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An Overview of Health Status in Estonia

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1. Population

- The resident population of Estonia, on January 1st 2008, according to the data of Statistics Estonia was 1,340,602 people, 54% are women. [1]¹
- The proportion of children in the population has decreased from 22.2% to 14.9% and the proportion of the age 65 and older has increased from 11.7% to 17.1% in the last 16 years. By the year 2050, the proportion of the elderly will increase to 27%.

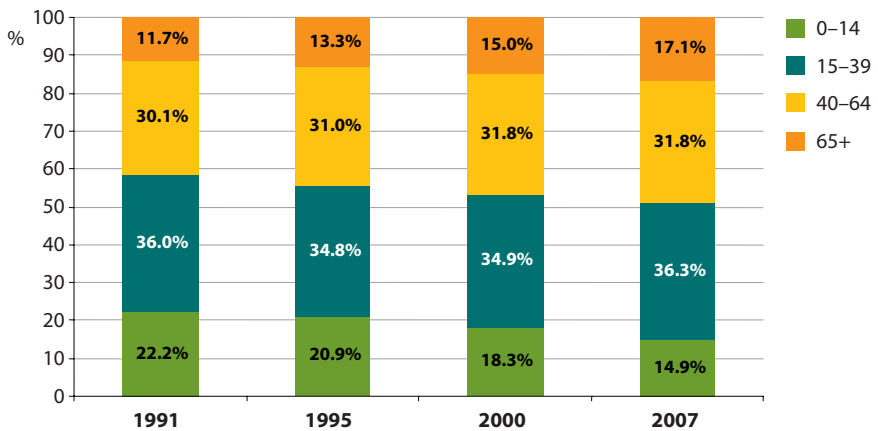


Figure 1. The age structure of the population, 1991–2007.

Source: Statistics Estonia

- Since 1991 the natural growth has been negative. Until 1998, there was a sharp decline in the birth rate when the fertility coefficient amounted to 1.3. Since 1998, the birth rate has risen, the average number of births per one woman in reproductive age increased up to 1.6, that still remains below population renewal levels (the average number of children per woman aged 15–49 needs to be at least 2.1).

¹ Further, all the data is provided by Statistics Estonia (www.stat.ee), if not stated otherwise.

2. Life Expectancy

- The average life expectancy at birth, which rose to 71 years in the second half of the 1980's, dropped sharply in the beginning of the 1990's.
- The lower average life expectancy at birth was recorded in 1994 (on the average 66.5 years): 60.5 years for men and 72.8 years for women.
- After a sharp decline in the beginning of 1990's, the average life expectancy has gradually risen, reaching the level of the pre-independence by 2002 and the figures of 2006 reveal 67.4 years for men and 78.5 for women.
- In Estonia, women have much higher life expectancy than men, the difference is over 10 years.
- The average life expectancy of Estonian men both at birth and at the age of 45 is considerably lower than that of the men from other European countries. [2]
- In 2005, the average life expectancy for 45-year-old Estonian men and women was 26.2 and 35 years respectively, while the EU average showed 32.6 years for men and 37.9 years for women. [2]
- The average life expectancy for 65-year-old Estonian men and women in 2005 was 13.1 and 18.1 years accordingly, whereas the EU average within the same age group for men was 16.4 years and 20 years for women. [2]
- The gaps between the different social groups in average life expectancy continue to deepen. [3] In 2000, the average life expectancy for Estonian men with higher education was 13.5 years higher than that of the men with lower secondary education. The life expectancy for the women with higher education in 2000 was 19 years more than for the men with lower secondary education. [3]

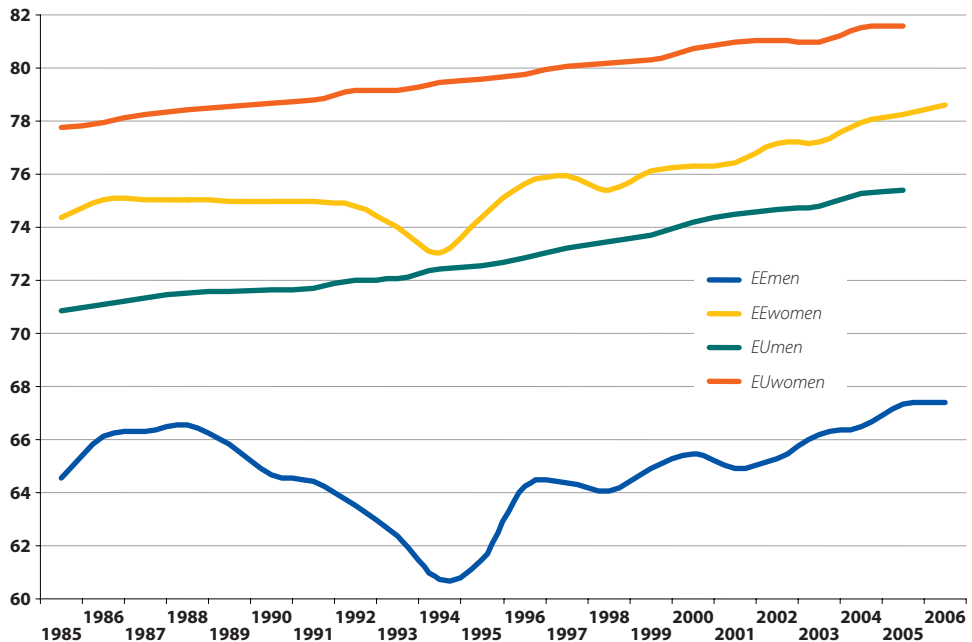


Figure 2. The average life expectancy at birth in Estonia and within the EU member states, 1985–2006.
Sources: World Health Organisation HFA (Health for All) database, Statistics Estonia

