EHLEIS Country Reports

Issue 7

EUROPEAN HEALTH & LIFE EXPECTANCY

JA:EHLEIS

INFORMATION SYSTEM

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Health Expectancy in Austria

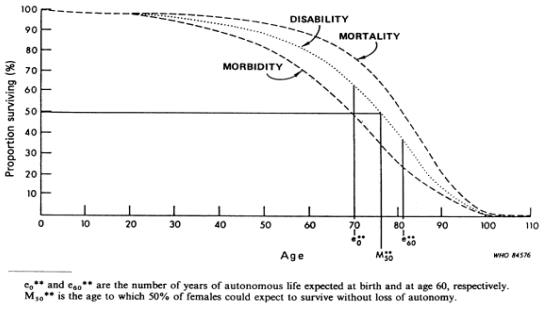
What is health expectancy?

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).

The general model of health transition (WHO, 1984): observed mortality and hypothetical morbidity and disability survival curves for females, USA, 1980.



e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
M_{50}^{**} is the age to which 50% of females could expect to survive without loss of autonomy.

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 2004 to 2011. 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 2011;
- Life and health expectancy at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU 27 in 2011 by gender (Health data from SILC)

References

Jagger C., Gillies C., Moscone F., Cambois E., Van Oyen H., Nusselder W., Robine J.-M., EHLEIS Team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008;372(9656) 2124-2131

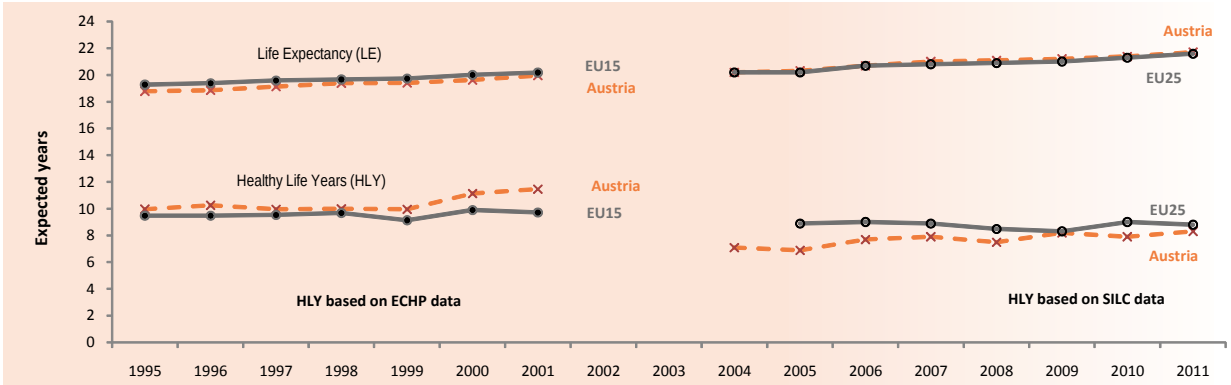
Robine J.-M., Jagger C., Mathers C.D., Crimmins E.M., Suzman R.M., Eds. *Determining health expectancies*. Chichester UK: Wiley, 2003.

Sullivan D.F. *A single index of mortality and morbidity*. HSMHA Health Reports 1971;86:347-354.World Health Organization. *The uses of epidemiology in the study of the elderly: Report of a WHO Scientific Group on the Epidemiology of Aging.* Geneva: WHO, 1984 (Technical Report Series 706)

* 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).The revision is being evaluated.

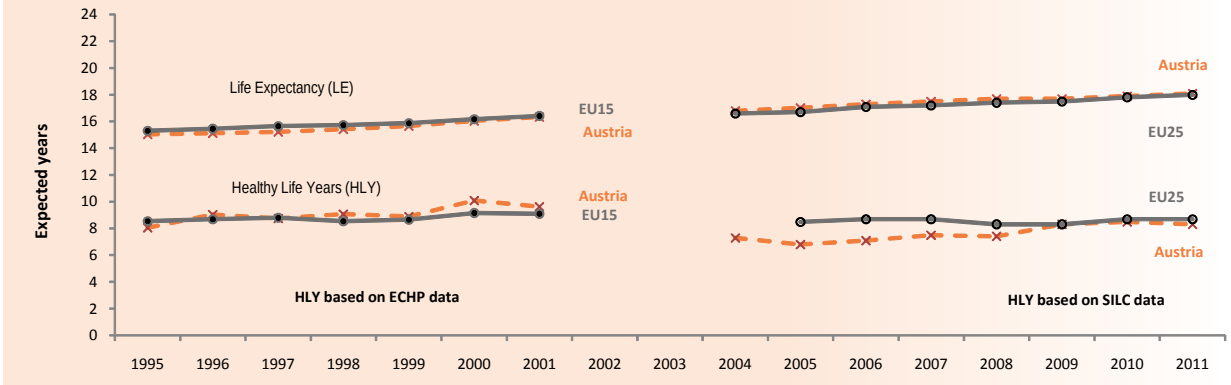
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Austria and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2004-2011)

Women



Austria	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	18.8	18.9	19.1	19.4	19.4	19.6	20.0	-	-	20.2	20.3	20.7	21.0	21.1	21.2	21.4	21.7
HLY	10.0	10.3	10.0	10.0	10.0	11.1	11.5	-	-	7.1	6.9	7.7	7.9	7.5	8.2	7.9	8.3
% HLY/LE	53%	54%	52%	52%	51%	57%	57%	-	-	35%	34%	37%	38%	36%	39%	37%	38%

Men



Austria	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	15.0	15.1	15.2	15.4	15.7	16.0	16.3	-	-	16.8	17.0	17.3	17.5	17.7	17.7	17.9	18.1
HLY	8.0	9.0	8.8	9.1	8.9	10.1	9.6	-	-	7.3	6.8	7.1	7.5	7.4	8.3	8.5	8.3
% HLY/LE	54%	60%	58%	59%	57%	63%	59%	-	-	43%	40%	41%	43%	42%	47%	47%	46%

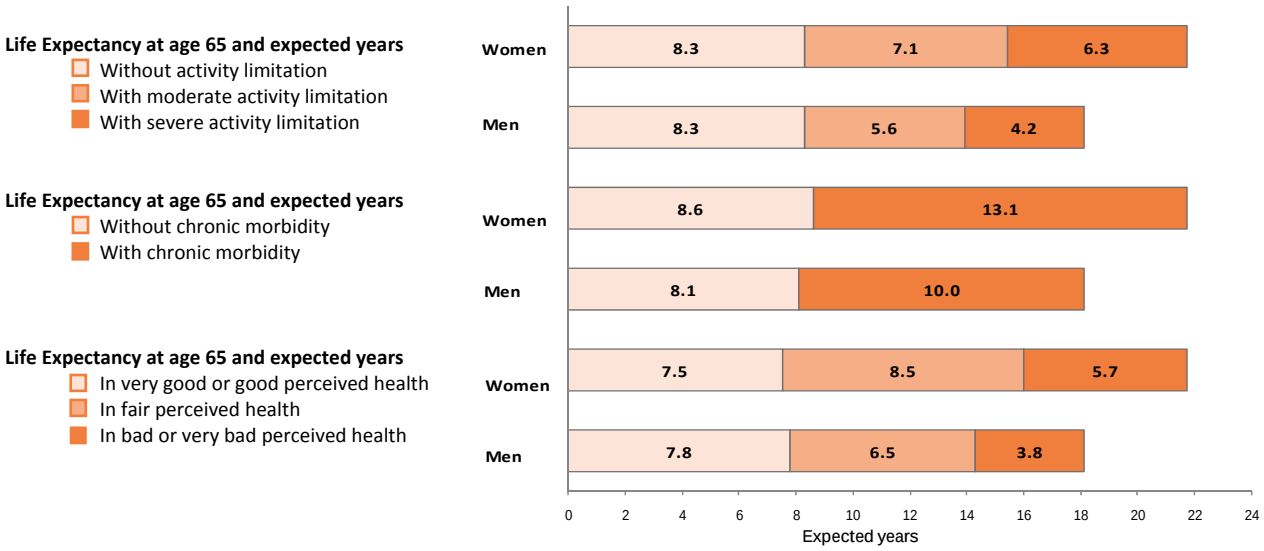
Key points:

Between 2001-2011 Austrian life expectancy (LE) at age 65 increased by 1.7 years for women and 1.8 years for men. While Austria performed at the EU15 average in 2001 this indicator value was also slightly above the EU25 average in 2011 (21.6 years for women and 18.0 for men).

Over the 1995-2001 health expectancy at age 65 when activity limitations (HLY) are taken into account as defined by ECHP data increased by approximately 1.5 years. Therefore the proportion of HLY (or years without *self-reported limitations due to a health condition or disability*), within the total number of expected years, increased for both sexes, being close to 57% for women and 59% for men in 2001. Between 1995 and 2001 HLY in Austria was above the average for the EU15.

The new HLY series on the basis of SILC data shows this indicator values for Austrian women being 0.3 year below the EU25 average of 8.6 in 2011 and Austrian men can expect 8.3 years HLYs which is also below the EU25 average of 8.8. Thus in 2011 women and men at age 65 can expect to spend 38% and 46% respectively of their remaining life without *self-reported long-term activity limitations*. Compared to earlier trends, the phrasing of the SILC question may explain the lower level of reported activity limitations as people report limitations of different severity. Nevertheless between 2008 and 2011 HLY increased for men by 0.8 and for women by 0.9 years. Note that the wording of the GALI question was changed in Austria in 2008 to better reflect the EU standard.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Austria (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Austria was 21.7 years for women and 18.1 years for men.

Based on SILC 2011 data, women at age 65 spent 8.3 years (38% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.1 years (33%) with moderate activity limitation and 6.3 years (29%) with severe activity limitation.*

Men of the same age spent 8.3 years (46% of their remaining life) without activity limitation compared to 5.6 years (31%) with moderate activity limitation and 4.2 years (23%) with severe activity limitation.*

Although the total number of years lived by men were less than those for women, the number of healthy life years were greater for men than women on all severity levels. Therefore 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.

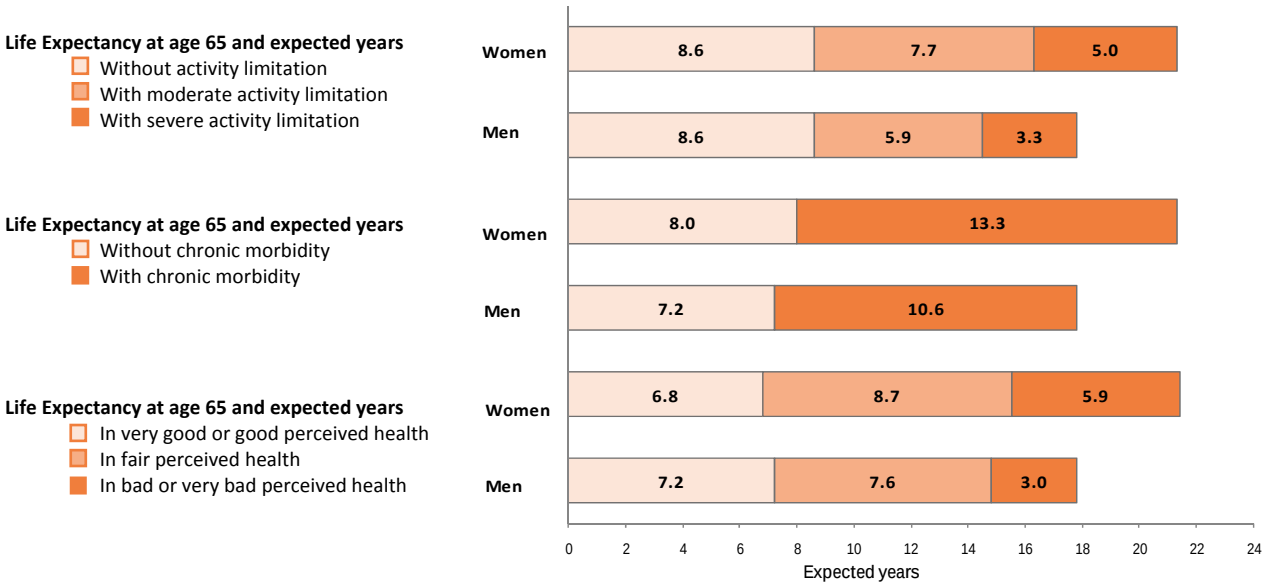
These results should be interpreted with caution as health states of people living in institutions or nursing home are not surveyed. Furthermore sample sizes in the SILC survey vary remarkably ranging between 1204 in Denmark to 10419 in Italy. The sample size for Austria comprised 1343 women and 1098 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

Publications and reports on health expectancies for Austria

- Klotz J. Convergence or divergence of educational disparities in mortality and morbidity? The evolution of life expectancy and health expectancy by educational attainment in Austria in 1981-2006. Vienna Yearbook of Population Research. 2010; 8:139-174.
- Jagger C., Robine J.-M., Van Oyen H., Cambois E. *Life expectancy with chronic morbidity*. In: European Commission, editor. *Major and chronic diseases - report 2007*. Luxembourg: European Communities; 2008. p. 291-304.
- Jagger C., Gillies C., Mascone F., Cambois E., Van Oyen H., Nusselder W.J., Robine J.-M., EHLEIS team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008; 372(9656):2124-2131.
- Lievre A., Jusot F., Barnay T., Sermet C., Brouard N., Robine J.-M., Brieu A.-M., Forette F. Healthy working life expectancies at age 50 in Europe: a new indicator. *J Nutr Health Aging*. 2007; 11(6):508-514.
- Jagger C., EHEMU team. *Healthy life expectancy in the EU 15*. In: Institut des Sciences de la Santé, editor. *Living longer but healthier lives: how to achieve health gains in the elderly in the European Union Europe Blanche XXVI, Budapest, 25-26 November 2005*. Paris: ISS; 2006. p. 49-62.
- Doblhammer G., Kytir J. Compression or expansion of morbidity? Trends in healthy-life expectancy in the elderly Austrian population between 1978 and 1998. *Soc Sci Med*. 2001; 52(3):385-391.
- Doblhammer G., Kytir J. Social Inequalities in Disability-free and healthy life expectancy in Austria. *Wien Klin Wochenschr*. 1998;110(11):393-396

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU27, in 2011, by gender (Health data from SILC)



Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time 8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

About the Joint Action EHLEIS

The current Joint Action EHLEIS (European Health and Life Expectancy Information System) and EurOhex (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; 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 and www.healthylife-years.eu.

Acknowledgements

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Tel: +33 (0)4 67 14 33 85 /e-mail: christine.perrier@inserm.fr

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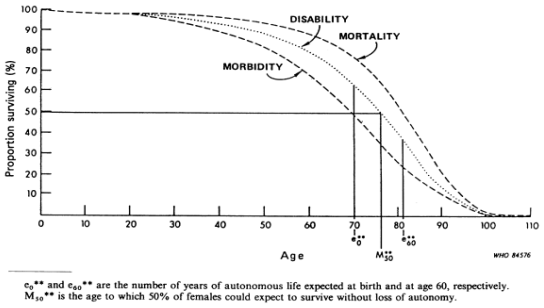

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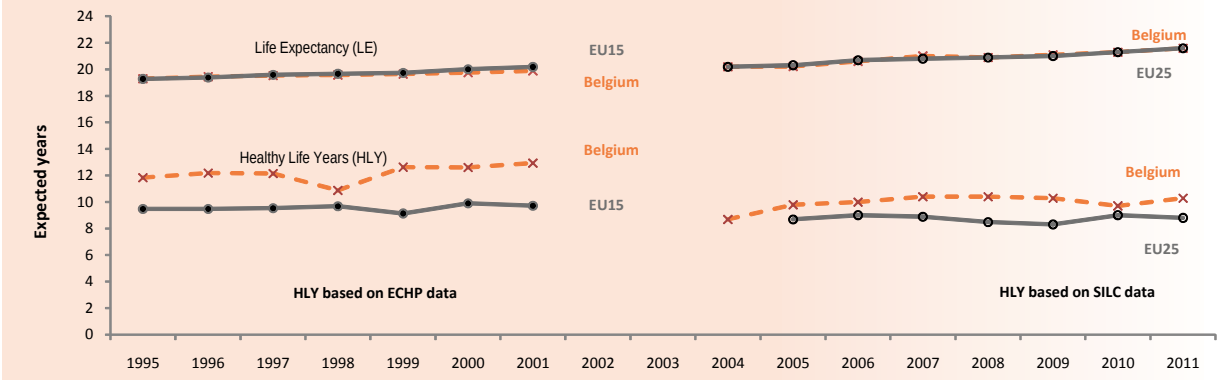
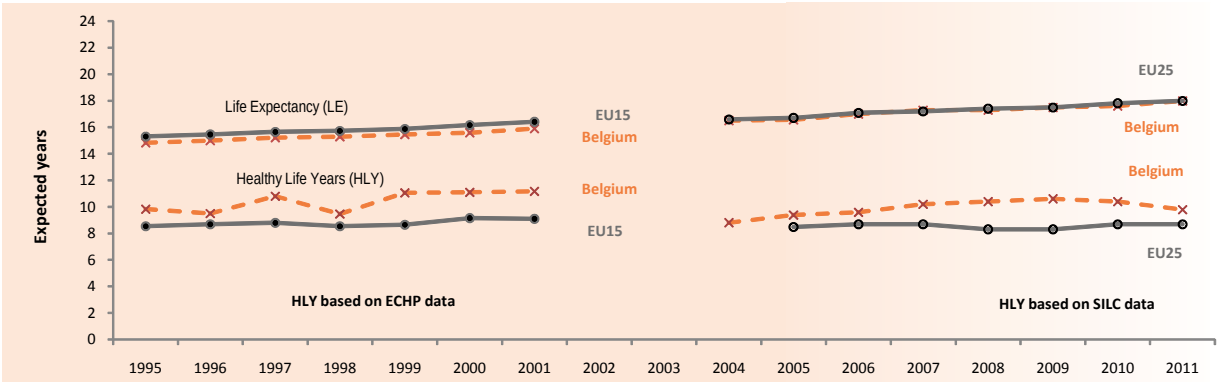


Belgium	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	19.3	19.4	19.5	19.6	19.6	19.7	19.9	-	-	20.2	20.2	20.6	21.0	20.9	21.1	21.3	21.6
HLY	11.8	12.2	12.2	10.9	12.6	12.6	12.9	-	-	8.7	9.8	10.0	10.4	10.4	10.3	9.7	10.3
% HLY/LE	61%	63%	62%	56%	64%	64%	65%	-	-	43%	49%	49%	50%	50%	49%	46%	48%

Men



Belgium	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	14.8	15.0	15.2	15.3	15.5	15.6	15.9	-	-	16.5	16.6	17.0	17.3	17.3	17.5	17.6	18.0
HLY	9.8	9.5	10.8	9.5	11.1	11.1	11.2	-	-	8.8	9.4	9.6	10.2	10.4	10.6	10.4	9.8
% HLY/LE	66%	63%	71%	62%	72%	71%	70%	-	-	53%	57%	56%	59%	60%	61%	59%	54%

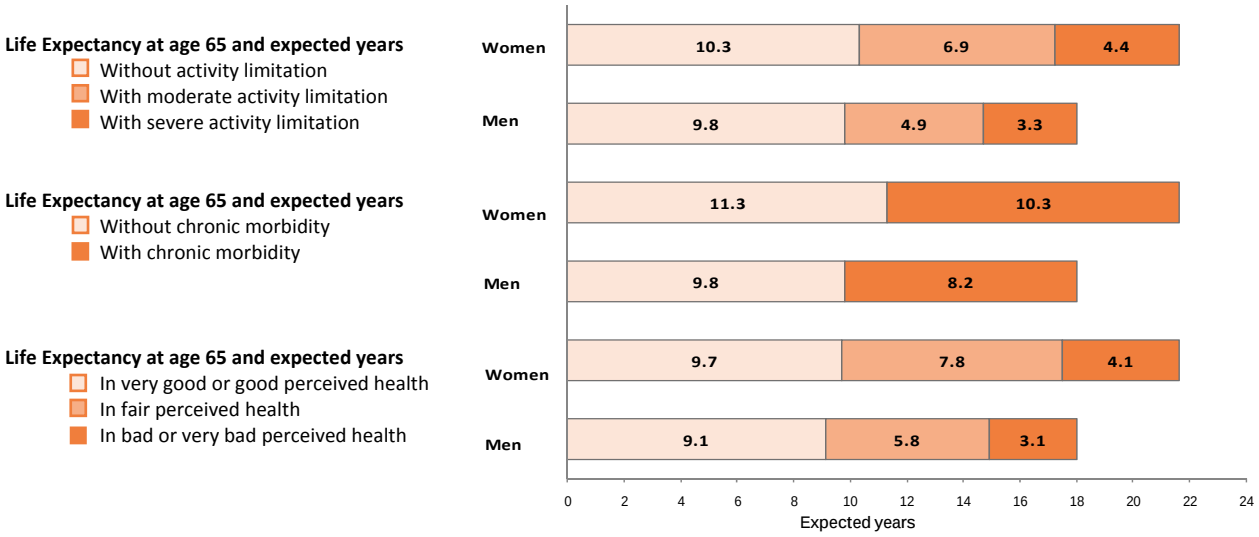
Key points:

Belgian life expectancy (LE) at age 65 has increased by 1.7 years for women and 2.1 years for men over the 2001-2011 period: LE for men between 1995-2001 was slightly below the EU15 average. By 2011 LE was similar to the EU25 average for women (21.6) and for men (18.0).

Over the 1995-2001 period, health expectancy based on activity limitation (HLY) at age 65 from the ECHP data increased in Belgium. The proportion of HLY (or years without *self-reported limitations due to health condition or disability*), within the total expected years, slightly increased for both sexes between 1995 and 2001, being close to 65% for women and 70% for men in 2001. Between 1995 and 2001 HLY in Belgium was above the EU15 average.

The new HLY series, initiated in 2004 with the SILC data, shows values for Belgium being in 2011 above the EU25 average: 10.3 years for women (+1.5 years) and 9.8 years for men (+1.1 years). In 2011 women and men at age 65 can expect to spend 48% and 54% of their life without *self-reported long-term activity limitations* respectively. HLY did not increase significantly between 2005 and 2011. Note that the wording of the GALI question was slightly changed in Belgium in 2005 to better reflect the EU standard.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Belgium (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Belgium was 21.6 years for women and 18.0 years for men.

Based on the SILC 2011, at age 65, women spent 10.3 years (48% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 6.9 years (32%) with moderate activity limitation and 4.4 years (20%) with severe activity limitation.*

Men of the same age spent 9.8 years (54% of their remaining life) without activity limitation compared to 4.9 years (27%) with moderate activity limitation and 3.3 years (18%) with severe activity limitation.*

The number of years lived in very good or good perceived health, the years lived without chronic morbidity and the HLY were greater for women than men. However, compared to men, women spent a larger proportion of their life in ill health, and spent more 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, and the size of the samples varying from 1204 in Denmark to 10419 in Italy. The sample size for Belgium comprised 1235 women and 1120 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

Publications and reports on health expectancies for Belgium

- Berger N., Charafeddine R., Tafforeau J., Van Oyen H. Espérances de vie en bonne santé par région et par niveau socio-économique en Belgique. WIV-ISP, Direction Opérationnelle Santé Publique et Surveillance, 2012: Bruxelles, N° de dépôt légal/2012/2505/44.
- Van Oyen H., Charafeddine R., Deboosere P., Cox B., Lorant V., Nusselder W., & Demarest S. Contribution of mortality and disability to the secular trend in health inequality at the turn of century in Belgium. *Eur J of Public Health. 2011, 21(6):781-787.*
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- Van Oyen H., Cox B., Demarest S., Deboosere P., Lorant V. Trends in health expectancy indicators in the older adult population in Belgium between 1997 and 2004. *Eur J Ageing*. 2008 Jun;5(2):137-146.
- Cox B., Van Oyen H., Cambois E., Jagger C., Le Roy S., Robine JM, Romieu I. The reliability of the Minimal European Health Module. *Int J Public Health*. 2009 (54): 55-60.

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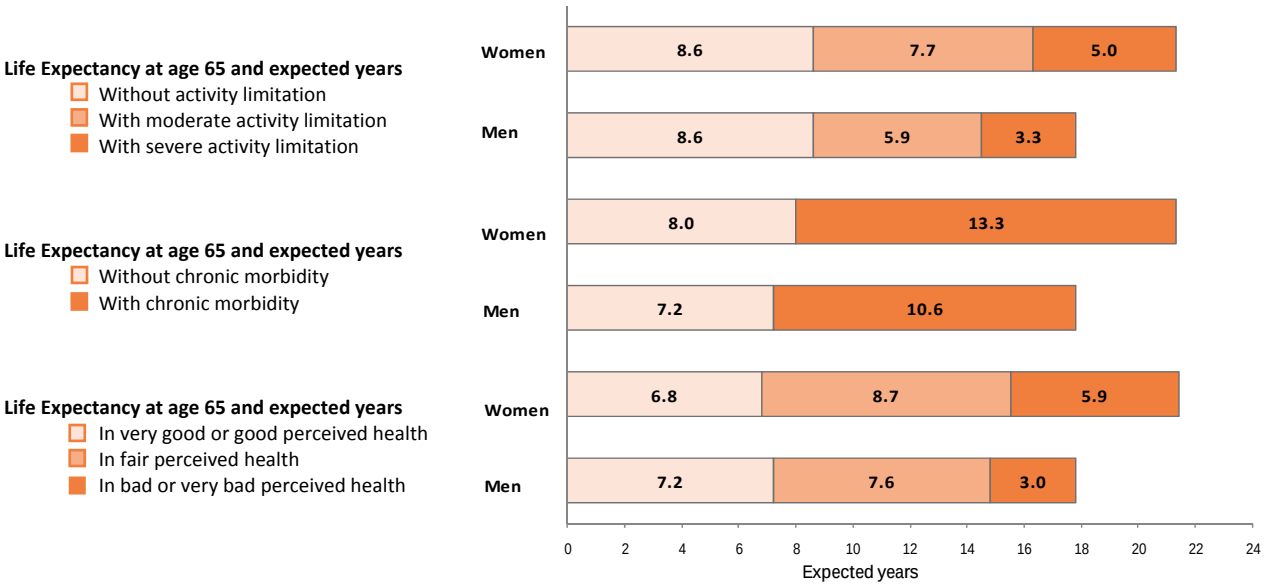

Key points:

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time 8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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Acknowledgements

Herman van Oyen and Nicolas Berger (Scientific Institute of Public Health) have contributed to this report and its translation.

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Health Expectancy in Bulgaria

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.

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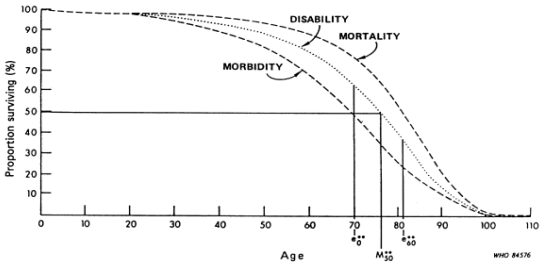
The general model of health transitions (WHO, 1984) shows the differences between life spent in different states: total survival, disability-free survival and survival without chronic disease. This leads naturally to life expectancy (the area under the 'mortality' curve), disability-free life expectancy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

The general model of health transition (WHO, 1984): observed mortality and hypothetical morbidity and disability survival curves for females, USA, 1980.



e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
M_{50}^{**} is the age to which 50% of females could expect to survive without loss of autonomy.

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.

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- Life and health expectancy at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU 27 in 2011 by gender (Health data from SILC)

References

Jagger C., Gillies C., Moscone F., Cambois E., Van Oyen H., Nusselder W., Robine J.-M., EHLEIS Team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008;372(9656) 2124-2131
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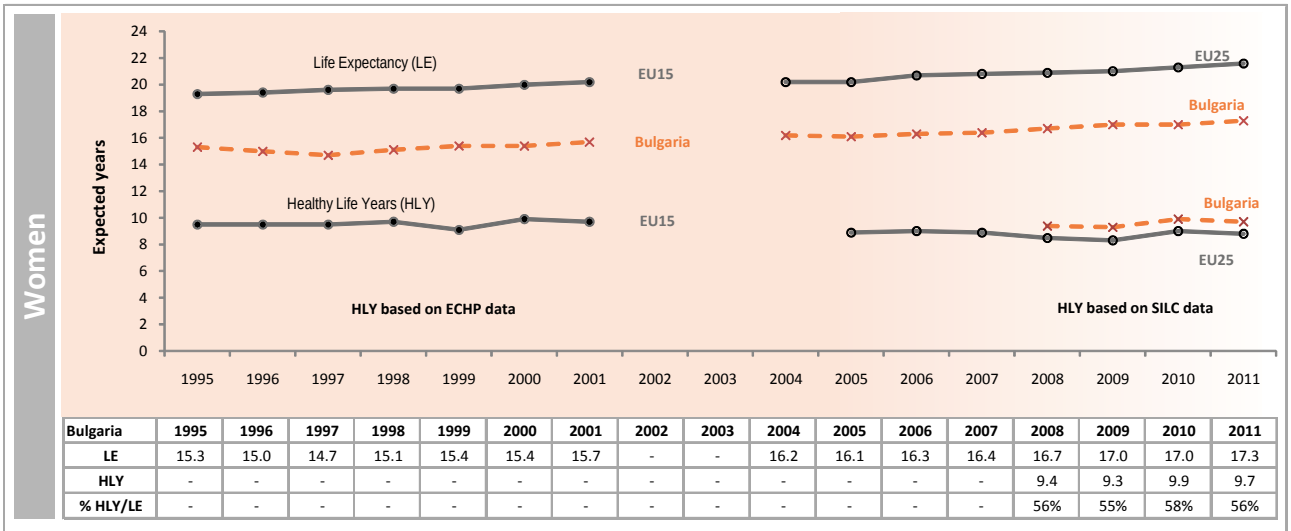
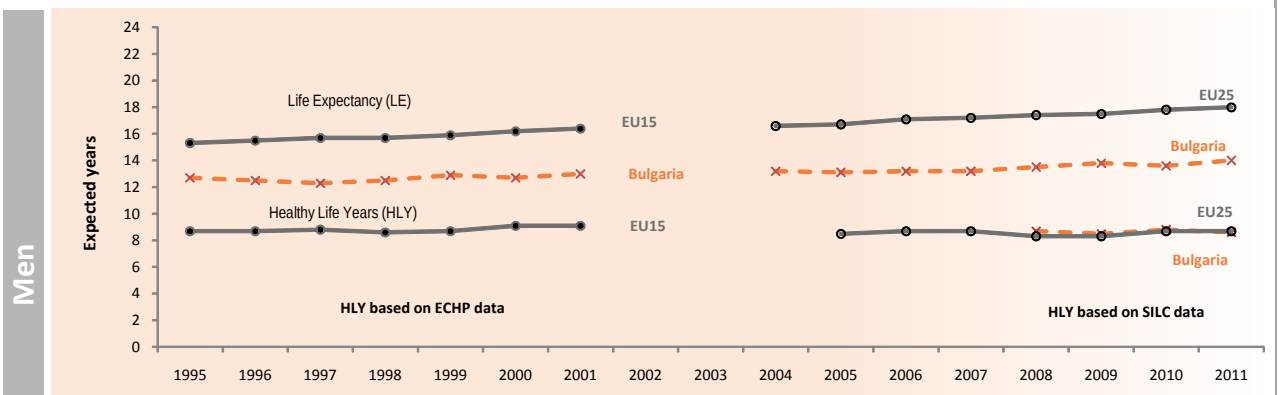
* Before the revision of 2008, the translations of the module used in some countries were not optimum (See Eurostat-EU Task Force on Health Expectancies common statement about the SILC data quality). This revision is being evaluated.

Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Bulgaria and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2005-2011)



Bulgaria	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	15.3	15.0	14.7	15.1	15.4	15.4	15.7	-	-	16.2	16.1	16.3	16.4	16.7	17.0	17.0	17.3
HLY	-	-	-	-	-	-	-	-	-	-	-	-	-	9.4	9.3	9.9	9.7
% HLY/LE	-	-	-	-	-	-	-	-	-	-	-	-	-	56%	55%	58%	56%



Bulgaria	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	12.7	12.5	12.3	12.5	12.9	12.7	13.0	-	-	13.2	13.1	13.2	13.2	13.5	13.8	13.6	14.0
HLY	-	-	-	-	-	-	-	-	-	-	-	-	-	8.7	8.5	8.8	8.6
% HLY/LE	-	-	-	-	-	-	-	-	-	-	-	-	-	64%	62%	65%	61%

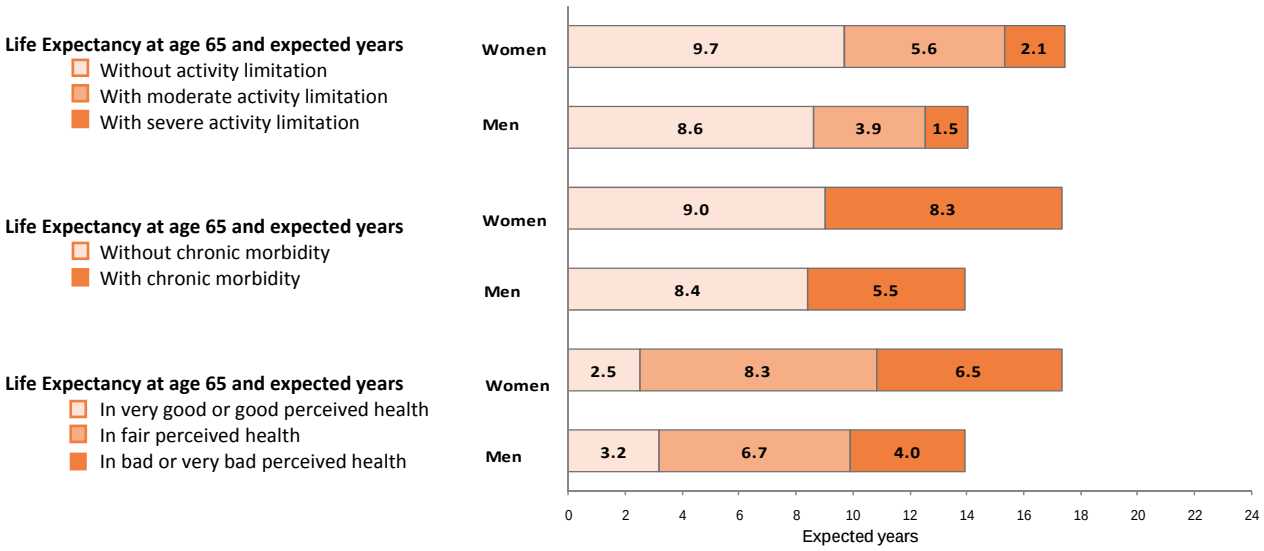
Key points:

Bulgarian life expectancy (LE) at age 65 has increased by 1.6 years for women and 1.0 years for men over the period 2001-2011: LE for men and women between 1995 and 2001 remained lower than the EU15 average. By 2011 LE for men and women was below the EU25 average (21.6 for women and 18.0 for men).

Because Bulgaria joined the European Union in 2007, health expectancy based on activity limitation (HLY) is not available before 2007.

The new HLY series, initiated in 2008 with the SILC data, shows that in 2011 women and men at age 65 can expect to spend 56% and 61% of their life without *self-reported long-term activity limitations* respectively. The HLY values for Bulgaria are above the EU25 average (8.6 for women and 8.8 for men) by 1.1 years for women and 0.2 year below the EU25 average for men in 2011. These results should be interpreted with great caution as the wording of the SILC questions was clearly different in Bulgaria compared to other EU countries. Between 2008 and 2011 HLY remained stable for men and women.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Bulgaria (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Bulgaria was 17.3 years for women and 14.0 years for men.

Based on the SILC 2011 at age 65, women spent 9.7 years (56% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 5.6 years (32%) with moderate activity limitation and 2.1 years (12%) with severe activity limitation.*

Men of the same age spent 8.6 years (61% of their remaining life) without activity limitation compared to 3.9years (28%) with moderate activity limitation and 1.5 years (11%) with severe activity limitation.*

Although the total years lived by men, the years lived without activity limitation and the years lived without chronic morbidity were less than those for women, the number of years lived in very good or good perceived health was greater for men than women.

Compared to men, women spent a much 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, and the size of the samples varying from 1204 in Denmark to 10419 in Italy. The sample size for Bulgaria comprised 2528 women and 1727 men aged 65+ years in 2011. Note that SILC started only in 2007 in Bulgaria.

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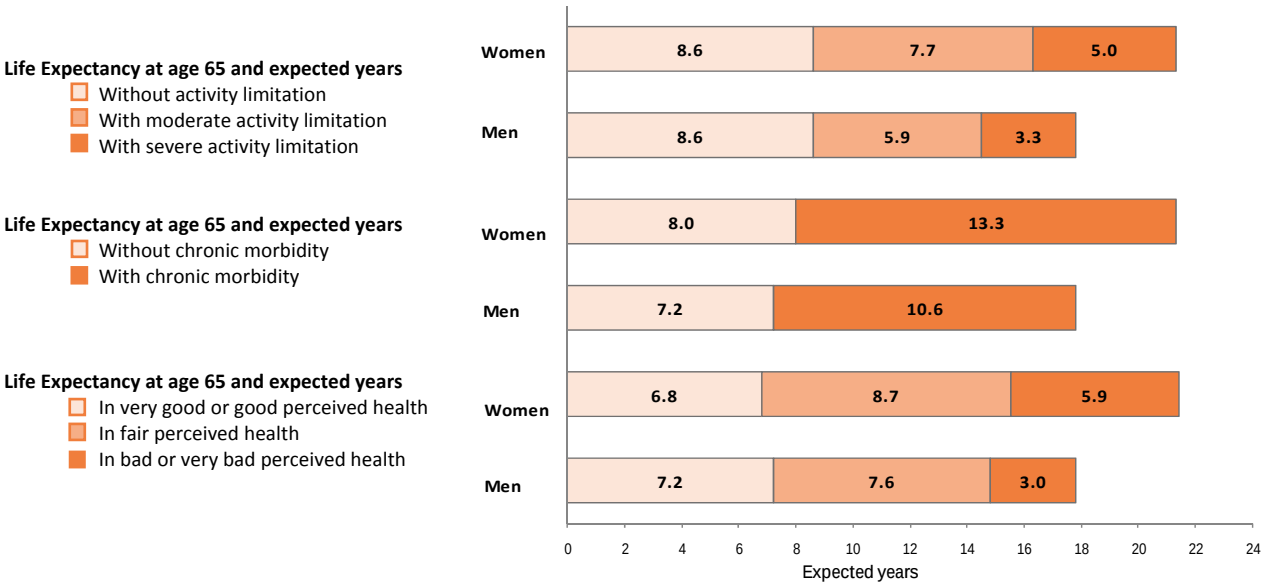

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Health Expectancy in Cyprus

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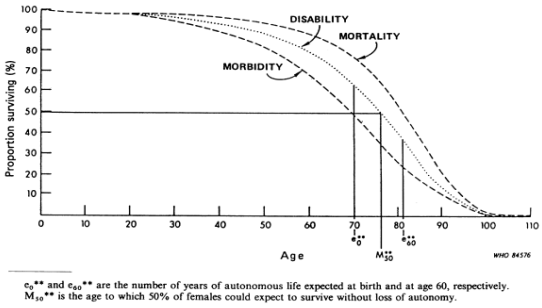

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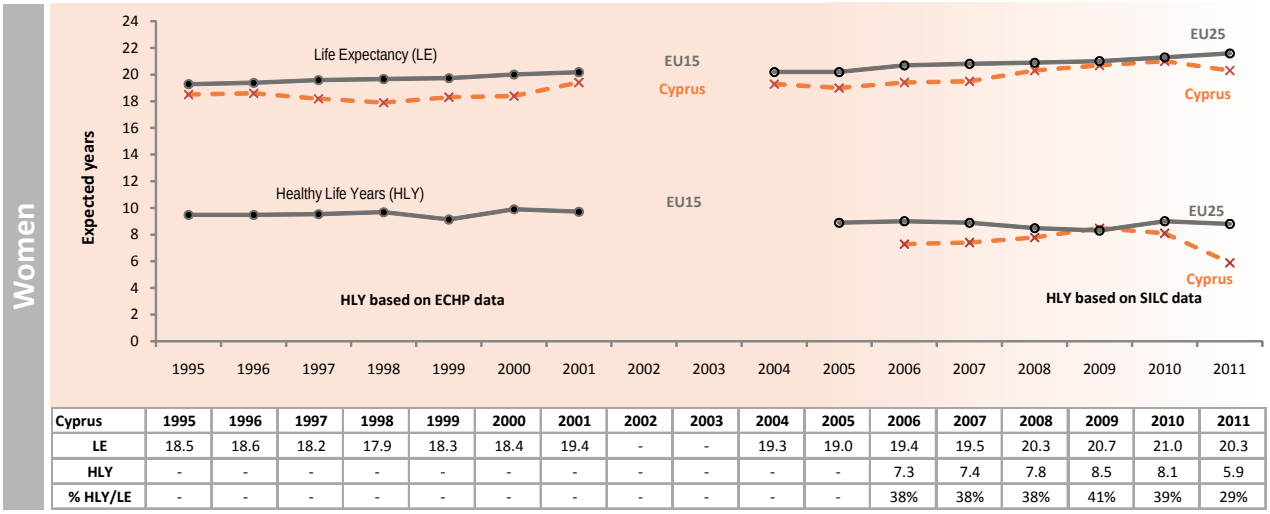
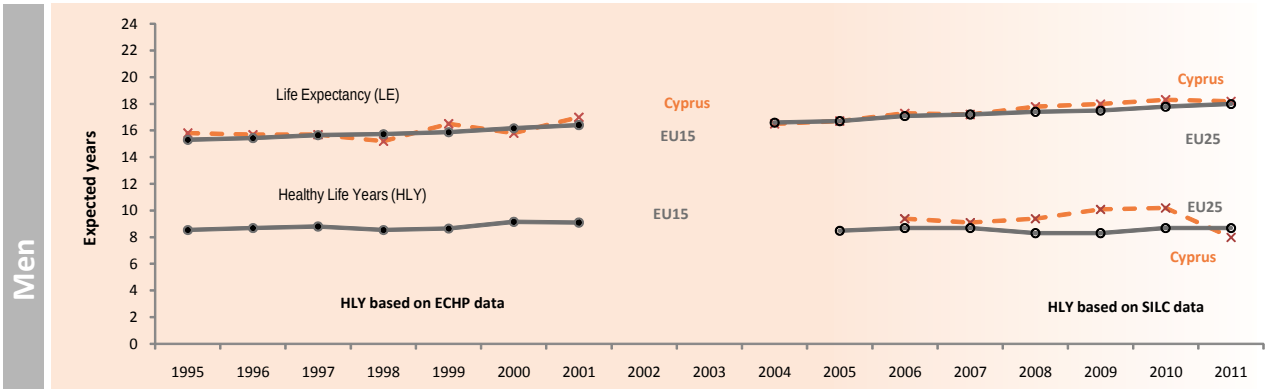


Cyprus	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	18.5	18.6	18.2	17.9	18.3	18.4	19.4	-	-	19.3	19.0	19.4	19.5	20.3	20.7	21.0	20.3
HLY	-	-	-	-	-	-	-	-	-	-	-	7.3	7.4	7.8	8.5	8.1	5.9
% HLY/LE	-	-	-	-	-	-	-	-	-	-	-	38%	38%	38%	41%	39%	29%



Cyprus	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	15.8	15.7	15.7	15.2	16.5	15.8	17.0	-	-	16.5	16.7	17.3	17.2	17.8	18.0	18.3	18.2
HLY	-	-	-	-	-	-	-	-	-	-	-	9.4	9.1	9.4	10.1	10.2	8.0
% HLY/LE	-	-	-	-	-	-	-	-	-	-	-	54%	53%	53%	56%	56%	44%

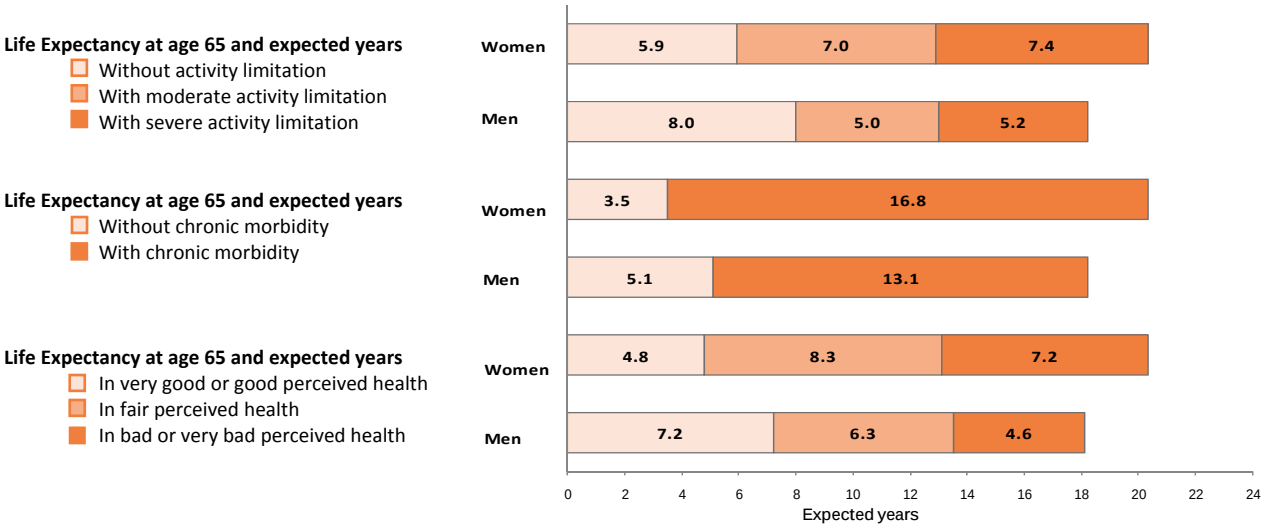
Key points:

Cypriot life expectancy (LE) at age 65 has increased by 0.90 year for women and 1.2 years for men over the period 2001-2011: LE for men reached the EU15 average between 1995 and 2001 while LE for women was lower. From 2005 onwards LE for men and women has an increasing trend and by 2011 LE for women was below the EU25 average of 21.6 and above the EU25 average of 18.0 for men.

Health expectancy based on activity limitation (HLY) over the period 1995-2001 is not available, since Cyprus joined the European Union just in 2004.

The new HLY series using the SILC data, initiated in 2006 in Cyprus, shows that in 2011 women and men at age 65 can expect to spend 29% and 44% of their life without *self-reported long-term activity limitations* respectively. The HLY values for Cyprus are 2.9 years below the EU25 average of 8.8 for women in 2011 and 0.7 year below the EU25 average of 8.7 for men. Between 2010 and 2011 HLY strongly decreased for women and men.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Cyprus (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Cyprus was 20.3 years for women and 18.2 years for men.

Based on the SILC 2011 at age 65, women spent 5.9 years (29% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.0 years (34%) with moderate activity limitation and 7.4 years (36%) with severe activity limitation.*

Men of the same age spent 8.0 years (44% of their remaining life) without activity limitation compared to 5.0 years (27%) with moderate activity limitation and 5.2 years (29%) with severe activity limitation.*

Although the total years lived by men were less than those for women, for all the health expectancies the years of life spent in positive health were significantly greater for men than women.

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.

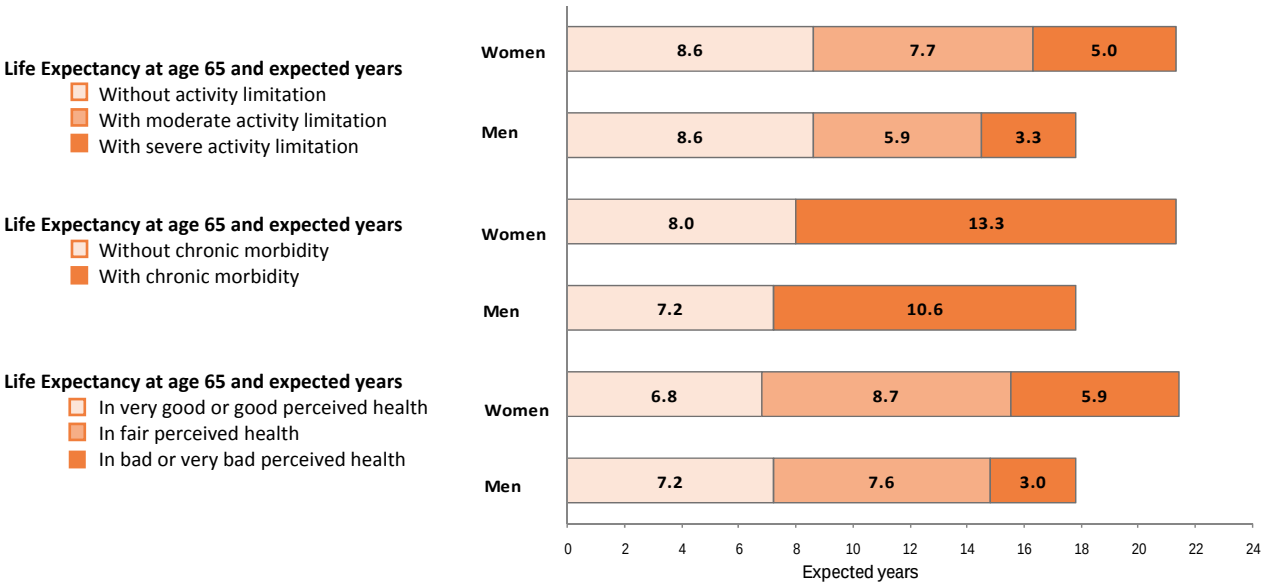
These results should be interpreted cautiously given the lack of the institutional population, such as people living in nursing homes, and the size of the samples varying from 1204 in Denmark to 10419 in Italy. The sample size for Cyprus comprised 1037 women and 876 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

Publications and reports on health expectancies for Cyprus

- Jagger C., Gillies C., Mascone F., Cambois E., Van Oyen H., Nusselder W.J., Robine J.-M., EHLEIS team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008;372(9656):2124-2131.
- Jagger C., Robine J.-M., Van Oyen H., Cambois E. *Life expectancy with chronic morbidity*. In: European Commission, editor. *Major and chronic diseases - report 2007*. Luxembourg: European Communities; 2008. p.291-304.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU27, in 2011, by gender (Health data from SILC)



Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time 8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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Acknowledgements

Eleni Kyriacou (Statistical Service of Cyprus) has contributed to this report and its translation.

Health Expectancy in the Czech Republic

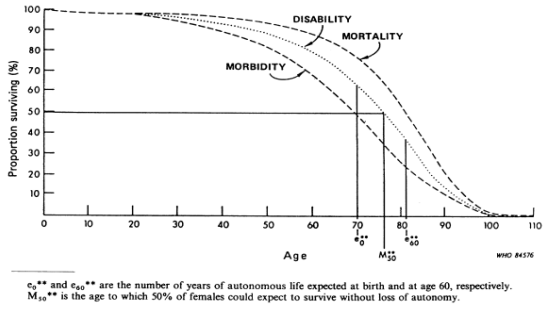
What is health expectancy?

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).

The general model of health transition (WHO, 1984): observed mortality and hypothetical morbidity and disability survival curves for females, USA, 1980.



e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
M_{50}^{**} is the age to which 50% of females could expect to survive without loss of autonomy.

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.

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- 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 2011. 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 2011;
- Life and health expectancy at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and self perceived health for EU 27 in 2011 by gender (Health data from SILC)

References

Jagger C., Gillies C., Moscone F., Cambois E., Van Oyen H., Nusselder W., Robine J.-M., EHLEIS Team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008;372(9656) 2124-2131
Robine J.-M., Jagger C., Mathers C.D., Crimmins E.M., Suzman R.M., Eds. *Determining health expectancies*. Chichester UK: Wiley, 2003.
Sullivan D.F. *A single index of mortality and morbidity*. HSMHA Health Reports 1971;86:347-354.
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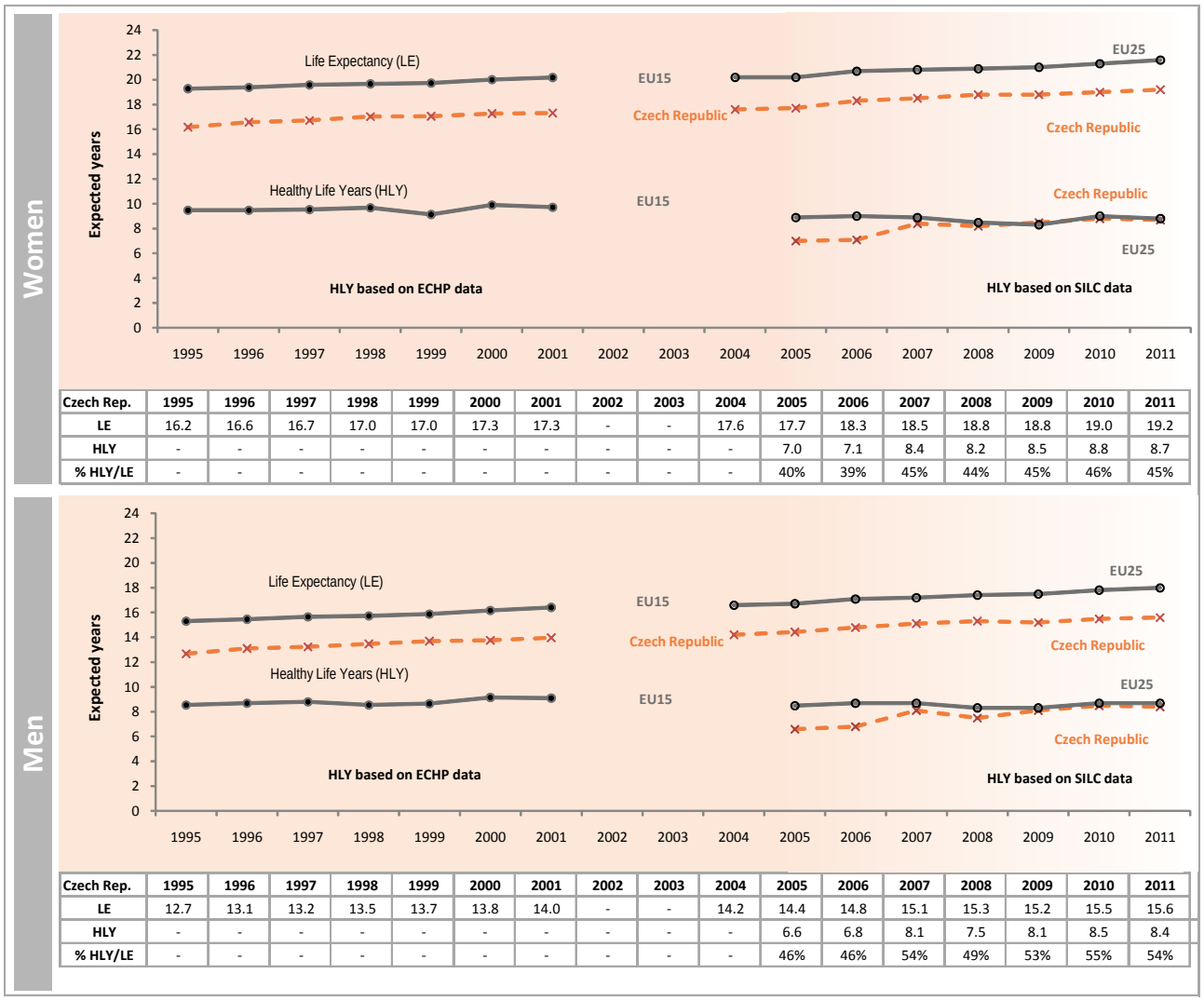
* Before the revision of 2008, the translations of the module used in some countries were not optimum (See Eurostat-EU Task Force on Health Expectancies common statement about the SILC data quality). This revision is being evaluated.

Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for the Czech Republic and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2005-2011)



Czech Rep.	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	16.2	16.6	16.7	17.0	17.0	17.3	17.3	-	-	17.6	17.7	18.3	18.5	18.8	18.8	19.0	19.2
HLY	-	-	-	-	-	-	-	-	-	-	7.0	7.1	8.4	8.2	8.5	8.8	8.7
% HLY/LE	-	-	-	-	-	-	-	-	-	-	40%	39%	45%	44%	45%	46%	45%

Czech Rep.	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	12.7	13.1	13.2	13.5	13.7	13.8	14.0	-	-	14.2	14.4	14.8	15.1	15.3	15.2	15.5	15.6
HLY	-	-	-	-	-	-	-	-	-	-	6.6	6.8	8.1	7.5	8.1	8.5	8.4
% HLY/LE	-	-	-	-	-	-	-	-	-	-	46%	46%	54%	49%	53%	55%	54%

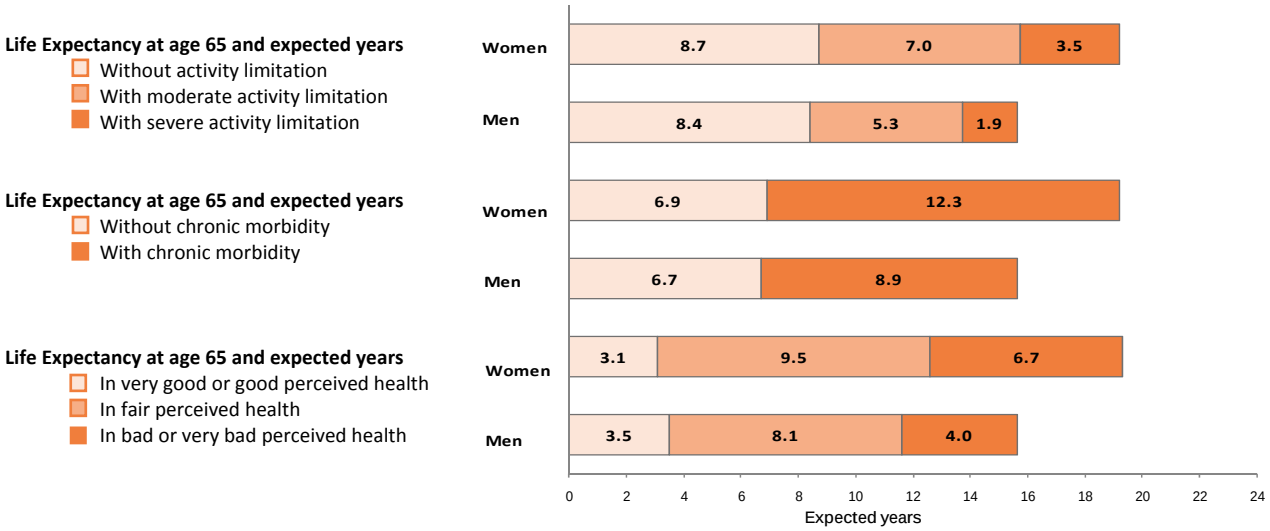
Key points:

Czech life expectancy (LE) at age 65 has increased by 1.9 years for women and 1.6 years for men over the period 2001-2011: LE for both sexes between 1995 and 2001 was below the EU15 average and remained below the EU25 average (21.6 for women and 18.0 for men) in 2011 by 2.4 years for women and men.

Because the Czech Republic joined the European Union in 2004, health expectancy based on activity limitation (HLY) over the period 1995-2001 is not available.

The new HLY series, initiated in 2005 with the SILC data, shows that in 2011 women and men at age 65 can expect to spend 45% and 54% of their life without *self-reported long-term activity limitations* respectively. The HLY values for the Czech Republic are 0.1 year below the EU25 average in 2011 (8.8 for women and 8.7 for men) for women and 0.3 year below for men. The whole series should be interpreted with caution due to successive changes in the wording of the questions in the Czech Republic (2007 then 2008). Especially, the wording of the GALI question was changed to better reflect the EU standard. Stable since 2007, HLY decreased slightly for both men and women between 2010 and 2011.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for the Czech Republic (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in the Czech Republic was 19.2 years for women and 15.6 years for men.

Based on the SILC 2011, at age 65, women spent 8.7 years (45% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.0 years (37%) with moderate activity limitation and 3.5 years (18%) with severe activity limitation.*

Men of the same age spent 8.4 years (54% of their remaining life) without activity limitation compared to 5.3 years (34%) with moderate activity limitation and 1.9 years (12%) with severe activity limitation.*

Although the total years lived by men were less than those for women, the number of years lived in good health was, whatever the indicator used, almost the same, being only slightly greater for women than men. Therefore, 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, and the size of the samples varying from 1204 in Denmark to 10419 in Italy. The sample size for the Czech Republic comprised 2370 women and 1707 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

Publications and reports on health expectancies for the Czech Republic

- Langhamrová J. *Střední a zdravá délka života v evropských zemích [Life expectancy and Healthy life expectancy in European countries]*. In Langhamrová J, Šídlo L. (eds) Zdraví – výzvy a rizika, sborník z XLIII. konference České demografické společnosti, Praha, 2013
- Daňková Š. *Délka života ve zdraví a projekt EHLEIS v České republice [Healthy life expectancy and project EHLEIS in the Czech Republic]*. In Langhamrová J, Šídlo L. (eds) Zdraví – výzvy a rizika, sborník z XLIII. konference České demografické společnosti, Praha, 2013
- Hrkal J. *Střední délka života prožitá ve zdraví v České republice v roce 2006 [Healthy Life Expectancy in the Czech Republic in 2006]*. *ÚZIS CR*. 2009(12):1-6.
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- Hrkal J. Prezentace indikátoru „Zdravá délka života“ 1 v zemích EU [Presentation of the “Healthy Life Years” indicator in EU countries]. *ÚZIS CR*. 2008(9):1-2.
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- Hrkal J., Kasalová Daňková Š. Zdravá délka života u obyvatel EU [Healthy Life Expectancy in the population of the EU]. *Demografické informační centrum* 2005(10.07.2005).
- Hrkal J. *Střední délka zdravého života [Healthy life expectancy]*. In: Kříž,Jaroslav, editors. *Zdravotní stav populace ČR Jak jsme na tom se zdravím? [Health status of the Czech population How healthy are we?]*. Praha; 2004. p. 24-25.
- Rychtaříková J. Naděje dožití ve zdraví [Disability free lifeexpectancy]. *Demografie*. 2000; 42(1):41-48.

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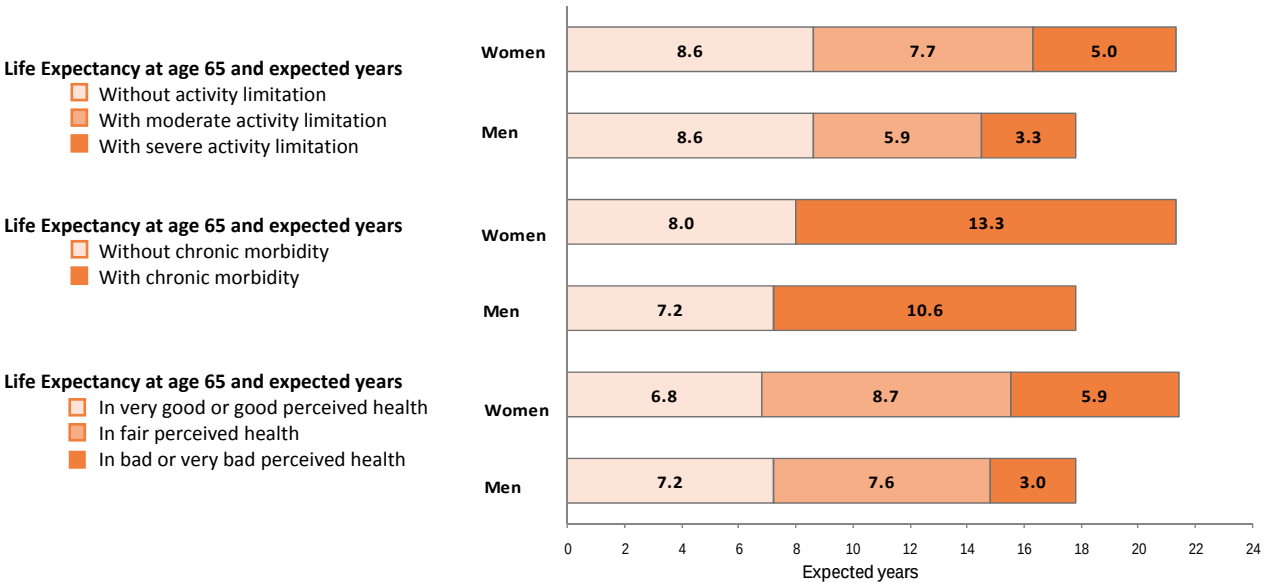

Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time 8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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Health Expectancy in Denmark

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?

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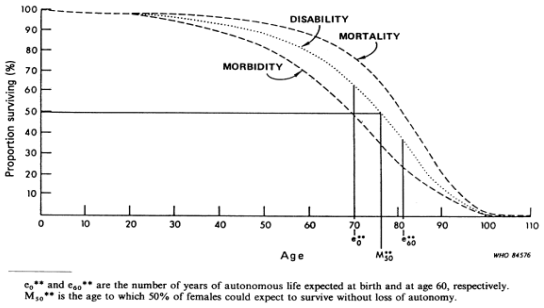

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How do we compare health expectancies?

