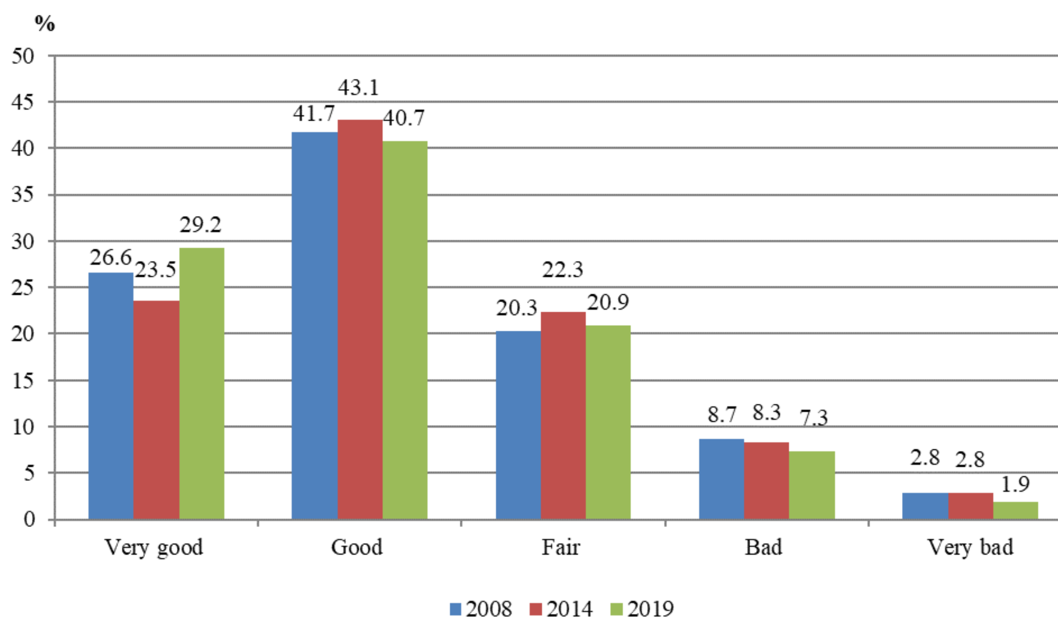
EUROPEAN HEALTH INTERVIEW SURVEY - THIRD WAVE, 2019 (PRELIMINARY DATA)

The European Health Interview Survey is a part of the European Health Survey System which aims at measuring on a harmonized basis and with a high degree of comparability among EU Member States, the health status, life style (health determinants) and health care services use of the EU citizens.
In 2019 the BNSI participated in the EHIS wave 3 in accordance with the Commission Regulation (EU) No. 2018/255. The survey was carried out in the period October 2019 - January 2020.
10 322 persons aged 15 and over living in 4 459 eligible private households are covered. The survey applies the principle of the voluntary participation. By face to face interview (PAPI) 7 540 persons are interviewed as the response rate is 73.0%.
All presented data are based on the respondents` answers and self-assessment. No documents are required, proving the correctness of answers and no measurements are done.