3. Health Behaviour and Risk Factors

Smoking

- During 1992–2006, the proportion of daily smokers among the Estonian population aged 16–64 remained fairly stable, the prevalence of smoking is in 41–49% of men and in 17–21% of women. [4]
- There are more smokers among the persons with lower level of education. In 2006, the proportion of daily smokers aged 16–64 among the persons with higher education was 12.5% and 37% with lower secondary education. [4]
- Prevalence of smoking in schoolchildren is ever-growing: in 2006, approximately every fourth 15-year-old boy and every fifth 15-year-old girl smoked at least once a week. [5]

The state and dynamics of passive smoking:

- Year after year, there has been a decline in the number of people staying in smoky rooms at homes. During 1994–2006, the proportion of people aged 16–64 staying in smoky rooms at homes decreased from 48% to 32%. [4]
- During 1994–2002, the proportion of men and women staying daily at least for one hour in smoky rooms outside their homes decreased from 51% to 26% and from 29% to 10% accordingly. [4]
- In 2006, 22% of men and 8% of women were spending daily at least one hour in the smoky working environment and 13% of men and 9% of women were staying in smoky public rooms. [4]
- The Tobacco Act [6], which entered into force on 5 July 2007 and imposed a smoking ban in all catering establishments (bars, restaurants, cafés, night clubs etc), should be deemed to facilitate the decrease in passive smoking outside homes. Smoking is allowed only in designated smoking rooms.

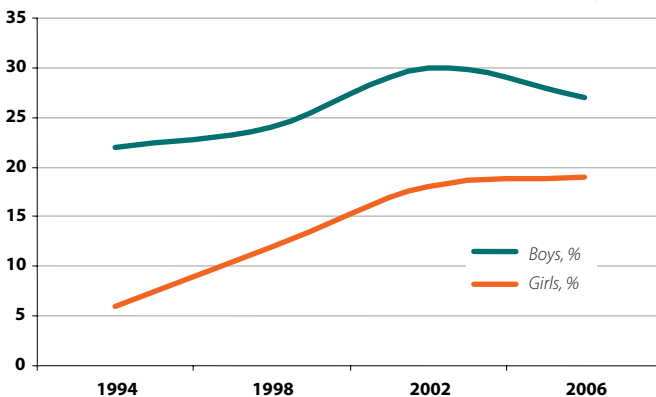


Figure 3. The proportion of school children in age 15, who smoke at least once a week, 1994–2006. Source: Health Behaviour among School Children (HBSC) in Estonia, National Institute for Health Development

Alcohol Consumption

- The consumption of alcohol is constantly increasing. According to the alcohol sales data, the consumption of absolute alcohol in Estonia is more than 12 litres per capita. [7]
- During 2000–2006, the proportion of men and women aged 16–64 consuming six standard dosages or more of alcohol at least once a month increased from 43% to 45% and from 9.8% to 12.4% accordingly. [4]
- The proportion of persons aged 16–64, who have consumed six standard dosages or more of alcohol at least once a month, is two times lower among persons with higher education, but considerably bigger among the unemployed. It is interesting to note, without considering the group with the lowest income, that the proportion of persons consuming six standard dosages or more of alcohol at least once a month increases as their income rises. [4]
- The proportion of persons consuming light alcoholic beverages is increasing. [7]
- In 2006, there were 9% of daily alcohol consumers among the men aged 16–64. [4]
- The major problem in the state alcohol policy remains the availability of alcohol due to

its low price, abundance of selling facilities and the differences of alcohol sale restrictions imposed on the territories of different local governments.

Table 1. Consumption of 100% alcohol beverages per capita during 2002–2006 (legal sales minus beverages taken out of the country by tourists, plus illegal sales of alcohol).

2002	2003	2004	2005	2006
9.9	10.1	10.7	11.1	12

Source: Estonian Institute of Economic Research

- In 2006, 3% of 11-year-olds, 10% of 13-year-olds and 23% of 15-year-olds used alcohol beverages at least once a week. The consumption of alcohol was higher among boys than among girls in all age groups. [5]

Drug Addiction

- By 2006, 25% of the men in age 16–64 and 9% of women of the same age had tried cannabis at least once in their lifetime. Among persons aged 16–24 the lifetime prevalence rate for cannabis use was the highest, approximately the half of men (50.3%) and 28.7% of women aged 16–24 had tried cannabis in their lifetime. [4]

