What is health expectancy?

Health expectancies were first developed to address whether or not longer life is being accompanied by an increase in the time lived in good health (the compression of morbidity scenario) or in bad health (expansion of morbidity). So health expectancies divide life expectancy into life spent in different states of health, from say good to bad health. In this way they add a dimension of quality to the quantity of life lived.

How is the effect of longer life measured?

The general model of health transitions (WHO, 1984) shows the differences between life spent in different states: total survival, disability-free survival and survival without chronic disease. This leads naturally to life expectancy (the area under the ‘mortality’ curve), disability-free life expectancy (the area under the ‘disability’ curve) and life expectancy without chronic disease (the area under the ‘morbidity’ curve).

There are in fact as many health expectancies as concepts of health. The commonest health expectancies are those based on self-perceived health, activities of daily living and on chronic morbidity.

How do we compare health expectancies?

Health expectancies are independent of the size of populations and of their age structure and so they allow direct comparison of different population sub-groups: e.g. sexes, socio-professional categories, as well as countries within Europe (Robine et al., 2003).

Health expectancies are most often calculated by the Sullivan method (Sullivan, 1971). However to make valid comparisons, the underlying health measure should be truly comparable.

To address this, the European Union has decided to include a small set of health expectancies among its European Community Health Indicators (ECHI) to provide summary measures of disability (i.e., activity limitation), chronic morbidity and perceived health. Therefore the Minimum European Health Module (MEHM), composed of 3 general questions covering these dimensions, has been introduced into the Statistics on Income and Living Conditions (SILC) to improve the comparability of health expectancies between countries. In addition life expectancy without long term activity limitation, based on the disability question, was selected in 2004 to be one of the structural indicators for assessing the EU strategic goals (Lisbon strategy) under the name of “Healthy Life Years” (HLY).

Further details on the MEHM, the European surveys and health expectancy calculation and interpretation can be found on www.eurohex.eu.

What is in this report?

This report is produced by the Joint Action European Health and Life Expectancy Information System (EHLEIS) as part of a country series. In each report we present:

- Life expectancies and Healthy Life Years (HLY) at age 65 for the country of interest and for the overall 25 European Union member states (EU25), using the SILC question on long term health related disability, known as the GALI (Global Activity Limitation Indicator), from 2005 to 2010. The wording of the question has been revised in 2008. When available, we provide previous HLY series based on the disability question of the 1995-2001 European Community Household Panel (ECHP);
- Health expectancies based on the two additional dimensions of health (chronic morbidity and self-perceived health) for the country of interest, based on SILC 2010;
- Mean, maximum and minimum values of three health expectancies at age 65 in the European Union (EU27), based on activity limitation, chronic morbidity and self perceived health (SILC 2010).

References


* Before the revision of 2008, the translations of the module used in some countries were not optimum (See Eurostat-EU Task Force on Health Expectancies common statement about the SILC data quality). This revision is being evaluated.
Dutch life expectancy (LE) at age 65 has increased by 1.7 years for women and 2.3 years for men over the period 2000-2010: for both sexes between 1995 and 2001 LE was slightly below the EU15 average, and by 2010 LE was slightly below the EU25 average (21.3 for women and 17.8 for men) for men and women.

Over the 1995-2001 period, health expectancy based on activity limitation (HLY) at age 65 from the ECHP data decreased for women but remained almost stable for men. The proportion of HLY (or years without self-reported limitations due to health condition or disability), within the total expected years, decreased for both sexes, being close to 50% for women and 60% for men in 2001. Between 1995 and 1999 HLY in the Netherlands was above the EU15 average but dropped to the EU15 average in 2000.

The new HLY series, initiated in 2005 with the SILC data, show values for the Netherlands being in 2010 above the EU25 average (9.0 for women and 8.7 for men) by 0.5 and 0.7 year for women and men respectively. In 2010 women and men at age 65 can expect to spend 45% and 53% of their life without self-reported long-term activity limitations respectively. Note that the wording of the GALI question was changed in the Netherlands in 2008 to better reflect the EU standard. This led to a clear decrease in HLY for men and women between 2007 and 2008. Between 2009 and 2010 HLY strongly decreased again for women and continued to slightly decrease for men.
Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for The Netherlands (Health data from SILC 2010)

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>Men</th>
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</thead>
<tbody>
<tr>
<td><strong>Life Expectancy at age 65 and expected years</strong></td>
<td><strong>Without activity limitation</strong></td>
<td><strong>With moderate activity limitation</strong></td>
</tr>
<tr>
<td>Women</td>
<td>9.5</td>
<td>8.9</td>
</tr>
<tr>
<td>Men</td>
<td>9.4</td>
<td>6.1</td>
</tr>
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<table>
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<tr>
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<th><strong>Without chronic morbidity</strong></th>
<th><strong>With chronic morbidity</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>10.1</td>
<td>10.9</td>
</tr>
<tr>
<td>Men</td>
<td>9.0</td>
<td>8.7</td>
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<tr>
<th></th>
<th><strong>In very good or good perceived health</strong></th>
<th><strong>In fair perceived health</strong></th>
<th><strong>In bad or very bad perceived health</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>11.3</td>
<td>7.7</td>
<td>2.0</td>
</tr>
<tr>
<td>Men</td>
<td>10.6</td>
<td>5.6</td>
<td>1.5</td>
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</table>

**Key points:**

In 2010 LE at age 65 in the Netherlands was 21.0 years for women and 17.7 years for men.