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References

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Ekholm O., Bronnum-Hansen H. Cross-national comparisons of non-harmonized indicators may lead to more confusion than clarification. *Scand J Public Health* 2009;37:661-663.
Robine J.-M., Jagger C., Mathers C.D., Crimmins E.M., Suzman R.M., Eds. *Determining health expectancies*. Chichester UK: Wiley, 2003.
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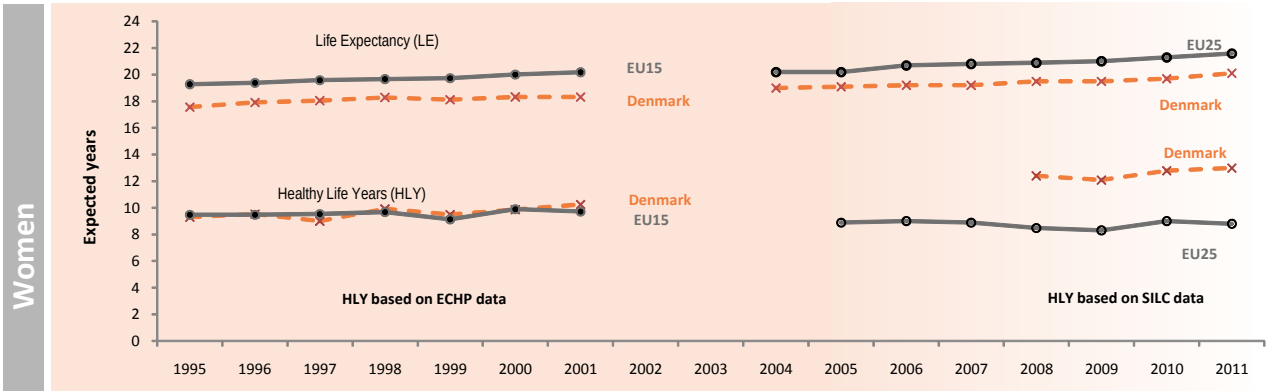
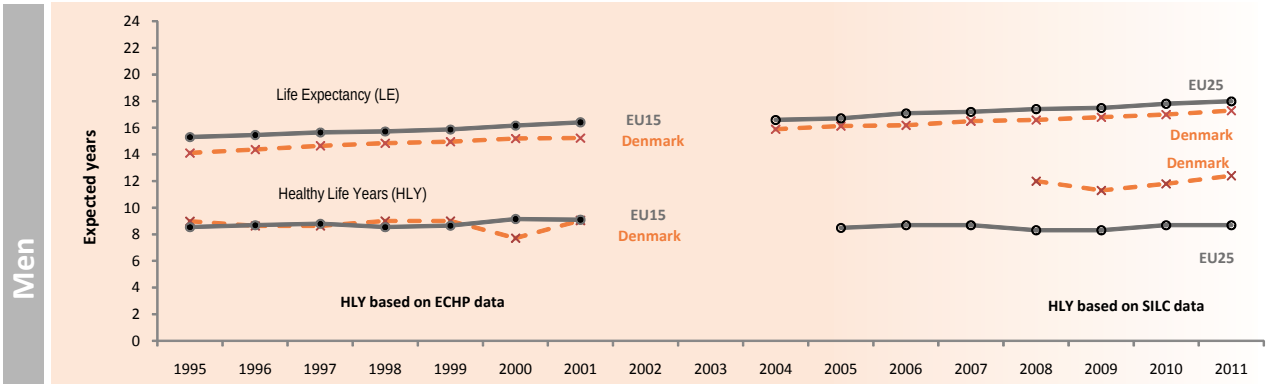


Denmark	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	17.6	17.9	18.0	18.3	18.1	18.3	18.3	-	-	19.0	19.1	19.2	19.2	19.5	19.5	19.7	20.1
HLY	9.3	9.5	9.0	9.9	9.5	9.9	10.3	-	-	-	-	-	-	12.4	12.1	12.8	13.0
% HLY/LE	53%	53%	50%	54%	52%	54%	56%	-	-	-	-	-	-	64%	62%	65%	65%



Denmark	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	14.1	14.4	14.6	14.9	15.0	15.2	15.2	-	-	15.9	16.1	16.2	16.5	16.6	16.8	17.0	17.3
HLY	9.0	8.6	8.6	9.0	9.0	7.7	9.0	-	-	-	-	-	-	12.0	11.3	11.8	12.4
% HLY/LE	64%	60%	59%	61%	60%	51%	59%	-	-	-	-	-	-	72%	67%	69%	72%

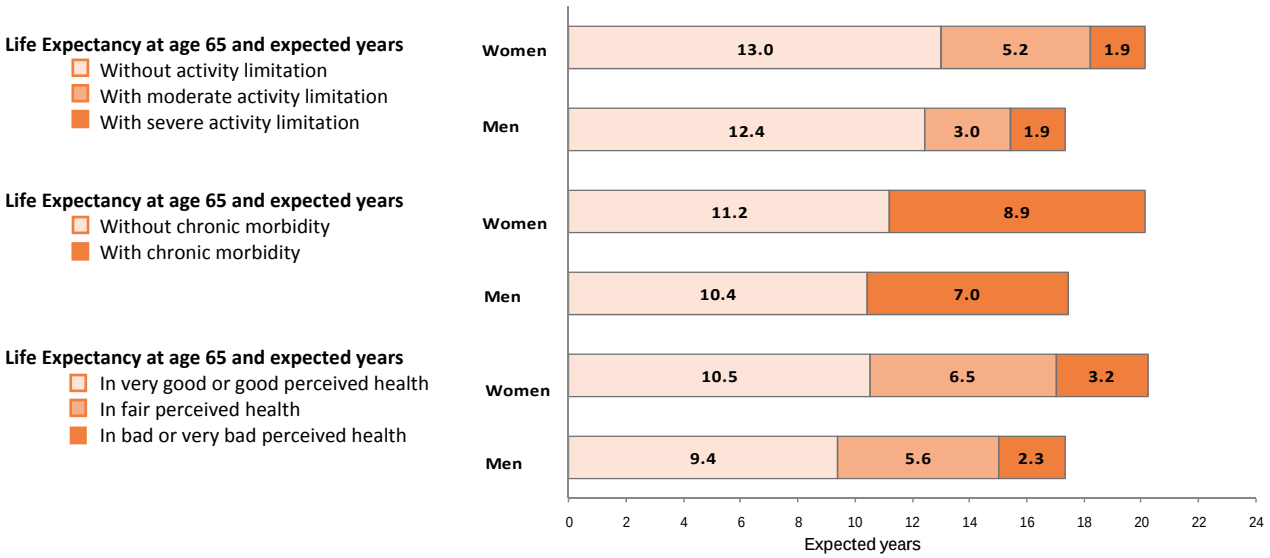
Key points:

Danish life expectancy (LE) at age 65 has increased by 1.8 years for women and 2.1 years for men over the period 2001-2011: LE for both sexes between 1995 and 2001 was below the EU15 average. In 2011 LE for both sexes was below the EU25 (21.6 for women and 18.0 for men).

Over the 1995-2001 period, health expectancy based on activity limitation (HLY) at age 65 from the ECHP data remained almost stable. The proportion of HLY (or years without *self-reported limitations due to health condition or disability*), within the total expected years, increased for both sexes, being close to 56% for women and 59% for men in 2001. Between 1995 and 2001 HLY in Denmark was close to the EU15 average.

Because the wording of the GALI question in the Danish survey was changed in 2008 to better reflect the EU standard, HLY estimates for Denmark are shown only from 2008. The Danish values were much higher than the EU25 average in 2011 (8.6 for women and 8.8 for men), 4.4 and 3.6 years higher for women and men respectively. Therefore, Danish women and men at age 65 can expect to spend 65% and 72%, respectively, of their remaining life without *self-reported long-term activity limitations*. Moreover HLY increased between 2009 and 2011 in Denmark.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Denmark (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Denmark was 20.1 years for women and 17.3 years for men.

Based on the SILC 2011, at age 65, women spent 13.0 years (65% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)) 5.2 years (26%) with moderate activity limitation and 1.9 years (9%) with severe activity limitation.*

Men of the same age spent 12.4 years (72% of their remaining life) without activity limitation, 3.0 years (17%) with moderate activity limitation and 1.9 years (11%) with severe activity limitation.*

Although for all the health expectancies the years of life spent in positive health were 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 small sample size. Thus, the sample size for Denmark comprised 626 women and 578 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

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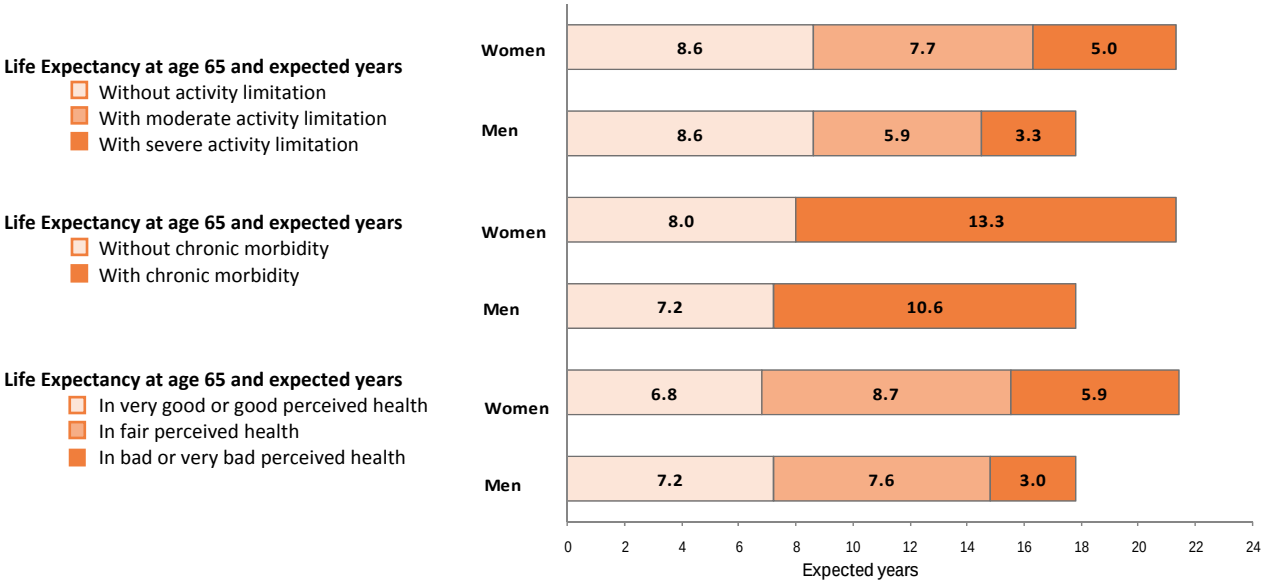

Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time 8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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Acknowledgements

Henrik Brønnum-Hansen (University of Copenhagen) has contributed to this report and its translation.

Health Expectancy in Estonia

What is health expectancy?

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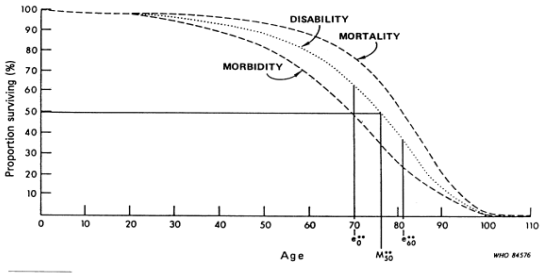
How is the effect of longer life measured?

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).

The general model of health transition (WHO, 1984): observed mortality and hypothetical morbidity and disability survival curves for females, USA, 1980.



e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
M_{50}^{**} is the age to which 50% of females could expect to survive without loss of autonomy.

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**).

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- Health expectancies based on the two additional dimensions of health (chronic morbidity and self-perceived health) for the country of interest, based on SILC 2011;
- Life and health expectancy at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU 27 in 2011 by gender (Health data from SILC)

References

Jagger C., Gillies C., Moscone F., Cambois E., Van Oyen H., Nusselder W., Robine J.-M., EHLEIS Team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008;372(9656) 2124-2131
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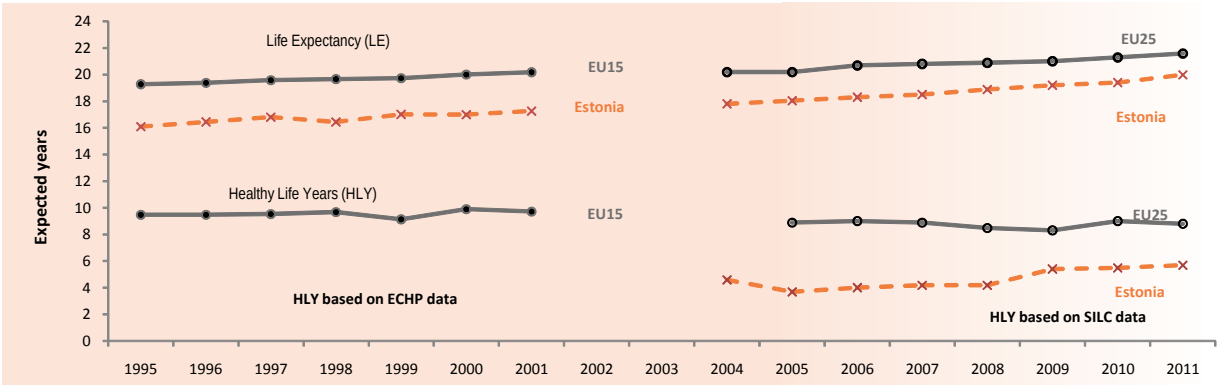
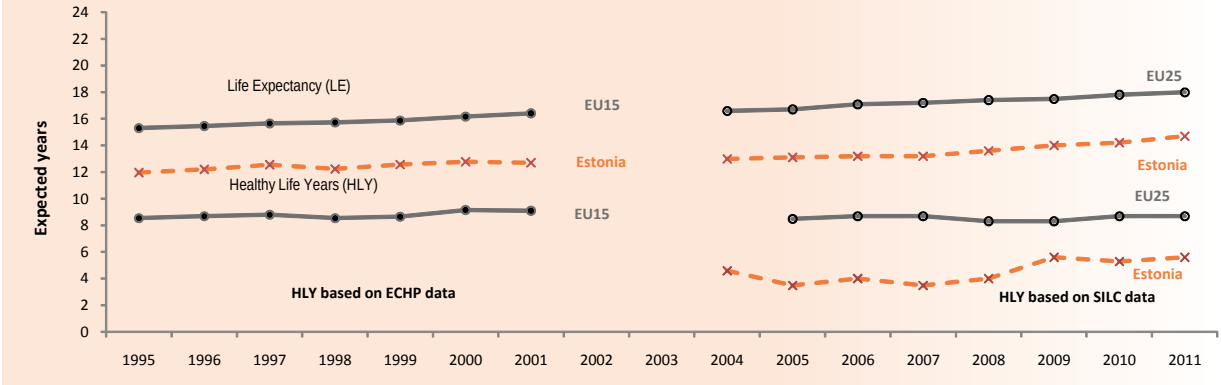
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Estonia and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2004-2011)

Women



Estonia	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	16.1	16.4	16.8	16.5	17.0	17.0	17.3	-	-	17.8	18.0	18.3	18.5	18.9	19.2	19.4	20.0
HLY	-	-	-	-	-	-	-	-	-	4.6	3.7	4.0	4.2	4.2	5.4	5.5	5.7
% HLY/LE	-	-	-	-	-	-	-	-	-	26%	21%	22%	23%	22%	28%	28%	28%

Men



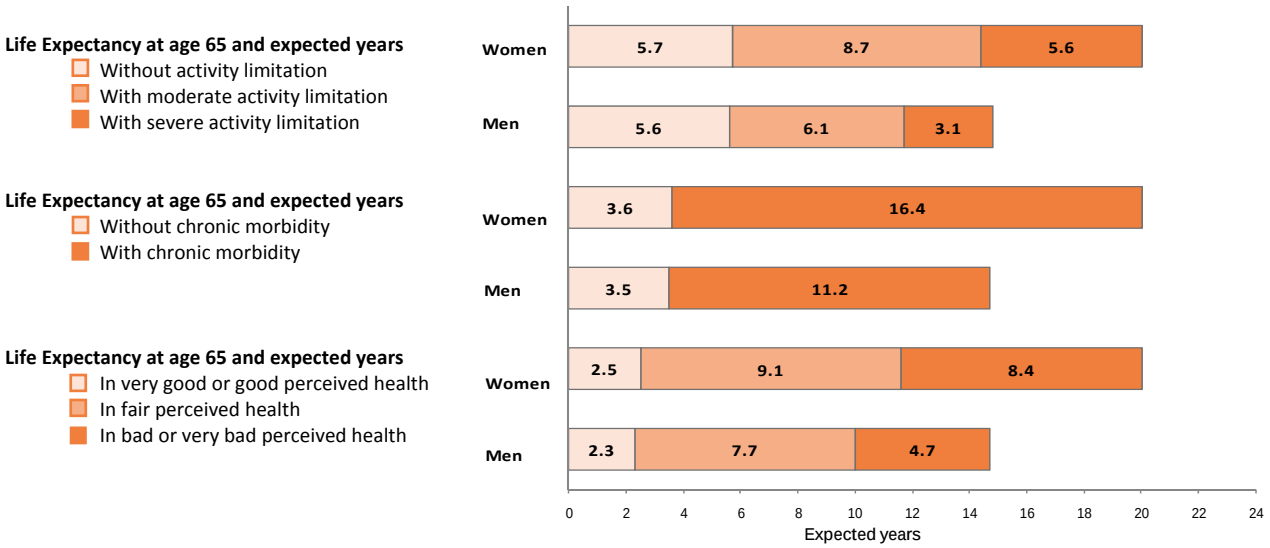
Estonia	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	12.0	12.2	12.5	12.2	12.6	12.8	12.7	-	-	13.0	13.1	13.2	13.2	13.6	14.0	14.2	14.7
HLY	-	-	-	-	-	-	-	-	-	4.6	3.5	4.0	3.5	4.0	5.6	5.3	5.6
% HLY/LE	-	-	-	-	-	-	-	-	-	35%	27%	30%	27%	29%	40%	37%	38%

Key points:

Estonian life expectancy (LE) at age 65 has increased by 2.7 years for women and 2.0 years for men over the period 2001-2011: LE for both sexes between 1995 and 2001 was below the EU15 average and remained below the EU25 average in 2011 (21.6 for women and 18.0 for men) although the gap with the EU25 average is reducing for women.

Because Estonia joined the European Union in 2004, health expectancy based on activity limitation (HLY) over the period 1995-2001 is not available. HLY series, initiated in 2004 with the SILC data, shows that in 2011 women and men at age 65 can expect to spend 28% and 38% of their life without *self-reported long-term activity limitations* respectively. In 2011 the HLY values for Estonia are 2.9 and 3.2 years, for women and men respectively, below the EU25 average (8.6 for women and 8.8 for men). The wording of the GALI question was changed in Estonia in 2008 to better reflect the EU standard. After a strong increase in 2009, HLY remained almost stable between 2009 and 2011 for both women and men.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Estonia (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Estonia was 20.0 years for women and 14.7 years for men.

Based on the SILC 2011, at age 65, women spent 5.7 years (28% of their remaining life) without activity limitation (corresponding to HLY)), 8.7 years (44%) with moderate activity limitation and 5.6 years (28%) with severe activity limitation.*

Men of the same age spent 5.6 years (38% of their remaining life) without activity limitation compared to 6.1 years (41%) with moderate activity limitation and 3.1 years (21%) with severe activity limitation.*

Although the total years lived by men were 5.3 years lower than that lived by women, the number of years lived without chronic morbidity, without activity limitation, or in good perceived health was about the same. Compared to men, women spent a larger proportion of their life with chronic morbidity, disability and/or poor perceived health and these years of ill health were more likely to be years with severe health problems.

The SILC sample size for Estonia comprised 1505 women and 886 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

Publications and reports on health expectancies for Estonia

- Statistics Estonia, Statistical Database: http://pub.stat.ee/px-web.2001/I_Databas/Social_life/05Health/05Health_status/05Health_status.asp.
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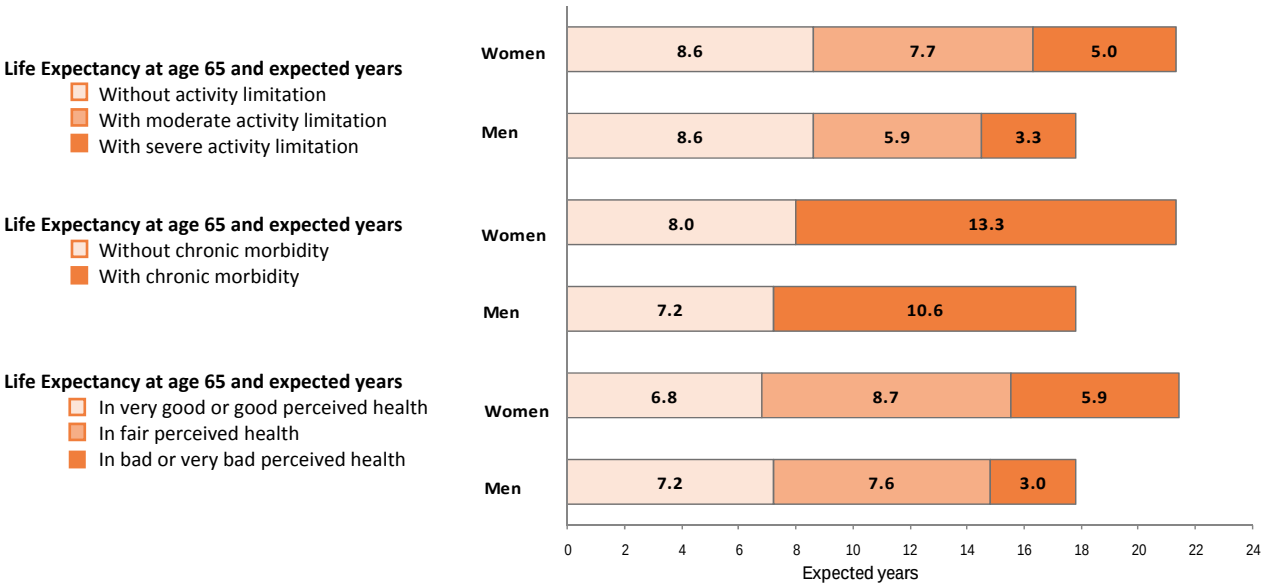

Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

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In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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Coordination : Robine Jean Marie, Project Leader / Leila Oumeddour, Senior Research Manager : +33 (0)1 56 06 22 54
Contact: Christine Perrier –Université Montpellier II–U710 MMDN - Place Eugène Bataillon-CC105-34095- Montpellier cedex 5 – France
Tel: +33 (0)467 14 33 85 /e-mail: christine.perrier@inserm.fr

Health Expectancy in Finland

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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.

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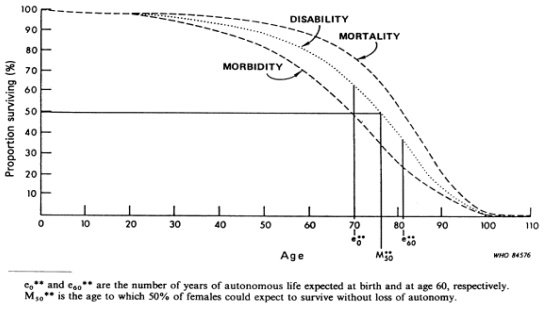

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References

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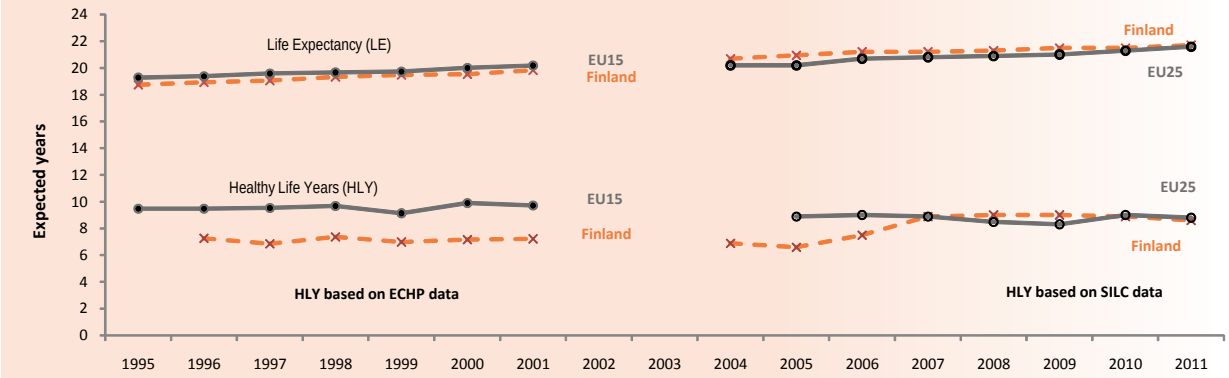
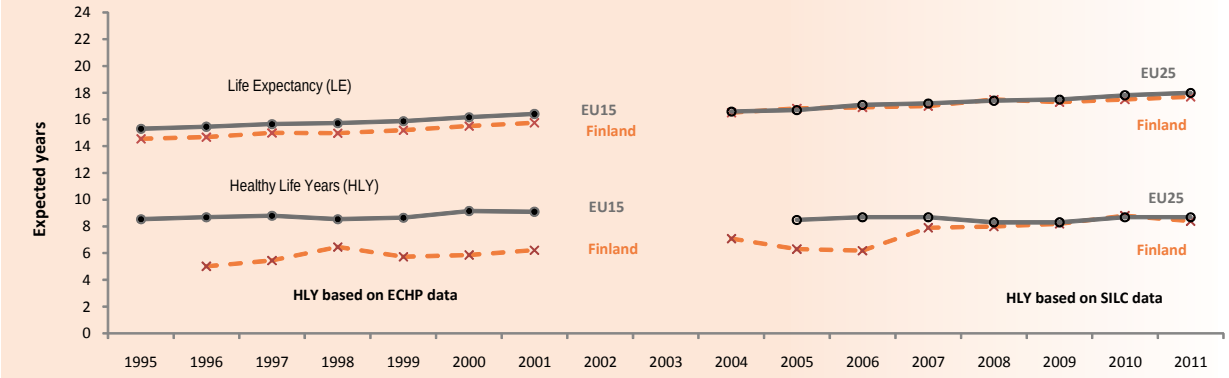


Finland	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	18.7	18.9	19.1	19.3	19.5	19.5	19.8	-	-	20.7	21.0	21.2	21.2	21.3	21.5	21.5	21.7
HLY	-	7.3	6.9	7.4	7.0	7.2	7.2	-	-	6.9	6.6	7.5	8.9	9.0	9.0	8.9	8.6
% HLY/LE	-	38%	36%	38%	36%	37%	36%	-	-	33%	31%	35%	42%	42%	42%	41%	40%

Men



Finland	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	14.6	14.7	15.0	15.0	15.2	15.5	15.7	-	-	16.5	16.8	16.9	17.0	17.5	17.3	17.5	17.7
HLY	-	5.0	5.5	6.5	5.7	5.9	6.2	-	-	7.1	6.3	6.2	7.9	8.0	8.2	8.8	8.4
% HLY/LE	-	34%	36%	43%	38%	38%	40%	-	-	43%	38%	37%	46%	46%	47%	50%	47%

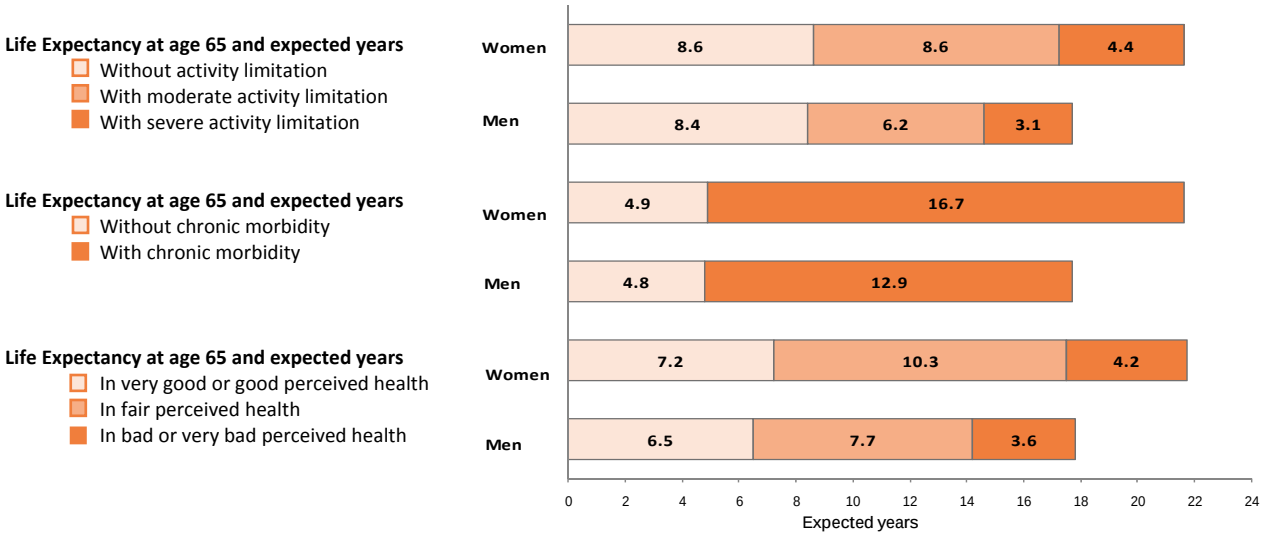
Key points:

Finnish life expectancy (LE) at age 65 has increased by 1.9 years for women and 2.0 years for men over the period 2001-2011: it was below the EU15 average in 2000 but was above the EU25 average (21.4 for women and 18.0 for men) by 2011 for women and 0.3 year below for men.

Over the 1996-2001 period, health expectancy based on activity limitation (HLY) at age 65 from the ECHP data remained stable for women and increased for men. Therefore the proportion of HLY (or years without *self-reported limitations due to health condition or disability*), within the total expected years, slightly decreased for women and increased for men, being close to 36% for women and 40% for men in 2001. Between 1996 and 2001 HLY in Finland was below the EU15 average.

The new HLY series, initiated in 2004 with the SILC data, shows values in Finland being in 2011 similar to the EU25 average (8.6 for women and 8.8 for men) for women and 0.4 year above for men. In 2011 women and men at age 65 can expect to spend 40% and 47% of their life without *self-reported long-term activity limitations* respectively. Between 2010 and 2011 HLY decreased for women and men in Finland. The whole series should be interpreted with caution due to successive changes in the wording of the question used especially in 2007.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Finland (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Finland was 21.7 years for women and 17.7 years for men.

Based on the SILC 2011, at age 65, women spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY), 8.6 years (40%) with moderate activity limitation and 4.4 years (20%) with severe activity limitation.*

Men of the same age spent 8.4 years (47% of their remaining life) without activity limitation compared to 6.2 years (35%) with moderate activity limitation and 3.1 years (18%) with severe activity limitation.*

Although the total years lived by men were less than those for women, the number of years lived without chronic morbidity, without activity limitation, or in good perceived health was about the same. Compared to men, women spent a larger proportion of their life with chronic morbidity, disability and/or poor perceived 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, and the size of the samples varying from 1204 in Denmark to 10419 in Italy. The sample size for Finland comprised 1021 women and 857 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

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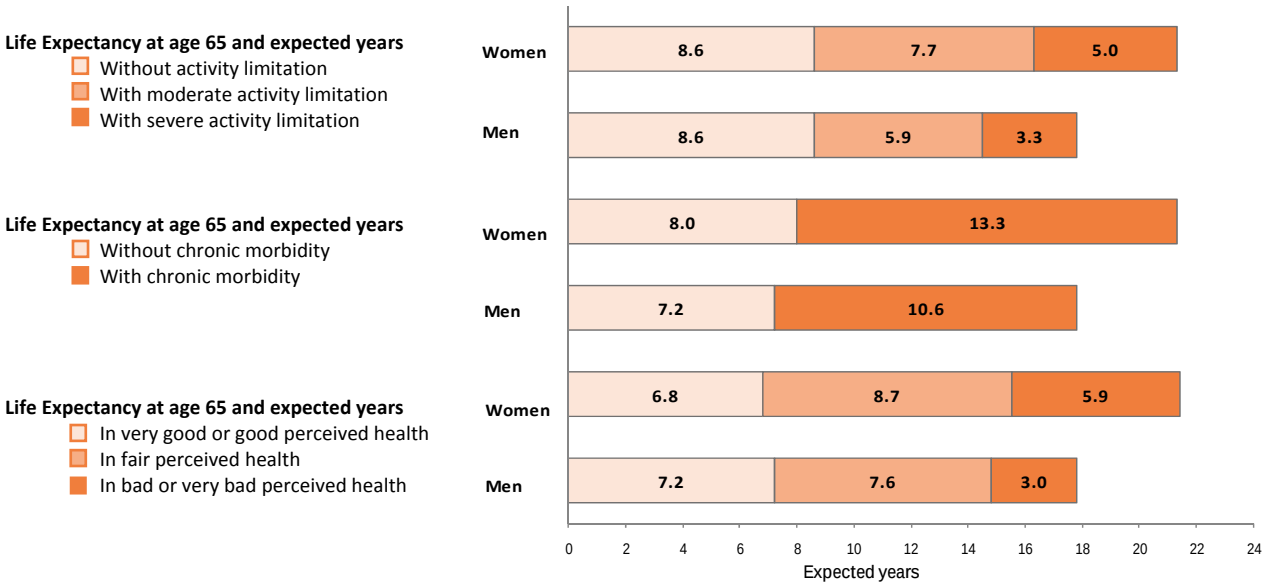
Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU27, in 2011, by gender (Health data from SILC)



Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time 8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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Health Expectancy in France

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.

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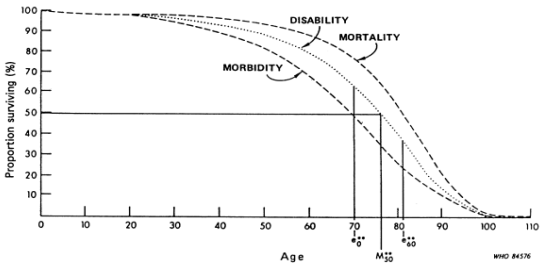

e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
M_{50}^{**} is the age to which 50% of females could expect to survive without loss of autonomy.

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**).

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References

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World Health Organization. *The uses of epidemiology in the study of the elderly: Report of a WHO Scientific Group on the Epidemiology of Aging.* Geneva: WHO, 1984 (Technical Report Series 706).

