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EPIDEMIOLOGY AND PUBLIC HEALTH

# HEALTH STATUS REPORT 2021

# THE STATE OF HEALTH IN BELGIUM

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# ABOUT SCIENSANO

SCIENSANO can count on more than 700 staff members who commit themselves, day after day, to achieve our motto: Healthy all life long.

As our name suggests, science and health are central to our mission. SCIENSANO's strength and uniqueness lie within the holistic and multidisciplinary approach to health. More particularly we focus on the close and indissoluble interconnection between human and animal health and their environment (the "One health" concept). By combining different research perspectives within this framework, SCIENSANO contributes in its unique way to everybody's health.

For this, SCIENSANO builds on the more than 100 years of scientific expertise of the former Veterinary and Agrochemical Research Centre (CODA-CERVA) and the ex-Scientific Institute of Public Health (WIV-ISP)

**Sciensano**

Epidemiology and public health • Lifestyle and chronic diseases

February 2022 · Brussels · Belgium
Deposit number: D/2022/14.440/06

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**Sponsors**

This report was commissioned by the Federal Minister of Public Health.

Financial support: National Institute for Health and Disability Insurance (NIHDI).

**Acknowledgements**

We would like to thank the following people for their careful review or advice: Rana Charafeddine, Karin De Ridder, Lydia Gisle, Johan Van der Heyden, and Lize Hermans. We thank Tadek Krzywania and Ledia Jani for administrative support.

**Please cite this publication as follow:**

Renard F., Scohy A., De Pauw R., Jurčević J., Devleesschauwer B., Health status report 2021 – The state of health in Belgium. Brussels, Belgium: Sciensano. Deposit number: D/2022/14.440/06. Available on https://www.healthybelgium.be/en/health-status

# CONTENTS

# 1. SUMMARY

**This Health Status Report 2021 provides a snapshot of the health of the Belgian population, based on available data by end 2021. For more detailed information, you can visit our website continuously updated: www.healthybelgium.be/en/health-status**

- Before the COVID-19 pandemic, the **life expectancy (LE)** had steadily increased over decades, reaching 81.8 years in 2019, a gain of 4 years since the turn of the century. Women have a 4 years advantage over men, but this advantage is decreasing over time. The LE is highest in Flanders, followed by Brussels and Wallonia. LE in Belgium is slightly lower than the EU-15 average. LE decreased by one year in 2020, falling to 80.8 years, due to the high mortality in the first year of the COVID-19 pandemic.
- In 2018, the **disability-free life expectancy** (one of the "Health Expectancy" indicators) at age 65 was around 12.5 years similar in both genders. In men, it was just at the EU-15 average, while women scored better than the EU-15 average.
- Seventy-seven percent of the Belgians **rated their health** as good or very good in 2018. This percentage was higher in men and higher in Flanders and Brussels than in Wallonia. Belgium performs better than the EU-15 average, ranking 6th for this indicator.
- The trends in **all-cause mortality** rates mirror the ones of LE: after a steady decrease from 2000 to 2019, the age-adjusted mortality rates (ASMR) peaked in 2020 due to the COVID-19 pandemic. The number of deaths reached almost 127,000 in 2020, a 17% increase compared to the average of the last 10 years.
- In 2018 (last available data), the three **main causes of death** among men were ischemic heart diseases (IHD), lung cancer and cerebrovascular diseases (including hypertension; HTA). Among women, the three main causes were dementia (including both vascular dementia and Alzheimer's disease), cerebrovascular diseases (including HTA) and IHD.
- The trend of **premature mortality** (i.e., mortality below the age of 75) was quite similar to that of all-age mortality. After a 31% decrease between 2000 and 2019, the age-adjusted premature mortality increased in 2020 by 10% for men and 5% for women, a smaller rise than for the all-age mortality. Gender and regional differences were more pronounced in premature than in all-age mortality. The three conditions with the highest burden in terms of years of life lost before 75 years among men were suicide, lung cancer, and ischemic heart diseases. Among women, they were breast cancer, lung cancer, and cerebrovascular diseases.
- More than one in four Belgians report living with at least one **chronic disease**. The six most common chronic diseases reported in the 2018 health interview survey (HIS) were low back disorders, high blood pressure, allergy, arthrosis, high blood cholesterol, and neck disorders. The prevalence of many chronic diseases has increased between 1997 and 2018, only partly due to the ageing of the population.
- Besides self-reported information, objective information is also available from registers. In 2019, 71,651 new diagnoses of invasive **cancer** (excluding non-melanoma skin cancer) were made. Incidence is highest in Wallonia. Prostate, lung and colorectal cancers in men, and breast, colorectal and lung cancers in women were the most common cancers. Over the past ten years, after correction for age, the cancer incidence only increased in women, an increase largely attributable to the rise of lung cancer incidence.
- In 2018, 6.3% of the Belgian population reported to have diagnosed **diabetes**. The diabetes prevalence has increased over time, even after age-correction, likely due to an increase of the risk factors for diabetes.

- **Mental health disorders** represent an important concern in Belgium. The prevalence of anxiety and depressive disorders reported in the HIS 2018 was already quite high, with around one in ten people reporting an anxiety disorder, and one in ten reporting a depressive disorder (a slight decrease compared to 2013). In 2018, among young people (15-24), suicide is the main cause of death for both men and women. Since the start of the COVID-19 crisis, the levels of anxiety and depressive disorders have increased and were highest at the early start of the crisis and during winter 2020-2021 (period of the most severe lockdown measures), reaching more than 20% of the population. Suicidal thoughts and attempts have increased during the COVID-19 crisis.
- The epidemiology of **communicable diseases** is currently dominated by the COVID-19 pandemic, that severely hit Belgium since 2020. This topic is extensively documented in the Sciensano dashboard and reports. On average, around 500,000 people (nearly 5% of the population) are affected each year by **influenza-like illness (ILI)** each year, half of those cases being actual influenza (2% of those requiring hospitalization). Between April 2020 and October 2021, almost no confirmed influenza infections were observed, but since October 2021 the number of influenza diagnoses is very slowly increasing again. Since 2010, the **tuberculosis** incidence remained quite stable at around 950 new cases per year. Tuberculosis is mainly an urban phenomenon, principally reaching people living in precarious conditions. In 2020, 725 new **HIV** diagnoses were made in Belgium. A decrease of 41% is observed since 2012; the decrease was particularly pronounced for Belgian men who have sex with men.
- In 2018, 15% of the population reported to **smoke daily**, an important decrease over the past 15 years. This percentage is below the EU-15 average. Men are still more likely than women to smoke daily. Fewer young people (15-24 years) were daily smokers in 2018 (11% vs 17% in 2013).
- **Alcohol consumption** is still high in Belgium but has decreased. The average consumption of pure alcohol in Belgium was 10.8 liters per capita in 2019, just below the mean EU-15 consumption. The weekly overconsumption of alcohol (more than 21 or 14 drinks weekly for men and women, respectively) was reported by 7.4% of men and 4.3% of women in 2018. Alcohol overconsumption has decreased in men. Weekly "risky single occasion drinking", or having at least 6 alcoholic drinks at a single occasion, is reported by 7.6% of people (aged 15+) but reaches 10% in young people (15-24 years).
- **Weight excess** is an important problem in Belgium like in most industrialized countries. In 2018, about half of the adult population was overweight (49%) and 16% was obese based on self-reported information in HIS; objective measurements revealed even higher figures. Overweight and obesity are higher in Wallonia than in the other regions. Belgium scores slightly better than the EU-15 average.
- The level of **physical activity** is insufficient: in 2018 less than one third (30%) of the adult population (aged 18+) met the WHO recommendations of doing at least 150 minutes of physical activity throughout the week. The recommendation was better met in Flanders and in men. Only 20% of the boys and 13% of the girls aged 11 to 18 years met the WHO recommendations for youngsters (60 minutes of physical activity daily).
- In 2018, only 13% of the population aged 6 years and over met the WHO dietary guidelines recommending to consume at least 5 portions of fruits and vegetables per day. Sugar-sweetened beverages should be avoided, but 20% of the population consumes daily sugary drinks. **Nutritional habits** are better in Brussels, among women and older people.
- **Socio-economic inequalities** were found for the whole scope of health indicators, spreading from risk factors to morbidity and mortality. They were particularly pronounced in mortality, mental health, and many risk factors (namely smoking, obesity, lack of physical activity, nutritional habits). While a recent worsening of the inequalities was observed for smoking behavior, depression, and migraine, for most health indicators, no clear recent worsening was observed between the early 2010s (2011-2013) and the late 2010s (2018-2020). However, for some indicators, the inequalities had increased earlier and have now stabilized at a higher level, which is a disappointing evolution (e.g. for the life expectancy).


