 1-3]

**13.** In Situationen in denen Sie nicht rauchen können oder dürfen (z.B. auf Bahnreisen, im Flugzeug), nutzen Sie dann regelmäßig eines oder mehrere der folgenden Produkte? [Mehrfachnennung möglich.] Bitte Liste RV13 vorlegen!

1. Nikotinkaugummi
2. Nikotinpastillen (Lutschtabletten)
3. Nikotinpflaster
4. Nikotin Inhalator\Inhaler
5. Nikotin Mundspray
6. Nikotin Nasalspray
7. E-Zigarette
8. Ein anderes Nikotinprodukt
9. Ich nutze keines der genannten Produkte
10. K.A.

[Wenn Frage 1 = 1-3]

**14.** Welche der folgenden Aussagen trifft auf Sie zu? Bitte Liste RV14 vorlegen!

1. Ich will nicht mit dem Rauchen aufhören.
2. Ich sollte mit dem Rauchen aufhören, aber ich möchte eigentlich nicht.
3. Ich will mit dem Rauchen aufhören, habe aber noch nicht darüber nachgedacht, wann.
4. Ich will **unbedingt** mit dem Rauchen aufhören, habe aber noch nicht darüber nachgedacht, wann.
5. Ich will mit dem Rauchen aufhören und hoffe, dies in naher Zukunft zu tun.
6. Ich will **unbedingt** mit dem Rauchen aufhören und habe vor, dies in den nächsten drei Monaten zu tun.
7. Ich will **unbedingt** mit dem Rauchen aufhören und habe vor, dies im nächsten Monat zu tun.
8. K.A.



[Wenn Frage 1 = 1-2 oder 4]

**15.** Wie viele Zigaretten rauchen Sie normalerweise? Oder, wie viele Zigaretten rauchten Sie normalerweise, bevor Sie mit dem Rauchen aufhörten? Machen Sie bitte nur eine Angabe: geben Sie die Menge pro Tag oder, wenn Sie gelegentlicher Nutzer sind, pro Woche oder pro Monat an. Für „Weiß nicht“ oder „Keine Angabe“ bitte Button oben anklicken!

1. Anzahl pro Tag: <ganze Zahl> [Einen Wert zwischen 1-999 erlauben]
2. Anzahl pro Woche: <ganze Zahl> [Einen Wert zwischen 1-999 erlauben]
3. Anzahl pro Monat: <ganze Zahl> [Einen Wert zwischen 1-999 erlauben]
4. Weiß nicht
5. K.A.

[Wenn Frage 1 = 1-2]

**16.** Wie schnell rauchen Sie nach dem Aufwachen Ihre erste Zigarette? Vorgaben bitte vorlesen!

1. Innerhalb von 5 Minuten
2. 6-30 Minuten
3. 31-60 Minuten
4. Mehr als 60 Minuten
5. Weiß nicht
6. K.A.

[Wenn Frage 1 = 1-4]

**17.** Wie häufig haben Sie in den vergangenen 24 Stunden das Verlangen verspürt zu rauchen? Bitte Liste RV21 vorlegen!

1. Überhaupt nicht
2. Selten
3. Manchmal
4. Häufig
5. Fast immer
6. Immer
7. K.A.

[Wenn Frage 17 = 2-6]

**18.** Wie stark war dieses Verlangen im Allgemeinen? Bitte Liste RV22 vorlegen!

1. Leicht
2. Mittelstark
3. Stark
4. Sehr stark
5. Extrem stark
6. K.A.

[Wenn Frage 1 = 1-4]

**19.** Wie viele ernsthafte Versuche haben Sie in den vergangenen 12 Monaten unternommen, mit dem Rauchen aufzuhören? Mit ernsthaftem Versuch meine ich, dass Sie vorhatten nie wieder zu rauchen. Falls Sie im letzten Jahr erfolgreich mit dem Rauchen aufgehört haben oder zurzeit versuchen mit dem Rauchen aufzuhören, zählen Sie dies bitte als Versuch mit. Für „Keine Angabe“ bitte Button oben anklicken!

1. <ganze Zahl> [Einen Wert zwischen 0-100, bzw. 1-100 wenn Frage 1=4 erlauben]
2. K.A.

Prüffrage, wenn unerlaubter Wert

[Wenn Frage 19 > "0" oder Frage 19 = „K.A.“]

**20.** Wie lange ist ihr letzter Versuch, mit dem Rauchen aufzuhören, her? Bitte Liste RV24 vorlegen!

1. In der letzten Woche
2. Länger als eine Woche
3. Länger als einen Monat
4. Länger als zwei Monate
5. Länger als drei Monate
6. Länger als sechs Monate
7. K.A.

[Wenn Frage 19 > "0" oder Frage 19 = „K.A.“]

**21.** Wie lange hat ihr letzter Versuch, mit dem Rauchen aufzuhören, gedauert, bis Sie wieder angefangen haben? Bitte Liste RV25 vorlegen!

1. Ich bin immer noch rauchfrei
2. Weniger als einen Tag
3. Weniger als eine Woche
4. Weniger als einen Monat
5. Weniger als zwei Monate
6. Weniger als drei Monate
7. Weniger als sechs Monate
8. Weniger als ein Jahr
9. K.A.