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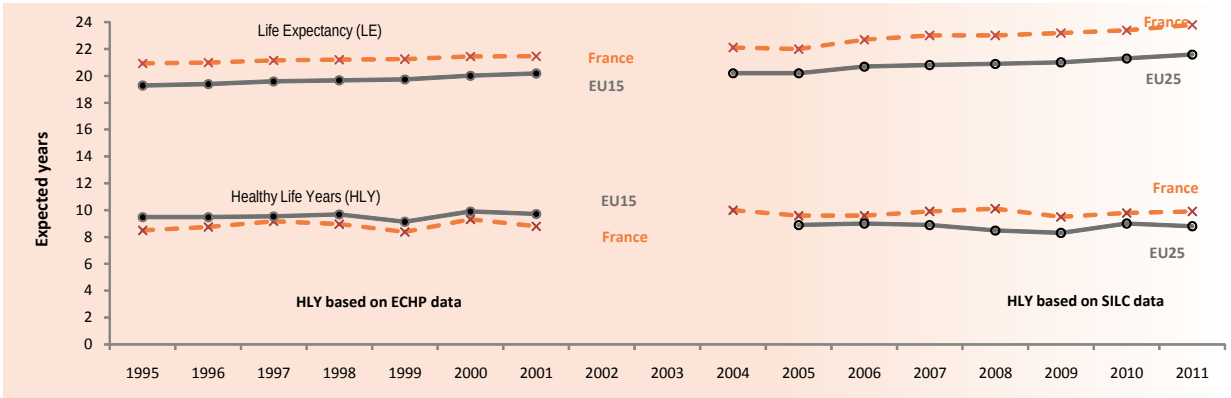
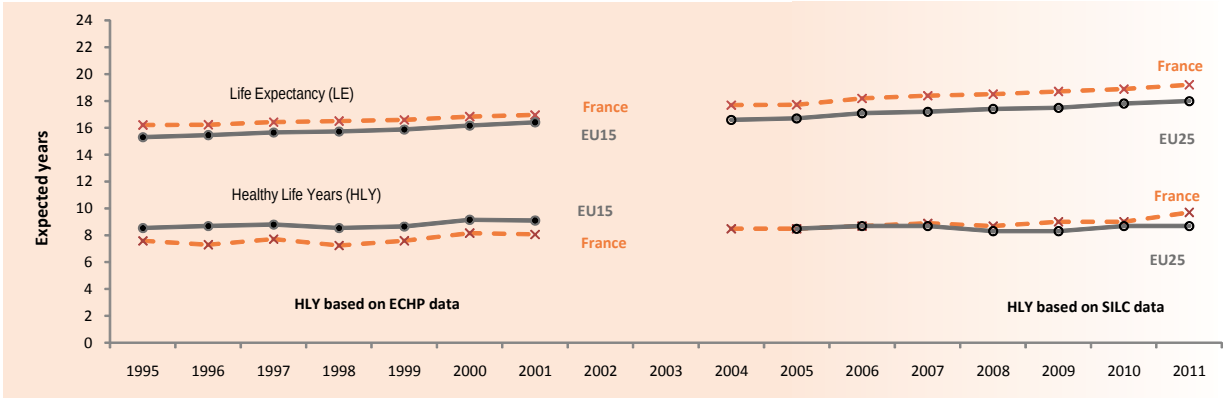
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for France and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2004-2011)

Women



France	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	20.9	21.0	21.2	21.2	21.2	21.4	21.5	-	-	22.1	22.0	22.7	23.0	23.0	23.2	23.4	23.8
HLY	8.5	8.7	9.2	9.0	8.4	9.3	8.8	-	-	10.0	9.6	9.6	9.9	10.1	9.5	9.8	9.9
% HLY/LE	41%	42%	43%	42%	39%	43%	41%	-	-	45%	44%	42%	43%	44%	41%	42%	42%

Men



France	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	16.2	16.2	16.4	16.5	16.6	16.8	17.0	-	-	17.7	17.7	18.2	18.4	18.5	18.7	18.9	19.2
HLY	7.6	7.3	7.7	7.2	7.6	8.2	8.1	-	-	8.5	8.5	8.7	8.9	8.7	9.0	9.0	9.7
% HLY/LE	47%	45%	47%	44%	46%	48%	48%	-	-	48%	48%	48%	48%	47%	48%	48%	51%

Key points:

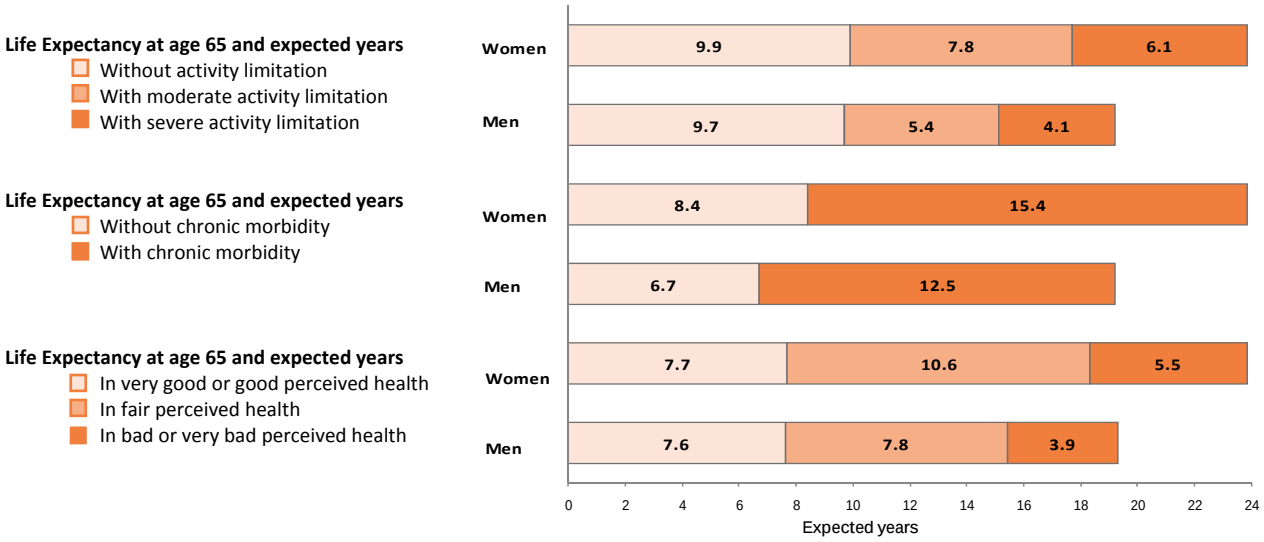
French life expectancy (LE) at age 65 has increased by 2.3 years for women and 2.2 years for men over the period 2001-2011: between 1995 and 2001 LE for both sexes was above the EU15 average and by 2011 LE for both sexes was the highest the EU25 average being 21.6 for women and 18.0 for men.

Over the 1995-2001 period, health expectancy based on activity limitation (HLY) at age 65 from the ECHP data slightly increased. The proportion of HLY (or years without *self-reported limitations due to health condition or disability*), within the total expected years, remained almost stable for both sexes at around 41% of remaining life for women and 48% for men. Between 1995 and 2001 HLY in France was below the EU15 average.

The new HLY series, initiated in 2004 with the SILC data continues the earlier stable trend for France and is above the EU25 average of 8.6 for women and 8.8 for men. In 2011 women and men at age 65 can expect to spend respectively 42% and 51% of their life without *self-reported long-term activity limitations* respectively. Between 2010 and 2011 HLY slightly increased in France for women and strongly increased for men. Note that the wording of the GALI question was marginally changed in France in 2008 to better reflect the EU standard. The small yearly variations observed since 2007 (decrease for men in 2008 or for women in 2009) are possibly due to random fluctuations. Between 2004 and 2011 HLY/LE (%), higher for men than women, decreased for women and remain stable for men with an increase in 2011.

We can underline the strong contrast between the excellent rank in the EU25 for LE at age 65 and the middling one for HLY at the same age.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for France (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in France was 23.8 years for women and 19.2 years for men.

Based on the SILC 2011, at age 65, women spent 9.9 years (42% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY), 7.8 years (33%) with moderate activity limitation and 6.1 years (25%) with severe activity limitation.*

Men of the same age spent 9.7 years (51% of their remaining life) without activity limitation compared to 5.4 years (28%) with moderate activity limitation and 4.1 years (21%) with severe activity limitation.*

Although all health expectancies were greater for women than 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 home, and the size of the samples varying from 1204 in Denmark to 10419 in Italy. The sample size for France comprised 2550 women and 2065 men aged 65+ years in 2011.

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Publications and reports on health expectancies for France

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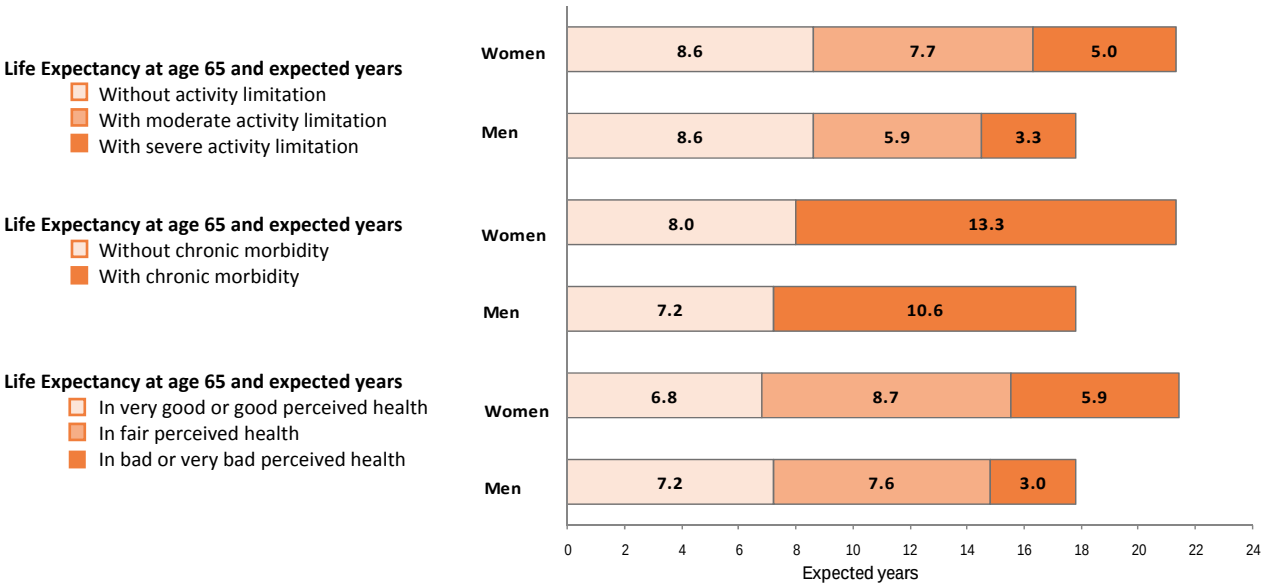

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Acknowledgements

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Health Expectancy in Germany

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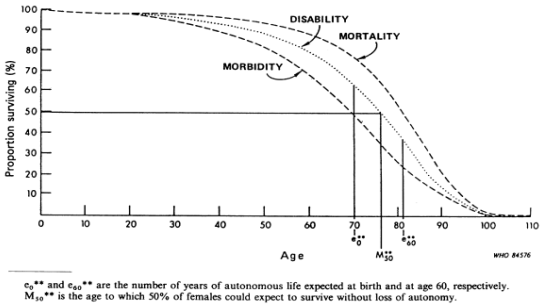

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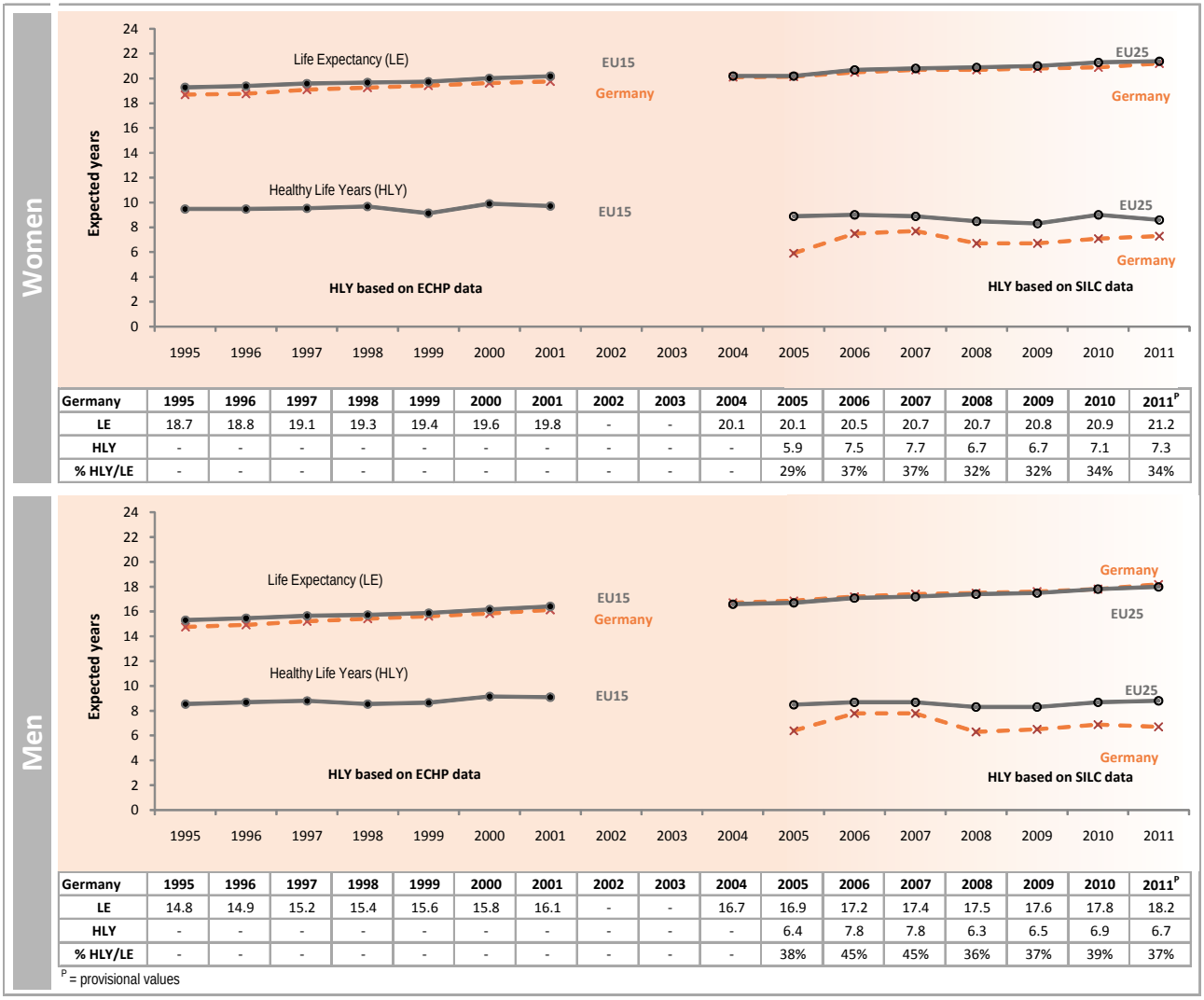
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Germany and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2005-2011)



Germany	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011[P]
LE	18.7	18.8	19.1	19.3	19.4	19.6	19.8	-	-	20.1	20.1	20.5	20.7	20.7	20.8	20.9	21.2
HLY	-	-	-	-	-	-	-	-	-	-	5.9	7.5	7.7	6.7	6.7	7.1	7.3
% HLY/LE	-	-	-	-	-	-	-	-	-	-	29%	37%	37%	32%	32%	34%	34%

Germany	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011[P]
LE	14.8	14.9	15.2	15.4	15.6	15.8	16.1	-	-	16.7	16.9	17.2	17.4	17.5	17.6	17.8	18.2
HLY	-	-	-	-	-	-	-	-	-	-	6.4	7.8	7.8	6.3	6.5	6.9	6.7
% HLY/LE	-	-	-	-	-	-	-	-	-	-	38%	45%	45%	36%	37%	39%	37%

[P] = provisional values

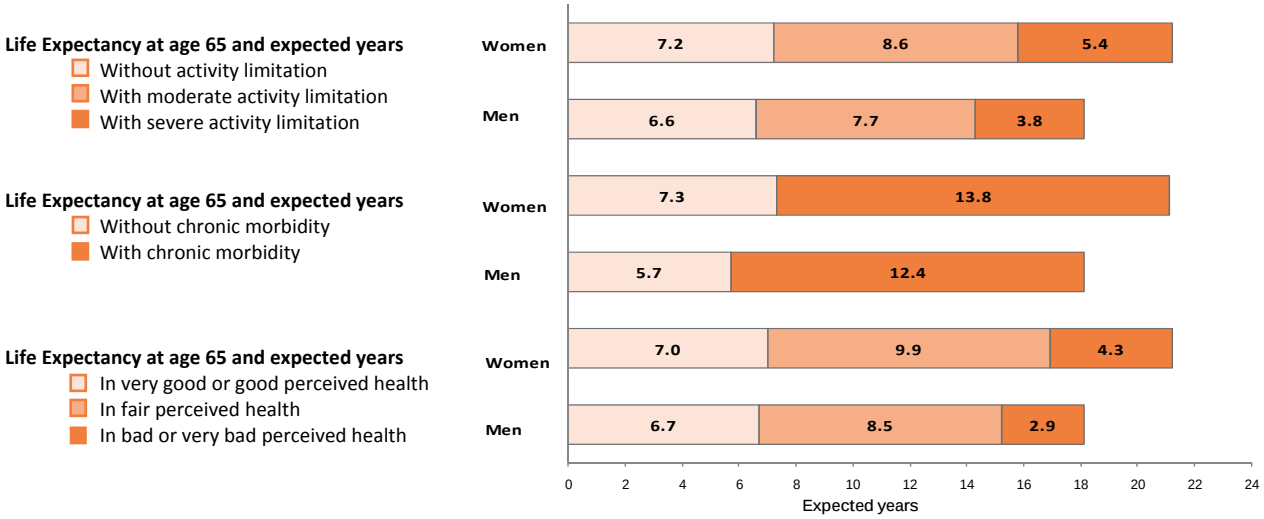
Key points:

German life expectancy (LE) at age 65 has increased by 1.4 years for women and 2.1 years for men over the period 2001-2011: it had almost reached the EU15 average by 2001 and was close the EU25 average by 2011 (21.4 for women and 18.0 for men), 0.2 year above for men and 0.2 year below for women.

Because ECHP data were not available in Germany, HLY values are only presented since 2005.

The new HLY series, initiated in 2005 with the SILC data, shows values for Germany being in 2011 below the EU25 average (8.6 for women and 8.8 for men) by 1.3 years for women and 2.1 for men. In 2011 women and men at age 65 can expect to spend 34% and 37% of their life without *self-reported long-term activity limitations* respectively. Note that the wording of the GALI question was changed in Germany in 2008 to better reflect the EU standard. This may explain the strong decrease in HLY observed between 2007 and 2008 in Germany, especially for men. Between 2010 and 2011 HLY slightly increased for women and slightly decreased for men.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Germany (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Germany was 21.2 years for women and 18.2 years for men.

Based on the SILC 2011 at age 65, women can expect to spent 7.2 years (34% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 8.6 years (41%) with moderate activity limitation and 5.4 years (25%) with severe activity limitation.*

Men of the same age spent 6.6 years (36% of their remaining life) without activity limitation compared to 7.7 years (42%) with moderate activity limitation and 3.8 years (21%) with severe activity limitation.*

Although for all the health expectancies the years of life spent in positive health were slightly greater for women than 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 and the size of the samples varying from 1204 in Denmark to 10419 in Italy. The sample size for Germany comprised 3127 women and 3217 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

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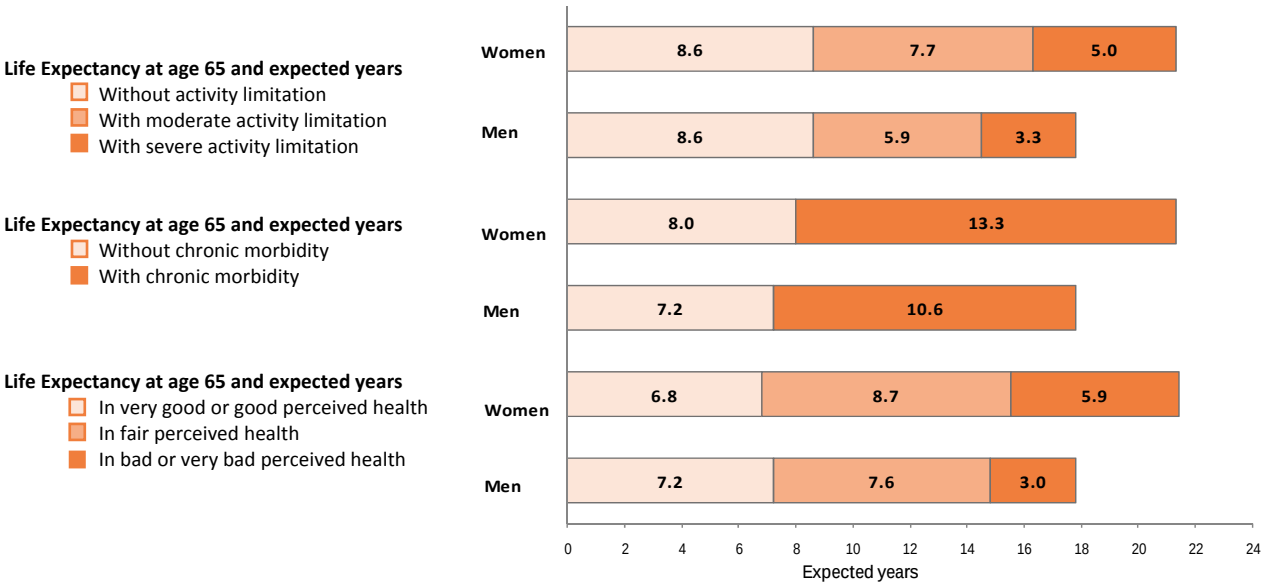
Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU27, in 2011, by gender (Health data from SILC)



Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time 8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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The current Joint Action EHLEIS (European Health and Life Expectancy Information System) and EurOhex (www.eurohex.eu) are co-funded by 11 Member States, the European Commission, DG SANCO, and two French institutions: the Ministry of Health and theNational 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; 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 and www.healthylife-years.eu.

Acknowledgements

Jurgen Thelen (Robert Koch Institute) and Gabriele Doblhammer (Rostock Center for Demographic Change) have contributed to this report and its translation.

Health Expectancy in Greece

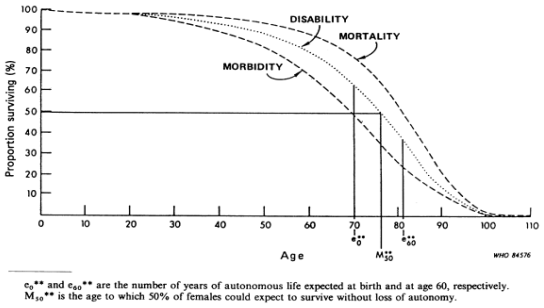
What is health expectancy?

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).

The general model of health transition (WHO, 1984): observed mortality and hypothetical morbidity and disability survival curves for females, USA, 1980.



e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
M_{50}^{**} is the age to which 50% of females could expect to survive without loss of autonomy.

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 2004 to 2011. 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 2011;
- Life and health expectancy at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU 27 in 2011 by gender (Health data from SILC)

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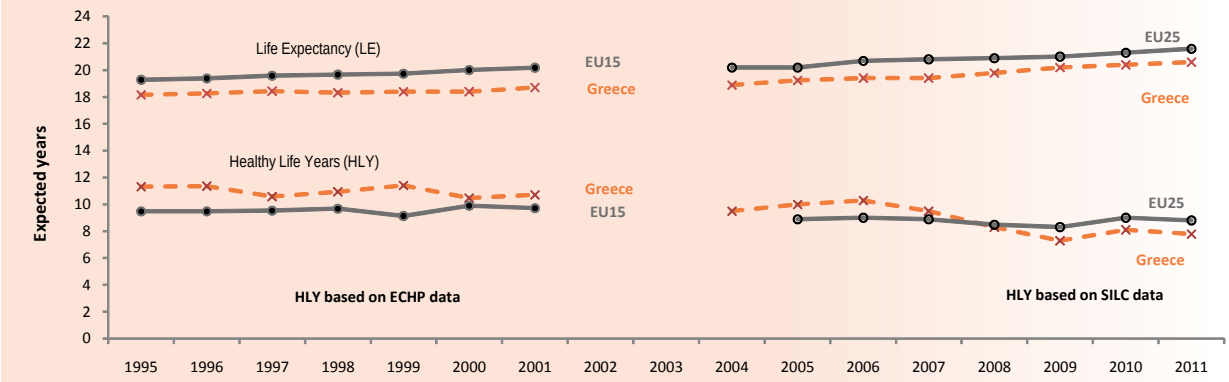
* Before the revision of 2008, the translations of the module used in some countries were not optimum (See Eurostat-EU Task Force on Health Expectancies common statement about the SILC data quality). This revision is being evaluated.

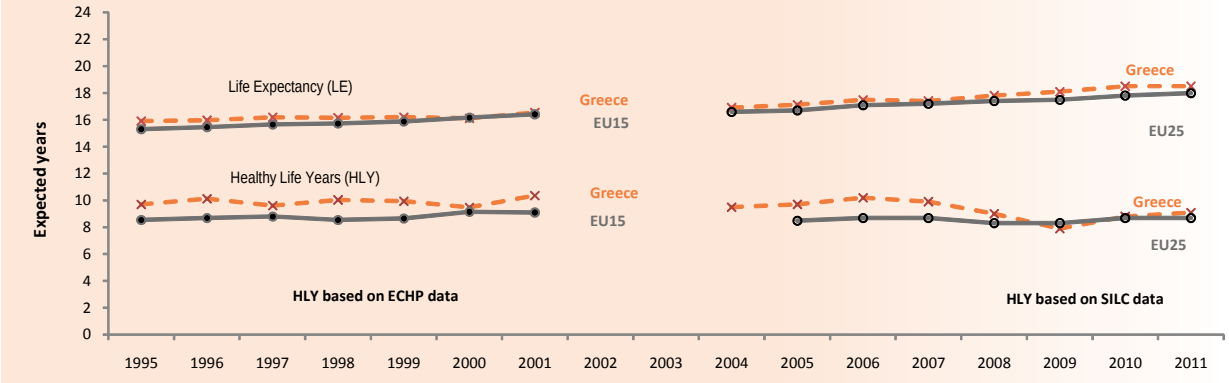
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Greece and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2004-2011)

Women



Greece	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	18.2	18.3	18.4	18.3	18.4	18.4	18.7	-	-	18.9	19.2	19.4	19.4	19.8	20.2	20.4	20.6
HLY	11.3	11.3	10.6	10.9	11.4	10.5	10.7	-	-	9.5	10.0	10.3	9.5	8.3	7.3	8.1	7.8
% HLY/LE	62%	62%	57%	60%	62%	57%	57%	-	-	50%	52%	53%	49%	42%	36%	40%	38%

Men



Greece	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	15.9	16.0	16.2	16.1	16.2	16.1	16.5	-	-	16.9	17.1	17.5	17.4	17.8	18.1	18.5	18.5
HLY	9.7	10.1	9.6	10.0	9.9	9.5	10.4	-	-	9.5	9.7	10.2	9.9	9.0	7.9	8.8	9.1
% HLY/LE	61%	63%	59%	62%	61%	59%	63%	-	-	56%	57%	58%	57%	51%	44%	48%	49%

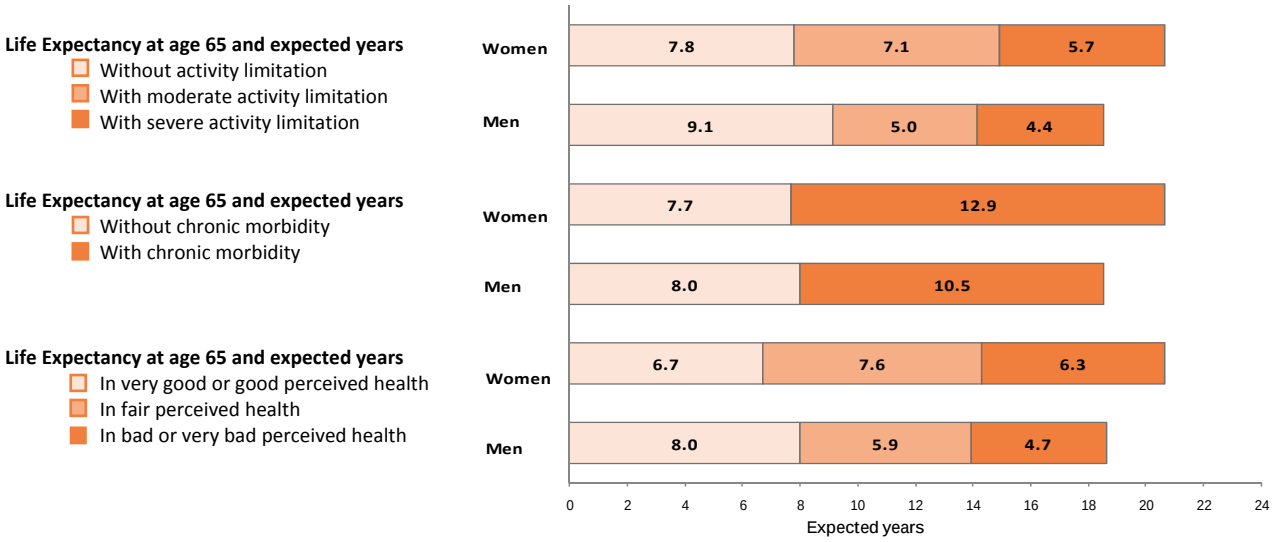
Key points:

Greek life expectancy (LE) at age 65 has increased by 1.9 years for women and 2.0 years for men over the period 2001-2011: LE for men between 1995 and 2001 reached the EU15 average while LE for women was lower. In 2010, LE for women was below the EU25 average (21.6 for women and 18.0 for men) but it was above for men.

Over the 1995-2001 period, health expectancy based on activity limitation (HLY) at age 65 from the ECHP data decreased for women and slightly increased 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 women and remained almost stable for men, being close to 57% for women and 63% for men in 2001. Between 1995 and 2001 HLY in Greece was above the EU15 average.

The new HLY series, initiated in 2004 with the SILC data, shows values for Greece being in 2011 higher than the EU25 average (8.6 for women and 8.8 for men) by 0.3 year for men and lower by 0.8 year for women. In 2011 women and men at age 65 can expect to spend 38% and 49% of their life without *self-reported long-term activity limitations* respectively. Note that the wording of the GALI question was changed in Greece in 2007 and 2008. But it is not clear whether this better reflects the EU standard and can explain the strong decrease in HLY observed since 2007 in Greece. However HLY increased for men between 2010 and in 2011 and slightly decreased for women.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Greece (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Greece was 20.6 years for women and 18.5 years for men.

Based on the SILC 2011, at age 65, women spent 7.8 years (38% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.1 years (34%) with moderate activity limitation and 5.7 years (28%) with severe activity limitation.*

Men of the same age spent 9.1 years (49% of their remaining life) without activity limitation compared to 5.0 years (27%)with moderate activity limitation and 4.4 years (24%) with severe activity limitation.*

Although the total years lived by men were less than those for women, for all the health expectancies the years of life spent in positive health were greater for men than women.

Compared to men, women spent a much 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 1204 in Denmark to 10419 in Italy. The sample size for Greece comprised 2103 women and 1700 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

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- Bagavos C. Gender and regional differentials in health expectancy in Greece. *Journal of Public Health Research*. 2013;2(2):66-73
- Χρήστος Μπάγκαβος, Η κατάσταση υγείας του πληθυσμού στην Ελλάδα, Προσδόκιμο επιβίωσης και προσδόκιμο υγείας, *Ινστιτούτο Εργασίας ΓΣΕΕ, Παρατηρητήριο Οικονομικών και Κοινωνικών Εξελίξεων, Ερευνητική Μονάδα Κοινωνικής Πολιτικής Φτώχειας και Ανισοτήτων,* Φεβρουάριος 2012, ISBN: 978-960-9571-21-0
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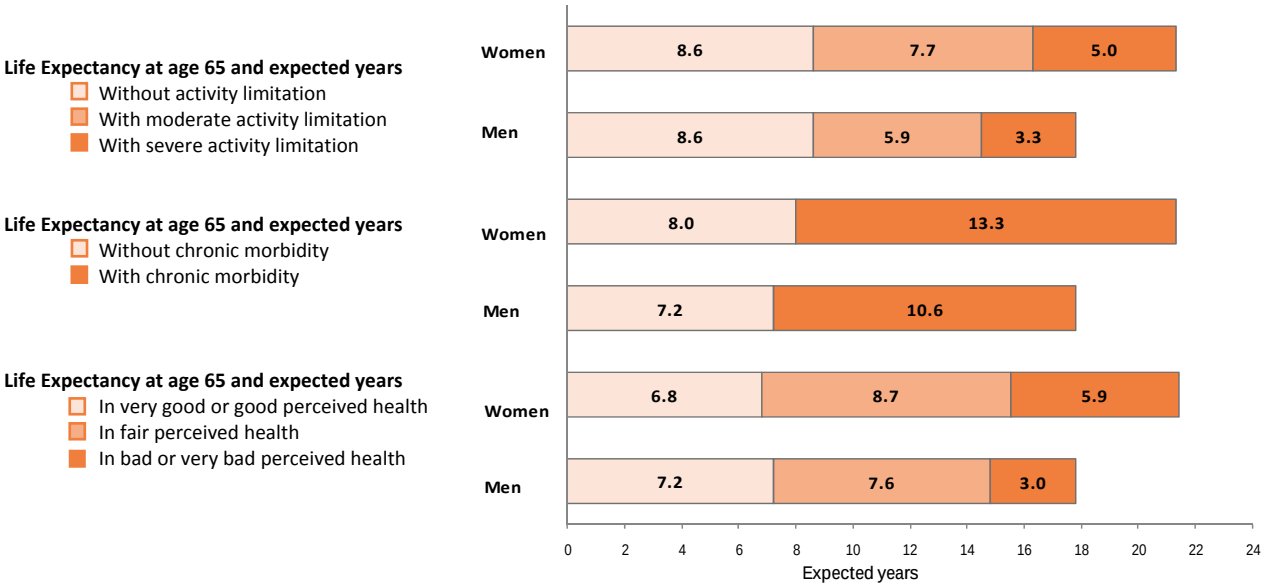

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Men of the same age spent the same amount of time8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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Tel: +33 (0)467 14 33 85 /e-mail: christine.perrier@inserm.fr

Health Expectancy in Hungary

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.