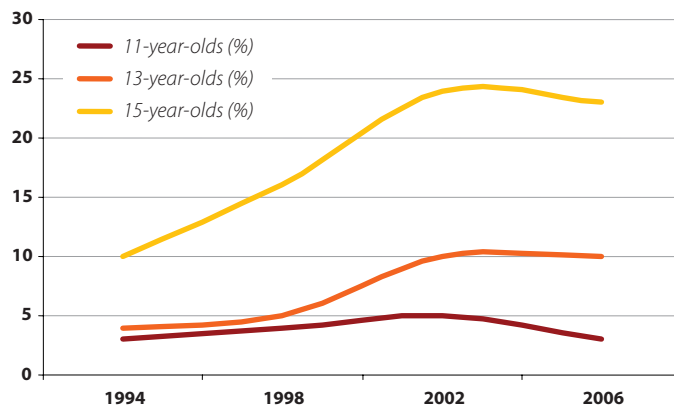


Figure 4. Consumption of alcoholic beverages at least once a week among school children, 1994–2006. Source: Health Behaviour among School Children (HBSC) in Estonia, National Institute for Health Development

- According to the study on the prevalence of injecting drug use carried out in 2005 in Estonia, there are approximately 13,800 injecting drug users (IDUs), up to 62% of whom are HIV-infected. Approximately 90% of IDUs are non-Estonians. A majority of IDUs live in Ida-Viru and Harjumaa Counties. The lack of drug addiction treatment capacity remains a problem. [8]
- During 1995–2007, the proportion of school children in age 15–16 who have ever tried illegal drugs increased from 7% to 30%. In 2007, 37% of boys and 23% of girls have tried narcotic substances. [9]
- The most commonly used drug among school children is marijuana or hashish, 48% of the respondents' first experience with drug use were cannabis products. The second most common first experience with drugs included inhalants (14% of the respondents), next were tranquilisers (12%), ecstasy (9%), alcohol with pills (9%) and amphetamine (6%). [9]
- The results revealed an increase in prevalence rates for illegal drug use among younger people. According to the data of the year 2007, 24% of the drug users younger than 12 have experimented with inhalants, 19% with tranquilisers and 10% with amphetamine. [9]
- Drugs remain easily accessible for school children. More school children say that by wish, they could obtain narcotic substances. 81% of school children aged 15–16 received their first drug from their friends or tried it with friends. [9]
- In 2006, there were 68 drug-related registered deaths, where the proportion of men aged 20–29 accounted for the 2/3 of deaths. In comparison to the previous years, the situation remains quite stable. [10] In the period of 1997–2006, there were 454 drug-related deaths registered in Estonia.

Obesity

- The proportion of overweight residents (BMI 25–29.9) has been increasing since 1998. If in 1998, 31.4% of men and 23.7% of women aged 16–64 were overweight, then in 2006 the proportion of overweight men and women had increased up to 36.1% and 25.4% accordingly. [4]
- The proportion of obese residents (BMI \geq 30) has been increasing since 1998. If in 1998, 11.6% of men and 14.7% of women were obese, then in 2006, the proportion of obese men and women was 14.5% and 15.8% accordingly. [4]
- In 2006, 15% of boys in age 13 and 6% of girls of the same age have overweight, the proportion of 15-year-old overweight boys and girls was 10% and 4% accordingly. [5]

Physical Activity

- Less than a half (43%) of the population aged 16–64 do not go in for sport at all or does it very seldom (a few times a year). [4]
- In 2006, the proportion of men and women who go in for recreational sport at least once a week, half an hour at a time, is 32% and 30% accordingly. In the last 10 years, the share of people who go in for recreational sport has remained practically unchanged. [4]
- The number of residents with higher income, who engage in recreational sport more than once a week is almost 2 times bigger than among the residents with lower income. [4]
- The proportion of people, whose jobs require sitting for the majority of time, has increased in last years. In 2006, 27.7% of men and 39.3% of women had jobs that required little physical activity, 45% of men and 26% of women had jobs that required average or heavy physical activity. [4]

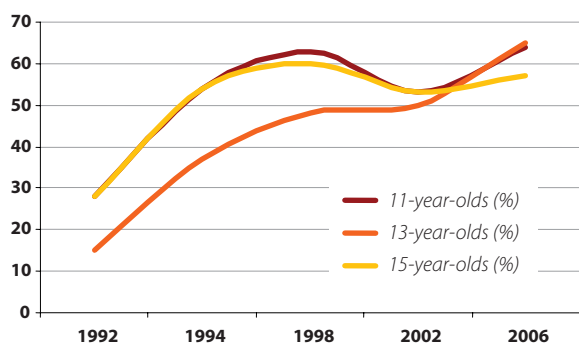


Figure 5. Boys engaged in physical activity four and over days a week, 1992–2006.

Source: Health Behaviour among School Children (HBSC)

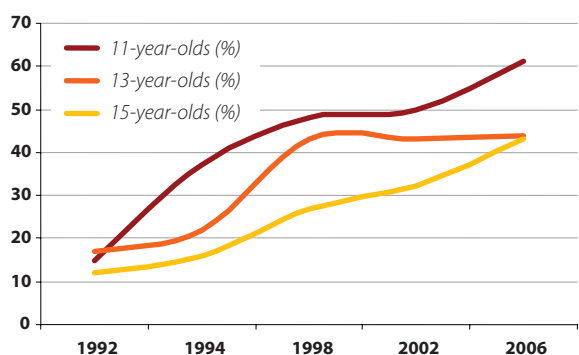


Figure 6. Girls engaged in physical activity four and over days a week, 1992–2006.