# 2. INTRODUCTION

This report summarizes the main key messages and results of the online "Health Status Report", a website dedicated to monitor the health status of the Belgian population. The description and the monitoring of the health status of a population are crucial to support public health policies. In 2017, the information that could contribute to a comprehensive description of the health status in Belgium was still scattered. Consequently, a global overview of the Belgian health status was absent at the federal level.

This lack of a global overview has been the starting point of the "Health Status Report" project. The project's objectives were two-fold: (1) to facilitate access to information about the health status in Belgium, and (2) to support the policy-making process by delivering key messages, highlighting attention points, and identifying and ranking health issues based on objective epidemiological criteria. A new website gathering information on important health indicators was developed in 2019, and is continuously updated when new information is available.

The current Health Status Report covers the following chapters:

- life expectancy and quality of life
- mortality and causes of death
- non-communicable diseases
- mental health
- communicable diseases
- COVID-19
- health determinants
- health inequalities.

In the current report, relevant epidemiological indicators are provided by demographic, regional and socio-economic breakdowns, and the report includes trends over time and international comparisons when these are available.

The current pdf document is an "at a glance" snapshot of the health situation, including the main indicators and key messages, while more detailed information is provided on the website. It describes the health status based on the last available data at the end of 2021. Please note that due to constant updates and changes in data availability, any picture of the health status could be quickly outdated. Therefore, we strongly encourage the readers to visit our website, which is constantly updated with the most recent data.

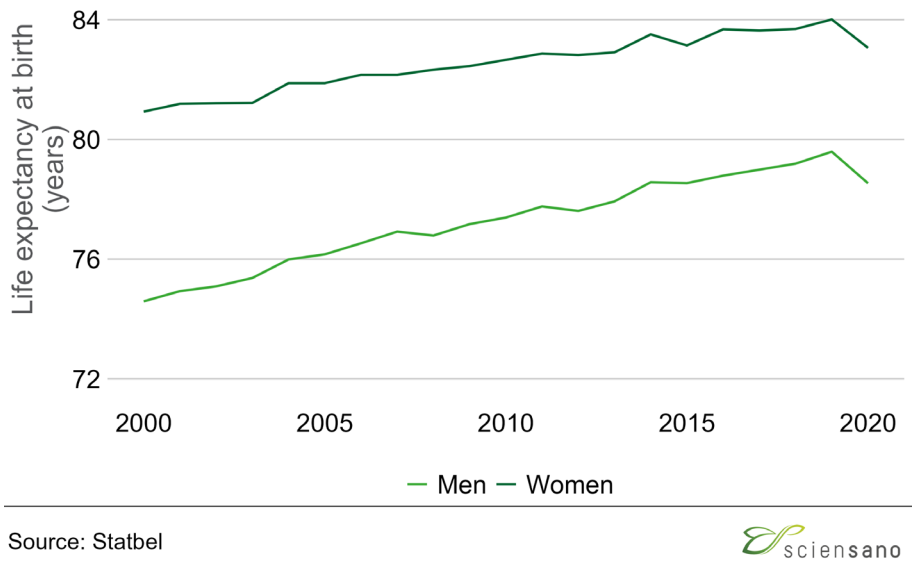
**Explore the Health Status Report via**
**https://www.healthybelgium.be/en/health-status**

# 3. LIFE EXPECTANCY AND QUALITY OF LIFE

## 3.1 LIFE AND HEALTH EXPECTANCY

- In 2020, life expectancy at birth was 80.8 years. Due to COVID-19, life expectancy at birth has decreased by one year, as it was 81.8 years in 2019 [1].
- Before the COVID-19 crisis, the life expectancy (LE) at birth in Belgium steadily increased for decades (except for the years 2012 and 2015). Between 2000 and 2019, a 4 years gain was observed.
- Life expectancy is higher among women (83.1 in 2020) than among men (78.5 in 2020).
- Regional disparities are observed in life expectancy. Flanders has the highest life expectancy (82.0), followed by Brussels (79.6) and Wallonia (79.0).
- An important socio-economic gradient is also observed with better life expectancy in higher than in lower socio-economic groups (see chapter 10).
- In 2018, the health expectancy in men aged 65 and over (defined here as Disability-Free Life Expectancy at 65 years, DFLE65) was 12.5 years, meaning they could in average expect to live another 12.5 years without disability. In women, the DFLE65 was 12.4 years. Between 2004 and 2018, the DFLE65 increased by 2.7 years for men and 1.4 years for women.
- DFLE65 is higher in Flanders for men (compared to the two other regions), and higher in Brussels and Flanders for women (compared to Wallonia).
- The DFLE65 furthermore shows a socioeconomic gradient, with increasing DFLE65 according to the level of educational attainment.
- DFLE65 among Belgian men is at the EU-15 average, while DFLE65 among Belgian women is higher than the EU-15 average.

Figure 1. Life expectancy at birth, by sex, Belgium, 2000-2020

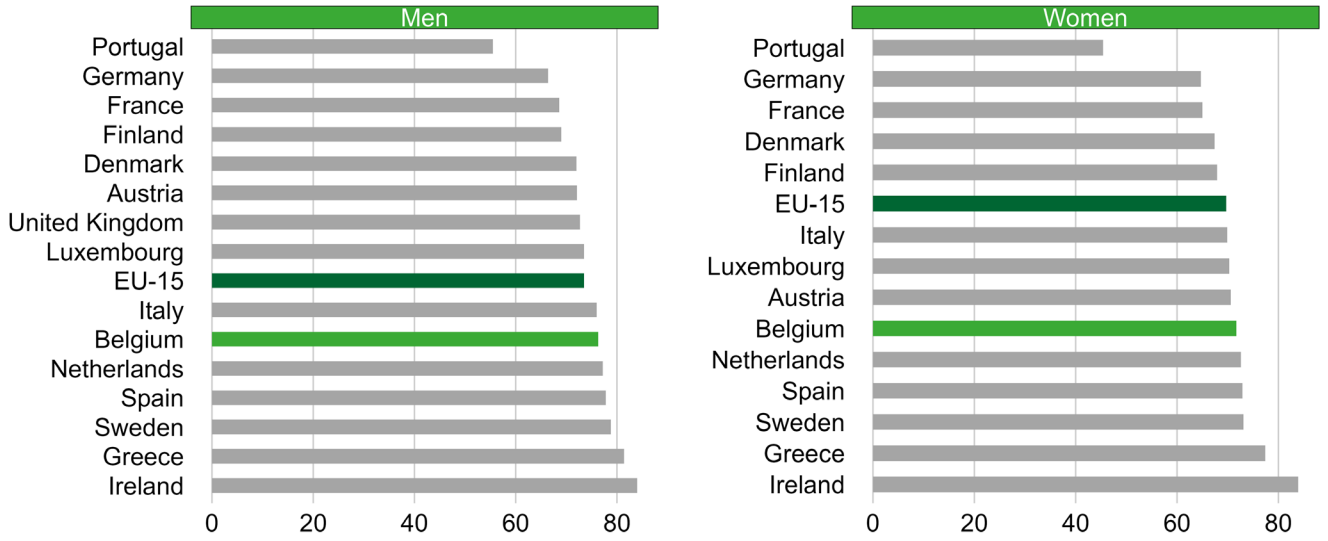



Source: Statbel

## 3.2 SELF-RATED HEALTH AND QUALITY OF LIFE RELATED TO HEALTH

- In 2018, 77% of the Belgian population reported their health to be good or very good in the Health interview survey (HIS). This percentage was higher in Flanders and Brussels (with respectively 78.5% and 78.4% rating their health as good or very good) than in Wallonia (74.0%).
- The mean score of "Health-Related Quality of Life (HRQoL)" was 0.79 in 2018, a slight decrease from 2013 (0.81). The mean score was higher in Flanders than in Brussels or Wallonia.
- Both indicators were better in men than in women and showed an important socio-economic gradient.
- Belgium ranked sixth among the EU-15 countries for self-rated health for men and women [2].