Health status

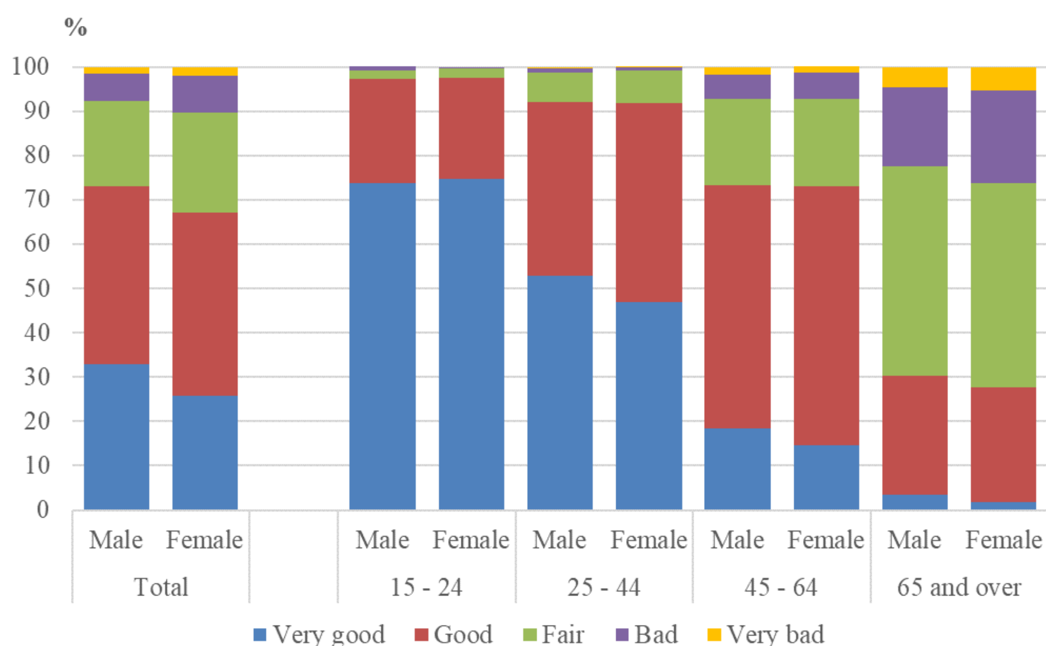
Self-perceived health
The researchers assume that people assess in a complex way the presence or absence of disease, functional limitations and restriction of activities in daily life due to health related reasons. One of the most important questions asked during the interview is ‘How is your health in general?’ with five answers categories. The reference is to health in general rather than the present state of health.
According to preliminary data in 2019 the biggest is the share of persons aged 15 and over who self-assessed their health as ‘good’ (40.7%), followed by ‘very good’ (29.2%) and fair (20.9%). As ‘bad’ and ‘very bad’ identified their health respectively 7.3 and 1.9% of the population. Compared to the data from the previous two waves conducted in 2008 and 2014, there is a positive trend of increasing the share of people who assessed their health as ‘very good’ - by 5.7 percentage points (pp). (Figure 1).

Figure 1. Self-perceived health status of persons aged 15 and over, 2008, 2014 and 2019



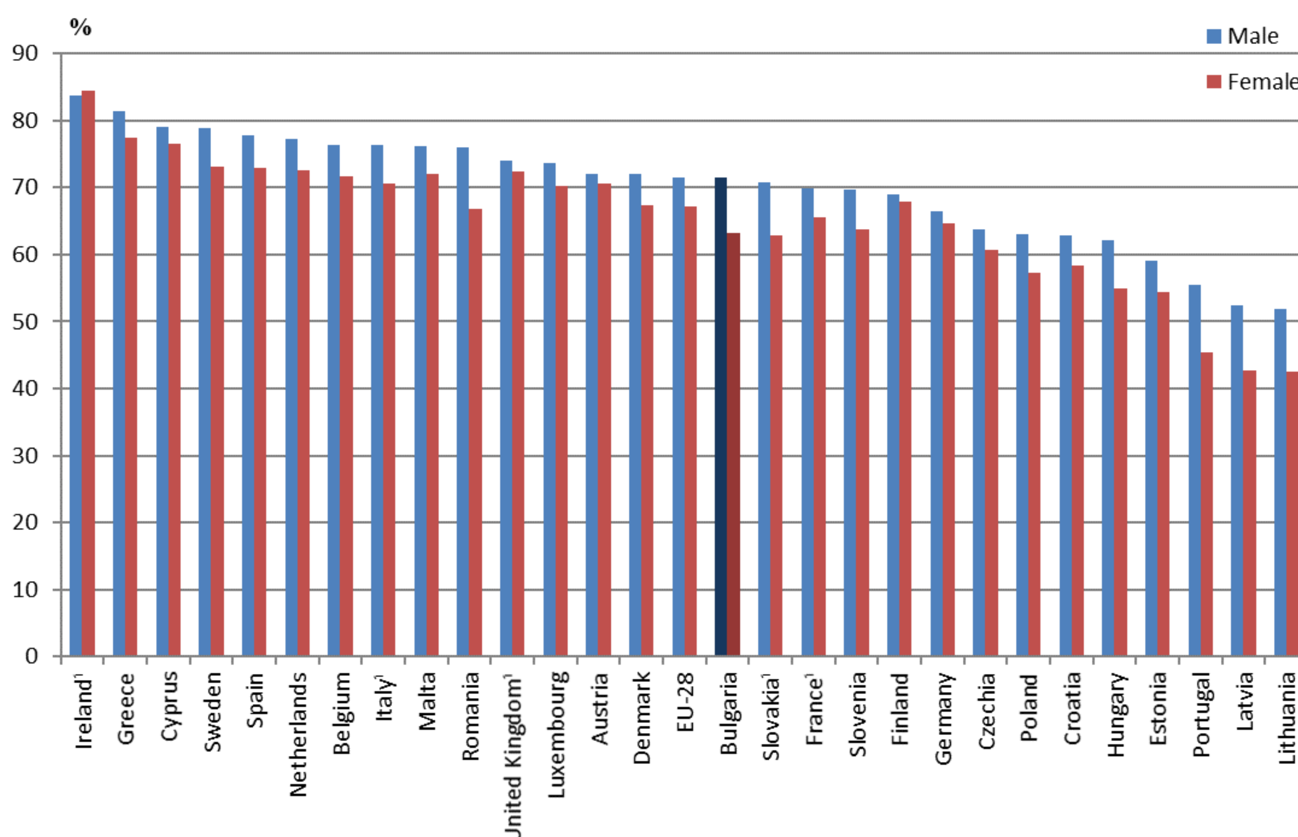
The self-assessment of health in a great extent depends on the sex and age of the (Figure 2). Men more often define their health as ‘very good’ and ‘good’ (73.1%) than women (67.2%). With increasing age, the share of people who assessed their health as ‘bad’ or ‘very bad’ has increased.