Prüffrage, wenn Frage 1=4 und Frage 21≠1:

Sind Sie sicher, dass die von Ihnen gemachte Angabe korrekt ist?

Bei „Nein“: Wiederholung der Frage

Bei „Ja“: Wiederholung von Frage 1:

**RV01\_1** Bitte korrigieren Sie Ihre Angabe an dieser Stelle:

Welcher der folgenden Zustände trifft am besten auf Sie zu?

Bitte beachten, dass das Rauchen von Zigaretten gemeint ist und nicht von elektrischen Zigaretten.

1. Ich rauche Zigaretten und zwar jeden Tag
2. Ich rauche Zigaretten, aber nicht jeden Tag
3. Ich rauche gar keine Zigaretten, aber ich rauche Tabak in anderer Form (zum Beispiel Pfeife oder Zigarre)
4. Ich habe in den vergangenen 12 Monaten vollständig mit dem Rauche aufgehört

[Wenn Frage 19 > "0" oder Frage 19 = „K.A.“]

Bitte drehen Sie den Laptop so, dass die/der Befragte mit auf den nächsten Bildschirm sehen kann.

**22.** Welche der folgenden Sachen haben Sie bei diesem letzten Versuch unternommen, um Ihren Rauchstopp zu unterstützen? [Mehrfachnennung möglich] Gibt es noch etwas anderes, das Sie zur Unterstützung genutzt haben?

1. Kurzberatung durch eine Ärztin/ einen Arzt
2. Kurzberatung durch eine Apothekerin/ einen Apotheker
3. Verhaltenstherapeutische Behandlung zur Rauchentwöhnung (zum Beispiel Einzel- oder Gruppentherapie)
4. Telefonische Beratung zur Rauchentwöhnung
5. Nikotinersatztherapie (zum Beispiel Nikotinpflaster) auf Rezept von Ärztin/ Arzt
6. Nikotinersatztherapie (zum Beispiel Nikotinpflaster) ohne Rezept
7. Zyban (Bupropion)
8. Champix (Vareniclin)
9. E-Zigarette mit Nikotin
10. E-Zigarette ohne Nikotin
11. App zur Rauchentwöhnung auf einem Smartphone oder Tablet PC
12. Internetseite zur Rauchentwöhnung
13. Allen Carr's Buch "Endlich Nichtraucher!"
14. Anderes Buch über Rauchentwöhnung
15. Hypnotherapie
16. Akupunktur
17. Heilpraktiker
18. Eigene Willenskraft
19. Soziales Umfeld (Familie, Freunde, Kollegen)
20. Sonstiges
21. K.A.

Bitte den Laptop so drehen, dass die/der Befragte nicht mehr mit auf den Bildschirm sehen kann!

[Wenn Frage 19 > "0" oder Frage 19 = „K.A.“]

**23.** Erinnern Sie sich bitte an Ihren letzten Versuch mit dem Rauchen aufzuhören. Haben Sie erst weniger geraucht, bevor Sie vollständig mit dem Rauchen aufgehört haben? *Vorgaben bitte vorlesen!*

1. Erst weniger geraucht
2. Direkt vollständig aufgehört, ohne erst weniger zu rauchen
3. K.A.

[Wenn Frage 19 > "0" oder Frage 19 = „K.A.“]

**24.** Erinnern Sie sich bitte an Ihren letzten Versuch mit dem Rauchen aufzuhören. Auf welche der folgenden Weisen haben Sie dies getan? *Vorgaben bitte vorlesen!*

1. Ich habe den Versuch geplant, und zwar für einen späteren Zeitpunkt des gleichen Tages oder für einen zukünftigen Tag
2. Ich habe den Versuch in dem Moment unternommen, in dem ich den Entschluss fasste, mit dem Rauchen aufzuhören.
3. K.A.

**RVWB1.** Wären Sie bereit zum Thema Rauchen noch einmal 7 kurze Fragen mit einer Dauer von maximal 5 Minuten telefonisch zu beantworten?

*Bitte übergeben Sie jetzt das Unterstützungsschreiben der Universität Düsseldorf!*

Dann würden wir die Angaben zu Ihrer Person sowie die Informationen zu diesem Themenbereich getrennt voneinander speichern und nur zum Zwecke der erneuten Befragung darauf zurückgreifen (gemäß Infoblatt).

*Auf Nachfrage – welche Informationen:*

*Telefonnummer, Alter, Geschlecht, Angaben aus dem Bereich „Rauchen“*

1. Ja
2. Nein

[Wenn Frage RVWB1 = 1]

**RVWB2.** Bitte nennen Sie mir Ihren Vornamen, Nachnamen und Ihre Mobil-Nummer und/oder Festnetz-Nummer.

Vorname:

Nachname:

Mobil-Nummer:

Festnetz-Nummer:

**RVWB3.** *Bitte lesen Sie dem Befragten die eingegebene(n) Telefonnummer(n) zur Bestätigung noch einmal langsam vor!*

<Mobil-Nummer>

<Festnetz-Nummer>

Ist/sind die Telefonnummer(n) korrekt?

1. Ja
2. Nein

*Bei „Nein“ wird Frage RVWB2“ wiederholt.*