Source: Health Behaviour among School Children (HBSC)

- The physical activity indicators among children improved in the course of the years 1992–2006, while physical activity among boys experienced far noticeable increase than among girls. [5]
- A majority of school children aged 11–15 are engaged in physical activity 2–3 times a week, this age group shows no significant differences expressed by gender. [5]
- The differences among school children engaged in physical activity four and more days a week are considerably bigger. Such physical activity means more moving than it is required during physical education classes in school. [5]

Dietary Habits

- The dietary habits of Estonians have improved during the last decade. The most conspicuous changes have been in the intake of food fats. The general replacement of animal fats with vegetable fats and general decrease in the consumption of food fats has been abrupt.
- If, at the beginning of 1990's, 28% of the respondents aged 16–64 used vegetable oil as the main fat in food preparation, then by the year 2006, the figure increased to 92.4%. [4]
- Another remarkable change in dietary habits of Estonians during the last decade is the abrupt growth in the frequency of fresh veg-

etable and fruit intake and in the number of consumers, both among men and women.

- If, at the beginning of 1990's, the proportion of men and women aged 16–64 consuming fresh vegetables every day was 7.3% and 9.5% accordingly, then the percentage of everyday consumers in 2006 was 17% among men and 26.5% among women. [4]
- If in 1998, the proportion of men and women aged 16–64 consuming fresh fruit every day was 11% and 22% accordingly, then in 2006, the percentage of everyday consumers was 18% among men and 36.2% among women. [4]
- In 2006, the proportion of those consuming fresh vegetable every day among girls in age 11 was 31%, among girls in age 13 – 26% and among those in age 15 – 22%. The consumption of fresh vegetables among boys was 3–4% less in all age groups. [5]
- The proportion of those girls consuming fresh fruit every day in age 11 and 13 was 41% and among those in age 15 was 34%. The percentage of consumers of fresh fruit among boys in age 11 was 39%, among boys in age 13 – 23% and 24% among those in age 15. [5]

Risky Sexual Behaviour

- In 2007, 40% of young people aged 19–29 used condoms during an accidental sexual intercourse. Among the young people aged 14–18, the condom use during an accidental intercourse was considerably higher: 60% of the respondents claimed to have always used a condom during an accidental intercourse. During past two years, these figures have remained practically unchanged. [11]
- The number of **abortions** have decreased more than twice during 1992–2006 (in 1992, there were 28,403 abortions, in 2006 – 11,647 abortions). The proportion of legally induced abortions of the total number of abortions fell from 90% to 80%. The number of induced abortions per 100 live births decreased from 158 to 78. Various information activities among young people as well as distribution of free contraceptives or contraceptives with a symbolic fee (e.g. most commonly birth control pills) have facilitated the decrease in abortions.

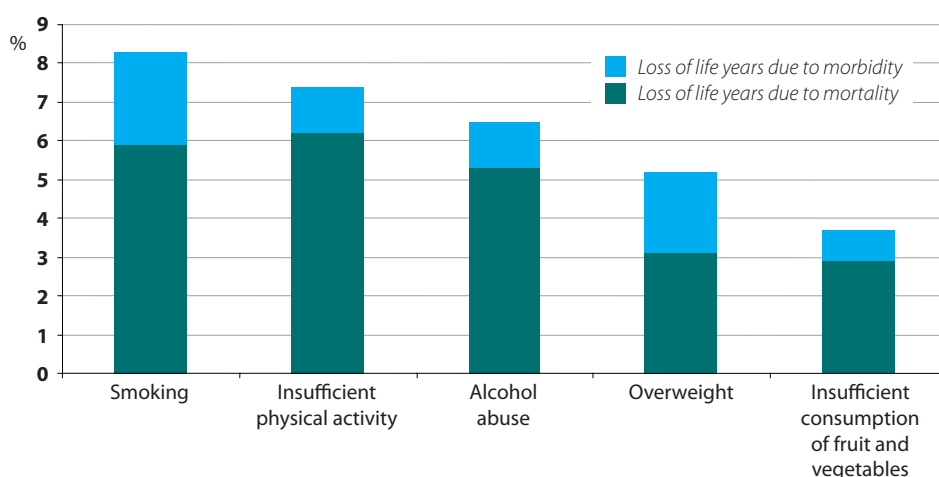


Figure 7. Burden of disease due to health risks, 2002.