Based on the SILC 2010 at age 65, women spent 9.5 years (45% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 8.9 years (42%) with moderate activity limitation and 2.6 years (12%) with severe activity limitation.*

Men of the same age spent 9.4 years (53% of their remaining life) without activity limitation compared to 6.1 years (35%) with moderate activity limitation and 2.2 years (12%) with severe activity limitation.*

Although for all the health expectancies the years of life spent in positive health were greater or slightly greater for women than men, women spent a larger proportion of their life in ill health.

These results should be interpreted cautiously given the lack of the institutional population, such as people living in nursing homes, and the size of the samples varying from 1,300 in Denmark to 10,126 in Italy. The sample size for Netherlands comprised 1238 women and 899 men aged 65+ years in 2010.

* These may not sum to Life Expectancy due to rounding

**Publications and reports on health expectancies for The Netherlands**

### Health expectancies at age 65 (in years)

<table>
<thead>
<tr>
<th>Activity limitation</th>
<th>Chronic morbidity</th>
<th>Perceived health</th>
</tr>
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<tbody>
<tr>
<td>Without</td>
<td>With moderate</td>
<td>With severe</td>
</tr>
<tr>
<td><strong>Women EU27</strong></td>
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<tr>
<td><strong>Men EU27</strong></td>
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<tr>
<td>(min-max)</td>
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#### Key points:

In 2010, LE at age 65 in the EU27 was 21.1 years for women (range across countries from 17.0 to 23.4 years) and 17.5 years for men (range across countries from 13.2 to 18.9 years).

Based on the SILC 2010, at age 65, EU27 women spent 8.8 years (range 2.8 years to 15.5 years) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.2 years (range 3.0 to 9.4 years) with moderate activity limitation and 5.0 years (range 2.0 to 7.3 years) with severe activity limitation.*

Men in the EU27 of the same age spent 8.6 years (range 3.3 to 14.1 years) without activity limitation compared to 5.6 years (range 2.3 to 7.0 years) with moderate activity limitation and 3.4 years (range 1.4 to 4.4 years) with severe activity limitation.*

The numbers of years lived free of activity limitation were almost identical in men and women but constituted 49% of remaining life in men and 42% of remaining life in women. Years in very good or good health were slightly higher for women than men and years free of chronic morbidity were higher by 0.9 year. However, compared to men, women spent a larger proportion of their life in ill health and these years of ill health were more likely to be years with severe health problems.

These results should be interpreted cautiously given the lack of the institutional population, such as people living in nursing homes.

* These may not sum to Life Expectancy due to rounding

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**About the Joint Action EHLEIS**

The current Joint Action EHLEIS (European Health and Life Expectancy Information System) and EurOhex ([www.eurohex.eu](http://www.eurohex.eu)) are co-funded by 11 Member States, the European Commission, DG SANCO, and two French institutions: the Ministry of Health and the National Solidarity Fund for Autonomy (CNSA). It is a collaboration between: Austria (Statistik Austria, Vienna Institute of Demography of the Austrian Academy of Sciences, European Centre for Social Welfare), Belgium (Scientific Institute of Public Health – ISP-WIV), the Czech Republic (Institute of Health Information and Statistics of the Czech Republic - UZIS CR), Denmark (Danish National Board of Health - SST; Economic Council of the Labour Movement - AE; University of Southern Denmark - IPH; University of Copenhagen - UCPH), France (National Institute of Health and Medical Research - INSERM; National Institute of Demography - INED; Regional Oncology Research Centre - CRLC; University of Montpellier - UM2), Germany (Robert Koch Institute - RKI; Rostock Center for Demographic Change - UROS), Greece (Hellenic Statistical Authority - ELSTAT), Italy (University La Sapienza - DSSEAD), The Netherlands (Erasmus Medical center - EMC; National Institute for Public Health and the Environment - RIVM; Statistical Office - CBS), Sweden (National Board of Health and Welfare - SoS/NBHW) and the United Kingdom (Office for National Statistics - ONS; Newcastle University - UNEW). The JA:EHLEIS and EurOhex aim to provide a central facility for the co-ordinated analysis, interpretation and dissemination of life and health expectancies to add the quality dimension to the quantity of life lived by the European populations. Further details about the Joint Action can be found on the websites: [www.eurohex.eu](http://www.eurohex.eu) and [www.healthylife-years.eu](http://www.healthylife-years.eu)