Figure 2. Percentage of people aged 15 years and older who perceive their health as good or very good, by sex, EU-15, 2019




Source: OECD Health Statistics (based on EU-SILC)

# 4. MORTALITY AND CAUSES OF DEATHS

## 4.1 OVERALL MORTALITY (ALL AGES)

### 4.1.1 All causes mortality

- In 2020, due to the COVID-19 epidemic, the number of deaths in Belgium peaked at around 127,000 deaths, representing a 17% increase as compared to the average of the past 10 years. The age-adjusted mortality rate reached 1051.2 per 100,000 inhabitants.
- In 2019, around 109,000 deaths were observed, or 949 per 100,000 inhabitants. The number of deaths in Belgium slightly increased between 2000 and 2019 mainly due to the growth of the population size and its ageing. The age adjusted mortality rate decreased from 1588 (in 2000) to 1099 (in 2019) per 100,000 in men and from 992 (2000) to 773 (in 2019) per 100.000 in women, i.e. a decrease of 31% and 22% respectively.

### 4.1.2 Causes of deaths

- The causes of deaths are currently available until 2018. In 2018, the three main causes of death among men were ischemic heart diseases (IHD), lung cancer and cerebrovascular diseases (including hypertension (HTA)). Among women, the 3 main causes were dementia (including vascular dementia and Alzheimer's disease), cerebrovascular diseases (including HTA) and IHD.

## 4.2 PREMATURE MORTALITY (BELOW 75 YEARS)

### 4.2.1 All causes premature mortality

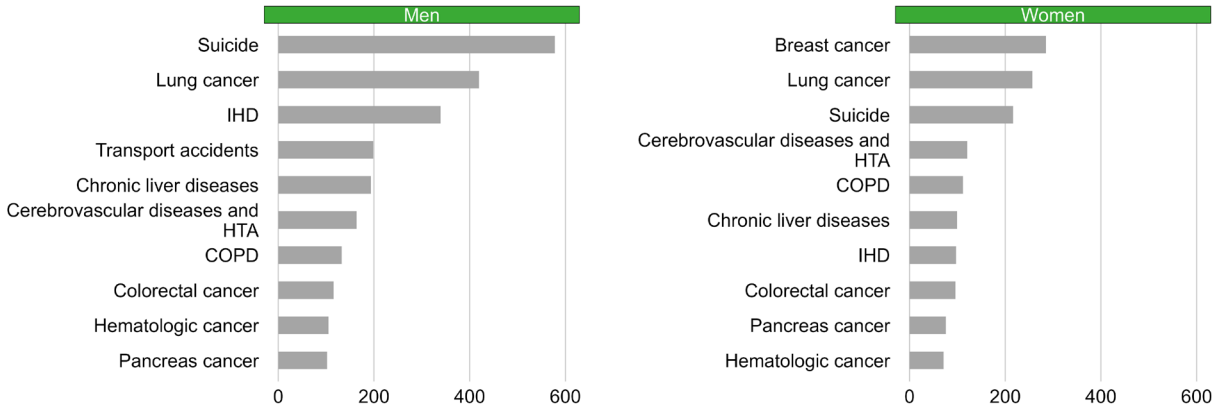
- The age-adjusted premature mortality rate (defined here as the mortality before age 75) decreased by 31% between 2000 and 2019 for both genders together.
- In 2019, the age-adjusted premature mortality rate was 70% higher in men (415 per 100,000) than in women (249). It was much higher in Wallonia (+38%) and Brussels (+16%) compared to Flanders.
- In 2020, during the first year of the Covid-19 crisis, the age-adjusted premature mortality increased by 10% for men and by 5% for women compared to 2019.
- The regional disparities in premature mortality increased in 2020, as the mortality excesses in premature mortality differ by region, hitting more severely Wallonia and Brussels. The following regional disparities were observed in 2020, for Wallonia and Brussels as compared to Flanders:
  - Wallonia: +56% among men and +45% among women
  - Brussels: +38% among men and +26% among women

### 4.2.2 Causes of premature deaths

- The causes of deaths are currently available until 2018. The conditions with the highest burden in terms of Potential Years of Life Lost (PYLL) before 75 years are :
  - Suicide, lung cancer, and ischemic heart diseases in men
  - Breast cancer, lung cancer, and cerebrovascular diseases in women
- The premature mortality rates decreased for most causes of death between 2000 and 2018. A large decrease was observable for IHD and transport accidents (a more than 50% decrease). On the contrary, lung cancer and chronic obstructive pulmonary disease (COPD) among women steadily increased then stabilized.

- Regional differences in premature mortality rates were also observed when looking at the causes of death, with for most of the causes, higher rates in Wallonia and Brussels compared to Flanders. The conditions contributing most to the total premature mortality difference between Wallonia and Flanders are IHD, lung cancer and chronic liver diseases in men, and lung cancer, COPD, and IHD in women. The conditions contributing most to the total premature mortality difference between Brussels and Flanders are IHD, cerebrovascular diseases and COPD for men and COPD, IHD, and chronic liver diseases in women.

Figure 3. Ranking of specific causes of premature death (before 75) ranked by age-adjusted* PYLL rate, by sex, Belgium, 2018



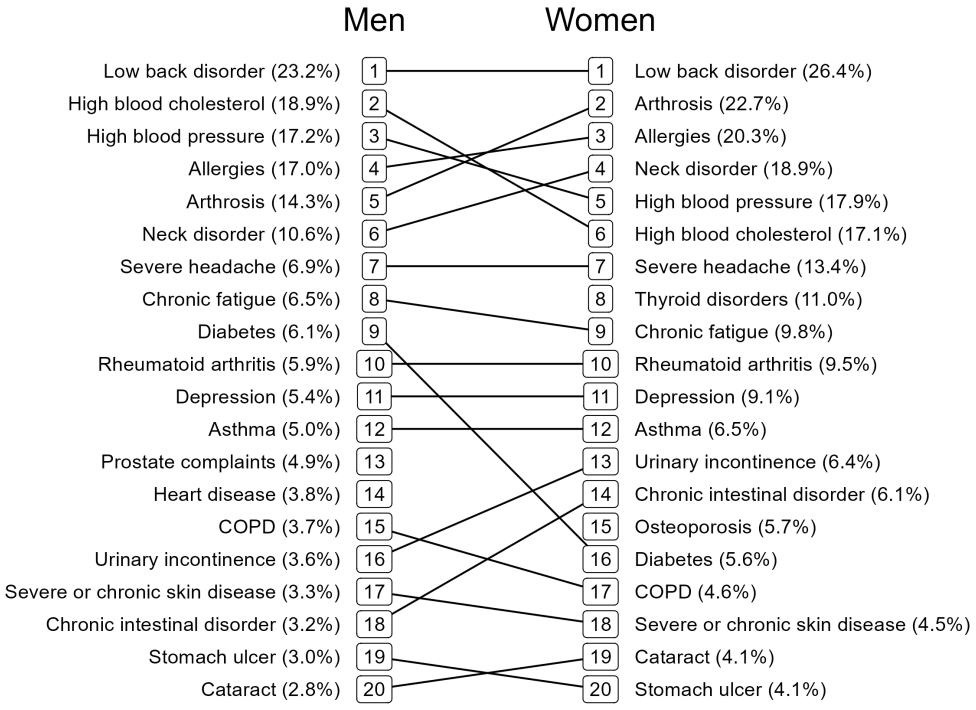

Source: Own calculations based on the cause of death database, Statbel

# 5. NON-COMMUNICABLE DISEASES

## 5.1 SELF-REPORTED NON-COMMUNICABLE DISEASES, OVERVIEW

- In 2018, 29% of the Belgians aged 15 years and over reported living with a chronic disease [1] . This percentage strongly increases with age, reaching 44% among people aged 75+ [3].
- Women are more frequently affected (31%) than men (27%).
- The most commonly reported chronic diseases are low back disorders, high blood pressure, allergy, arthrosis, high blood cholesterol, and neck disorders. Their prevalence has increased since 1997 (even after age-adjustment).
- The prevalence of multi-morbidity (reporting at least 2 NCD among the main ones: chronic lung disease, heart disease, hypertension, diabetes, cancer, and arthropathy) has significantly increased since 1997, even after age-adjustment, so this increase is only partly explained by the ageing of the population.
- Individuals with a lower educational level suffer more frequently from NCD.