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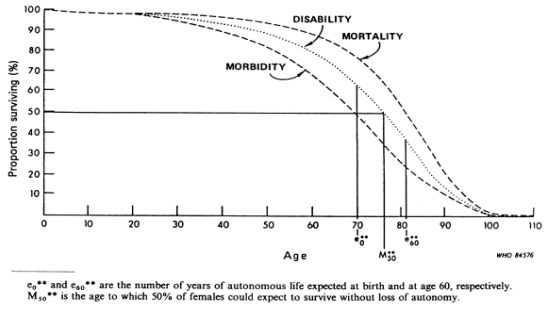

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What is in this report?

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 2011. 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 2011;
- Life and health expectancy at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU 27 in 2011 by gender (Health data from SILC)

References

Jagger C., Gillies C., Moscone F., Cambois E., Van Oyen H., Nusselder W., Robine J.-M., EHLEIS Team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008;372(9656) 2124-2131
Robine J.-M., Jagger C., Mathers C.D., Crimmins E.M., Suzman R.M., Eds. *Determining health expectancies*. Chichester UK: Wiley, 2003.
Sullivan D.F. *A single index of mortality and morbidity*. HSMHA Health Reports 1971;86:347-354.
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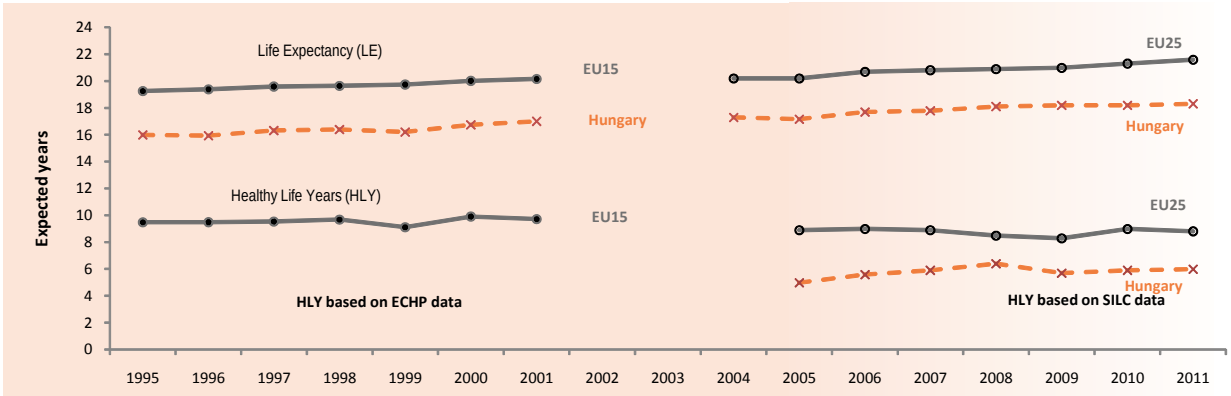
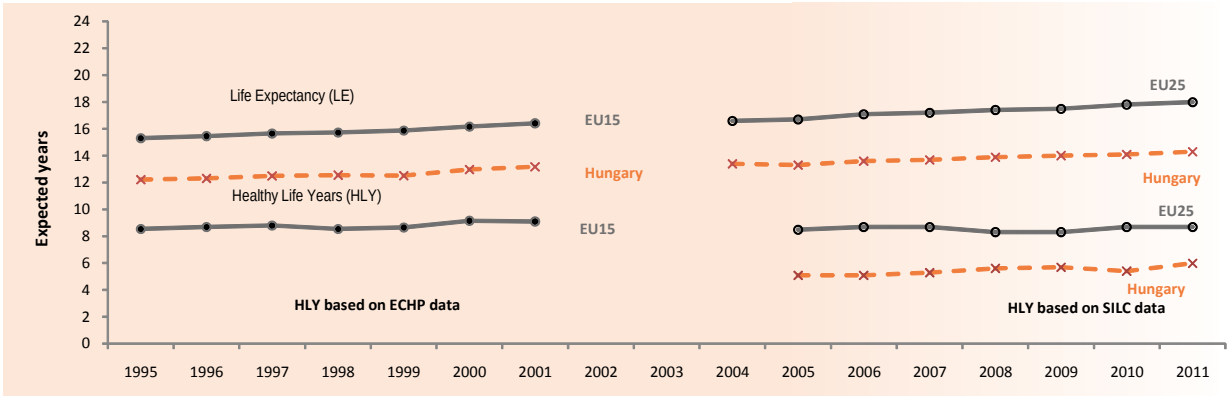
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Hungary and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2005-2011)

Women



Hungary	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	16.0	15.9	16.3	16.4	16.2	16.7	17.0	-	-	17.3	17.2	17.7	17.8	18.1	18.2	18.2	18.3
HLY	-	-	-	-	-	-	-	-	-	-	5.0	5.6	5.9	6.4	5.7	5.9	6.0
% HLY/LE	-	-	-	-	-	-	-	-	-	-	29%	32%	33%	35%	31%	32%	33%

Men



Hungary	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	12.2	12.3	12.5	12.5	12.5	13.0	13.2	-	-	13.4	13.3	13.6	13.7	13.9	14.0	14.1	14.3
HLY	-	-	-	-	-	-	-	-	-	-	5.1	5.1	5.3	5.6	5.7	5.4	6.0
% HLY/LE	-	-	-	-	-	-	-	-	-	-	38%	38%	39%	40%	41%	38%	42%

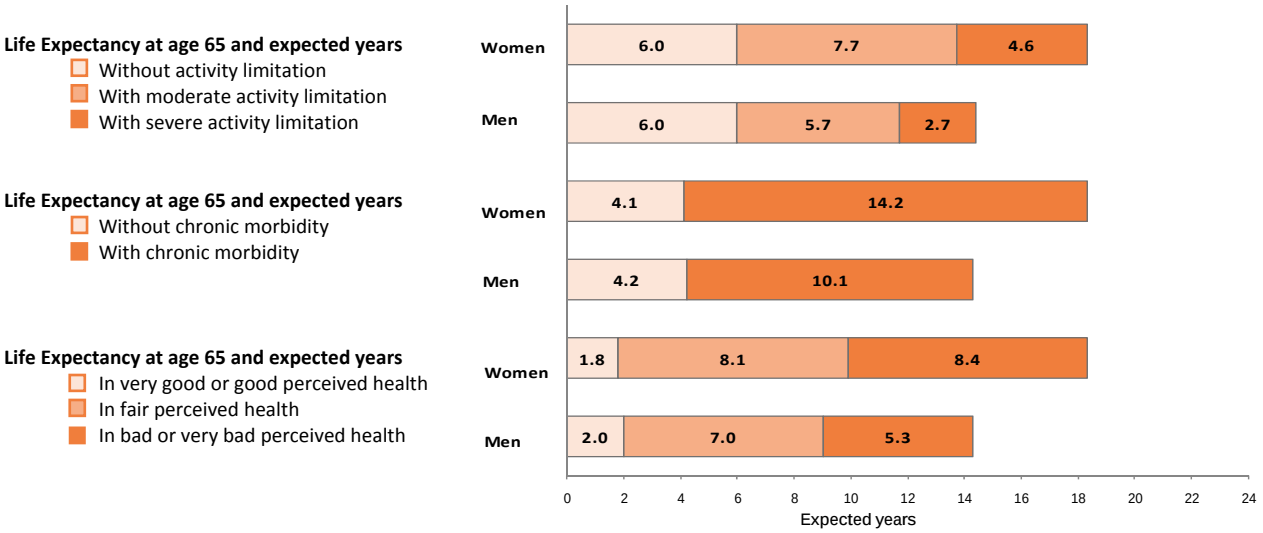
Key points:

Hungarian life expectancy (LE) at age 65 has increased by 1.3 years for women and 1.1 years for men over the 2001-2011 period: LE for both sexes between 1995 and 2001 was below the EU15 average and remained below the EU25 average (21.6 for women and 18.0 for men) in 2010 by 3.7 years for men and 3.1 years for women.

Because Hungary joined the European Union in 2004, the first series of health expectancy based on activity limitation (HLY) over the period 1995-2001 is not available.

The new HLY series, initiated in 2005 with the SILC data, shows that in 2011 women and men at age 65 can expect to spend 33% and 42% of their life without *self-reported long-term activity limitations* respectively. In 2011 the HLY values for Hungary are 2.6 years and 2.8 years below the EU25 average (8.6 for women and 8.8 for men) for women and men respectively. Between 2010 and 2011 HLY increased in Hungary for men and slightly increased for women. Note that the wording of the GALI question was changed in 2008 to better reflect the EU standard.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Hungary (Health data from SILC 2011)



Key points:

In 2011 LE at age 65 in Hungary was 18.3 years for women and 14.3 years for men.

Based on the SILC 2011, at age 65, women spent 6.0 years (33% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (42%) with moderate activity limitation and 4.6 years (25%) with severe activity limitation.*

Men of the same age spent 6.0 years (42% of their remaining life) without activity limitation compared to 5.7 years (40%) with moderate activity limitation and 2.7 years (19%) with severe activity limitation.*

Although for all the health expectancies the years of life spent in positive health were greater or equal 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 1204 in Denmark to 10419 in Italy. The sample size for Hungary comprised 2944 women and 1581 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

Publications and reports on health expectancies for Hungary

- A fenntartható fejlődés indikátorai Magyarországon / The sustainable development indicators in Hungary. KSH, 2012.
- See also Nők és férfiak Magyarországon, 2012 (in press) and the website: http://portal.ksh.hu/pls/ksh/docs/hun/thm/2/indi2_8_1.html
- Szabó Z., Hány egészséges életévre számíthatunk (Egészségesen várható élettartamok) KSH, 2009. http://portal.ksh.hu/pls/ksh/docs/hun/elef/kal_szabo.html.
- Yearbook of Health Statistics, 2012. KSH Chapter 17 International data.
- The social development indices in Hungary (Health status 2000-2011) http://www.ksh.hu/thm/2/indi2_8_1.html.
- Kovacs K. *Comments on Robine et al's paper by Katalin Kovacs*. In: Dykstra PA, editor. *Ageing, Intergenerational solidarity and age specific vulnerabilities*. Amsterdam: KNAW Press; 2008. p. 133-140.
- Jagger C., Gillies C., Mascone F., Cambois E., Van Oyen H., Nusselder W.J., Robine J.-M., EHLEIS team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008; 372(9656):2124-2131.
- Jagger C., Robine J.-M., Van Oyen H., Cambois E. *Life expectancy with chronic morbidity*. In: European Commission, editor. *Major and chronic diseases - report 2007*. Luxembourg: European Communities; 2008. p. 291-304.
- Farago M. *Egészségesen várható élettartamok Magyarországon 2005: Egy összetett , kvalifikált mutató a népesség egészségi állapotának mérésére [Healthy life expectancy in Hungary 2005: a summary measure of population health*]. Budapest: Hungarian Central Statistical Office; 2007.

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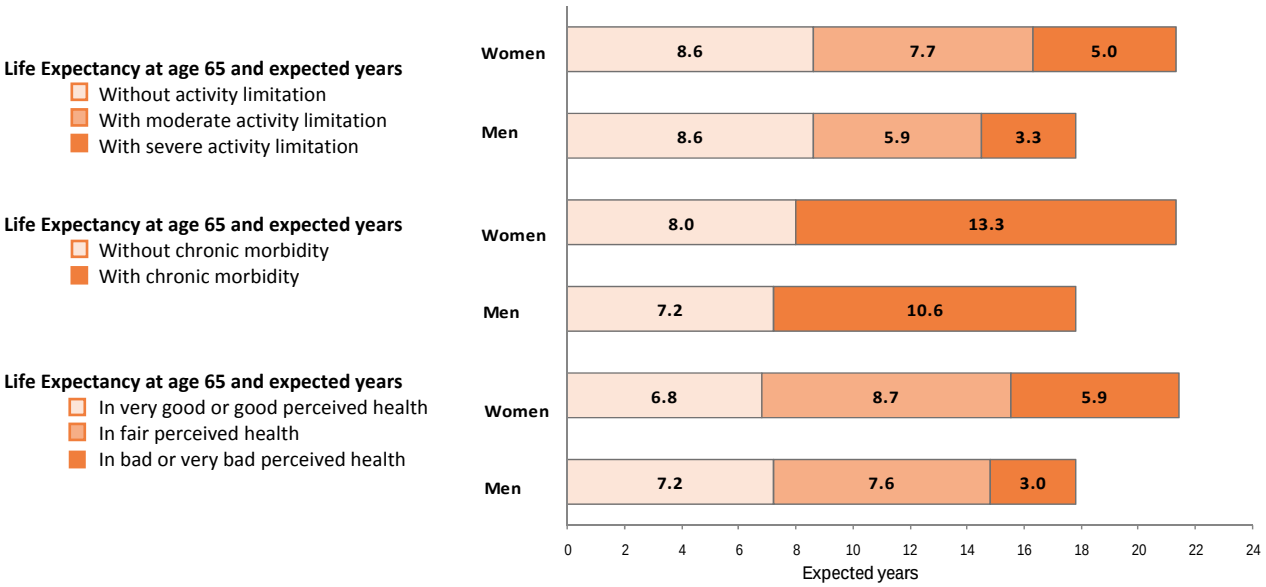

Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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Acknowledgements

Zsuzsanna Kristina Szabó (Central Statistical Office of Hungary) has contributed to this report and its translation.

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Tel: +33 (0)467 14 33 85 /e-mail: christine.perrier@inserm.fr

Health Expectancy in Ireland

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).

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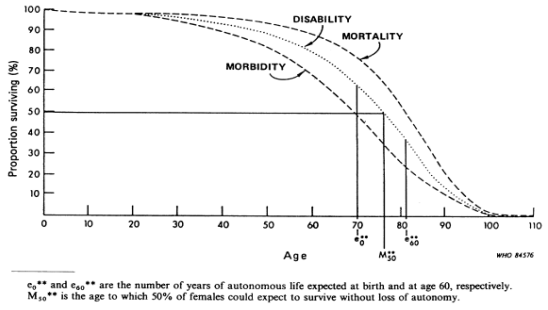

e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
M_{50}^{**} is the age to which 50% of females could expect to survive without loss of autonomy.

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).

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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**).

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References

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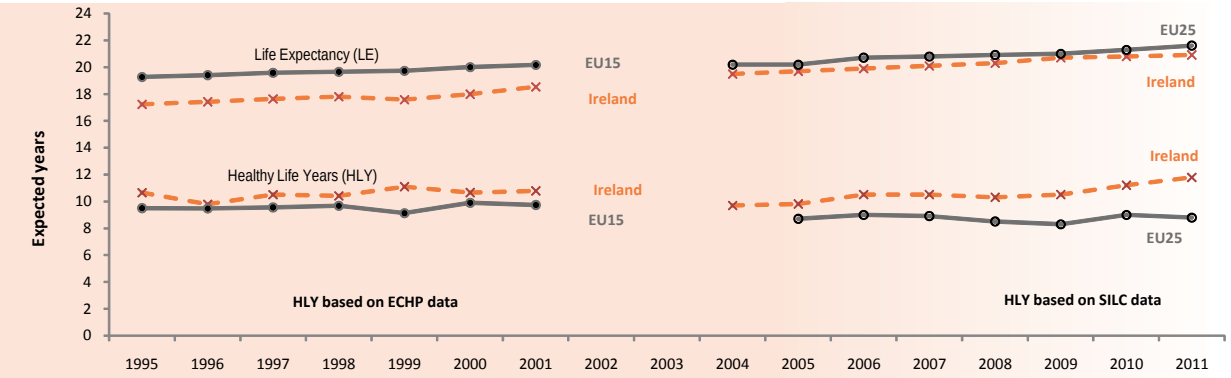
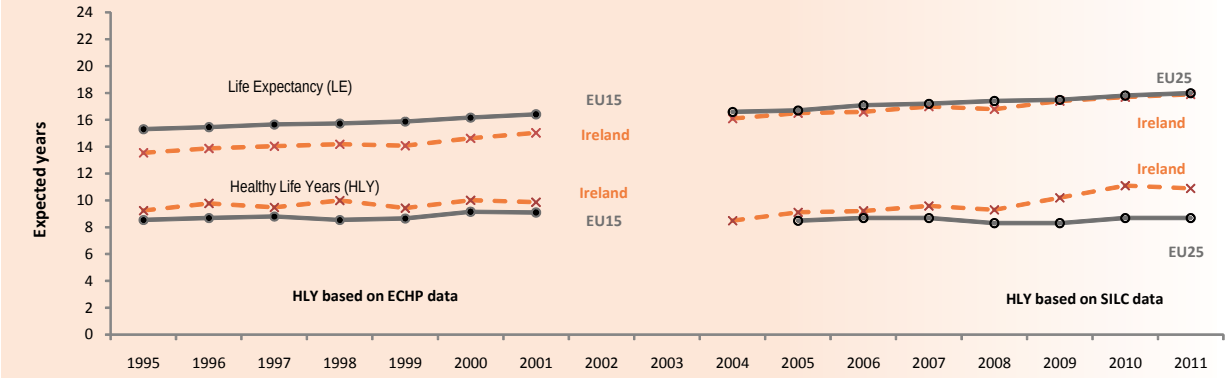
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Ireland and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2004-2011)

Women



Ireland	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	17.2	17.4	17.6	17.8	17.6	18.0	18.5	-	-	19.5	19.7	19.9	20.1	20.3	20.7	20.8	20.9
HLY	10.7	9.8	10.5	10.4	11.1	10.6	10.8	-	-	9.7	9.8	10.5	10.5	10.3	10.5	11.2	11.8
% HLY/LE	62%	56%	60%	59%	63%	59%	58%	-	-	50%	50%	53%	52%	50%	51%	54%	56%

Men



Ireland	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	13.5	13.9	14.0	14.2	14.1	14.6	15.0	-	-	16.1	16.5	16.6	17.0	16.8	17.4	17.7	17.9
HLY	9.2	9.8	9.5	10.0	9.4	10.0	9.9	-	-	8.5	9.1	9.2	9.6	9.3	10.2	11.1	10.9
% HLY/LE	68%	70%	68%	70%	67%	68%	66%	-	-	53%	55%	55%	56%	55%	59%	63%	61%

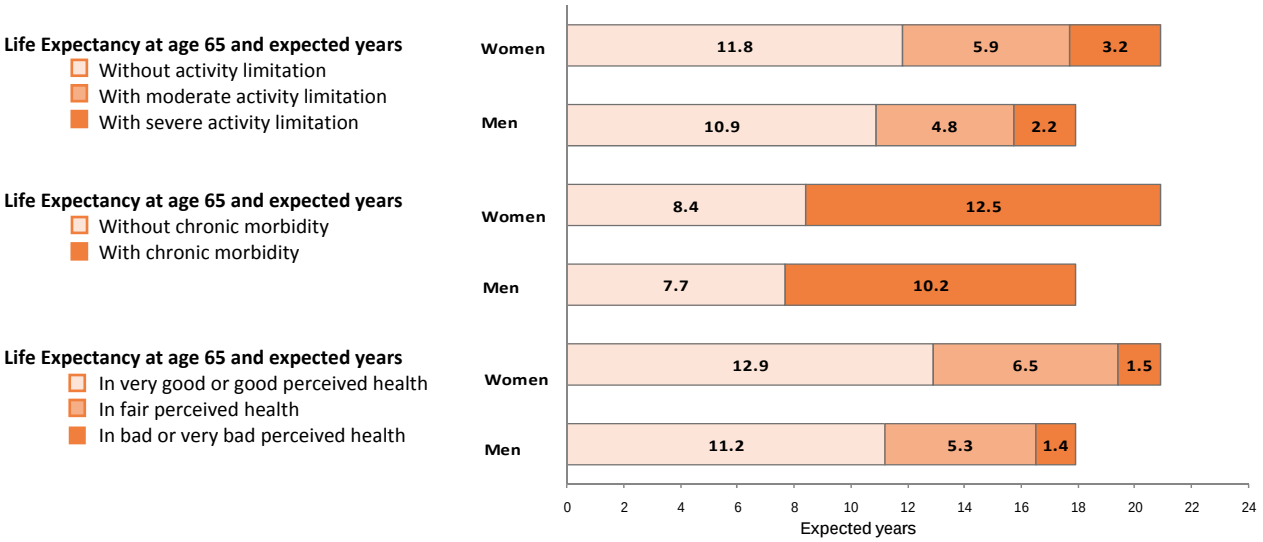
Key points:

Irish life expectancy (LE) at age 65 has increased by 2.4 years for women and 2.9 years for men over the 2001-2011 period: LE for both sexes between 1995 and 2001 was below the EU15 average, and by 2011 LE was also below the EU25 average (21.6 for women and 18.0 for men) for women and men.

Over the 1995-2001 period, health expectancy based on activity limitation (HLY) at age 65 from the ECHP data remained almost stable in Ireland and were above the EU15 average. The proportion of HLY (or years without *self-reported limitations due to health condition or disability*), within the total expected years, slightly decreased for both sexes, being close to 58% for women and 66% for men in 2001.

The new HLY series, initiated in 2004 with the SILC data, shows values for Ireland in 2011 above the EU25 average of 8.6 for women and 8.8 for men. In 2011 women and men at age 65 can expect to spend 56% and 61% of their life without *self-reported long-term activity limitations* respectively. Between 2009 and 2010 HLY strongly increased for men and women and continued to increase for women between 2010 and 2011 but slightly decreased for men. Note that the wording of the GALI question did not need to be changed in Ireland in 2008.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Ireland (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Ireland was 20.9 years for women and 17.9 years for men.

Based on the SILC 2011, at age 65, women spent 11.8 years (56% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 5.9 years (28%) with moderate activity limitation and 3.2 years (15%) with severe activity limitation.*

Men of the same age spent 10.9 years (61% of their remaining life) without activity limitation compared to 4.8 years (27%) with moderate activity limitation and 2.2 years (13%) with severe activity limitation.*

Although the total number of years lived without activity limitation or without chronic morbidity was similar for men and women, women spent a larger proportion of their life in ill health. However, the total number of years lived in very good or good perceived health was less for men than for women and the proportion of their life similar.

These results should be interpreted cautiously given the lack of the institutional population, such as people living in nursing homes (see: http://www.cso.ie/releasespublications/nationaldisabilitysurvey06first.htm) and the size of the samples varying from 1204 in Denmark to 10419 in Italy. The sample size for Ireland comprised 1030 women and 892 men aged 65+ years in 2011.

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Publications and reports on health expectancies for Ireland

- Jagger C., Gillies C., Mascone F., Cambois E., Van Oyen H., Nusselder W.J., Robine J.-M., EHLEIS team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008; 372(9656):2124-2131.
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Khoman E., Weale M. *Healthy life expectancy in the EU Member States: ENEPRI Research report n°33 - AHEAD WP5*. sl: ENEPRI; 2006.

- Jagger C., EHEMU team. *Healthy life expectancy in the EU 15*. In: Institut des Sciences de la Santé, editor. *Living longer but healthier lives: how to achieve health gains in the elderly in the European Union Europe Blanche XXVI, Budapest, 25-26 November 2005*. Paris: ISS; 2006. p. 49-62.

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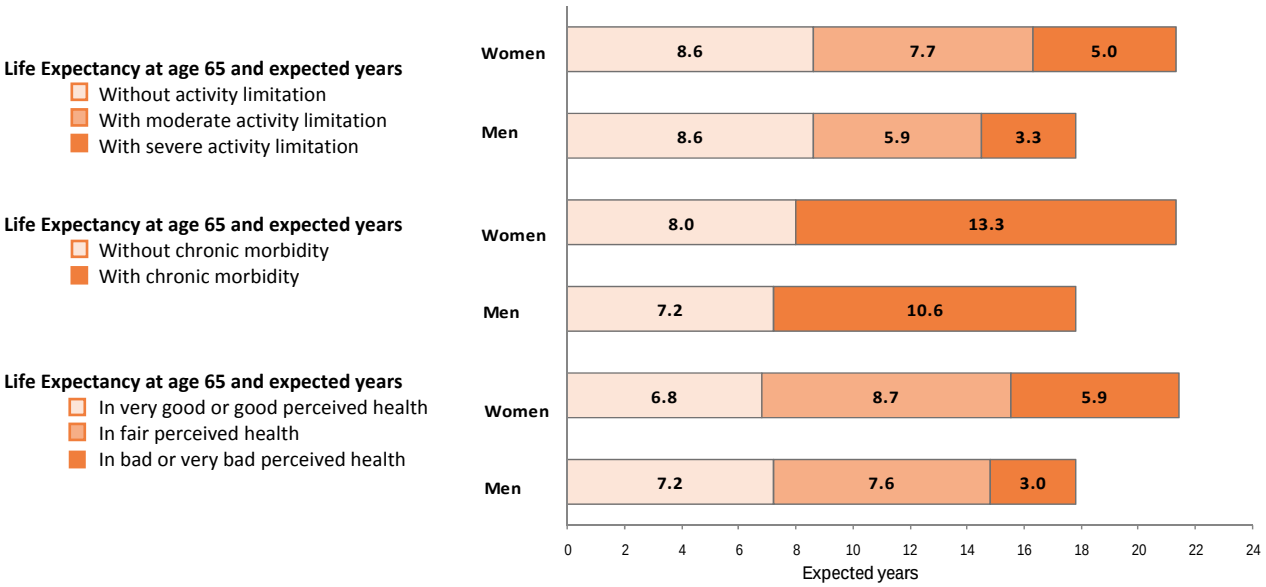

Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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Acknowledgements

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Health Expectancy in Italy

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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).

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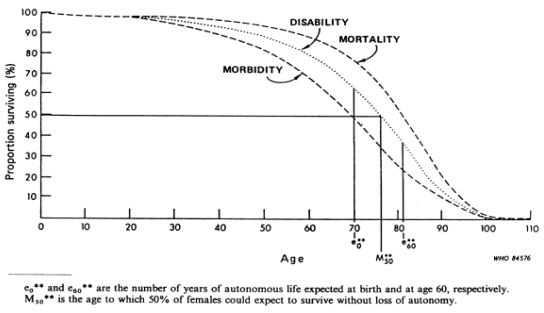

e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
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There are in fact as many health expectancies as concepts of health. The commonest health expectancies are those based on self-perceived health, activities of daily living and on chronic morbidity.

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- 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 2004 to 2011. The wording of the question has been revised in 2008 for most countries. However it was made in 2007 in Italy. 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 2011;
- Life and health expectancy at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU 27 in 2011 by gender (Health data from SILC)

References

Jagger C., Gillies C., Moscone F., Cambois E., Van Oyen H., Nusselder W., Robine J.-M., EHLEIS Team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008;372(9656) 2124-2131
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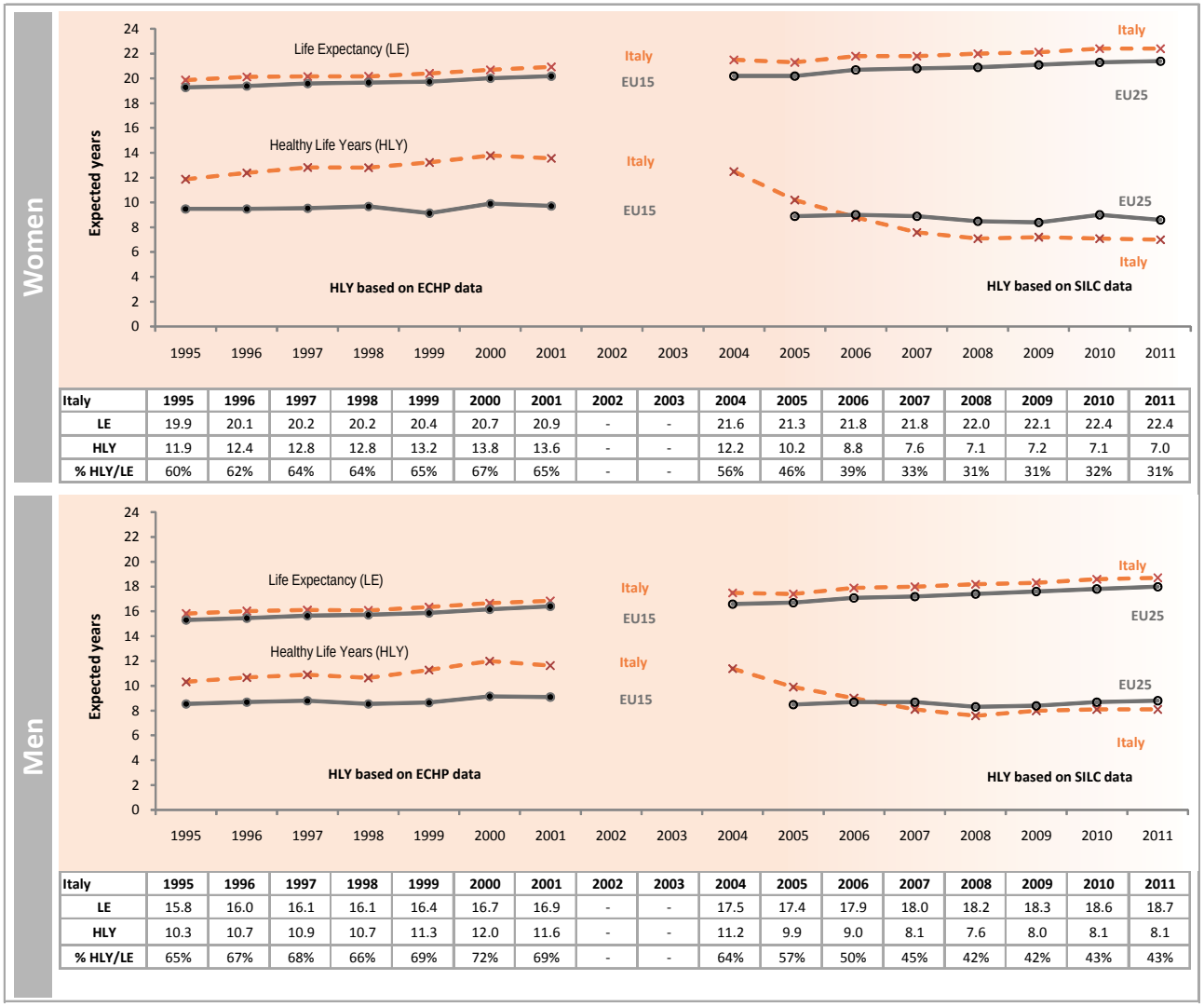
Sullivan D.F. *A single index of mortality and morbidity*. HSMHA Health Reports 1971;86:347-354.
World Health Organization. *The uses of epidemiology in the study of the elderly: Report of a WHO Scientific Group on the Epidemiology of Aging.* Geneva: WHO, 1984 (Technical Report Series 706).

* 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).

Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Italy and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2004-2011*)



Italy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	19.9	20.1	20.2	20.2	20.4	20.7	20.9	-	-	21.6	21.3	21.8	21.8	22.0	22.1	22.4	22.4
HLY	11.9	12.4	12.8	12.8	13.2	13.8	13.6	-	-	12.2	10.2	8.8	7.6	7.1	7.2	7.1	7.0
% HLY/LE	60%	62%	64%	64%	65%	67%	65%	-	-	56%	46%	39%	33%	31%	31%	32%	31%

Italy	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	15.8	16.0	16.1	16.1	16.4	16.7	16.9	-	-	17.5	17.4	17.9	18.0	18.2	18.3	18.6	18.7
HLY	10.3	10.7	10.9	10.7	11.3	12.0	11.6	-	-	11.2	9.9	9.0	8.1	7.6	8.0	8.1	8.1
% HLY/LE	65%	67%	68%	66%	69%	72%	69%	-	-	64%	57%	50%	45%	42%	42%	43%	43%

*Data on activity limitation for 2010 have been estimated as the mean prevalence of 2009 and 2011 data

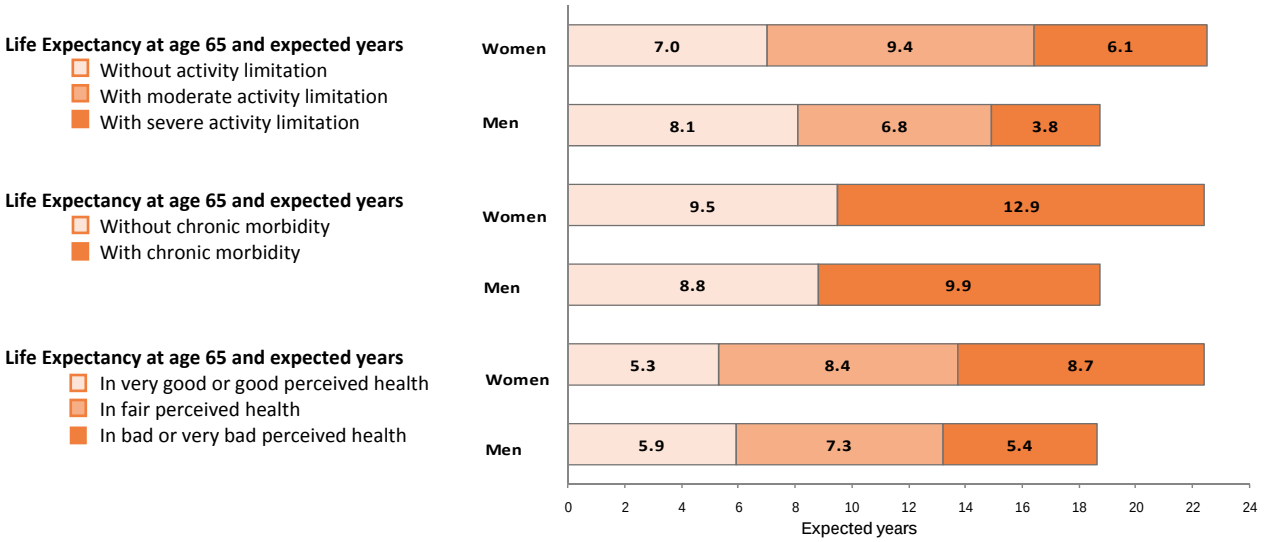
Key points:

Italian life expectancy (LE) at age 65 has increased by 1.5 years for women and 1.8 years for men over the period 2001-2011: Between 1995 and 2001, LE for both sexes was above the EU15 average and remained above the EU25 average (21.6 for women and 18.0 for men) in 2011.

Over the 1995-2001 period, health expectancy based on activity limitation (HLY) at age 65 from the ECHP data increased. The proportion of HLY (or years without *self-reported limitations due to health condition or disability*), within the total expected years, remained almost stable for both sexes, at around 64% for women and 68% for men. Between 1995 and 2001 HLY in Italy was above the EU15 average.

The new HLY series, initiated in 2004 with the SILC data, shows values for Italy in 2011 below the EU25 average of 8.8 for women and 8.6 for men. In 2011 women and men at age 65 can respectively expect to spend 31% and 43% of their life without *self-reported long-term activity limitations*. The strong decrease observed before 2007 should be interpreted with caution because of the changes that have annually occurred in the wording of the GALI. Between 2007 and 2009 HLY remained almost stable for women and men in Italy. From 2009 to 2011 HLY remained almost stable for women and slightly increased for men but all remained below the EU 25 average.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Italy (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Italy was 22.4 years for women and 18.7 years for men.

Based on the SILC 2011, at age 65, women spent 7.0 years (31% of remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 9.4 years (42%) with moderate activity limitation and 6.1 years (27%) with severe activity limitation.*

Men of the same age spent 8.1 years (43% of remaining life) without activity limitation compared to 6.8 years (36%) with moderate activity limitation and 3.8 years (20%) with severe activity limitation.*

Although total years lived by men were less than those for women, the numbers of years lived in very good or good perceived health and the years lived without activity limitation were slightly larger for men. However, the number of years lived without chronic morbidity was greater for women than men.

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, and the size of the samples varying from 1204 in Denmark to 10419 in Italy. The sample size for Italy comprised 5835 women and 4584 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

Publications and reports on health expectancies for Italy

- ISTAT. *Il Benessere equo e sostenibile.* 2012 http://www.misuredelbenessere.it/
- Battisti A.. *Speranza di vita libera da disabilità*. In *Rapporto Osservasalute 2011 Stato di salute e qualità dell'assistenza nelle regioni italiane*, Osservatorio Nazionale sulla salute nelle regioni italiane (http://www.osservasalute.it/). 2011: 168-169.
- Frova L., Prati S. *Sopravvivenza e Salute. I*n Rapporto sulla popolazione, *L'Italia a 150 dall'Unità, Paperbacks, a cura di Associazione italiana per gli studi di popolazione*, Salvini S., De Rose A., ed. Il Mulino, 2011:79-96.
- Frova L., Battisti A., Burgio A. Are gaps in disability free life expectancies diminishing in Italy? *Eur J Ageing.* 2010;(7):239-247.
- Battisti A., Burgio A. *La speranza di vita libera da disabilità*. In *La disabilità in Italia: il quadro della statistica ufficiale.* a cura di A. Solipaca, ISTAT, Argomenti n. 37. 2009: 40-44.
- Burgio A., Murianni L., Folino-Gallo P. Differences in Life Expectancy and Disability Free Life Expectancy in Italy. A Challenge to Health Systems. *Social Indicators Research*. 2009 May;92(1):1-11.
- Jagger C., Gillies C., Mascone F., Cambois E., Van Oyen H., Nusselder W.J., Robine J.-M., EHLEIS team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008;372(9656):2124-2131.
- Battisti A., Burgio A. *Speranza di vita libera da disabilità*. In *Rapporto Osservasalute 2007 Stato di salute e qualità dell'assistenza nelle regioni italiane*, Osservatorio Nazionale sulla salute nelle regioni italiane (http://www.osservasalute.it/). 2007: 184-186.
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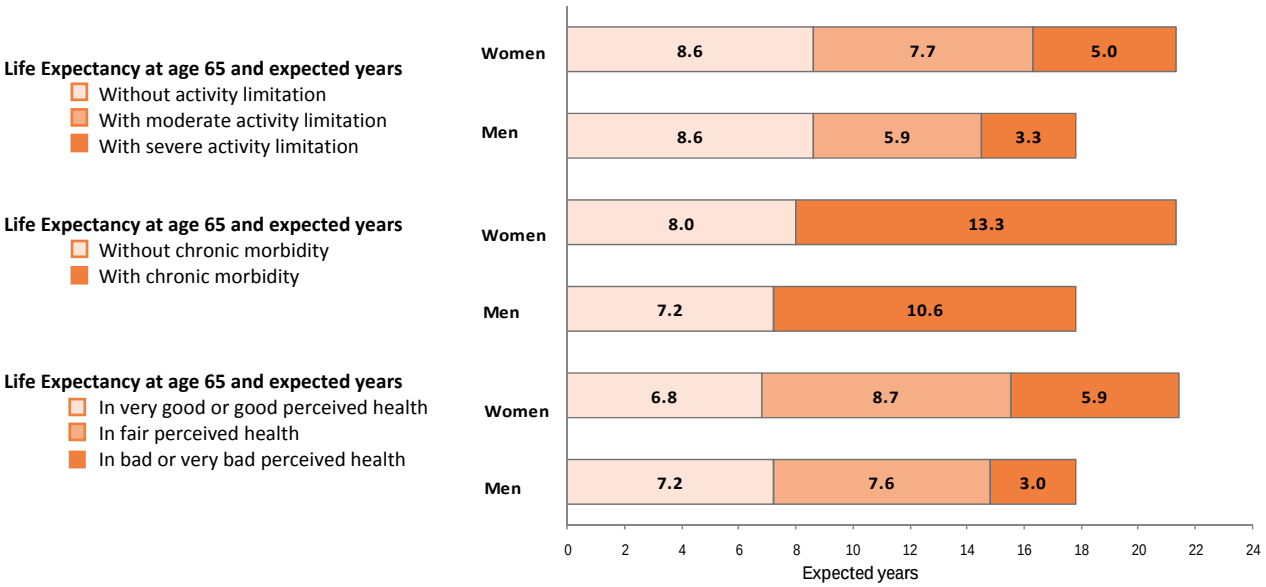
- ISTAT. *Un sistema informativo territoriale su sanità e salute* / [Regional data-set on health]. Rome: ISTAT; 2006.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU27, in 2011, by gender (Health data from SILC)



Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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Acknowledgements

Luisa Frova and Alessandra Battisti (Italian National Institute of Statistics), Viviana Egidi (Universita La Sapienza) have contributed to this report and its translation.

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Health Expectancy in Latvia

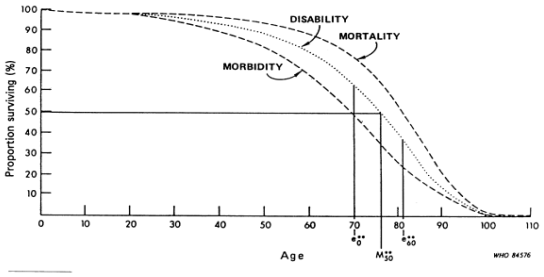
What is health expectancy?

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).

The general model of health transition (WHO, 1984): observed mortality and hypothetical morbidity and disability survival curves for females, USA, 1980.



e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
M_{50}^{**} is the age to which 50% of females could expect to survive without loss of autonomy.

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.

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References

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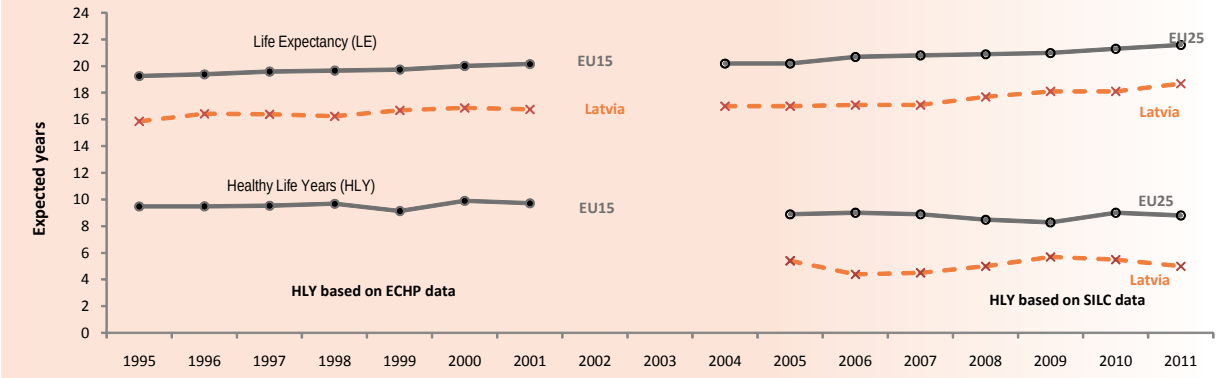
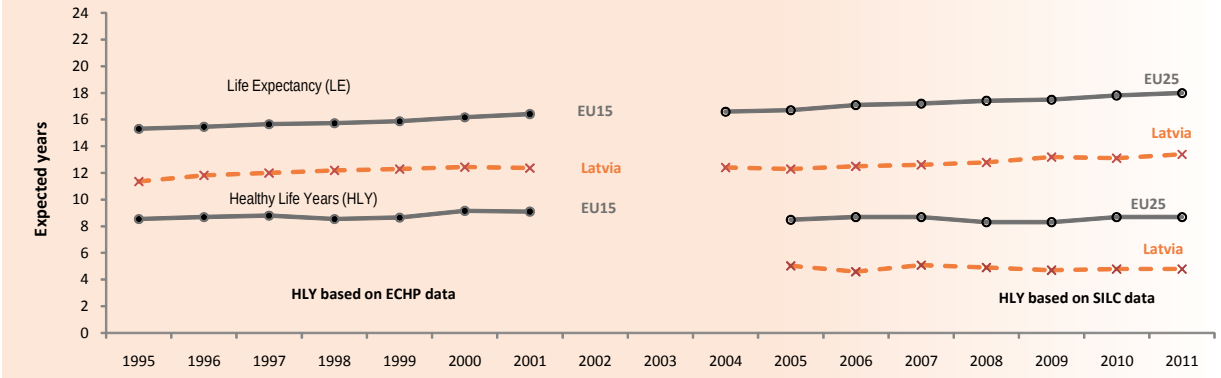
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Latvia and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2005-2011)

Women



Latvia	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	15.9	16.4	16.4	16.3	16.7	16.9	16.8	-	-	17.0	17.0	17.1	17.1	17.7	18.1	18.1	18.7
HLY	-	-	-	-	-	-	-	-	-	-	5.4	4.4	4.5	5.0	5.7	5.5	5.0
% HLY/LE	-	-	-	-	-	-	-	-	-	-	32%	26%	26%	28%	31%	30%	27%

Men



Latvia	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	11.4	11.8	12.0	12.2	12.3	12.4	12.4	-	-	12.4	12.3	12.5	12.6	12.8	13.2	13.1	13.4
HLY	-	-	-	-	-	-	-	-	-	-	5.0	4.6	5.1	4.9	4.7	4.8	4.8
% HLY/LE	-	-	-	-	-	-	-	-	-	-	41%	37%	40%	38%	36%	37%	36%

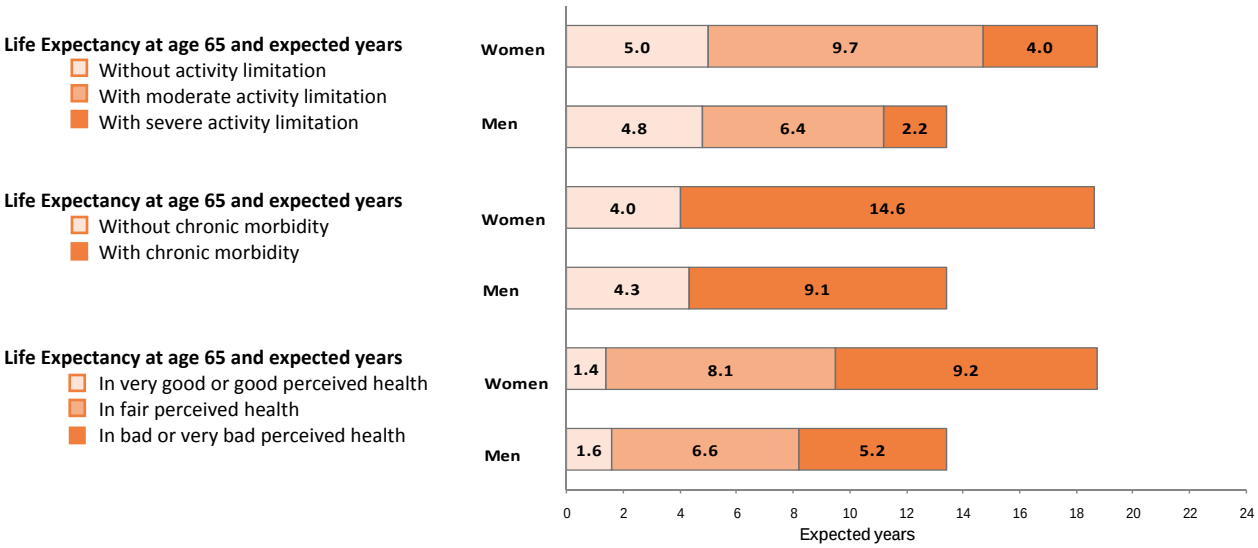
Key points:

Latvian life expectancy (LE) at age 65 has increased by 1.9 years for women and 1.0 year for men over the period 2001-2011: LE for both sexes between 1995 and 2001 was below the EU15 average and remained below the EU25 average (21.6 for women and 18.0 for men) in 2011, 4.6 years for men and 2.7 years for women.

Because Latvia joined the European Union in 2004, the first series of health expectancy based on activity limitation (HLY) over the period 1995-2001 is not available.

The new HLY series, initiated in 2005 with the SILC data, shows that in 2011 women and men at age 65 can expect to spend 27% and 36% of their life without *self-reported long-term activity limitations* respectively. In 2011 the HLY values for Latvia are 3.6 years and 4.0 years below the EU25 average (8.6 for women and 8.8 for men) for women and men respectively. Since 2006 HLY increased for women in Latvia but in 2011 HLY seems much flat. Note that the wording of the GALI question was not changed in 2008.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Latvia (Health data from SILC 2011)



Key points:

In 2011 LE at age 65 in Latvia was 18.7 years for women and 13.4 years for men.

Based on the SILC 2011, at age 65, women spent 5.0 years (27% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 9.7 years (52%) with moderate activity limitation and 4.0 years (21%) with severe activity limitation.*

Men of the same age spent 4.8 years (36% of their remaining life) without activity limitation compared to 6.4 years (48%) with moderate activity limitation and 2.2 years (16%) with severe activity limitation.*

Although women lived more years without chronic morbidity and/or without disability, compared to men, they 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, and the size of the samples varying from 1204 in Denmark to 10419 in Italy. The sample size for Latvia comprised 2414 women and 1140 men aged 65+ years in 2011.

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Publications and reports on health expectancies for Latvia

- Dubkova N, Krumins J. Life expectancy and health expectancy in Latvia: changes and interpretation problems. Research papers of the Central Statistical Bureau of Latvia 2012. Riga, 2012, p21-33.
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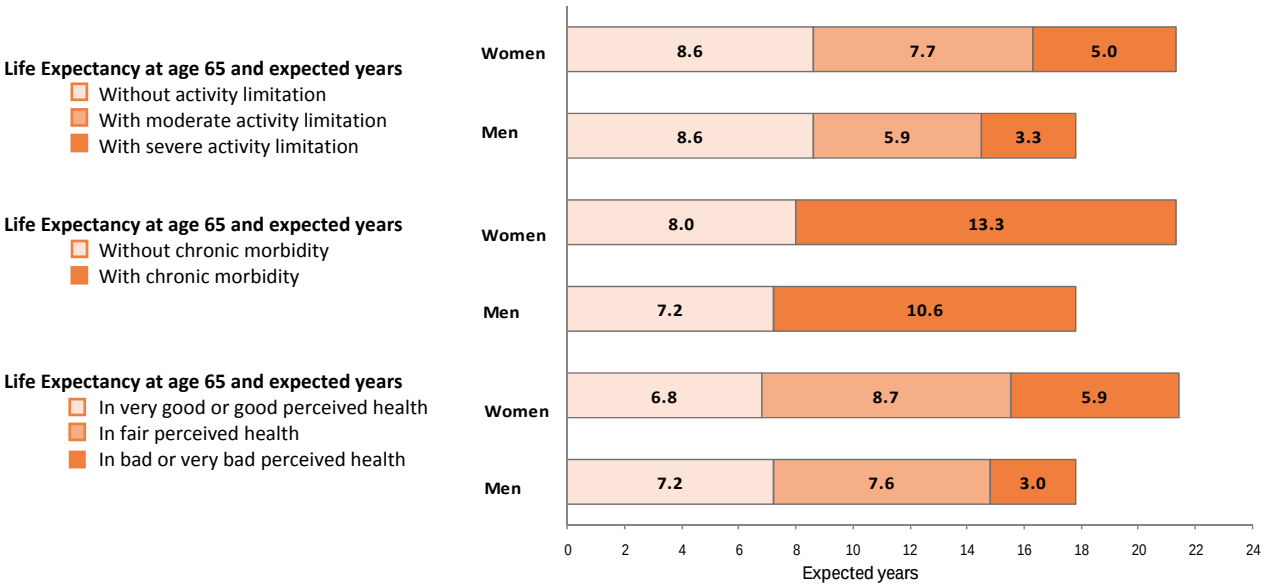

Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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Acknowledgements

Juris Krumins and Natalja Dubkova (University of Latvia) have contributed to this report and its translation. Calculations of LE, HLY and LIFLE for Latvia's regions and urban-rural population was performed by Natalja Dubkova.

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Health Expectancy in Lithuania

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.

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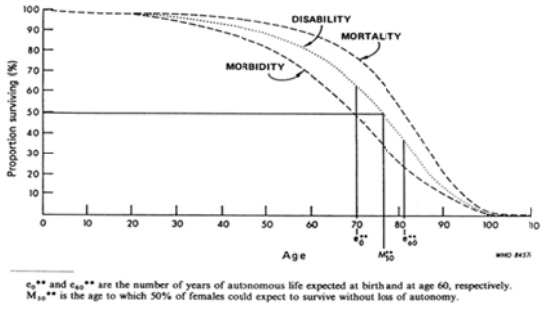
The general model of health transition (WHO, 1984): observed mortality and hypothetical morbidity and disability survival curves for females, USA, 1980.



e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
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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.

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References

Jagger C., Gillies C., Moscone F., Cambois E., Van Oyen H., Nusselder W., Robine J.-M., EHLEIS Team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008;372(9656) 2124-2131
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Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Lithuania and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2005-2011)

Lithuania	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	16.9	17.2	17.3	17.4	17.6	17.9	17.9	-	-	17.9	17.6	17.6	17.9	18.1	18.4	18.4	19.2
HLY	-	-	-	-	-	-	-	-	-	-	4.3	5.3	5.5	6.5	6.8	6.7	6.7
% HLY/LE	-	-	-	-	-	-	-	-	-	-	24%	30%	31%	36%	37%	36%	35%

Lithuania	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	12.9	13.0	13.2	13.3	13.4	13.7	13.5	-	-	13.4	13.0	13.0	12.9	13.4	13.4	13.5	14.0
HLY	-	-	-	-	-	-	-	-	-	-	5.2	5.9	5.3	5.8	6.1	6.3	6.1
% HLY/LE	-	-	-	-	-	-	-	-	-	-	40%	45%	41%	43%	46%	47%	44%

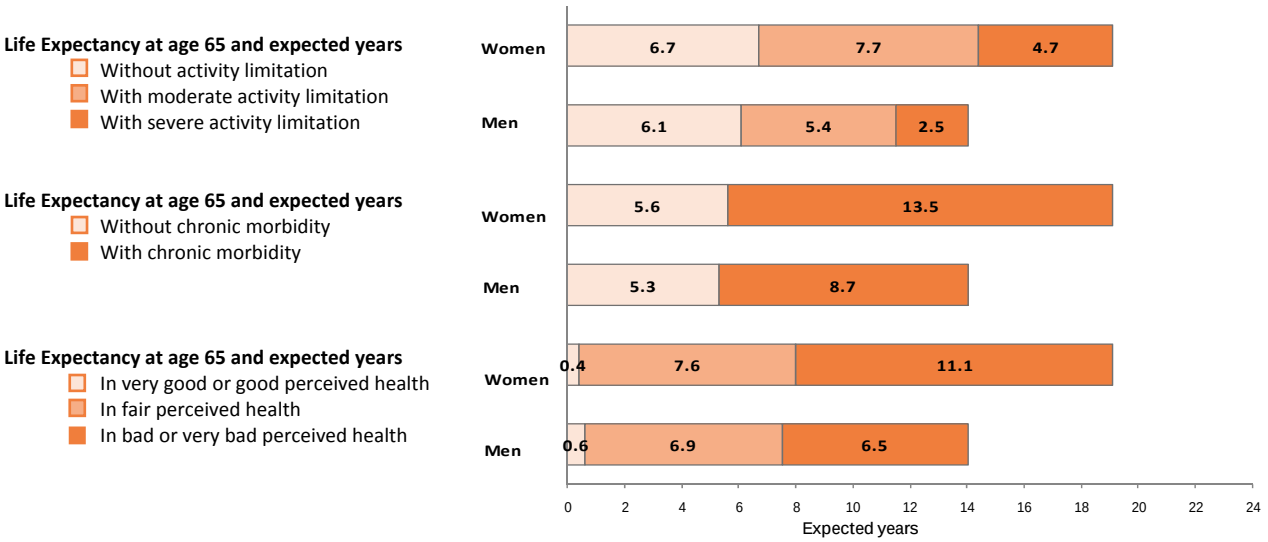
Key points:

Lithuanian life expectancy (LE) at age 65 has increased by 1.3 year for women and by 0.5 year for men over the period 2001-2011: LE for both sexes between 1995 and 2001 was below the EU15 average and remained below the EU25 average (21.6 for women and 18.0 for men) in 2011, 4.0 years for men and 2.2 years for women.

Because Lithuania joined the European Union in 2004, the first series of health expectancy based on activity limitation (HLY) over the period 1995-2001 is not available.

The new HLY series, initiated in 2005 with the SILC data, shows that in 2011 women and men at age 65 can expect to spend 35% and 44% of their life without *self-reported long-term activity limitations* respectively. In 2011 the HLY values for Lithuania are 1.9 years and 2.5 years below the EU25 average (8.6 for women and 8.8 for men) respectively for women and men. HLY remained stable between 2010 and 2011 for women and slightly decreased for men. Note that the wording of the GALI question was changed in Lithuania in 2006 and again in 2007.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Lithuania (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Lithuania was 19.2 years for women and 14.0 years for men.

Based on the SILC 2011 at age 65, women spent 6.7 years (35% of their remaining life) without activity limitation corresponding to Healthy Life Years (HLY)), 7.7 years (40%) with moderate activity limitation and 4.7 years (25%) with severe activity limitation.*

Men of the same age spent 6.1 years (44% of their remaining life) without activity limitation compared to 5.4 years (39%) with moderate activity limitation and 2.5 years (18%) with severe activity limitation.*

Although women lived slightly more years without disability, compared to men, they 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.

The number of years lived by men and women without chronic morbidity or in good perceived health was similar

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 1204 in Denmark to 10419 in Italy. The sample size for Lithuania comprised 1725 women and 1174 men aged 65+ years in 2011.

**These may not sum to Life Expectancy due to rounding*

Publications and reports on health expectancies for Lithuania

- Jagger C., Gillies C., Mascone F., Cambois E., Van Oyen H., Nusselder W.J., Robine J.-M., EHLEIS team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008; 372(9656):2124-2131.
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- Petrauskienė J., Ambrozaitienė D., Kalėdienė R., Starkuvienė S. Assessment of disability-free life expectancy in Lithuania. *Medicina* (Kaunas). 2010; 46(10):707-711

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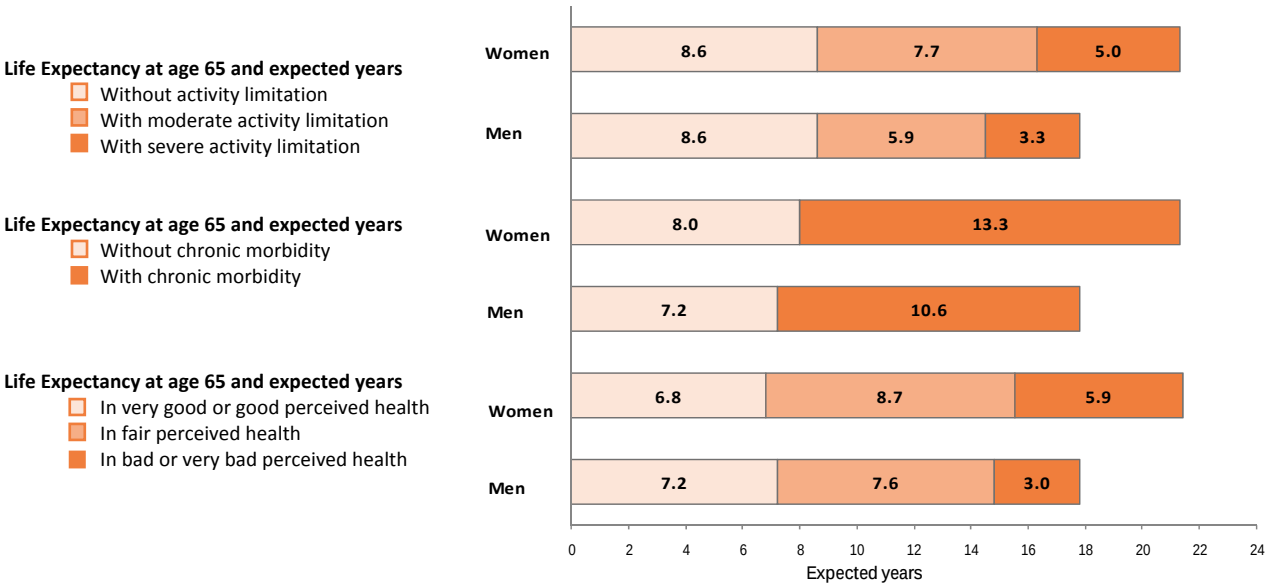

Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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Acknowledgements

Nadezda Lipunova (Institute of Hygiene –Health Information Center) has contributed to this report and its translation.

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Health Expectancy in Luxembourg

What is health expectancy?

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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).

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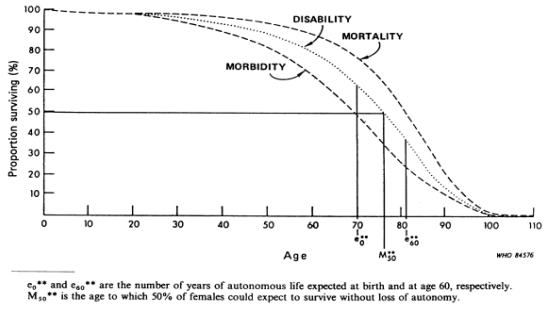

e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
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There are in fact as many health expectancies as concepts of health. The commonest health expectancies are those based on self-perceived health, activities of daily living and on chronic morbidity.

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References

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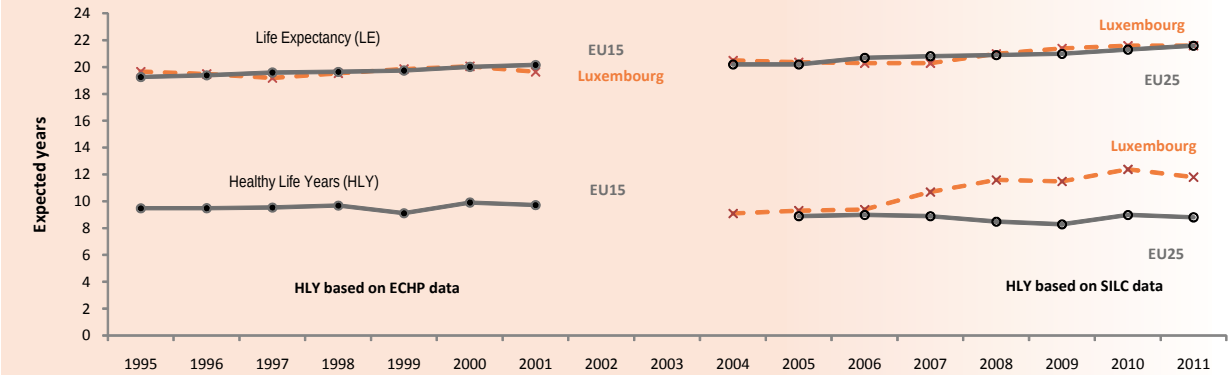
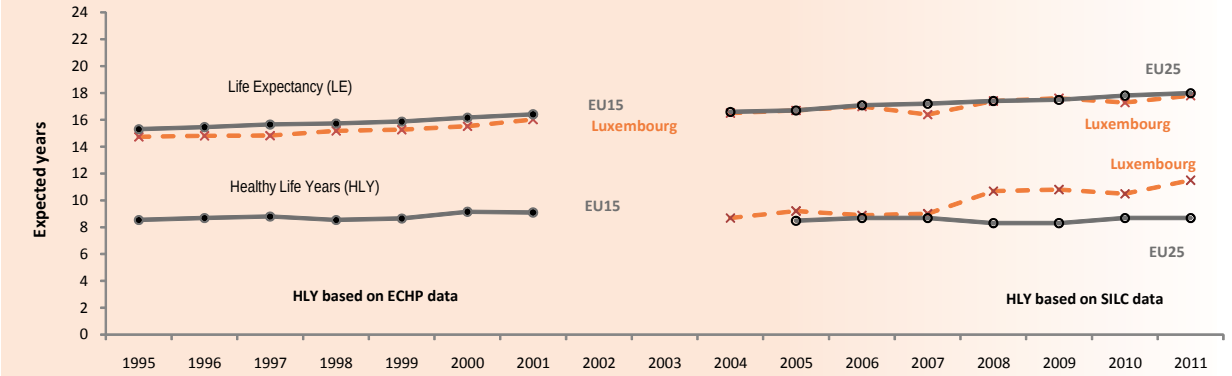
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Luxembourg and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2004-2011)

Women



Luxembourg	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	19.7	19.5	19.2	19.5	19.8	20.1	19.7	-	-	20.5	20.4	20.3	20.3	21.0	21.4	21.6	21.6
HLY	-	-	-	-	-	-	-	-	-	9.1	9.3	9.4	10.7	11.6	11.5	12.4	11.8
% HLY/LE	-	-	-	-	-	-	-	-	-	44%	46%	46%	53%	55%	54%	57%	55%

Men



Luxembourg	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	14.7	14.8	14.8	15.2	15.3	15.5	16.0	-	-	16.5	16.7	17.0	16.4	17.4	17.6	17.3	17.8
HLY	-	-	-	-	-	-	-	-	-	8.7	9.2	8.9	9.0	10.7	10.8	10.5	11.5
% HLY/LE	-	-	-	-	-	-	-	-	-	53%	55%	52%	55%	61%	61%	61%	65%

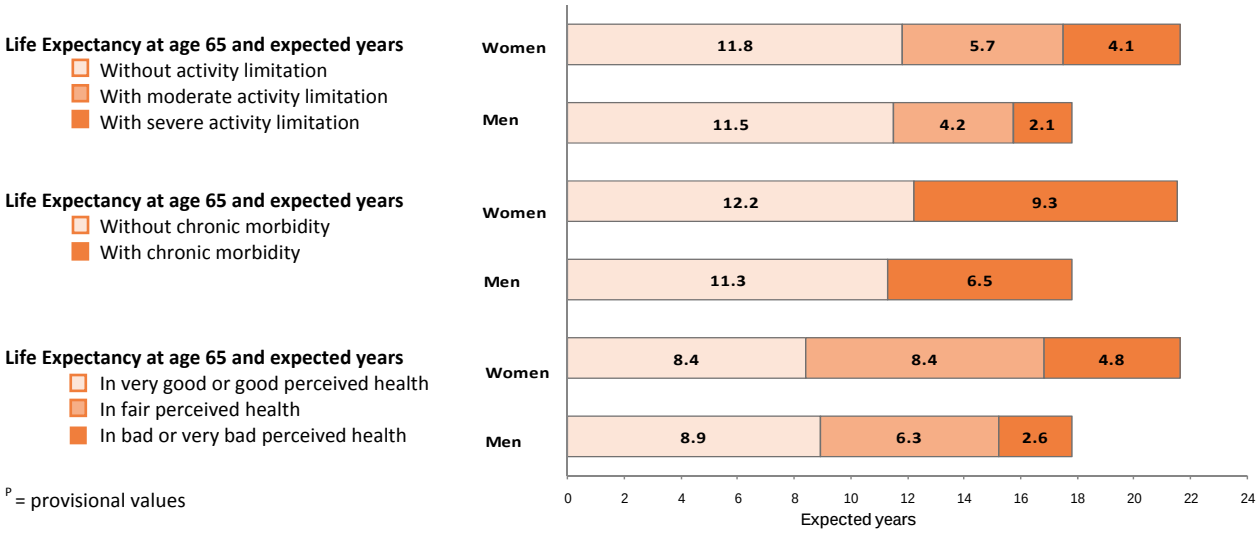
Key points:

Luxembourg life expectancy (LE) at age 65 has increased by 1.9 years for women and 1.8 years for men over the period 2001-2011: LE for men between 1995 and 2001 was below the EU15 average. By 2011 LE is above the EU25 average (21.6 for women and 18.0 for men) for women and remained below for men.