Figure 2. Distribution of persons aged 15 and over by self-perceived health status, sex and age, 2019



According to SILC data disseminated by Eurostat, in 2019 71.5% of men and 67.2% of women in the Member States define their health as 'very good' or 'good'. The highest is the share for men as well as for women in Ireland - respectively 83.8 and 84.4%. The lowest is the share of men and women with a positive self-assessment of their health in Lithuania (51.9 and 42.5%) and Latvia (52.5 and 42.7%).

Figure 3. Share of persons aged 16 and over in the Member States with 'very good' or 'good' health by sex, 2019



[1] 2018 data.
Data source: EU-SILC, Eurostat database.

Chronic morbidity
Through the EHIS the prevalence of selected chronic (longstanding/long term) diseases and health problems is observed. When answering the question respondent has to consider whether the disease, respectively the health problem in the last 12 months prior to the interview has appeared. The question asked to the respondents is whether they have had a particular chronic disease or health problem, not whether they 'suffer' from it. In this sense, cases where the respondent has had a disease, which has been controlled with medicines (eg. high blood pressure) and so has not been a problem for the person should be considered as well.
And in 2019 the most common disease in Bulgaria from those, included in the survey's questionnaire was **hypertension** - 29.7% from the persons aged 15 years and above. That disease is more prevalent among the women (32.8%) compared to men (26.5%) (Table 1).

1. Self-reported prevalence of selected diseases and chronic conditions among persons aged 15 and over by diseases and sex, 2019

(%)

Diseases and chronic conditions	Total	Male	Female
Arthrosis (arthritis excluded)	5.8	3.3	8.1
Low back disorder or other chronic back defect	10.4	8.9	11.7
Neck disorder or other chronic neck defect	4.3	2.8	5.7
Asthma (allergic asthma included)	2.2	1.9	2.6
Chronic bronchitis, chronic obstructive pulmonary disease, emphysema	3.2	2.9	3.4
Myocardial infarction (heart attack) or chronic consequences of myocardial infarction	1.6	1.8	1.4
Coronary heart disease or angina pectoris	7.0	5.8	8.1
High blood pressure (hypertension)	29.7	26.5	32.8
Stroke (cerebral haemorrhage, cerebral thrombosis) or chronic consequences of stroke	2.5	2.5	2.5
Urinary incontinence, problems in controlling the bladder	2.6	2.7	2.4
Kidney problems	4.7	4.3	5.1
Diabetes	6.9	6.5	7.3
Allergy (allergic asthma excluded)	3.9	2.4	5.4
Depression	2.7	1.9	3.5