Figure 4. Prevalence of 20 most commonly reported non-communicable diseases among men and women, Belgium, 2018



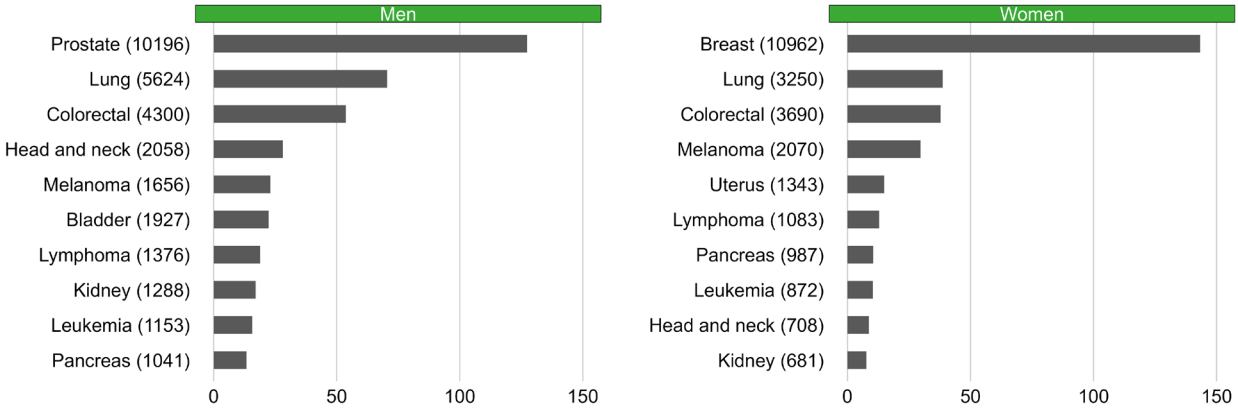

Source: Health Interview Survey, Sciensano

1 Most non communicable diseases are chronic diseases, so these terms are often used interchangeably (despite their slight difference)

## 5.2 CANCER

- In 2019, 71,651 new diagnoses of cancer were made, including 38,572 in men and 33,079 cases in women. The most frequently diagnosed cancers were prostate, lung and colorectal cancer in men, and breast, colorectal and lung cancer in women [4].
- Age-adjusted incidence rates are the highest in the Walloon region.
- Since 2006, the incidence of cancer has increased, partly due to the ageing of the population. After correction for age, it only increased in women.
- Since 2006, the (age-adjusted) incidence of lung cancer has gone up by 63% in women, while it decreased by 16% in men. Over the same period, the age-adjusted incidence of melanoma has increased by 130% in men and 100% in women.

Figure 5: 10 most frequent cancer, by sex, Belgium, 2019*




Source: Belgian Cancer Registry

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* Head and neck cancer = C00 to C14 and C30 to C32, Colorectal = C18 to C20, Lymphoma C80 and C82 to C86 and Leukemia = C91 to C95

## 5.3 ISCHEMIC HEART DISEASE

### Angina pectoris

- In 2018, 3.8% of people aged 65 + reported suffering from angina pectoris (angor). The prevalence was higher in men.
- Between 2008 and 2018, the percentage of people aged 65 years and over reporting to suffer from angina pectoris has decreased in the three regions, in both genders, and more in women than in men.

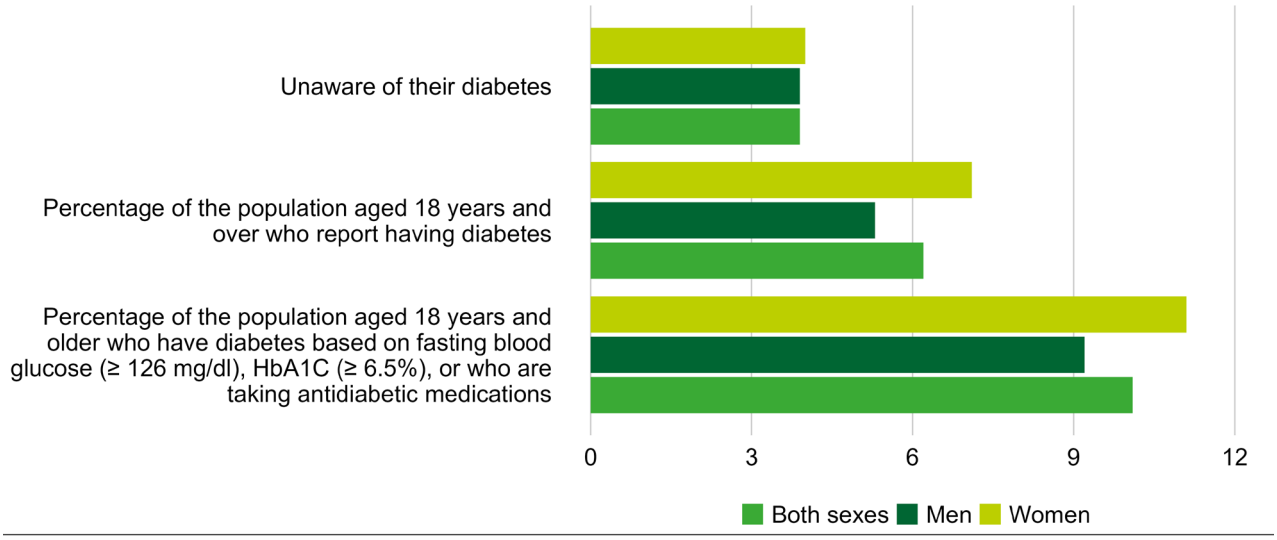
### Acute myocardial infarct

- In 2017, the number of people having suffered from acute myocardial infarction (AMI) was estimated at 20,253 in Belgium (178 cases per 100,000 inhabitants). Among them, 67.4% were men. The incidence rate of AMI increases with age and is higher in men in all age groups.
- In 2017, in both genders, the age-adjusted incidence rate of myocardial infarction was higher in Wallonia, followed by Flanders and Brussels.
- Between 2008 and 2017, the age-adjusted incidence of myocardial infarction has decreased in both genders.

## 5.4 DIABETES

- In 2018, 6.3% of the Belgian population had a known diabetes diagnosis (IMA data). However, more than one in three people with diabetes do not know they have the disease (Health examination survey, BELHES), which brings the estimated true prevalence of diabetes (known + unknown) as high as 10% [5].
- Diabetes prevalence is increasing over time as a result of both the ageing of the population and an increase in the risk of developing diabetes.
- The diabetes prevalence is higher in Wallonia and Brussels than in Flanders and is higher for individuals with a lower socio-economic status. Socioeconomic differences are especially found in the prevalence of undiagnosed/ insufficiently controlled diabetes.

Figure 6. Prevalence of diabetes and knowledge of diabetic status in Belgium, by sex, 2018



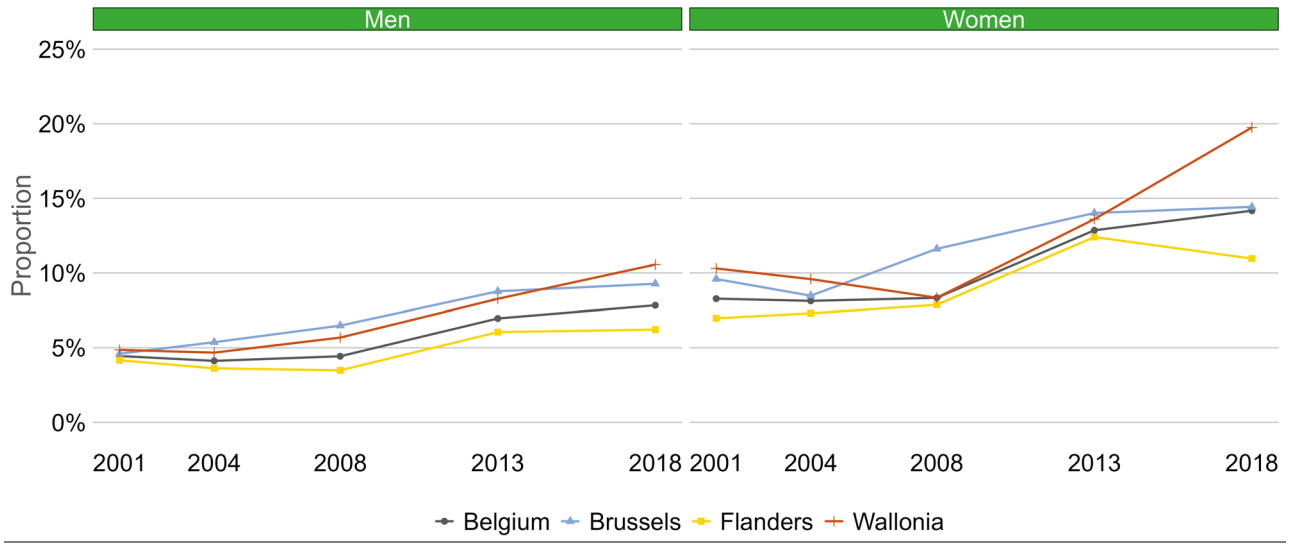

Source: Health Examination Survey, Sciensano

# 6. MENTAL HEALTH

## 6.1 ANXIETY AND DEPRESSION

- In 2018, around one in ten person suffered from an anxiety disorder, and one in ten reported a depression disorder [6]. The mental health still deteriorated during the crisis (see chapter COVID-19).
- It appears from earlier surveys that anxiety and depressive disorders had both seriously increased between 2008 and 2013; in 2018, the prevalence of anxiety disorders remained as high as in 2013, and even increased in Wallonia, while the prevalence of depressive disorders decreased as compared to 2013.
- Anxiety and depressive disorders are more prevalent in women.
- The indicators of mental health are better in Flanders compared to the other regions.
- Mental health also differs by educational level, with anxiety and depressive disorders being more frequent in the lowest educated group.