Source: Years of life lost due to burden of disease in Estonia: connections with risk factors and cost-effectiveness of harm reduction. Department of Public Health, University of Tartu, Ministry of Social Affairs, 2005

Burden of Risks

- The main factors contributing to the burden of risks to health among Estonian population are **smoking**, the second is **insufficient physical activity and consumption of alcohol** comes as third. [12]
- The main part of burden linked with risk factors depends on the loss of life years due to mortality. The only exception is risky sexual behaviour, where the loss in life years caused by diseases and deaths is the same. [12]
- Concerning the burden of risks, there is a remarkable difference by gender, which is not in favour of men. The biggest proportion of health loss caused by smoking, alcohol consumption and drug use is among men. Also, the loss of life years due to the diseases caused by insufficient consumption of fresh vegetables and fruit is higher among men than women. On the other hand, the proportion of health loss due to overweight, insufficient physical activity and risky sexual behaviour is much higher among women. [12]

4. Self-Perceived Health

- The share of population with positive self-assessment of the health status has increased during the last ten years. [4]
- In 1992, the proportion of respondents aged 16–64 regarding their health to be either good or relatively good was 33.8%, the percentage of those considering their health to be average was 58.8%, and the proportion of those considering it bad or very bad was 11.2%. In 2006, the proportion of the population aged 16–64 who regarded their health to be good or relatively good, average and bad or very bad was 46.6%, 43.6% and 9.7% accordingly. The share of population with positive self-assessment of the health status has increased by approximately 13% since 1992. [4]
- During more than ten years, women have assessed their health to be worse than that of the men, but in the recent years, the self-estimation of both genders evened out. [4]
- Persons with higher level of education and higher income assess their health status more positively. [4]
- The proportion of men and women, who report having a health problem is the same. [4]

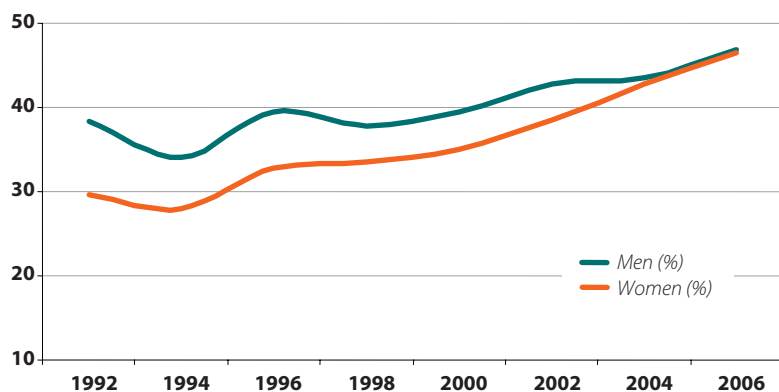


Figure 8. Proportion of the persons regarding their health to be either good or relatively good by gender, 1992–2006.

Source: Health Behaviour among Estonian Adult Population survey, National Institute for Health Development

- In 2006, approximately less than half (46%) of the population aged 16–64 had any long-term illnesses. 52% of the persons having long-term illnesses claimed that illness had limited their everyday activities. However, 9% admitted that illness had limited them considerably and 43% stated it had limited them to some extent. [4]

5. Communicable Diseases

HIV/AIDS

- By the end of 2007, a total number of 6364 HIV-positive cases and 191 AIDS patients have been registered in Estonia. According to the prognoses, in the next 10 years, HIV will become a considerable cause of disease burden in the country. [13]
- Since 2001, there has been a concentrated epidemic of HIV/AIDS among intravenous drug users that is characterised by a 5% prevalence rate among the subpopulation

of intravenous drug users, but less than a 1% prevalence rate among pregnant women. [13]

- Starting from 2002, there has been a declining tendency in the number of new registered cases: in 2007, there were diagnosed 633 new cases or 47.2 cases per 100,000 population. [13]
- Until 2003, the persons infected were mainly men, but in the last years, the proportion of women among the HIV-infected has risen considerably. In 2003, the proportion of infected men was 72%, in 2007, the proportion decreased up to 59%. [13]
- The infection is prevalent mainly in Ida-Viru County and Tallinn. Out of the 633 cases registered in 2007, 313 of HIV-infected individuals or 49.4% lived in Ida-Viru County and 240 or 37.9% in Tallinn. [13]