On the second place among surveyed chronical diseases and health problems were **injuries affecting the lower back or other chronic disorders of the back**, indicated by 10.4% of persons as these disorders were more prevalent among the women (11.7%) then the men (8.9%).
Presence of the **coronary heart disease or angina pectoris** during the last 12 months, preceding the survey declared 5.8% of men and 8.1% of women aged 15 and above years.
The **diabetes** is one of social significant disease, which has a significant impact on the quality of life of individuals and often leads to complications**.** According to the EHIS 2019 preliminary data 6.9% of the population aged 15 years and above have diabetes. The disease was prevalent among 6.5% of men and 7.3% of women.
With **arthrosis** were 5.8% of persons, as the disease was significantly more prevalent among the women - 8.1%, then among the men - 3.3%.

Health care

The EHIS collects data on the use of health care services by main socio-economic characteristics of persons.

Inpatient care

In 2019, 9.0% of the population aged 15 and over have been hospitalized as an inpatient that is overnight or longer[1].

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[1] The time spent in hospital for giving birth is not be included. The time spent for reasons related to antenatal and postnatal period (e.g. complications during pregnancy, abortions, and complications after giving birth) should be included.

During the past 12 months before the interview, 7.7% of the population has been admitted to a hospital as a day patient. A day patient is a person who is admitted for hospital treatment (formally) and is discharged from the hospital establishment within the same day, for example for performing a medical procedure - chemotherapy, dialysis, etc.

Outpatient care

The EHIS is data source concerning the use[1] of ambulatory health care. Visits/contacts that focus on respondent's health should be considered. Only visits and consultations related to the health needs of the respondent are included, not when accompanying a child, spouse, etc. Contacts with a nurse on behalf of a GP, for instance for receiving a receipt as well as for arranging an appointment with a doctor are excluded. The data present that among the persons aged 15 years and above in 2019:

- With the general practitioners were consulted 62.5% of population;
- With the specialists - 27.2% and
- With dentists or orthodontists – 41.0% (Table 2).

2. Consultations with medical specialists among persons aged 15 and over by sex and age, 2019

(%)

	General practitioner	Specialists	Dentist or orthodontist
Total	**62.5**	**27.2**	**41.0**
By sex			
Male	54.9	23.0	38.4
Female	69.5	31.1	43.4
By age			
15 - 24	44.5	15.6	44.0
25 - 44	47.0	23.6	46.9
45 - 64	66.8	29.3	44.8
65+	83.9	34.2	27.6

The distribution by sex presents that the women were more active in relation to consultations with these medical specialists. With increasing the age, the number of consultations with general practitioners and specialists increased. The exception is in the number of consultations with dentists in the last 12 months, which decreased significantly among persons aged 65 and over.

Preventive services

Preventive measures are one of the main prerequisites for improving the health status of the population and reduce mortality from certain diseases. Preventive actions affect the life expectancy and the healthy life years and therefore in the instrumentarium of the European Health Interview Survey were included questions regarding the application of selected preventive measures.

[1] Visits to a doctor/dentist for consultation, treatment, etc. Visits to the doctor's office as well as home visits and telephone consultations are included.

The most widely applied preventive measure than those included in the questionnaire was blood pressure measurement by a health professional. For 54.9% of men and 66.4% of women blood pressure was measured by a medical specialist in the 12 months preceding the interview (Table 3). Blood sugar measurement by a medical professional during this period was made by 48.0% of men and 58.5% of women and blood cholesterol measurement – by 47.4 and 58.0% of men and women respectively.

3. Preventive actions within the past 12 months, by sex

(%)

	Total	Male	Female
Blood pressure measurement by a health professional	61.0	54.9	66.4
Blood cholesterol measurement	52.9	47.4	58.0
Blood sugar measurement	53.5	48.0	58.5

Health determinants (life style)

The purpose of the questions included in this module is to assess the health habits as part of individual actions to protect and restore the health.