Figure 7. Prevalence of anxiety disorders, by sex and region, Belgium, 2001-2018




Source: Own calculations based on Health Interview Survey, Sciensano

## 6.2 SUICIDAL BEHAVIOUR

- Suicidal behaviors (thoughts, attempts, and actual suicides) represent an important public health problem in Belgium.

### Suicidal thoughts and attempts

- In 2018, 4.3% of the population had seriously considered suicide and 0.2% had attempted to commit suicide in the last 12 months.
- Women and middle-aged people were more at risk. Suicidal thoughts and attempts were more common in the lowest educated group.
- Suicidal thoughts and attempts increased during the COVID-19 crisis (see chapter "Impact of COVID-19").

### Suicides

- 1795 deaths by suicide were recorded in 2018. The highest numbers were found in the 45-64 age groups.
- Suicide represents the highest burden in term of years of life lost in men before 75. Moreover, it is the leading cause of death among young people of each gender. In the 15-24 age group, 30% of male deaths and 21% of female deaths were due to suicide.

# 7. COMMUNICABLE DISEASES

## 7.1 INFLUENZA AND INFLUENZA-LIKE ILLNESS

- On average, around 500,000 people are affected by influenza-like illness (ILI) each year in Belgium, i.e., about 5% of the total population. About 50-60% of those cases are actual influenza cases.
- While ILI is in most cases a benign illness, about 2% to 3% of true influenza cases require hospitalization. Of the hospitalized cases, 13% develop severe complications, including 6% who die in the course of hospital stay; usually, more than 80% of these deaths occur in people aged 65+
- The Belgian flu epidemic of the 2018-2019 season lasted 8 weeks, which was average compared to previous seasons. An estimated 506,000 Belgians consulted their GP for flu-like symptoms. The severity indicators showed a usual level of severity.
- In the winter of 2019-2020, there was rather mild, 8-week flu epidemic that ended in the week of 9-15 March. The end of the flu epidemic coincided with the start of the COVID-19 epidemic. Between April 2020 and October 2021, almost no confirmed influenza infections were observed, but since October 2021 the number of influenza diagnoses is very slowly increasing again.

## 7.2 TUBERCULOSIS

- Belgium is a low-incidence country for tuberculosis. In 2019, 968 new cases were diagnosed (an incidence rate of 8.6 per 100,000). The rate has remained quite stable since 2010.
- The incidence of tuberculosis is higher in men regardless of age group, region or nationality.
- There are important geographical differences: in 2019, the incidence rate was 4.8 times higher in the Brussels-Capital Region when compared with Wallonia and Flanders, where the incidence rates were similar. Big cities reported more cases, potentially related to a higher concentration of risk groups. Brussels was the city with the highest incidence.
- In 2019, 55.9% of tuberculosis cases occurred among people who did not have Belgian nationality. This proportion was higher in Brussels (65.9%) than in Wallonia (52.2%) and Flanders (49.5%).

## 7.3 HIV

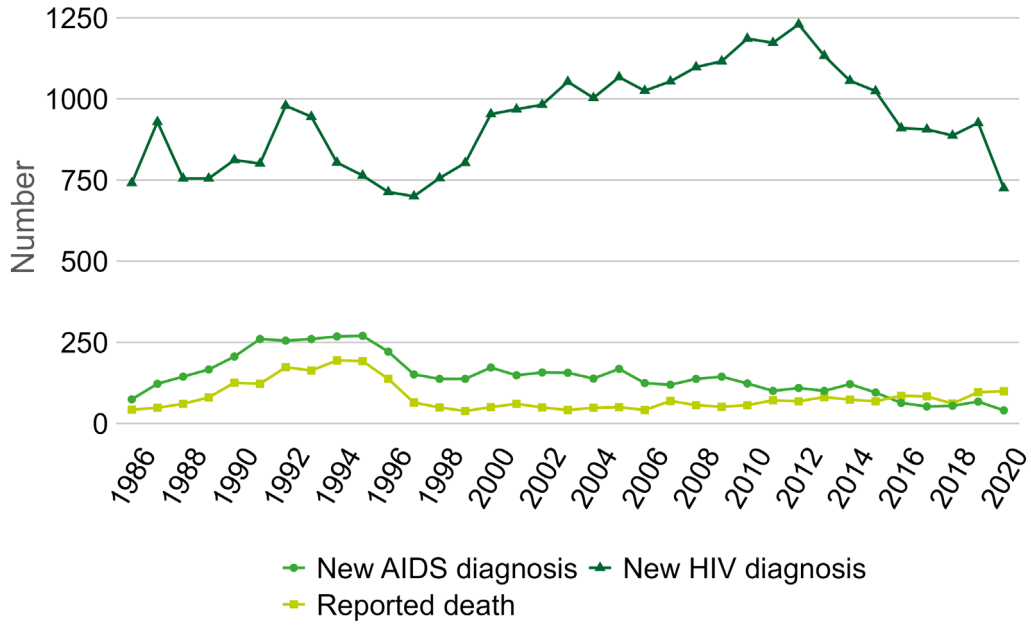
### HIV infections

- Despite an important decrease since 2012, the number of new HIV diagnoses remains high in 2020 in Belgium with 725 new diagnoses [7].
- 69.4% of the new HIV cases were diagnosed in men and most cases were diagnosed in the 25-49 age group.
- The rate of new HIV diagnosis is higher in Brussels than in the other regions.
- The HIV epidemic in Belgium mainly affects two populations: men who have sex with men (MSM), mainly of Belgian or other European nationality, and people having contracted the virus through heterosexual relations, mainly from sub-Saharan African origin.

## AIDS

The number of new cases of AIDS was 882 in 2020. The numbers dropped sharply in 1995-1996 when an efficient treatment became available.

Figure 8. Number of new diagnoses of HIV, AIDS, and deaths reported, Belgium, 1982-2020




*the deaths in a given year are related to AIDS cases occurred in an earlier year

Source: Epidemiology of AIDS and HIV infection

# 8. COVID-19

## 8.1 EPIDEMIOLOGY OF COVID-19, LINKS

Epidemiological information can be found on the Sciensano dedicated website and reports:

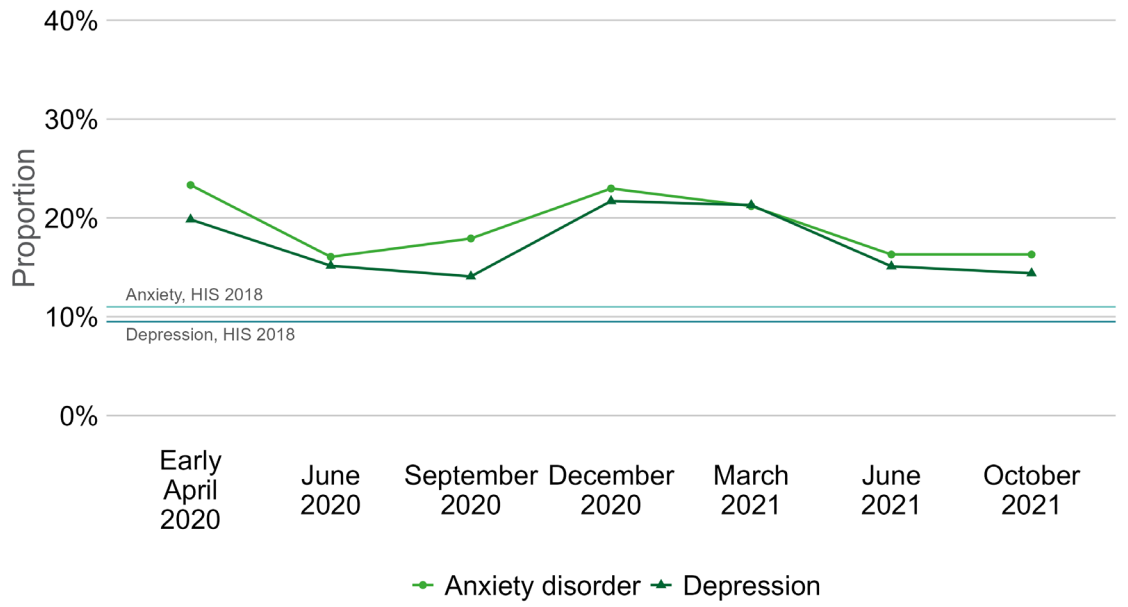
- EPISTAT page (daily update of figures of tests, infections, hospitalizations, deaths, vaccinations)
- Sciensano COVID page, leading to all epidemiological reports