The first series of health expectancy based on activity limitation (HLY) over the period 1995-2001 is available only for 2 or 3 years in Luxembourg and therefore these are not shown.

The new HLY series, initiated in 2004 with the SILC data, shows that in 2011 women and men at age 65 can expect to spend 55% and 65% of their life without *self-reported long-term activity limitations* respectively. In 2011 the HLY values for Luxembourg is above the EU25 average (8.6 for women and 8.8 for men) for women and men, by 3.2 years and 2.7 years respectively. HLY strongly increased for men between 2010 and 2011 in Luxembourg while a slight decline is observed for women.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Luxembourg (Health data from SILC 2011[p])



[p] = provisional values

Key points:

In 2011 LE at age 65 in Luxembourg was 21.6 years for women and 17.8 years for men.

Based on the SILC 2011, at age 65, women spent 11.8 years (55% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 5.7 years (26%) with moderate activity limitation and 4.1 years (19%) with severe activity limitation.*

Men of the same age spent 11.5 years (65% of their remaining life) without activity limitation compared to 4.2 years (24%) with moderate activity limitation and 2.1 years (12%) with severe activity limitation.*

Although for all the health expectancies the years of life spent in positive health were greater for women than men, women spent a slightly 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 1204 in Denmark to 10419 in Italy. The sample size for Luxembourg comprised 817 women and 827 men aged 65+ years in 2011.

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Publications and reports on health expectancies for Luxembourg

- Zahlen P. *La perception de la santé*. STATEC, regards n°03-2013.
  http://www.statistiques.public.lu/fr/publications/series/regards/2013/03-13-sante/index.html
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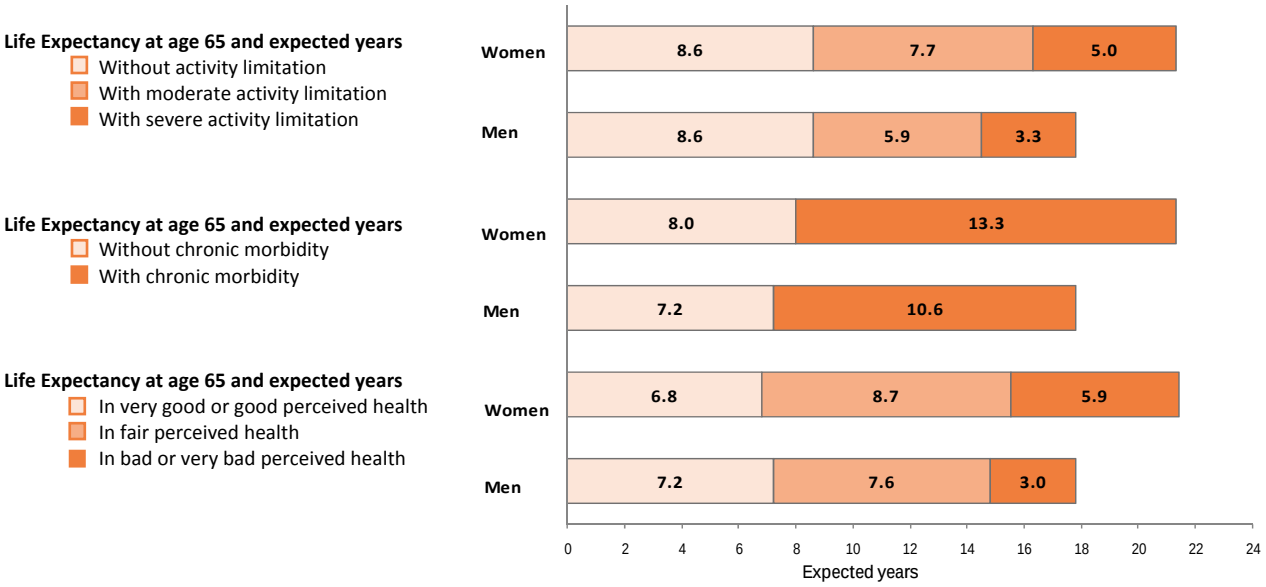

Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

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Health Expectancy in Malta

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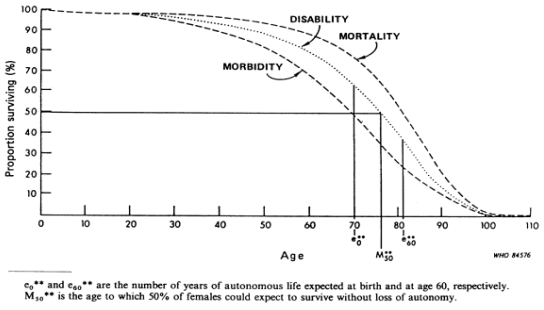

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References

Jagger C., Gillies C., Moscone F., Cambois E., Van Oyen H., Nusselder W., Robine J.-M., EHLEIS Team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008;372(9656) 2124-2131
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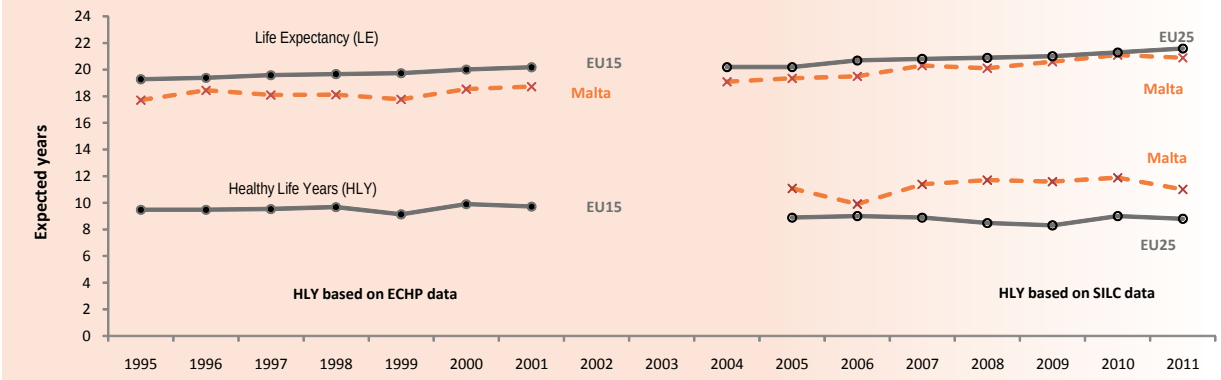
World Health Organization. *The uses of epidemiology in the study of the elderly: Report of a WHO Scientific Group on the Epidemiology of Aging.* Geneva: WHO, 1984 (Technical Report Series 706).

* 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.

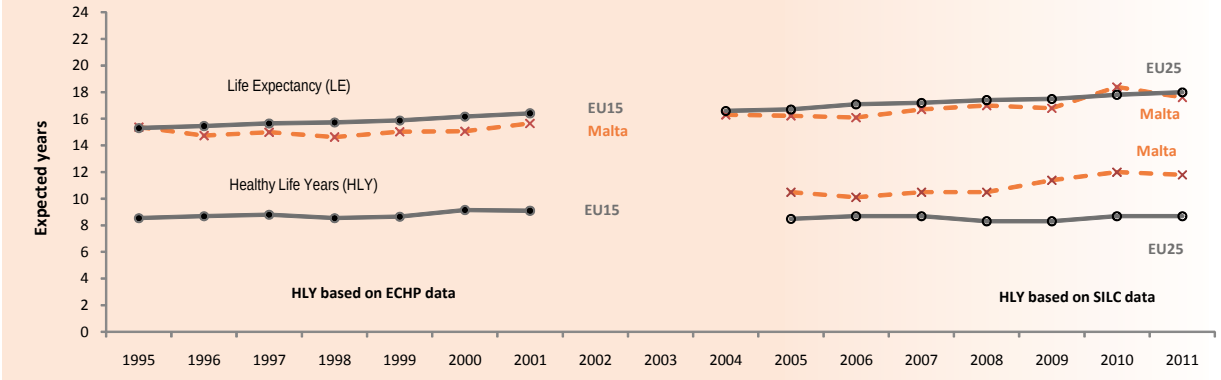
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Malta and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2005-2011)

Women



Malta	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	17.7	18.5	18.1	18.1	17.8	18.5	18.7	-	-	19.1	19.4	19.5	20.3	20.1	20.6	21.1	20.9
HLY	-	-	-	-	-	-	-	-	-	-	11.1	9.9	11.4	11.7	11.6	11.9	11.0
% HLY/LE	-	-	-	-	-	-	-	-	-	-	57%	51%	56%	58%	56%	56%	53%

Men



Malta	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	15.4	14.7	15.0	14.6	15.0	15.1	15.7	-	-	16.3	16.2	16.1	16.7	17.0	16.8	18.4	17.6
HLY	-	-	-	-	-	-	-	-	-	-	10.5	10.1	10.5	10.5	11.4	12.0	11.8
% HLY/LE	-	-	-	-	-	-	-	-	-	-	65%	63%	63%	62%	68%	65%	67%

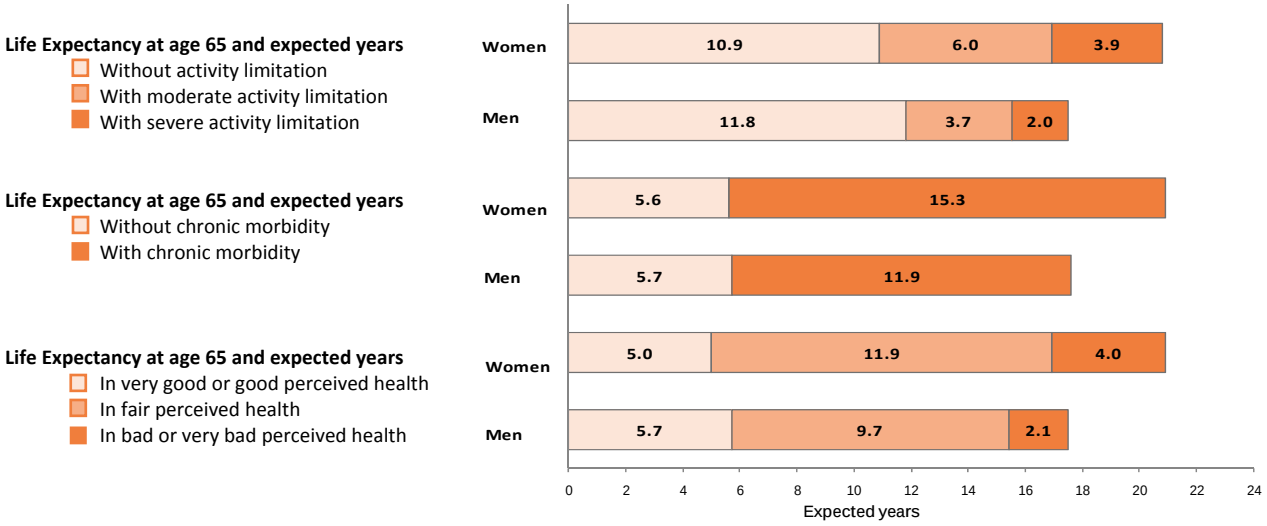
Key points:

Maltese life expectancy (LE) at age 65 has increased by 2.2 years for women and 1.9 years for men over the period 2001-2011: LE for both sexes between 1995 and 2001 was below the EU15 average. As from 2010, the LE for both men and women is converging to the EU25 average (21.6 for women and 18.0 for men).

Because Malta joined the European Union in 2004, the first series of health expectancy based on activity limitation (HLY) over the period 1995-2001 is not available.

The new HLY series, initiated in 2005 with the SILC data, shows that in 2011 women and men at age 65 can expect to spend 53% and 67% of their life without *self-reported long-term activity limitations* respectively. In 2011 the HLY values for Malta are above the EU25 average (8.6 for women and 8.8 for men) by 2.4 years for women and 3.0 years for men. Except a dip in 2006, HLY remained almost unchanged for women and men between 2005 and 2009 with an increasing trend between 2009 and 2010 but a small decrease in2011. Note that the wording of the GALI question was not changed in Malta in 2008.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Malta (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Malta was 20.9 years for women and 17.6 years for men.

Based on the SILC 2011 at age 65, women spent 10.9 years (52% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 6.0 years (29%) with moderate activity limitation and 3.9 years (19%) with severe activity limitation.*

Men of the same age spent 11.8 years (67% of their remaining life) without activity limitation compared to 3.7 years (21%) with moderate activity limitation and 2.0 years (11%) with severe activity limitation.*

Although total years lived by men was less than those for women, the numbers of years lived in very good or good perceived health and years lived without activity limitation were almost similar for women and men. However the number of years lived without chronic morbidity was slightly greater for women than men.

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, and the size of the samples varying from 1204 in Denmark to 10419 in Italy. The sample size for Malta comprised 1192women and 935 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

Publications and reports on health expectancies for Malta

- Jagger C., Gillies C., Mascone F., Cambois E., Van Oyen H., Nusselder W.J., Robine J.-M., EHLEIS team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008; 372(9656):2124-2131.
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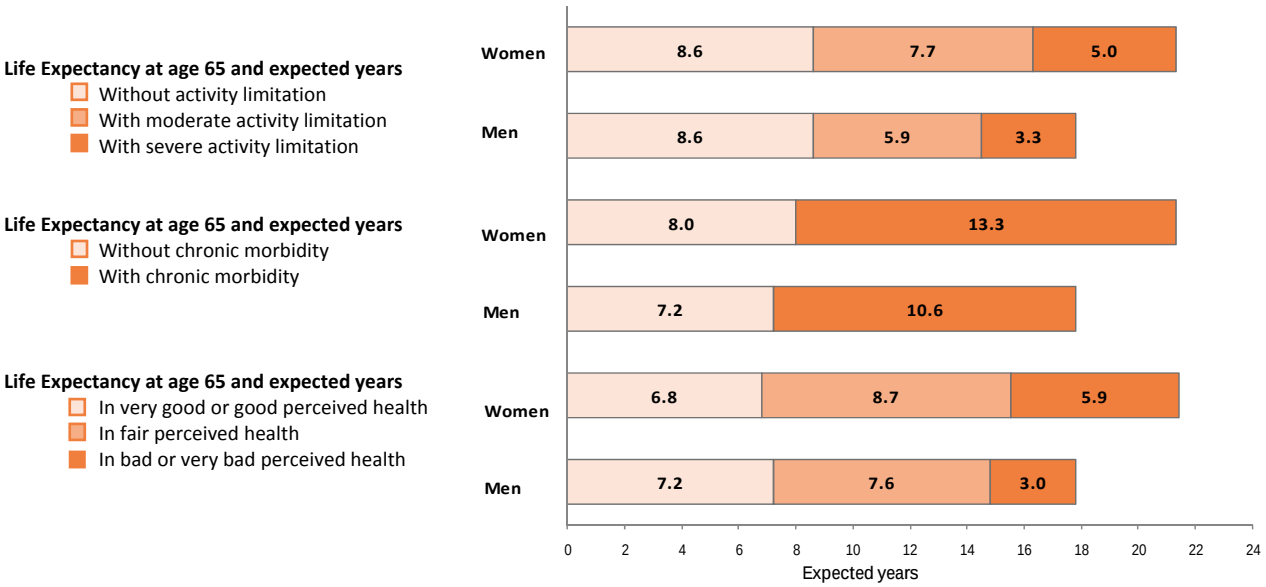

Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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Acknowledgements

Neville Calleja, Dorothy Gauci and Deborah Stoner (Ministry of Health-Department of Health Information and Research) have contributed to this report.

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Health Expectancy in The Netherlands

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.

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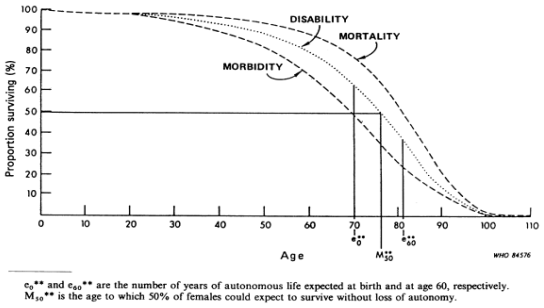
The general model of health transitions (WHO, 1984) shows the differences between life spent in different states: total survival, disability-free survival and survival without chronic disease. This leads naturally to life expectancy (the area under the 'mortality' curve), disability-free life expectancy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

The general model of health transition (WHO, 1984): observed mortality and hypothetical morbidity and disability survival curves for females, USA, 1980.



e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
M_{50}^{**} is the age to which 50% of females could expect to survive without loss of autonomy.

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).

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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**).

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- Health expectancies based on the two additional dimensions of health (chronic morbidity and self-perceived health) for the country of interest, based on SILC 2011;
- Life and health expectancy at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU 27 in 2011 by gender (Health data from SILC)

References

Jagger C., Gillies C., Moscone F., Cambois E., Van Oyen H., Nusselder W., Robine J.-M., EHLEIS Team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008;372(9656) 2124-2131
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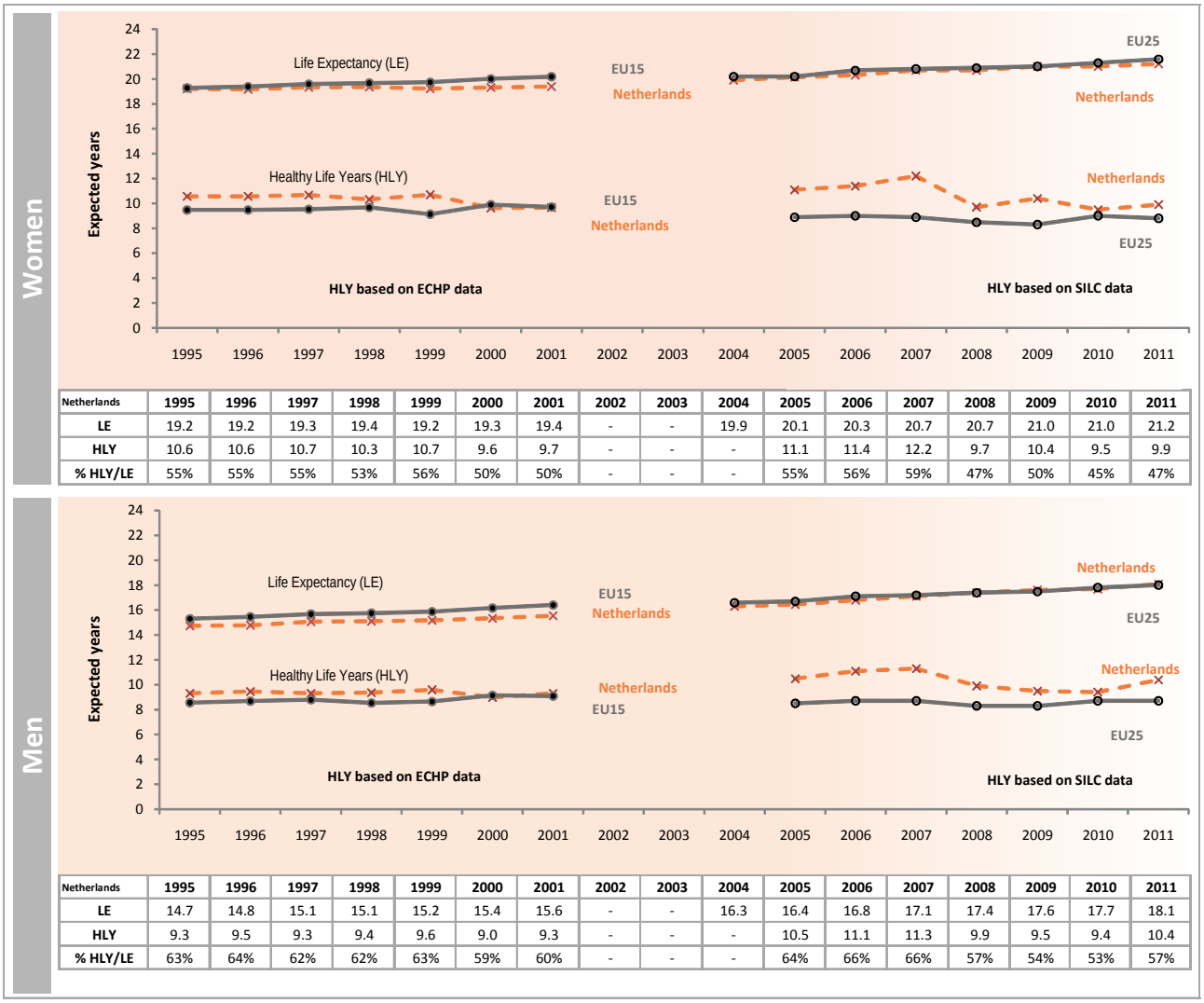
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for The Netherlands and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2005-2011)



Netherlands	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	19.2	19.2	19.3	19.4	19.2	19.3	19.4	-	-	19.9	20.1	20.3	20.7	20.7	21.0	21.0	21.2
HLY	10.6	10.6	10.7	10.3	10.7	9.6	9.7	-	-	-	11.1	11.4	12.2	9.7	10.4	9.5	9.9
% HLY/LE	55%	55%	55%	53%	56%	50%	50%	-	-	-	55%	56%	59%	47%	50%	45%	47%

Netherlands	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	14.7	14.8	15.1	15.1	15.2	15.4	15.6	-	-	16.3	16.4	16.8	17.1	17.4	17.6	17.7	18.1
HLY	9.3	9.5	9.3	9.4	9.6	9.0	9.3	-	-	-	10.5	11.1	11.3	9.9	9.5	9.4	10.4
% HLY/LE	63%	64%	62%	62%	63%	59%	60%	-	-	-	64%	66%	66%	57%	54%	53%	57%

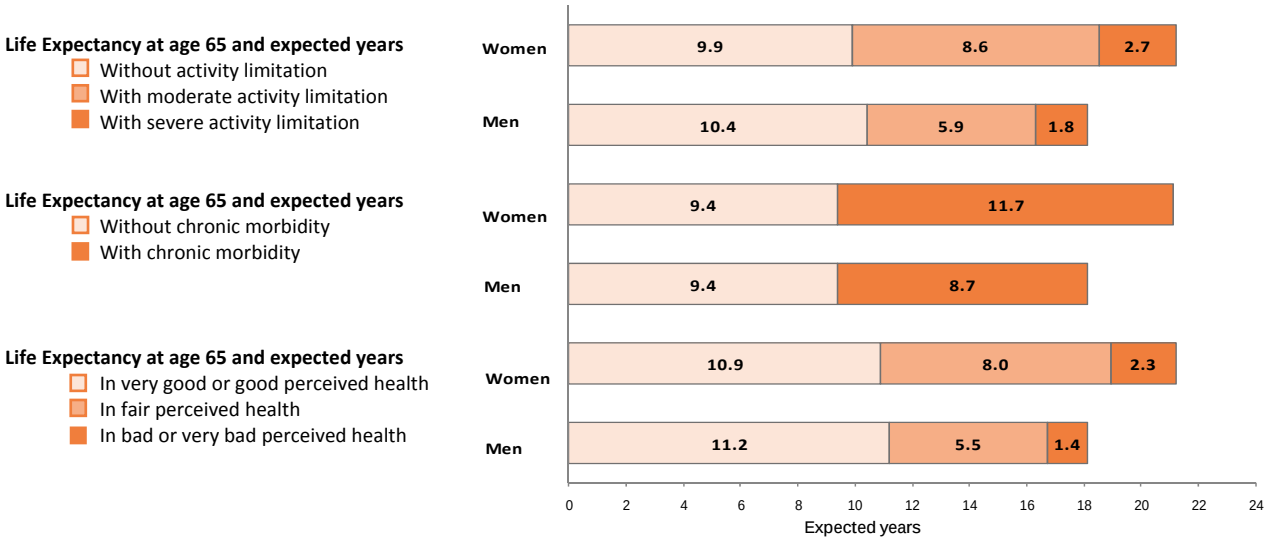
Key points:

Dutch life expectancy (LE) at age 65 has increased by 1.8 years for women and 2.5 years for men over the period 2001-2011. For both sexes in 2001 LE was slightly below the EU15 average, and by 2011 LE for Dutch men and women was very close to the EU25 average (21.6 for women and 18.0 for men).

Over the 1995-2001 period, health expectancy at age 65, based on activity limitation (HLY) 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 2011 above the EU25 average (8.6 for women and 8.8 for men) by 1.3 years for women and 1.6 years for men . In 2011 women and men at age 65 can expect to spend 47% and 57% 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. After a decrease of HLY for men and women between 2009 and 2010, in 2011 HLY increased, although for women only slightly.

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 2011)



Key points:

In 2011 LE at age 65 in the Netherlands was 21.2 years for women and 18.1 years for men.

Based on the SILC 2011 at age 65, women spent 9.9 years (47% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 8.6 years (41%) with moderate activity limitation and 2.7 years (12%) with severe activity limitation.*

Men of the same age spent 10.4 years (57% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 1.8 years (10%) with severe activity limitation.*

For all the health expectancies the years of life spent in positive health were greater or slightly greater for men than women and 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 1204 in Denmark to 10419 in Italy. The sample size for Netherlands comprised 1340 women and 966 men aged 65+ years in 2011.

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- Majer IM, Stevens R, Nusselder WJ, Mackenbach JP, van Baal PH. Modeling and forecasting health expectancy: theoretical framework and application. Demography. 2013 Apr;50(2):673-97.
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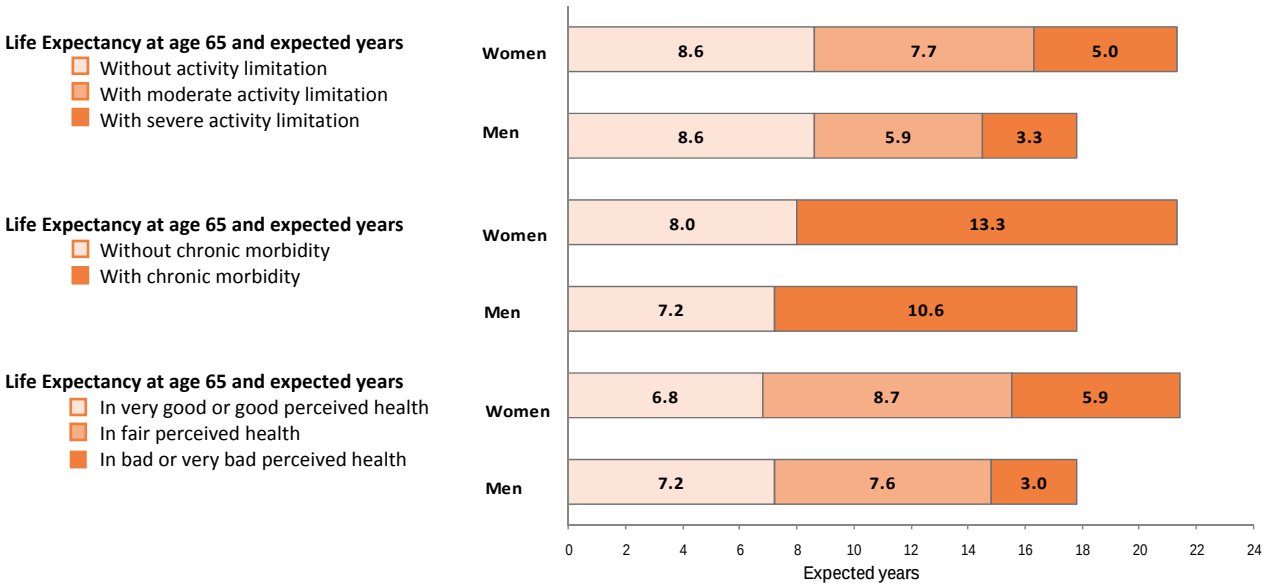

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Wilma Nusselder (Erasmus University), Coen van Gool (National Institute for Public Health and the Environment) and Jan-Willen Bruggink (Centraal Bureau voor de Statistiek) have contributed to this report and its translation.