Weight and height, overweight and obesity

Being overweight is one of the negative factors influencing the prevalence of cardiovascular disease, diabetes and other chronic diseases. The information on the height and the weight of persons that is collected by EHIS allows calculating Body Mass Index (BMI)[1], which defines the proportion of people with overweight and obesity.
In 2019, with overweight, including obesity were 62.8% of men and 45.0% of women aged 18 and older. With normal weight were 36.3% of men and 51.2% of women (Table 4).

4. Distribution of persons aged 18 and over by BMI and sex in 2014 and 2019

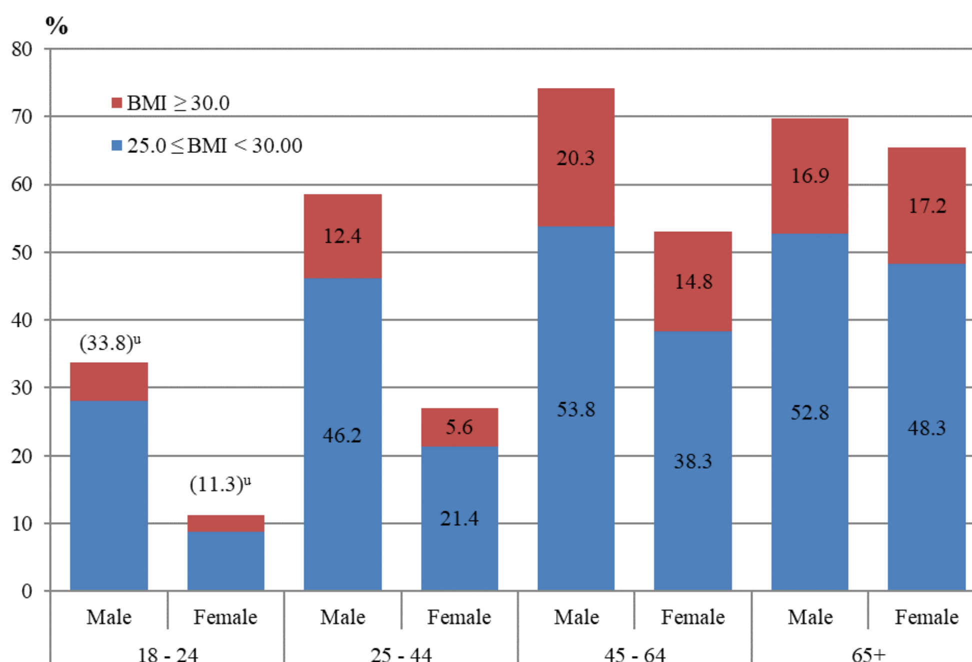
(%)

BMI	Total		Male		Female	
	2014	2019	2014	2019	2014	2019
Underweight (under 18.5)	2.2	2.5	0.5	(0.9) [u]	3.6	3.8
Normal weight (18.5 - 24.99)	43.8	44.1	37.3	36.3	49.6	51.2
Pre-obese (25.00 - 29.99)	39.2	40.1	46.7	47.7	32.6	33.4
Obese (30.00+)	14.8	13.3	15.5	15.1	14.2	11.6

[u] - due to a small sample size figures in brackets are not reliable.

[1] BMI is defined as the weight in kilos divided by the square of the height in meters. The persons are overweight if the BMI is equal or bigger than 25. The overweight includes obesity (BMI is equal or bigger than 30). For international comparisons the indicator is calculated for persons aged 18 and over.