## 8.2 IMPACT OF COVID-19

The COVID-19 health surveys collected a variety of information in order to assess how the Belgian population experienced the coronavirus crisis in 2020 and 2021:

- Mental health has strongly deteriorated since the start of the COVID-19 crisis, as revealed by the rise in anxiety, depression, suicidal thoughts and attempts [6], [8]–[15].
- Anxiety and depression disorders were particularly high in the population between April 2020 and March 2021, mostly among youngsters (18-29 years old). The June and October 2021 surveys showed some improvements compared to the previous ones. Life satisfaction has also improved and only 14% of the population expressed low life satisfaction in October 2021, closer to the level observed in 2018 (12%).
- Suicidal thoughts and suicide attempts have increased in the population since 2018. In June 2021, one out of 6 young people (18-29 years old) reported having seriously considered suicide during the last 12 months.
- Poor social support has been frequently reported since the beginning of the crisis. However, in October 2021, the quality of social health has improved with only 19% of the population reporting poor social support. It is still higher than the level observed in 2018 (16%).
- Lockdowns impacted the access to healthcare and home care, but the impact was much smaller during the second lockdown.
- In 2020, around 20% of the population saw their financial situation worsening during the crisis; around 10% of the population worried that they would lack food before being able to buy more.

Figure 9. Percentage of the population aged 18 and over presenting anxiety or depressive disorder in the COVID-19 health surveys 2020-2021 compared to the health interview survey 2018, Belgium, 2021



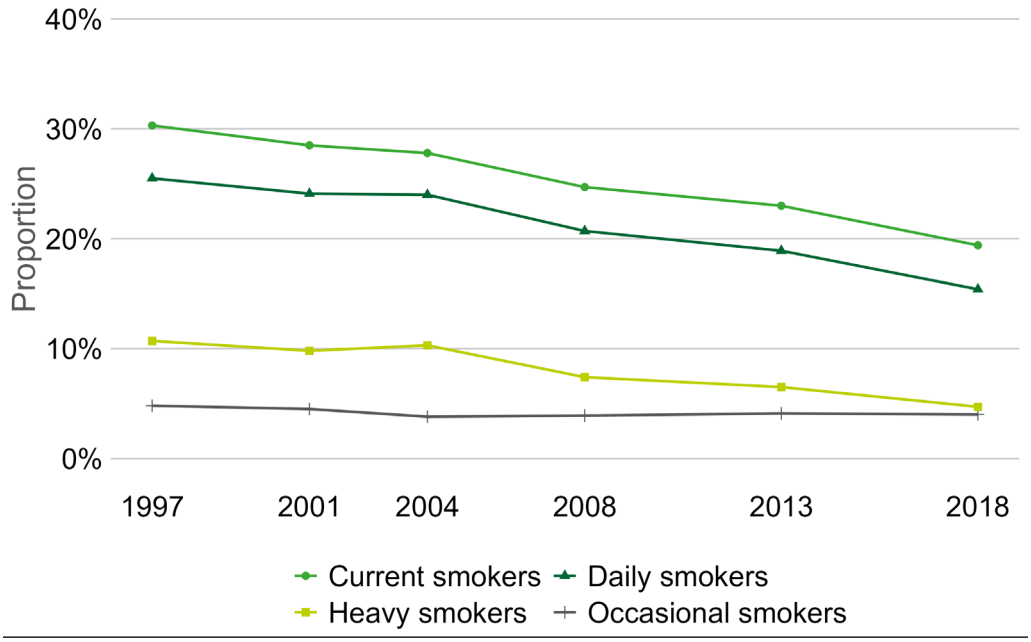

Source: COVID-19 Health Surveys and Health Interview Survey

# 9. HEALTH DETERMINANTS

## 9.1 TOBACCO USE

- In 2018, 15% of the population were daily smokers in Belgium, less than the EU-15 average. This proportion is higher in men (18%) than in women (12%) and higher in Wallonia (18%) than in Brussels (16%) and Flanders (13%) [16].
- The trends evolve favorably, with the prevalence of daily smoking having decreased by 40% between 1997 and 2018. Fewer young people (15-24) were daily smokers in 2018 (11%) than in 2013 (17%).
- Socio-economic disparities are large in smoking behavior, with the proportion of daily smokers being much higher in the lower versus the highest educated people.
- 4.1% of the population were regular users of e-cigarettes in 2018 in Belgium.

Figure 10. Type of smokers in the population aged 15 and over, Belgium, 1997-2018

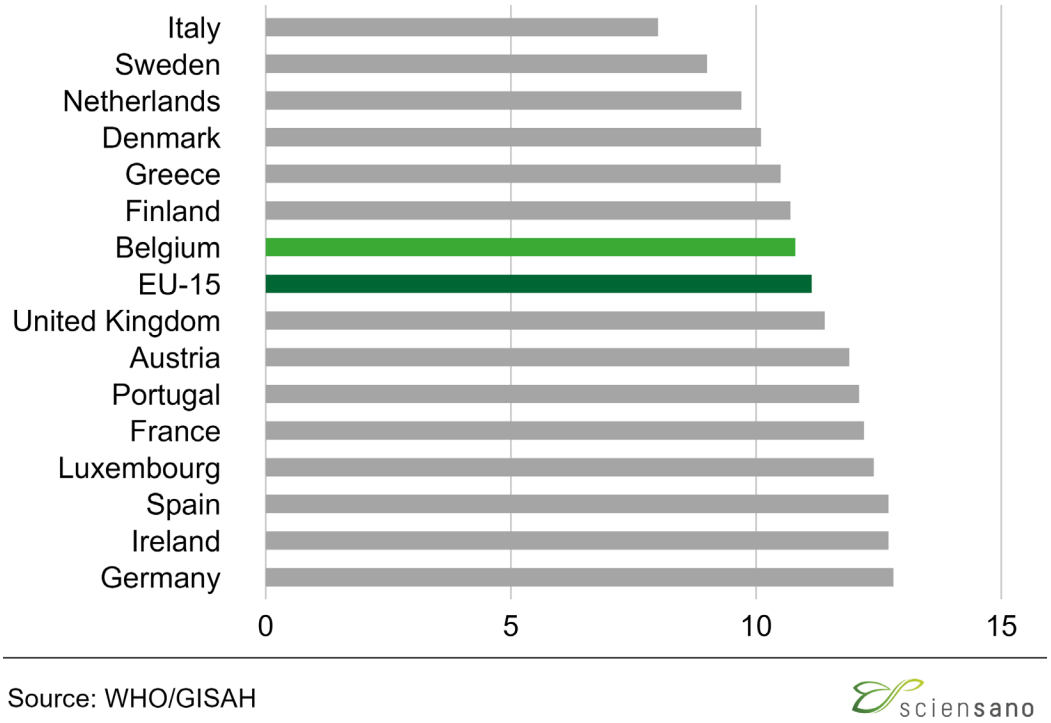



Source: Health Interview Survey, Sciensano

## 9.2 ALCOHOL USE

- European countries have the highest level of alcohol consumption in the world. The average consumption of pure alcohol in Belgium was 10.8 liters per capita per year in 2019, a decrease compared to 2016; pure alcohol consumption is now lower in Belgium than the EU-15 average (11.1 liters) [17].
- In 2018, 7.4% of men and 4.3% of women (15 years and over) had a hazardous consumption of alcohol (defined as more than 21 or more than 14 drinks weekly for men and women, respectively). This proportion has decreased over time.
- Weekly "risky single occasion drinking", or having at least 6 alcoholic drinks at a single occasion, is reported by 7.6% of people (aged 15+) but reaches 10% in young people (15-24 years). Also one in ten young people met the criteria for "problematic alcohol consumption" (as defined by the CAGE instrument) in the past 12 months.