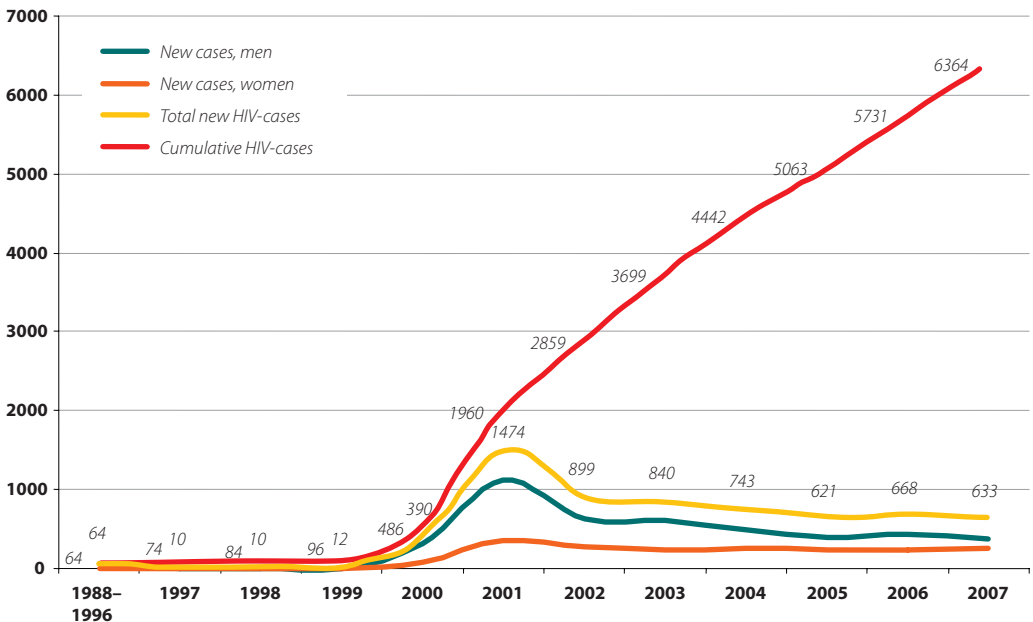


Figure 9. Diagnosed new HIV-cases, new HIV-cases by gender and HIV-cases cumulatively, 1988–2007

Source: Health Protection Inspectorate

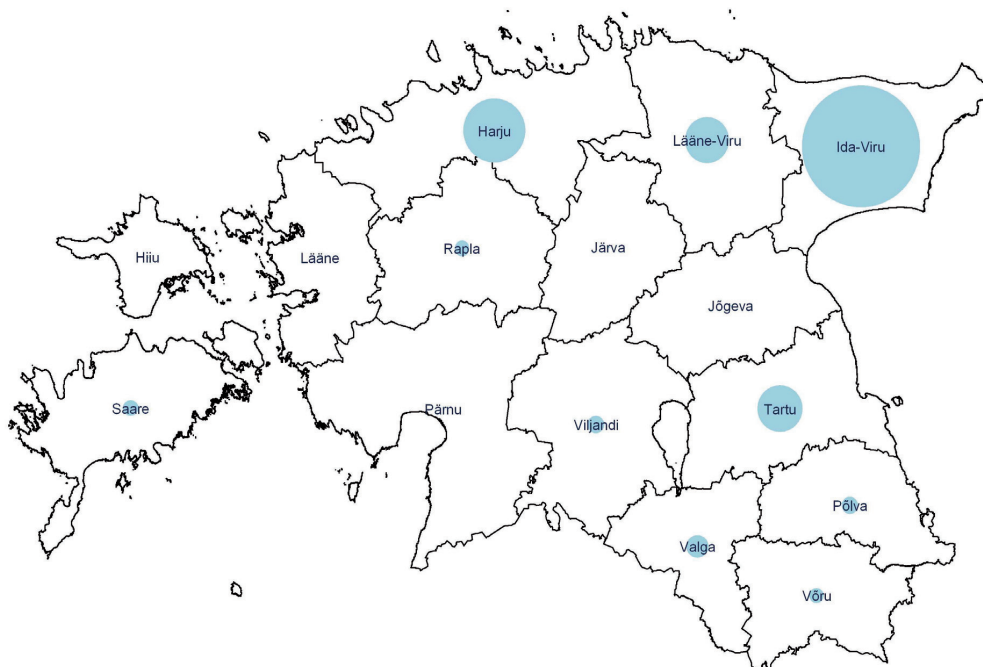


Figure 10. HIV-cases per 100,000 population in 2007.

Source: Health Protection Inspectorate

- There are more and more sexually transmitted virus cases being reported: if in the first epidemic year 2000, according to the data of anonymous AIDS consultation clinics, IDUs made up 90% of the new HIV-positive cases, then in 2006, the IDUs made up only 28% of the new infected individuals. [13]
- At the end of 2007, there were 25 HIV-positive children born in Estonia. [13]
- At present, the Estonian state finances everyone's antiretroviral treatment, including that of the persons not insured with compulsory health insurance. A number of HIV-infected individuals do not have the compulsory health insurance. At the end of 2007, 772 HIV-positive individuals had received antiretroviral treatment. [14]
- A number of infected individuals who are also in the need of other health services is

increasing (treatment of tuberculosis, other infections and malignant neoplasms).

Tuberculosis

- After the high incidence of tuberculosis in the 1990's, there has been a decrease since 1999. In 2007, there were 40% less new cases of tuberculosis than in 1998 when the incidence rate had reached its peak. [15]
- Extensively drug-resistant (XDR) and multi-drug-resistant (MDR) forms of tuberculosis pose a problem for Estonia. The proportion of multidrug-resistant new tuberculosis cases of total tuberculosis incidences increased from 10% in 1997 to 12.5% in 2007. [15]
- Since 1998, the directly observed treatment system (DOTS) of tuberculosis is implemented in Estonia (everyday intake of medications