Figure 4. Share of persons aged 18 and over with overweight (BMI ≥ 25.0), including obesity (BMI ≥ 30.0) by sex and age, 2019



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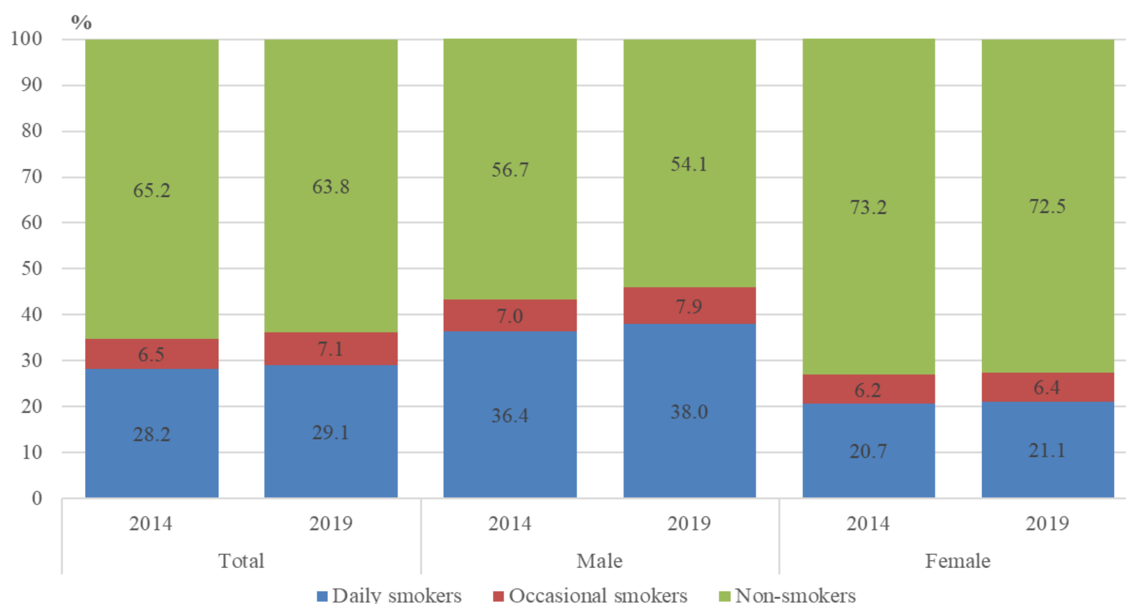
The age of persons determined the prevalence of the overweight (Figure 4). Significant are differences between men and women with overweight in young ages - among men aged 18 - 24 years, 33.8% were with overweight (incl. obesity) and among the young women the share was almost three times lower (11.3%). With increasing the age the difference between the sexes reduced and among adult population aged 65 and over the difference in shares of those overweight is minimum (69.7% men and 65.5% of women).

Smoking

Smoking is an important risk factor for lung diseases, lung cancer, some other cancers and diseases of the circulatory system.
According to the 2019 EHIS preliminary data the number of current smokers (daily and occasional smokers)[1] aged 15 and over in Bulgaria is estimated at 2.06 million persons (36.2%). Daily smokers are 29.1% of the persons and occasional - 7.1% (Figure 5). At the end of 2019, 45.9% of men and 27.5% of women were smokers. No significant difference in the relative shares of occasionally smokers men and women, while daily smokers men aged 15 years and older are almost twice more of women in this group. There are no significant differences in the prevalence of smoking in the country - in total and by sex, compared to 2014.