Figure 11. Total alcohol (recorded + unrecorded) per capita consumption (in liters of pure alcohol) among the population aged 15 or over by country of residence, Europe, 2019




## 9.3 WEIGHT STATUS

- In 2018, nearly half of the adult population aged 18+ (49%) was overweight (BMI ≥ 25) and 16% was obese (BMI ≥ 30) based on self-reported height and weight (Health interview Survey) [18].
- Objective height and weight measurements (Health Examination Survey) reveal even higher figures, with as much as 55% of the adult population being overweight and 21% being obese [5].
- Overweight and obesity were more frequent in Wallonia.
- Overweight and obesity are strongly related to the socio-economic status with a much higher prevalence among people with a lower educational level.

- Overweight and obesity have regularly increased from 1997 to 2013, and stabilized afterwards.
- Among adolescents, the prevalence of overweight (including obesity) was around 15% in 2018, as revealed by the HBSC survey [19].

Figure 12. Prevalence of overweight and obesity among the population aged 18 years and over, self-reported and measured, by sex, Belgium, 2018


Source: Health Interview Survey and Health Examination Survey

## 9.4 NUTRITIONAL HABITS

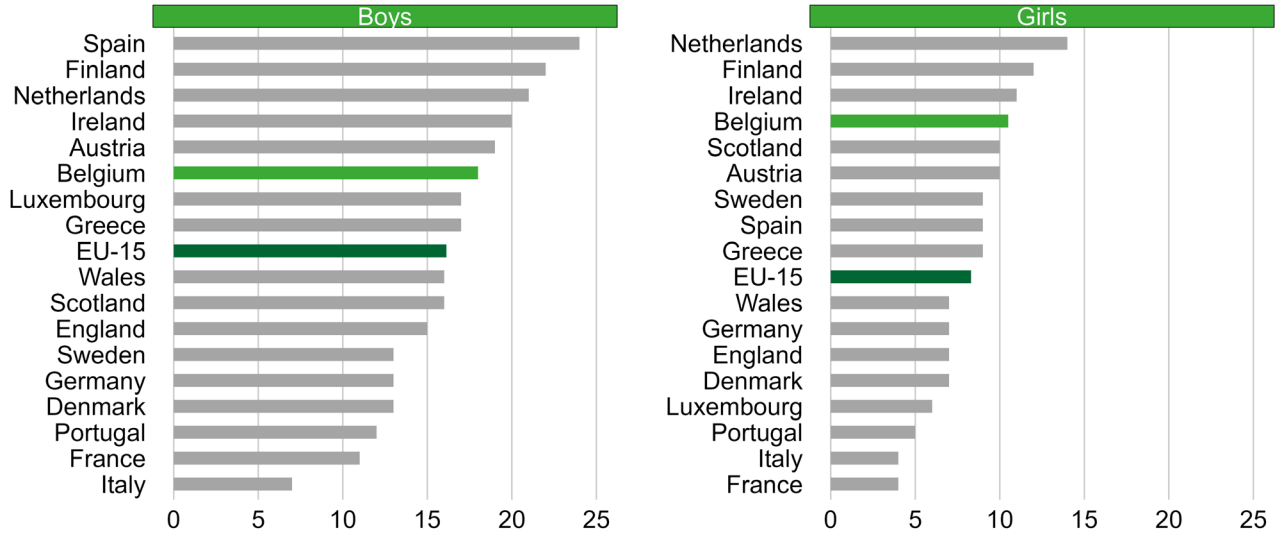
- The Belgian diet is characterized by insufficient consumption of fruits, vegetables, nuts and seeds, milk, eggs and fish and by excessive consumption of red meat, processed meat and sugar-sweetened beverages [20], [21].
- Over time, these patterns have only slightly improved.
- In 2018, only 12.7% of the population aged 6 years and over consumed the daily recommended amount of fruit and vegetables (at least 5 portions) [18]. More people were meeting the recommendations on daily fruit and vegetable consumption in Brussels (13.3% in men and 19.2% in women) and Wallonia (12.5% and 18.0%) than in Flanders (8.7% and 14.7%).
- In 2018, 20.4% of the population drank sugary drinks daily; 4.1% even drank a liter or more daily.
- Women, older people, people with tertiary education and people living in Brussels had healthier nutritional habits.

## 9.5 PHYSICAL ACTIVITY

- In 2018, less than one third (30%) of the adult population (18 years and older) meets the WHO recommendations of doing at least 150 minutes of moderate-to-vigorous-intensity physical activity throughout the week.
- More men (36%) than women (25%) comply with the WHO recommendations.

- Residents of Flanders (37%) and people with tertiary education (38%) were more likely to meet the recommendations.
- Among adolescents aged 11 to 17 years, 20% of the boys and 13% of the girls meet the WHO recommendations of performing at least 60 minutes of moderate- to vigorous-intensity physical activity per day [19].

Figure 13. Proportion of teenagers aged 15 years old spending at least 60 minutes on moderate – to vigorous-intensity physical activity daily, by sex and country of residence* (EU-15), 2018




Source: HBSC International report

sciensano

* The proportion for Belgium is the unweighted average of the results for the Wallonia-Brussels federation and the Flemish community.

## 9.6 HEALTH LITERACY

- One-third of the population aged 15 years and over (33%) has a low level of health literacy, meaning they do not have sufficient skills to make informed decisions about their health [22].
- The prevalence of limited or insufficient health literacy was higher in Brussels and Wallonia (38% and 36%, respectively) than in Flanders (29%).
- People in poor health, older people, and lower educated people have a lower level of health literacy; in other words, people who have higher needs for healthcare and health promotion, are those who benefit the least from such interventions.

# 10. SOCIO-ECONOMIC HEALTH INEQUALITIES

## 10.1 INTRODUCTION

Socio-economic (SE) health inequalities refer to systematic disparities in health between SE groups, most often in disfavour of the less advantaged groups. SE health inequalities have been consistently observed worldwide. Tackling health inequalities is a priority for the WHO [23], the European Union [24], and Belgium [25]–[27]. The 1948 Universal Declaration of Human Rights mentioned health as part of the right to an adequate standard of living (article 25) and this should apply for all SE groups [28]. Assessing the progress towards the reduction of the SE health inequality requires their measurement and monitoring [29], [30].

In this section, we describe inequalities for a large scope of health topics, spreading from health determinants to mortality.

Data from different published studies have been extracted [31]–[34]. The SE indicator varies among the different included studies. Most often the SE indicator was expressed as the educational level (EL), which has been grouped into 3 categories (low, mid, high). Alternatively, a multi-dimensional score of inequality (grouped in four equal groups (quartiles) and including information on educational level, socio-professional category and housing characteristics) or the income level (grouped in five groups, quintiles) was also used. Additional methodological details are available on our website.

The health indicators are first broken down in the different categories of the SE indicator, where after the following inequality indices have been computed:

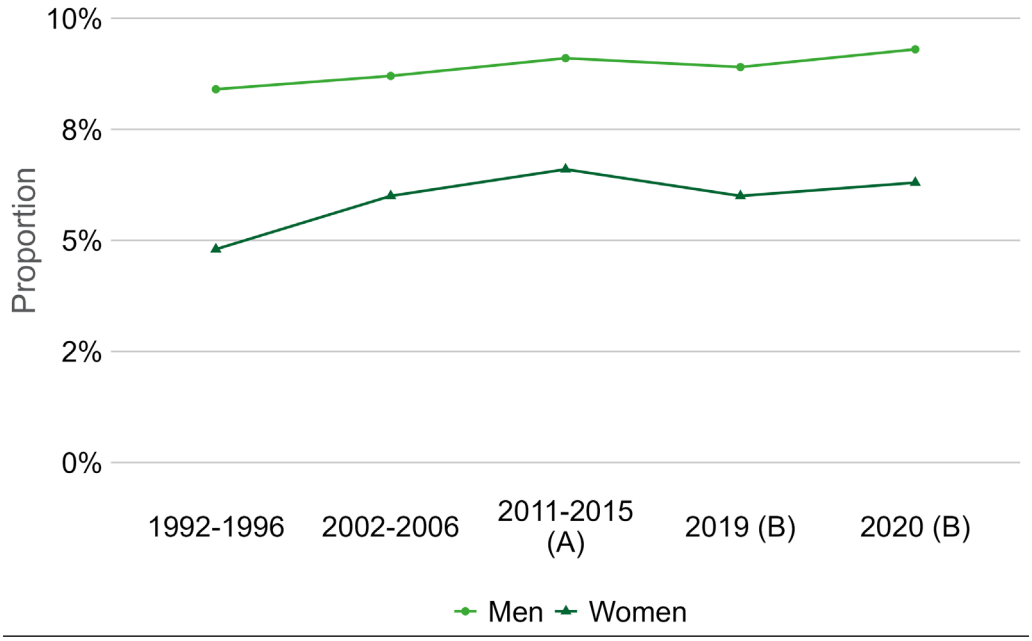
- Absolute inequalities are calculated as the absolute difference between rates among the low versus the high SE groups (after age-adjustment); for life and health expectancy (life expectancy without disability) this difference is expressed in years.
- Relative inequalities are expressed as the ratio of rates among the lowest versus the highest SE groups (after age-adjustment) (it was not calculated for life and health expectancies).
- Population attributable fraction (PAF) is calculated as the percentage of gain in health expected in the whole population if all groups experienced the health of the group with the highest education. It is an indicator of inequalities at population level including all the SE levels in the comparison and not only the lowest and highest levels.