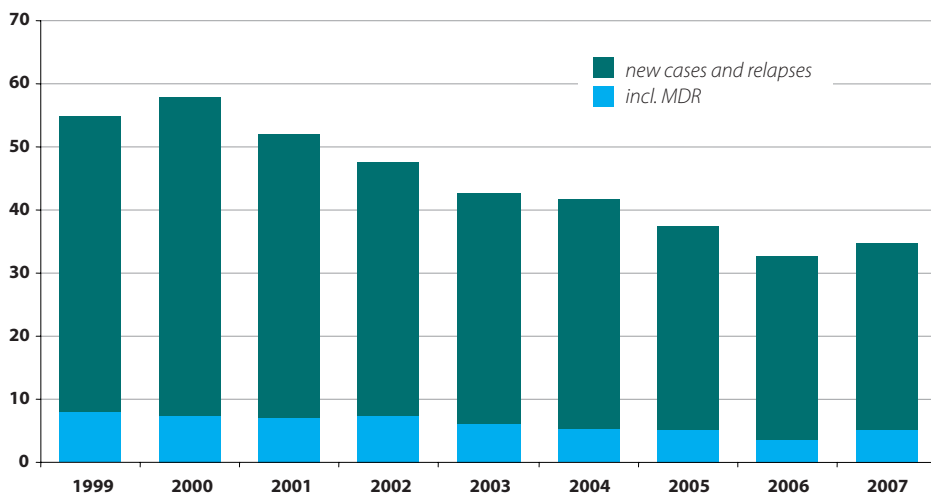


Figure 11. The new cases and relapses of tuberculosis per 100,000 population, 1999–2007.

Source: Tuberculosis Registry

in the presence of a nurse or a social worker in medical institution or at patient's home), which has proved successful.

- HIV-infection is a significant risk factor for incidence of tuberculosis.
- In 2001, the proportion of HIV-positive tuberculosis patients was approximately 1% of the total cases of tuberculosis, by the year 2007, their proportion grew up to 10.5%. [15]
- In the next years, an increase in the incidence of tuberculosis in Estonia is expected primarily among the HIV-infected individuals. [15]

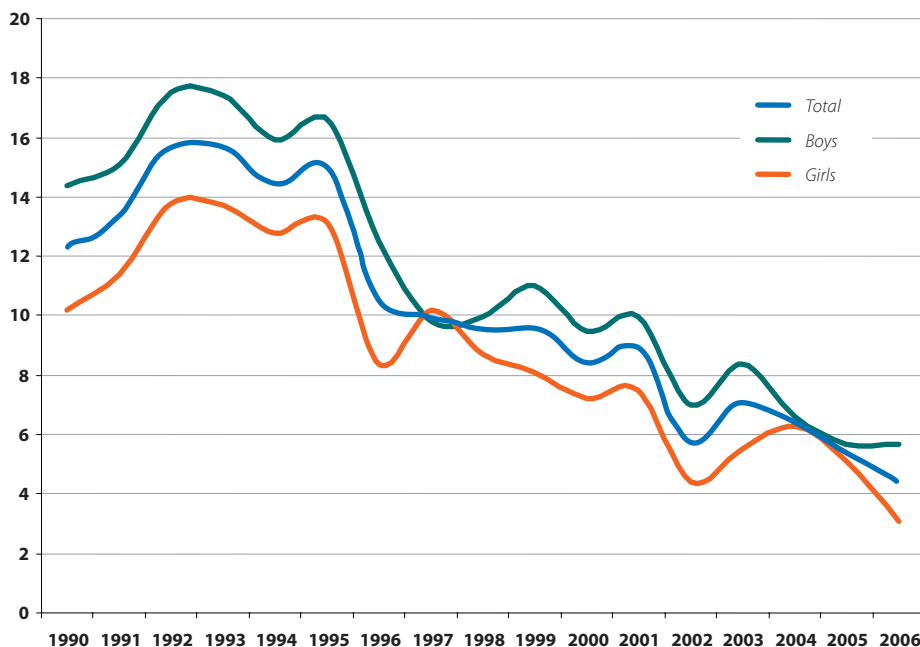


Figure 12. Infant mortality per 1000 live births, 1990–2006.

Source: Statistics Estonia

6. Mortality

Infant mortality

- In comparison to the beginning of the 1990's, the infant mortality rate as well as the cases of still-born children decreased three times among both, boys and girls.
- The main causes for infant mortality are perinatal conditions and malformations, external cause injuries and poisonings, infectious diseases, infant sudden death syndrome and respiratory diseases.
- The crude death rates among men exceed these of the women, and that is especially remarkable among the younger groups of population. For instance, the difference in the group of 15–64-year-olds is approximately triple (in 2006, 8.1 deaths among men and 2.9 among women per 1,000 population). The causes of death differ by gender.

Main Causes of Death

- During the last 10 years, the mortality rates have decreased to some extent.
- **Cardiovascular** mortality makes up over the half of all the deaths in Estonia (60% among women, 46% among men). The level of premature morbidity and mortality, also the permanent incapacity of work caused by cardiovascular diseases among middle-aged persons is high in Estonia as compared to Western-Europe and Scandinavian countries.