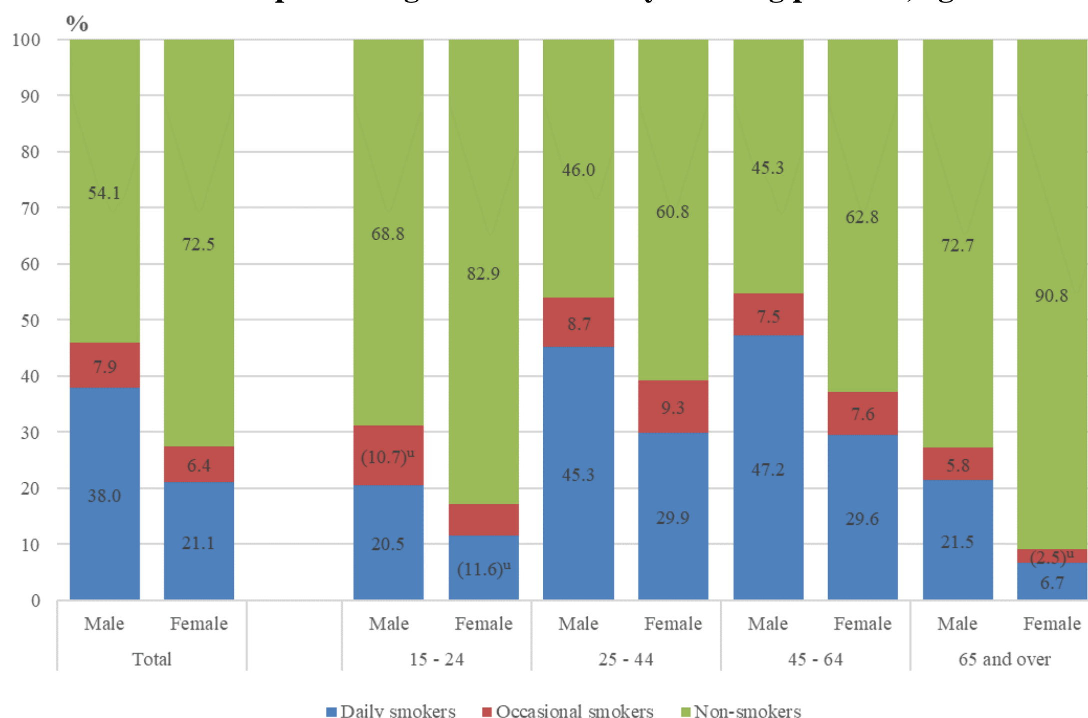
[1] Regardless of the amount or kind of tobacco product. – manufactured cigarettes, hand-rolled cigarettes, cigars, pipes, electronic devices for heating tobacco (eg IQOS, GLO, etc.). Electronic cigarettes are excluded.

Figure 5. Distribution of persons aged 15 and over by smoking patterns and sex in 2014 and 2019



The largest are the relative shares of smokers among both men and women in the age groups 25 - 44 and 45 - 64 years. With increasing age, the share of non-smokers increases and among the population aged 65 and over 27.3% of men and 9.2% of women are smokers (Fig. 6).

Figure 6. Distribution of persons aged 15 and over by smoking patterns, age and sex in 2019



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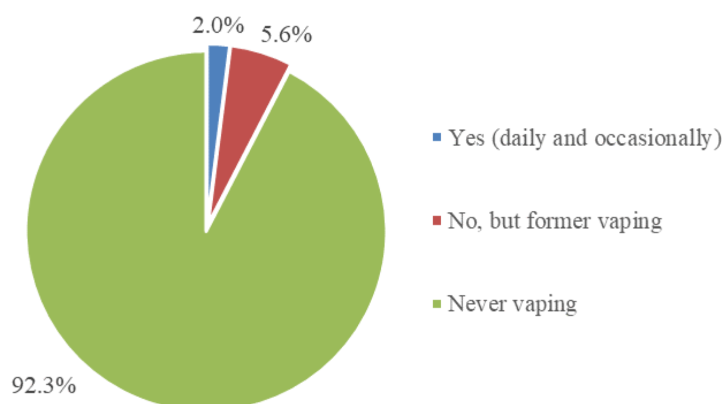
In recent years, e-cigarettes and other similar evaporators, in which the liquid is converted into an aerosol (vapor), have become increasingly popular in European countries. These are not tobacco products and according to the methodology of the survey, the use of these products is investigated through a separate question.

Preliminary data show that in 2019 in Bulgaria only 2.0% of persons aged 15 and over use such devices (daily or occasionally). Currently not, but previously used vapor 5.6% of persons (Fig. 7).

Figure 7. Distribution of persons aged 15 and over by usage of electronic cigarettes or similar electronic devices (e-hookah, vapor) in 2019



Alcohol consumption

Another risk factor in respect to the health status is alcohol consumption.

In the year preceding the survey, 16.2% of men and 42.0% of women aged 15 and over never used alcohol. At least once a month drank 23.6% of men and 22.3% of women and at least once a week but not daily - respectively 34.0 and 14.5%.

Every day or almost every day alcohol used 17.4% of men and 3.6% of women aged 15 and older.