## 10.2 RESULTS

### 10.2.1 Socio-economic inequalities in life expectancy, health expectancy, and quality of life

- People with a higher socio-economic status (SES) live longer. The gap in life expectancy at birth between the highest and lowest SE group (defined as the last and first quartile of a multidimensional SE score) equalled 9.3 years for men and 6.3 years for women, in 2020. The life expectancy gaps have increased until 2011 then stayed at a high level [31], [32].

Figure 14. Evolution of the gaps in life expectancy at birth between the first and last quartiles of the multidimensional socio-economic scores, by sex, Belgium, 1992-2020




Source: (a) Aerden et al. + (b) Bourguignon et al.

- People with a higher SES also live longer in good health. The gap in life expectancy without disability (Healthy Life Years) at 25 years between the highest and lowest educational levels was 10.5 years for men and 13.4 years for women in 2011-2015. These gaps in health expectancy had grown between 2001-2005 and 2011-2015 with 4.0 years in men and 4.1 in women [34].
- The self-rated health shows large inequalities: people in the low educational level rate their health 2.2 times more often 'less than good' (35%) compared to the high educated people (16%), after age-adjustment. The inequalities in self-rated health have increased until 2013, after which they have stabilized at a higher level.

### 10.2.2 Socio-economic inequalities in mortality

- In the period 2015 to 2019, a strong association was observed between mortality and the following SE indicators: income, education, housing characteristics, socio-professional status and a multidimensional indicator.
- The impact of the first wave of the COVID-19 pandemic (March to June 2020) on mortality inequalities varied according to age [33]:
  - among people aged 40-64 years, mortality rates remained stable in each income group so the mortality inequalities observed before the first wave of the COVID-19 pandemic did not change.
  - among people aged 65+, the mortality increased in all income groups, but the increase was higher among the disadvantaged groups, leading to an increase of the inequalities in mortality above 65 years.
- A former study revealed that the specific conditions contributing most to the inequalities in the under-75 years' all-cause mortality among men were lung cancer, ischemic heart diseases, suicide and chronic obstructive pulmonary diseases (COPD). Among women, it was ischemic heart disease, lung cancer, cerebrovascular diseases and COPD [34].

### 10.2.3 Socio-economic inequalities in non-communicable diseases

- Minor SE inequalities were observed in 2018 in the age-adjusted prevalence of suffering from a chronic condition in general. However, inequalities in the prevalence of suffering from multiple conditions simultaneously (multimorbidity) were much larger, meaning that people of the low EL are more prone to cumulate health problems. Over time, the extent of inequalities in suffering from a chronic condition in general and in multimorbidity has fluctuated. Fortunately, they seem to have decreased in 2018 as compared to 2013.
- In 2018 inequalities were also observed in many specific chronic conditions, namely for arthrosis, high blood pressure, urinary incontinence (in people aged 65+), migraine-like headache, COPD in people aged 65+, diabetes, asthma and acute myocardial infarction (AMI) in 65+.
- For most of those specific conditions, inequalities have not increased or even slightly decreased in 2018. For diabetes and COPD, the inequalities have slightly decreased since 2008; for asthma, a decrease was observed since 2013. An increase of SE inequalities between 2013 and 2018 was only observed for migraine-like headache.

### 10.2.4 Socio-economic inequalities in mental health conditions

- In 2018, SE inequalities in mental health conditions were larger compared to those of physical health conditions with relative differences of 2.
- When looking at the evolution, absolute inequalities in anxiety and depression had strongly increased between 2008 and 2013, and stayed stable at a higher value between 2013 and 2018, which is a worrying evolution. Between 2013 and 2018, the relative inequalities in depression have even worsened.

### 10.2.5 Socio-economic inequalities in health determinants

- In Belgium, in 2018, strong SE inequalities were observed in many health determinants.
- People with a low EL were about three times more likely to be daily smokers and twice more likely to be obese (BMI ≥ 30) and daily consumers of sugary drinks compared to high educated people.
- People with a low EL were also twice less likely to consume sufficient fruits/vegetables or to reach adequate levels of physical activity.
- Alcohol consumption does not present the same SE pattern as most health determinants. The SE pattern of excessive alcohol consumption is unclear and inconclusive.
- Between 1997 and 2018, inequalities in daily smoking increased [16], while no clear trend was observed for inequality in the other health determinants that were studied.

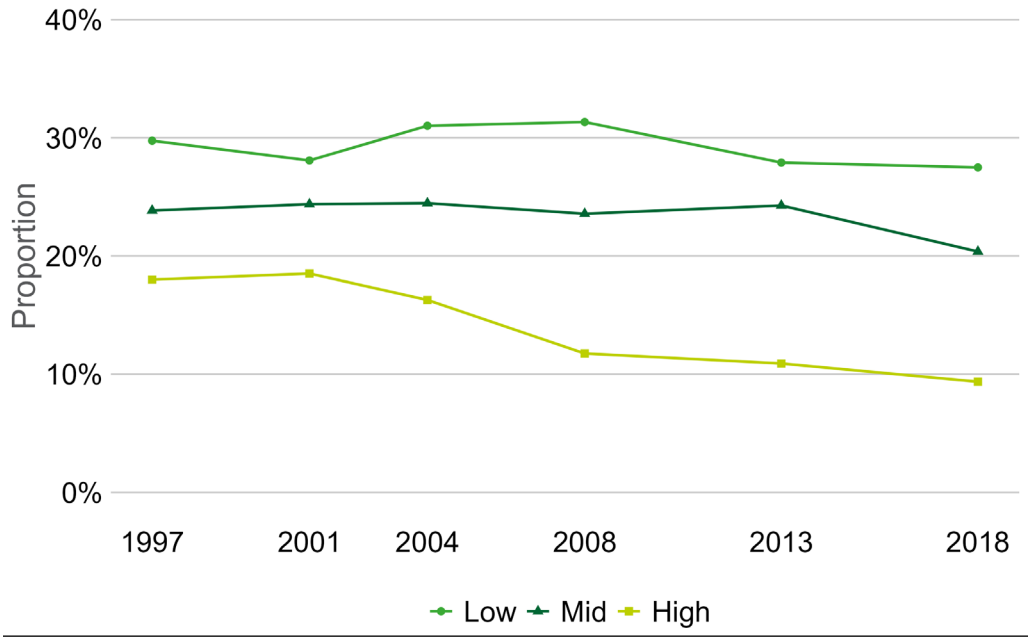
Table 1 Socio-economic inequalities in selected health determinants, Belgium, 2018

| | Age adjusted prevalence rate Low EL | Age adjusted prevalence rate High EL | Absolute difference | Relative difference | PAF |
|---|---|---|---|---|---|
| Daily smoking (% people ≥ 15 years) | 27.5% | 9.4% | 18.1%* | 2.9* | 37.5%* |
| Obesity (% people ≥ 18 years, BMI ≥ 30) | 22.0% | 12.0% | 10.0%* | 1.8* | 22.7%* |
| At least 150 min of moderate to vigorous physical activity per week (% people ≥ 18 years) | 18.8% | 38.5% | -19.7%* | 0.5* | -23.9%* |
| Daily consumption of 5 portions of fruits and vegetables (% people ≥ 6 years) | 8.2% | 16.6% | -8.4%* | 0.5* | -33.5%* |
| Daily consumption of sugar-sweetened beverages (% people all ages) | 29.3% | 13.9% | 15.4%* | 2.1* | 31.5%* |

Source: Own calculation based on Health Interview Survey, Sciensano

* statistically different from 0% for absolute difference and PAF, and statistically different from 1 for the relative difference (p<0.05)

Figure 15. Prevalence of daily smoking among people aged 15 and over, by educational level, Belgium, 1997-2018




Source: Own calculations based on Health Interview Survey

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