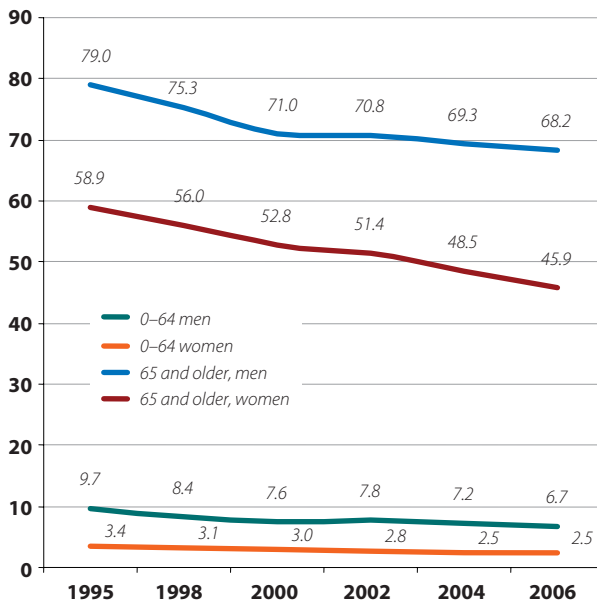


Figure 13. The crude death rate of the age groups 0–64 and 65 and older per 1,000 population, 1995–2006.
Source: Statistics Estonia

In 2005, the mortality rate of men younger than 65 years from cardiovascular diseases in Estonia was three times higher than that of the European Union member states. [2]

- **Cancer** mortality made up over 20.7% of all death cases in 2006 in Estonia (19% among women, 22% among men). Most commonly, the deaths are caused by lung cancer, colon cancer, rectum cancer and stomach cancer.
- **External causes** of morbidity (injuries and poisonings) made up 9.4% of all death cases in 2006 (4.5% among women, 14% among men). Despite of increased safety that brought about the development in society, the rate of injury-related deaths in Estonia in 2005 was three times higher than in the European Union member states. In 2005, due to external causes there were registered 123 deaths in Estonia and 42 deaths in the European Union member states per 100,000 population. [2] The most common causes of death in Estonia are suicides, traffic injuries, alcohol poisonings, fire deaths and freezing deaths.

- **Smoking-related** mortality has gradually decreased since 1995. The crude death rate per 100,000 population has decreased from 990.5 deaths in 1995 to 667.7 deaths in 2005 among men, and – from 513.6 to 317 deaths among women. The mortality rate due to smoking-related diseases in Estonia was 2.2 times higher than that of the old member states of European Union. [2]
- **Alcohol-related** mortality has also decreased since 1995. In 1995, there were 395 deaths among men and 89.2 among women, and in 2005, 274.1 deaths among men and 68.1 among women per 100,000 population caused by alcohol consumption. In 2005, the mortality rate due to alcohol-related diseases in Estonia was 2.7 times higher than that of the old member states of European Union. [2]

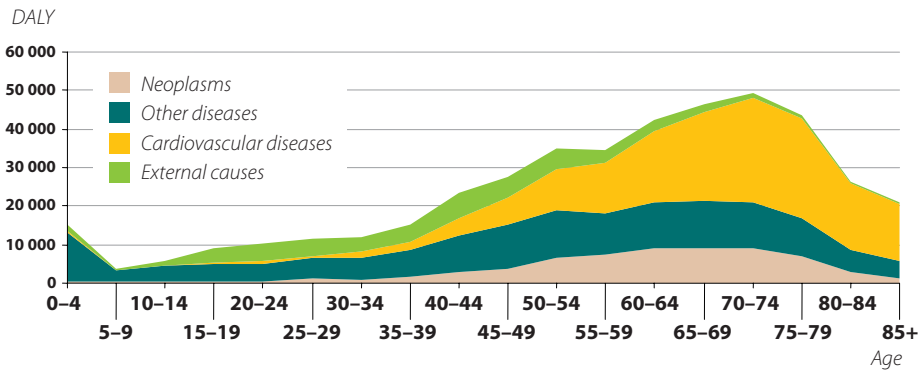


Figure 14. The total health loss among the age groups in Estonia in 2003.

Source: Lai, T. Burden of Disease in Estonia by Counties 2000–2003. Tallinn, Ministry of Social Affairs, 2006.

7. Burden of Disease

- The national burden of disease studies are regularly conducted in Estonia. The term ‘burden of disease’ is measure of the health gap that sums the concept of potential years of life lost due to premature death and equivalent years of ‘healthy’ life lost by the virtue of being in states of poor health or disability (DALY).
- In the productive age, i.e. at the age of 16–64, the half of all the potential years is lost due to morbidity, injuries and mortality. [16]
- If in the productive age the years of ‘healthy’ life are lost due to injuries and deaths caused by external causes of morbidity (e.g. traffic and home and leisure accidents, suicides), then starting from the age of 40, next main causes are cardiovascular diseases and malignant neoplasms. [16]
- Cardiovascular diseases, malignant neoplasms and injuries and poisonings are the main causes of burden of disease among the total population. [16]

Table 2. The distribution of total health loss (DALY) among the disease groups in 2003.

Disease Group	DALY
Cardiovascular diseases	167 215 (1)
Malignant neoplasms	64 617 (2)
External causes of morbidity	53 731 (3)
Other diseases and conditions	35 262 (4)
Musculoskeletal system diseases	21 262 (5)
Respiratory system diseases	20 412 (6)
Psychiatric disorders	18 207 (7)
Digestive system diseases	16 142 (8)
Neuvious system diseases	13 707 (9)
Malformalities and perinatal conditions	8 819 (10)
Urogenital diseases	7 867 (11)
Communicable diseases	4 941 (12)
Total	432 182

Source: Lai, T. Burden of Disease in Estonia by Counties 2000–2003. Tallinn, Ministry of Social Affairs, 2006.

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