7. Alcohol consumption among persons aged 15 and over in 2019 by sex

(%)

Frequency	Total	Male	Female
Every day or almost every day	10.2	17.4	3.6
5 - 6 days a week	3.3	5.7	(1.1) u
3 - 4 days a week	10.3	15.1	5.9
1 - 2 days a week	10.2	13.2	7.5
2 - 3 days in a month	13.0	14.6	11.6
Once a month	9.9	9.0	10.7
Less than once a month	13.4	8.8	17.6
Not in the past 12 months, as I no longer drink alcohol	11.2	7.8	14.4
Never, or only a few sips or trials, in my whole life	18.5	8.4	27.6

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Methodological notes

The European Health Interview Survey is a part of the European Health Survey System which aims at measuring on a harmonized basis and with a high degree of comparability among EU Member States, the health status, life style (health determinants) and health care services use of the EU citizens.
In 2019 all Member States participated in the EHIS wave 3 in accordance with the Commission Regulation (EU) No. 2018/255 as the BNSI carried out the survey in the period October 2019 - January 2020.
The first EHIS based on a harmonized instrument in accordance with the Eurostat requirements was carried out by NSI in 2008 and the second wave of the survey – in 2014.
According to the character of the questions the reference period is two or four weeks, six or twelve months, weekdays or weekend.
The topics included in the questionnaire are developed in order to meet main needs as for the management of health care systems, as well as in science. Within these needs, EHIS questions are aimed at meeting the basic needs of information at EU level. They do not cover all detailed aspects of health which can better be carried out via specific surveys at national level.
The questionnaire consists of four modules:

- Health status;
- Health care;
- Health determinants (life style);
- Background module.

It should be keep in mind that in order to reduce the respondents' burden, the questionnaire for the three waves of the survey was changed. Therefore, when using and comparing the data from the three surveys, it should be keep in mind that for some of the indicators comparability is not complete and in some cases does not exist.
The questionnaire consists of three parts - Households part, Face to face part and Self complete part. In the self-complete part the questions for smoking and alcohol use are included. The reason for this is the sensitivity of these questions and with aim to reduce the share of refusals.
10 322 persons aged 15 and over living in 4 459 eligible private households are covered. The survey applies the principle of the voluntary participation. By face to face interview (PAPI) 7 540 persons are interviewed as the response rate is 73.0%.
In accordance with the EHIS methodology people living in institutionalized households as residencies for students or workers, medical or social institutions, prisons are excluded from the target population.
In accordance with the methodological recommendations *proxy interview* is allowed only due to health problems of the respondent. There are two possibilities: either the respondent is unable to complete the interview due to physical or mental problems or when the person is hospitalized.
A two stage stratified cluster sample on national and regional level is used. The sample is stratified by using the administrative regions in the country and persons' place of residence (town, village). As a result of the stratification 56 strata are designed. At the first stage clusters are selected with a probability proportional to their size, separately for 28 districts and for urban and village population. At the second stage, through a systematic selection 8 households are identified. All persons aged 15 and over in selected households were interviewed.

Standard errors of key indicators are commonly used as a measure of the reliability of data collected through sample survey. The standard error was calculated as follow:

Indicator/sub-indicator (variable(s) from which the indicator is derived)	**Number of respondents - *n* (unweighted)**	**Estimated proportion - *p* (weighted)**	**Standard error - *SE***	**Confidence interval**	
				95% lower limit, in %	**95% upper limit, in %**
Respondents aged 15 years or over in good or very good health (HS1)					
Total	4587	69.9	0.7	68.6	71.4
Male	2204	73.1	0.9	71.4	74.8
Female	2383	67.2	0.8	65.5	68.8
Respondents aged 15 years or over that were severely limited in activities people usually do because of health problems for at least the past 6 months (HS3)					
Total	527	5.8	0.3	5.2	6.5
Male	218	5.5	0.4	4.7	6.4
Female	309	6.1	0.4	5.4	6.9

Additional statistical information and date about the survey ‘European Health Interview Survey’ can be found on the NSI’s website (www.nsi.bg), theme ‘Health’. The final EHIS data will be available in the IS Infostat (https://infostat.nsi.bg/infostat/pages/module.jsf?x_2=62) as well.