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Health Expectancy in Poland

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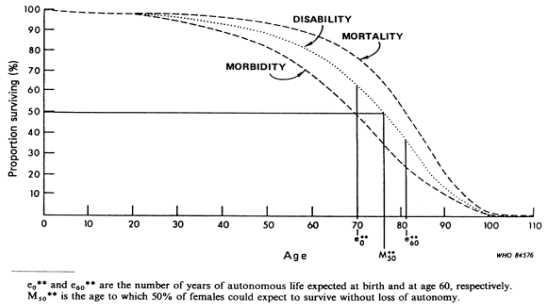

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- Health expectancies based on the two additional dimensions of health (chronic morbidity and self-perceived health) for the country of interest, based on SILC 2011;
- Life and health expectancy at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU 27 in 2011 by gender (Health data from SILC)

References

Jagger C., Gillies C., Moscone F., Cambois E., Van Oyen H., Nusselder W., Robine J.-M., EHLEIS Team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008;372(9656) 2124-2131
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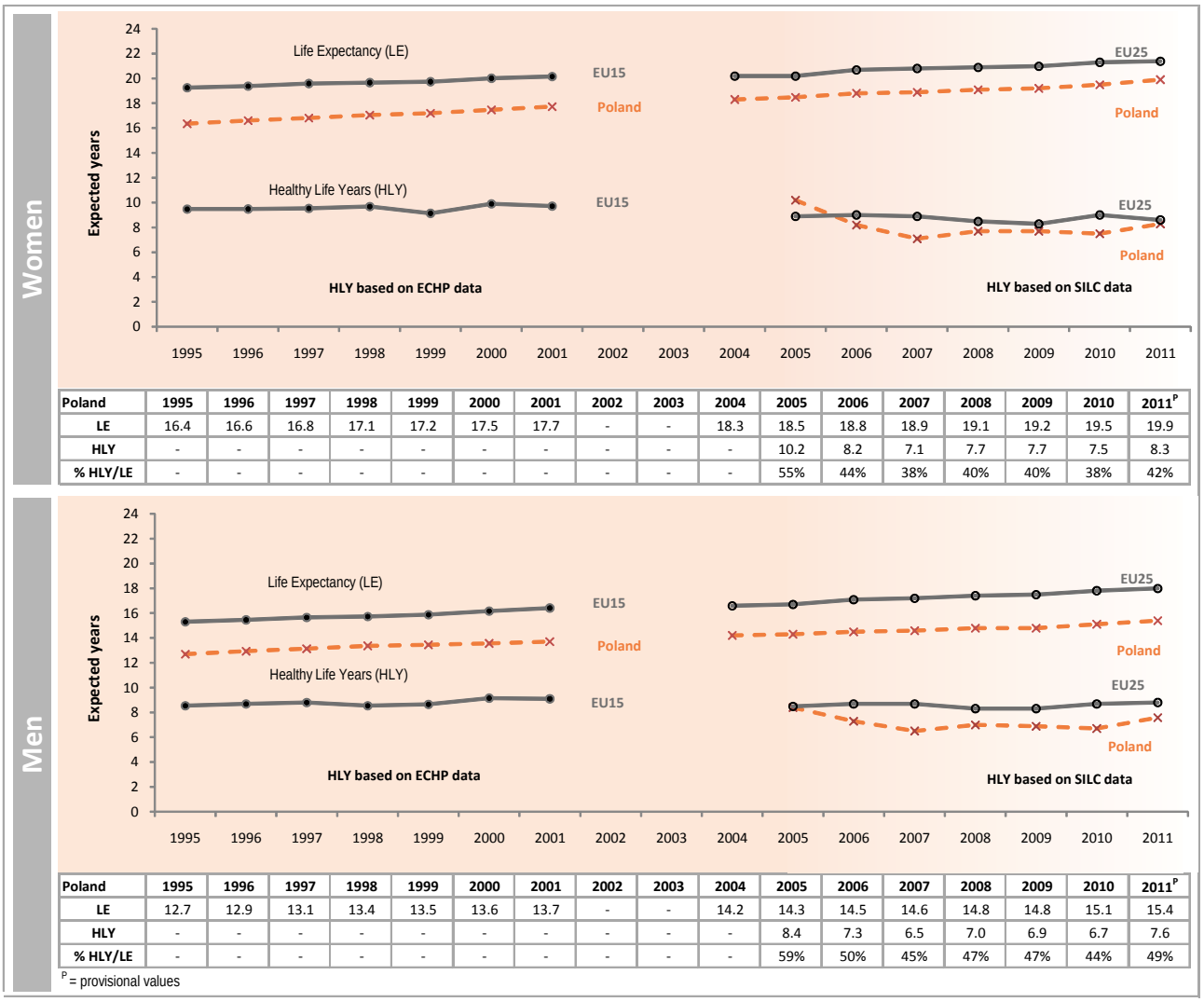
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Poland and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2005-2011)



Poland	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011[P]
LE	16.4	16.6	16.8	17.1	17.2	17.5	17.7	-	-	18.3	18.5	18.8	18.9	19.1	19.2	19.5	19.9
HLY	-	-	-	-	-	-	-	-	-	-	10.2	8.2	7.1	7.7	7.7	7.5	8.3
% HLY/LE	-	-	-	-	-	-	-	-	-	-	55%	44%	38%	40%	40%	38%	42%

Poland	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011[P]
LE	12.7	12.9	13.1	13.4	13.5	13.6	13.7	-	-	14.2	14.3	14.5	14.6	14.8	14.8	15.1	15.4
HLY	-	-	-	-	-	-	-	-	-	-	8.4	7.3	6.5	7.0	6.9	6.7	7.6
% HLY/LE	-	-	-	-	-	-	-	-	-	-	59%	50%	45%	47%	47%	44%	49%

[P] = provisional values

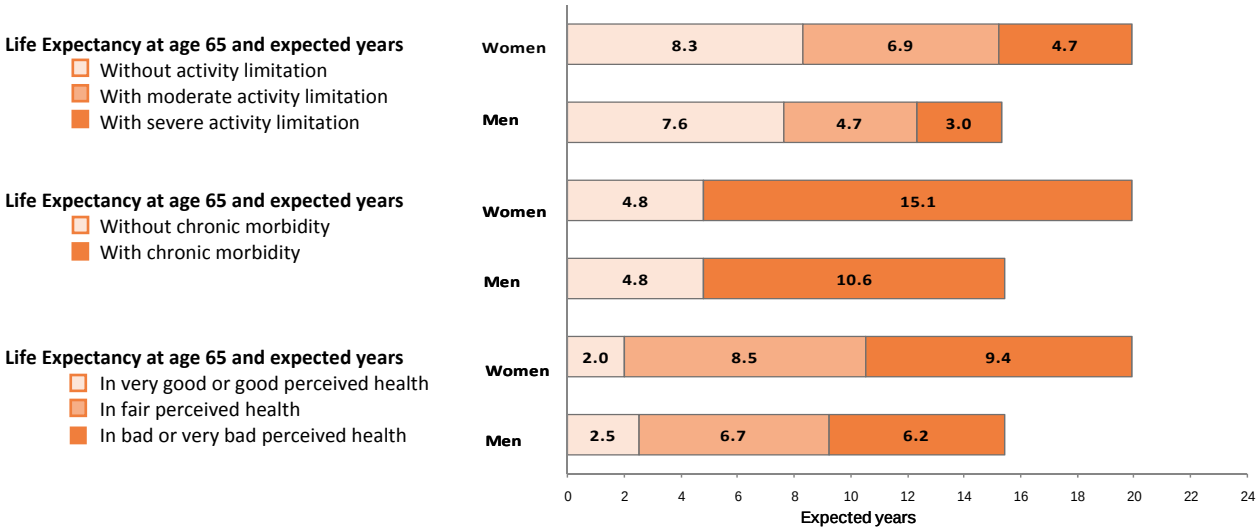
Key points:

Polish life expectancy (LE) at age 65 has increased by 2.2 years for women and 1.7 years for men over the 2001-2011 period: LE for both sexes between 1995 and 2001 was below the EU15 average and by 2011 remained lower than the EU25 average (21.6 for women and 18.0 for men) by 1.7 years for women and 2.6 years for men.

Because Poland joined the European Union in 2004, health expectancy based on activity limitation (HLY) over 1995-2001 period is not available.

The new HLY series, initiated in 2005 with the SILC data, shows that in 2011 women and men at age 65 can expect to spend 42% and 49% of their life without *self-reported long-term activity limitations* respectively. In 2011 the HLY values for Poland are below the EU25 average (of 8.8 for women and 8.7 for men) by 0.5 year for women and 1.1 years for men. The HLY values remained stable in Poland since 2007 but increased between 2010 and 2011. Note that there are some differences in the wording of the GALI question the years 2005 and in 2006-2008 and 2009-2010 in Poland.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Poland (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Poland was 19.9 years for women and 15.4 years for men.

Based on the SILC 2011, at age 65, women can expect to spend 8.3 years (42% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY), 6.9 years (35%) with moderate activity limitation and 4.7 years (23%) with severe activity limitation.*

Men of the same age can expect to spend 7.6 years (49% of their remaining life) without activity limitation compared to 4.7 years (31%) with moderate activity limitation and 3.0 years (20%) with severe activity limitation.*

Although total years lived by men were less than those for women, the numbers of years lived in very good or good perceived health and the years lived without chronic morbidity were similar. However, the number of years lived without activity limitation was slightly greater for women than men.

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 1204 in Denmark to 10419 in Italy. The sample size for Poland comprised 3589 women and 2343 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

Publications and reports on health expectancies for Poland

- Wojtyniak B., Stokwiszewski J., Gorynski P., Poznanska A. *Długość życia i umieralność ludności Polski (Life expectancy and mortality of the Polish population)*. In: Wojtyniak B., Gorynski P., Moskalewicz B., editors. *Sytuacja Zdrowotna Ludności Polski i jej Uwarunkowania (Health situation of the Polish Populationand its Determinants)*. Warszawa: Narodowy Instytut Zdrowia Publicznego-Państwowy Zakład Higieny; 2012.
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- Wojtyniak B., Stokwiszewski J., Gorynski P., Poznanska A. *Długość życia i umieralność ludności Polski (Life expectancy and mortality of the Polish population)*. In: Wojtyniak B,Gorynski P, editors. *Sytuacja Zdrowotna Ludności Polski (Health situation of the Polish Population)*. Warszawa: Narodowy Instytut Zdrowia Publicznego-Państwowy Zakład Higieny; 2008. p. 31-86.
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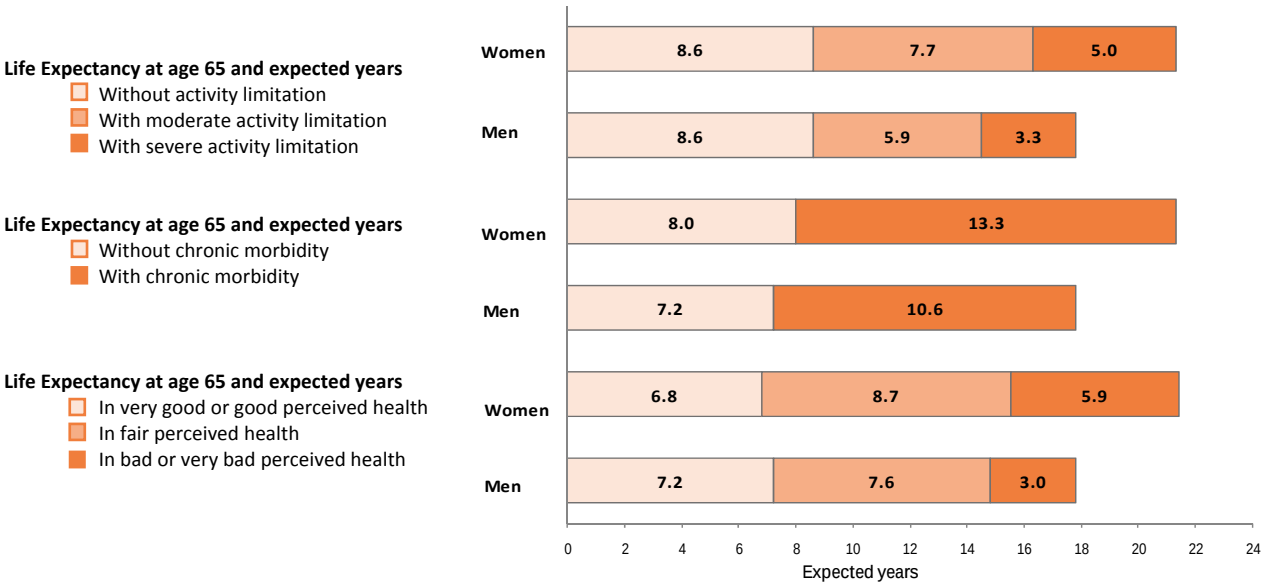
Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU27, in 2011, by gender (Health data from SILC)



Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.
Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.
Men of the same age spent the same amount of time 8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.
However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.
In total, life expectancy is greater for women than for men (+3.5 years) but 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.

About the Joint Action EHLEIS

The current Joint Action EHLEIS (European Health and Life Expectancy Information System) and EurOhex (www.eurohex.eu) are co-funded by 11 Member States, the European Commission, DG SANCO, and two French institutions: the Ministry of Health and theNational 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 and www.healthylife-years.eu

Acknowledgements

Bogdan Wojtyniak (National Institute of Public Health) has contributed to this report and its translation.

Health Expectancy in Portugal

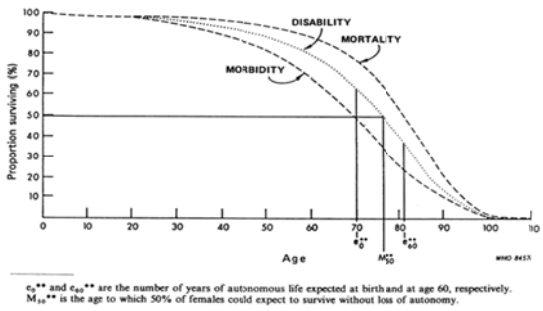
What is health expectancy?

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).

The general model of health transition (WHO, 1984): observed mortality and hypothetical morbidity and disability survival curves for females, USA, 1980.



e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
M_{50}^{**} is the age to which 50% of females could expect to survive without loss of autonomy.

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?

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References

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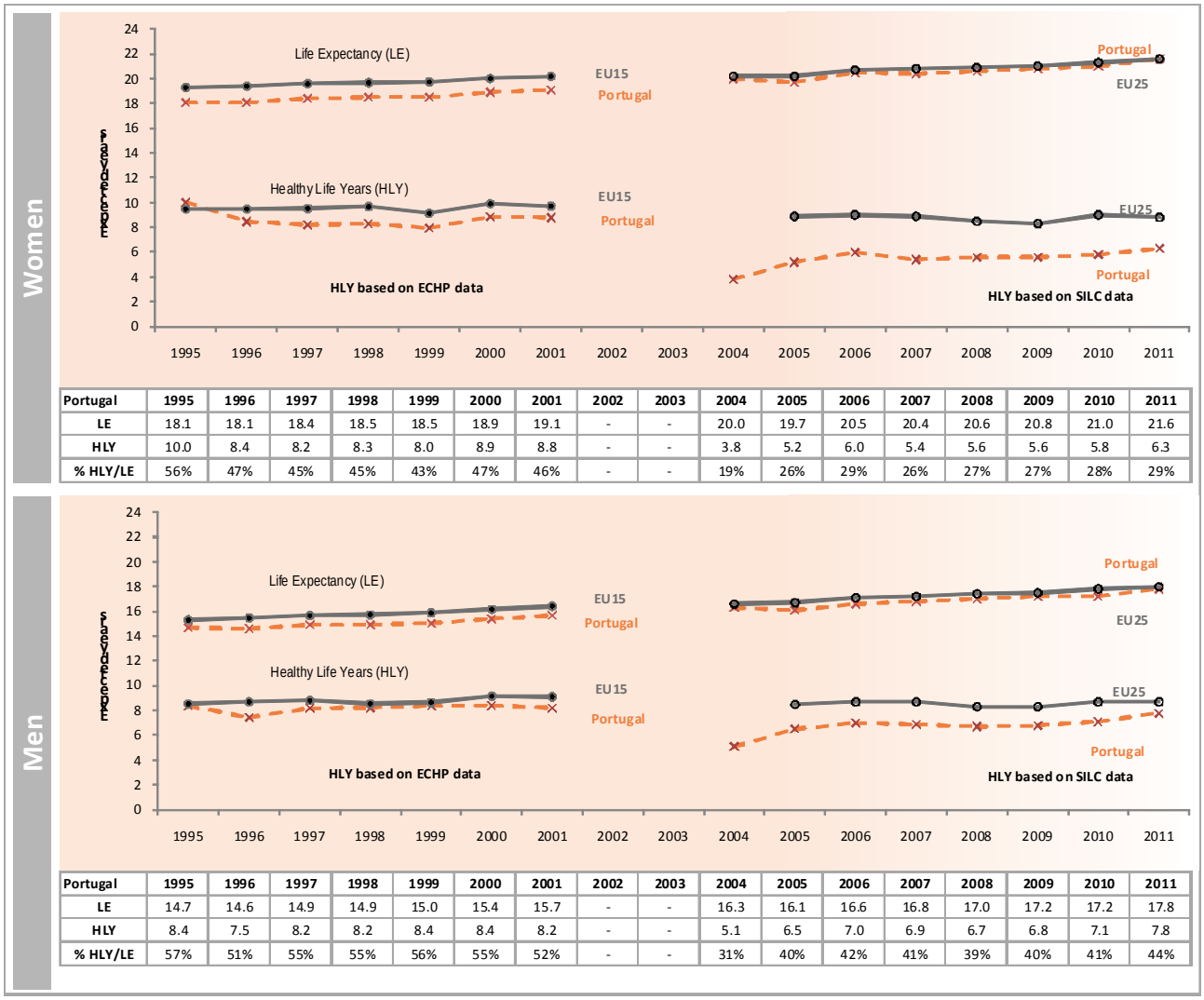
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Portugal and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2004-2011)



Portugal	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	18.1	18.1	18.4	18.5	18.5	18.9	19.1	-	-	20.0	19.7	20.5	20.4	20.6	20.8	21.0	21.6
HLY	10.0	8.4	8.2	8.3	8.0	8.9	8.8	-	-	3.8	5.2	6.0	5.4	5.6	5.6	5.8	6.3
% HLY/LE	56%	47%	45%	45%	43%	47%	46%	-	-	19%	26%	29%	26%	27%	27%	28%	29%

Portugal	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	14.7	14.6	14.9	14.9	15.0	15.4	15.7	-	-	16.3	16.1	16.6	16.8	17.0	17.2	17.2	17.8
HLY	8.4	7.5	8.2	8.2	8.4	8.4	8.2	-	-	5.1	6.5	7.0	6.9	6.7	6.8	7.1	7.8
% HLY/LE	57%	51%	55%	55%	56%	55%	52%	-	-	31%	40%	42%	41%	39%	40%	41%	44%

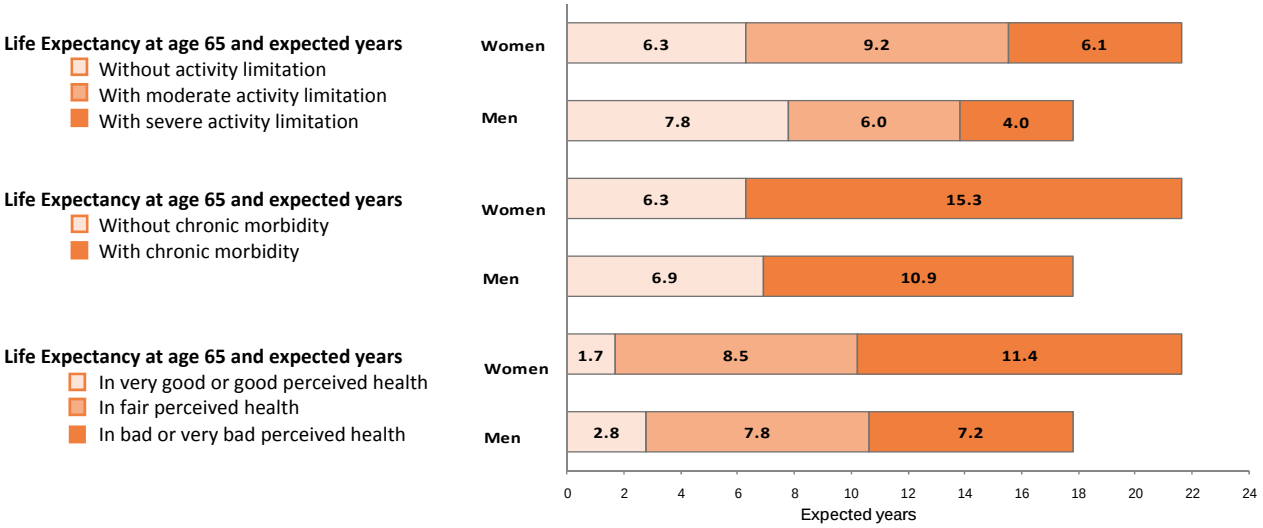
Key points:

Portuguese life expectancy (LE) at age 65 has increased by 2.5 years for women and 2.1 years for men over the period 2001-2011: LE for both sexes between 1995 and 2001 was below the EU15 average and below the EU25 average until 2010 but became similar to the EU25 average (21.6 for women and 18.0 for men) in 2011 for women and remained slightly below for men.

Over the 1995-2001 period, health expectancy based on activity limitation (HLY) at age 65 from the ECHP data remained almost stable. 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 46% for women and 52% for men in 2001. Between 1996 and 2001 HLY in Portugal was below the EU15 average.

The new HLY series, initiated in 2004 with the SILC data, shows values for Portugal being in 2011 lower than the EU25 average (8.8 for women and 8.7 for men) by 2.5 and 0.9 years for women and men respectively. In 2011 women and men at age 65 can expect to spend 29% and 44% of their life without *self-reported long-term activity limitations* respectively. Since 2006 HLY remained stable for women and men in Portugal but increased notably in 2010 and continue to increase in 2011. Note that the wording of the GALI question was changed in 2008 to better reflect the EU standard.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Portugal (Health data from SILC 2011)



Key points:

In 2011 LE at age 65 in Portugal was 21.6 years for women and 17.8 years for men.

Based on the SILC 2011, at age 65, women spent 6.3 years (29% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 9.2 years (43%) with moderate activity limitation and 6.1 years (28%) with severe activity limitation.*

Men of the same age spent 7.8 years (44% of their remaining life) without activity limitation compared to 6.0 years (34%) with moderate activity limitation and 4.0 years (22%) with severe activity limitation.*

Although total years lived by men were less than those for women, for all the health expectancies the years of life spent in positive health were greater for men than women. Therefore 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, and the size of the samples varying from 1204 in Denmark to 10419 in Italy. The sample size for Portugal comprised 2118 women and 1583 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

Publications and reports on health expectancies for Portugal

- Instituto Nacional de Estatistica; *A Península Ibérica em Números – 2010/La Península Ibérica en Cifras - 2010*. Madrid/Lisboa. Instituto Nacional de Estadística, España/Instituto Nacional de Estatística, Portugal. 2011.
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- *Esperanças de vida sem incapacidade fisica de longa duraçao: Portugal continental: 1995-1996*. Portugal: Instituto Nacional de Estatistica; 2000.

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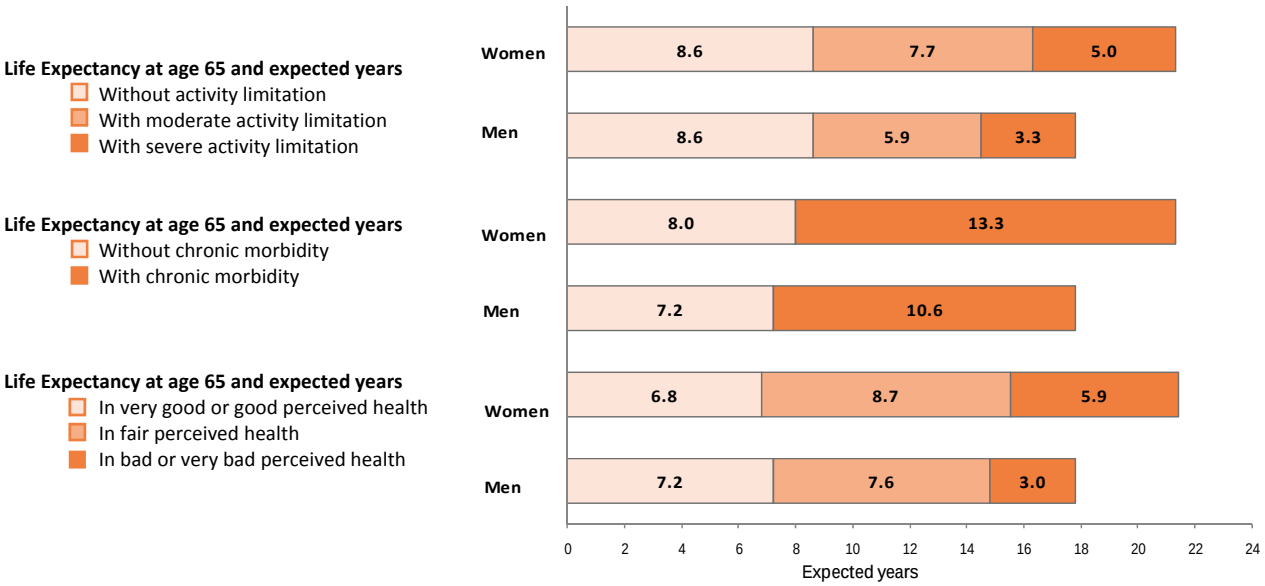

Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time 8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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Acknowledgements

Carlos Matias Dias (Instituto Nacional de Saude Doutor Ricardo Jorge) has contributed to this report and its translation.

Health Expectancy in Romania

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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).

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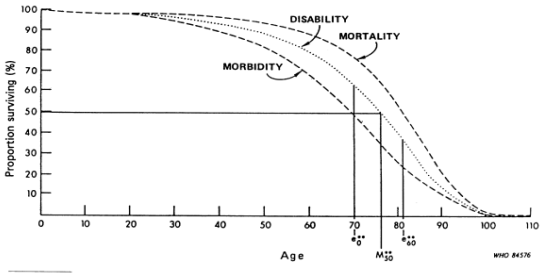

e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
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There are in fact as many health expectancies as concepts of health. The commonest health expectancies are those based on self-perceived health, activities of daily living and on chronic morbidity.

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References

Jagger C., Gillies C., Moscone F., Cambois E., Van Oyen H., Nusselder W., Robine J.-M., EHLEIS Team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008;372(9656) 2124-2131
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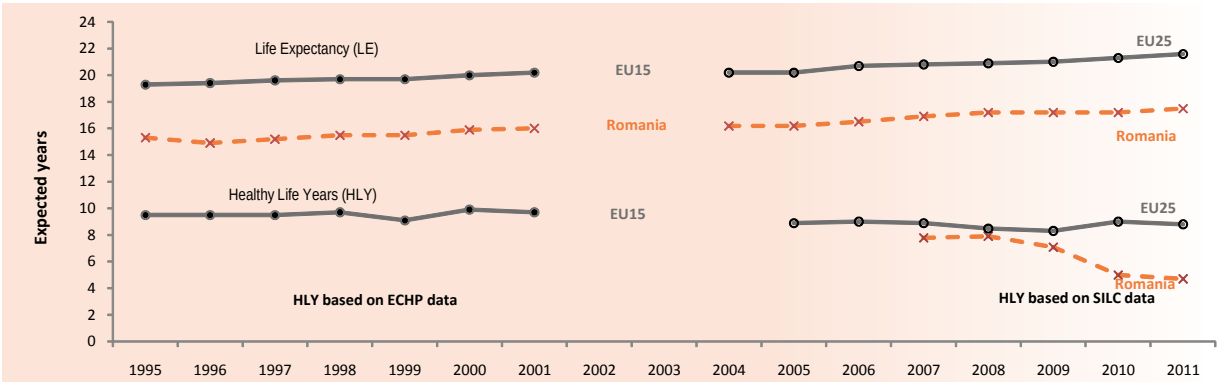
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Romania and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2005-2011)

Women



Romania	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	15.3	14.9	15.2	15.5	15.5	15.9	16.0	-	-	16.2	16.2	16.5	16.9	17.2	17.2	17.2	17.5
HLY	-	-	-	-	-	-	-	-	-	-	-	-	7.8	7.9	7.1	5.0	4.7
% HLY/LE	-	-	-	-	-	-	-	-	-	-	-	-	46%	46%	41%	29%	27%

Men

Romania	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	12.7	12.4	12.6	12.9	12.9	13.3	13.2	-	-	13.3	13.4	13.6	13.9	14.0	14.0	14.0	14.3
HLY	-	-	-	-	-	-	-	-	-	-	-	-	7.7	7.8	7.2	5.9	5.3
% HLY/LE	-	-	-	-	-	-	-	-	-	-	-	-	55%	56%	51%	42%	37%

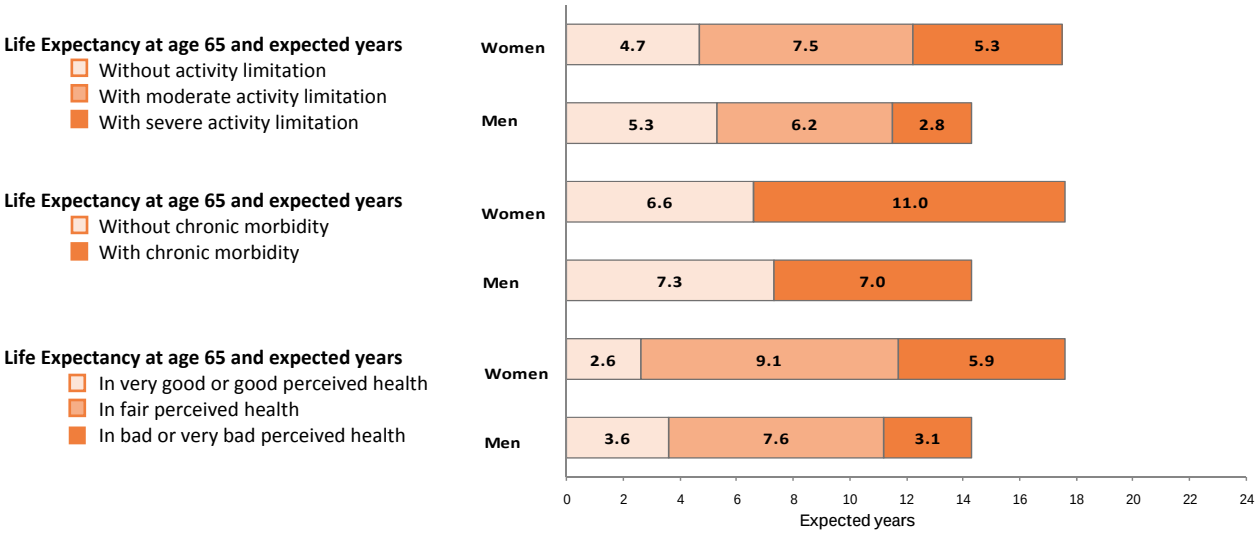
Key points:

Romanian life expectancy (LE) at age 65 has increased by 1.5 years for women and 1.1 year for men over the period 2001-2011: LE for men and women between 1995 and 2001 remained lower the EU15 average. By 2011 LE for men and women was largely below the EU25 average (21.6 for women and 18.0 for men).

Because Romania joined the European Union in 2007, health expectancy based on activity limitation (HLY) is not available before 2007.

The new HLY series, initiated in 2007 with the SILC data, shows that in 2011 women and men at age 65 can expect to spend 27% and 37% of their life without *self-reported long-term activity limitations* respectively. The HLY values for Romania are 4.1 years and 3.4 years below the EU25 average (8.8 for women and 8.7 for men) for women and men respectively in 2011. The HLY values decreased strongly between 2009 and 2010 for both genders and continued a small decrease in 2011. Note that the wording of the GALI question was changed in 2008 and change again in 2010.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Romania (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Romania was 17.5 years for women and 14.3 years for men.

Based on the SILC 2011 at age 65, women spent 4.7 years (27% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.5 years (43%) with moderate activity limitation and 5.3 years (30%) with severe activity limitation.*

Men of the same age spent 5.3 years (37% of their remaining life) without activity limitation compared to 6.2 years (43%) with moderate activity limitation and 2.8 years (20%) with severe activity limitation.*

Although the total years lived by men were less than those for women, for all the health expectancies the years of life spent in positive health were greater for men than women. Therefore 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, and the size of the samples varying from 1204 in Denmark to 10419 in Italy. The sample size for Romania comprised 2496 women and 1852 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

Publications and reports on health expectancies for Romania

- OECD (2010), *Health at a Glance: Europe 2010*, OECD Publishing. http://dx.doi.org/10.1787/health_glance-2010-en
- INS (2013), *Evolution of mortality in Romania*.

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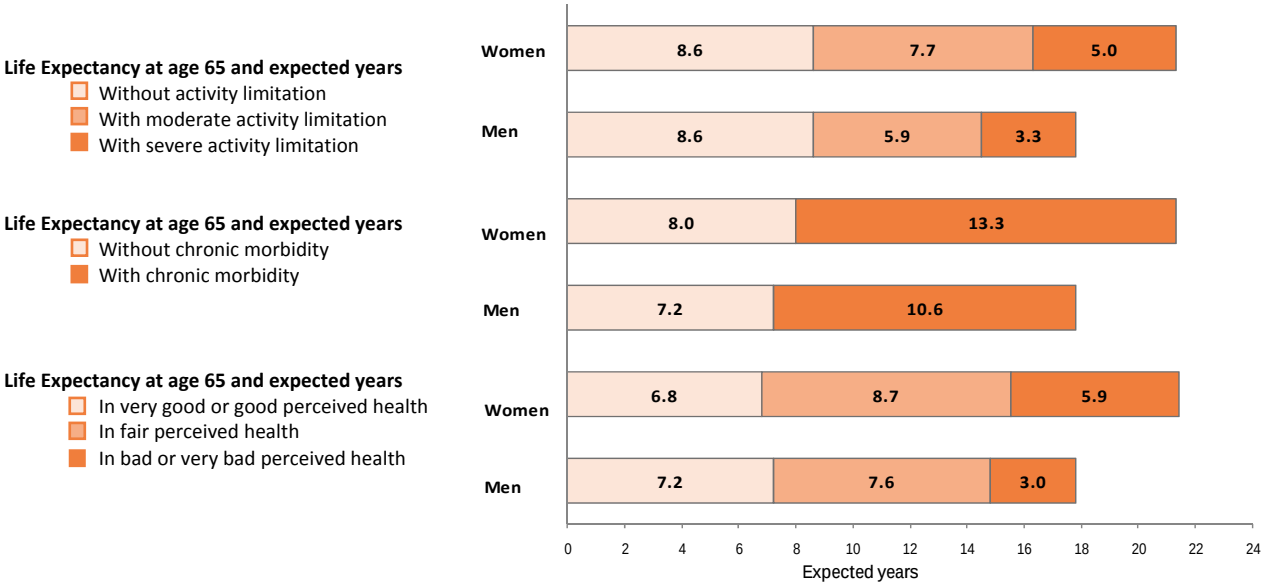

Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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Acknowledgements

Marcela Postelnicu (National Institute of Statistics) has contributed to this report and its translation.

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Tel: +33 (0)467 14 33 85 /e-mail: christine.perrier@inserm.fr

Health Expectancy in Slovakia

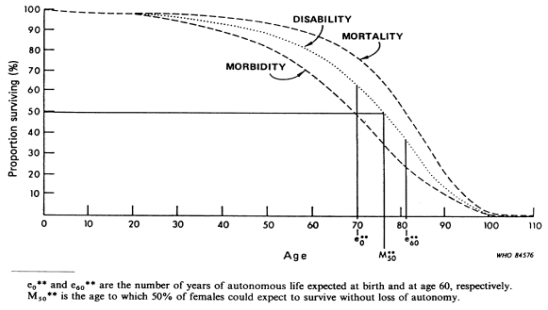
What is health expectancy?

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).

The general model of health transition (WHO, 1984): observed mortality and hypothetical morbidity and disability survival curves for females, USA, 1980.



e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
M_{50}^{**} is the age to which 50% of females could expect to survive without loss of autonomy.

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**).

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- Health expectancies based on the two additional dimensions of health (chronic morbidity and self-perceived health) for the country of interest, based on SILC 2011;
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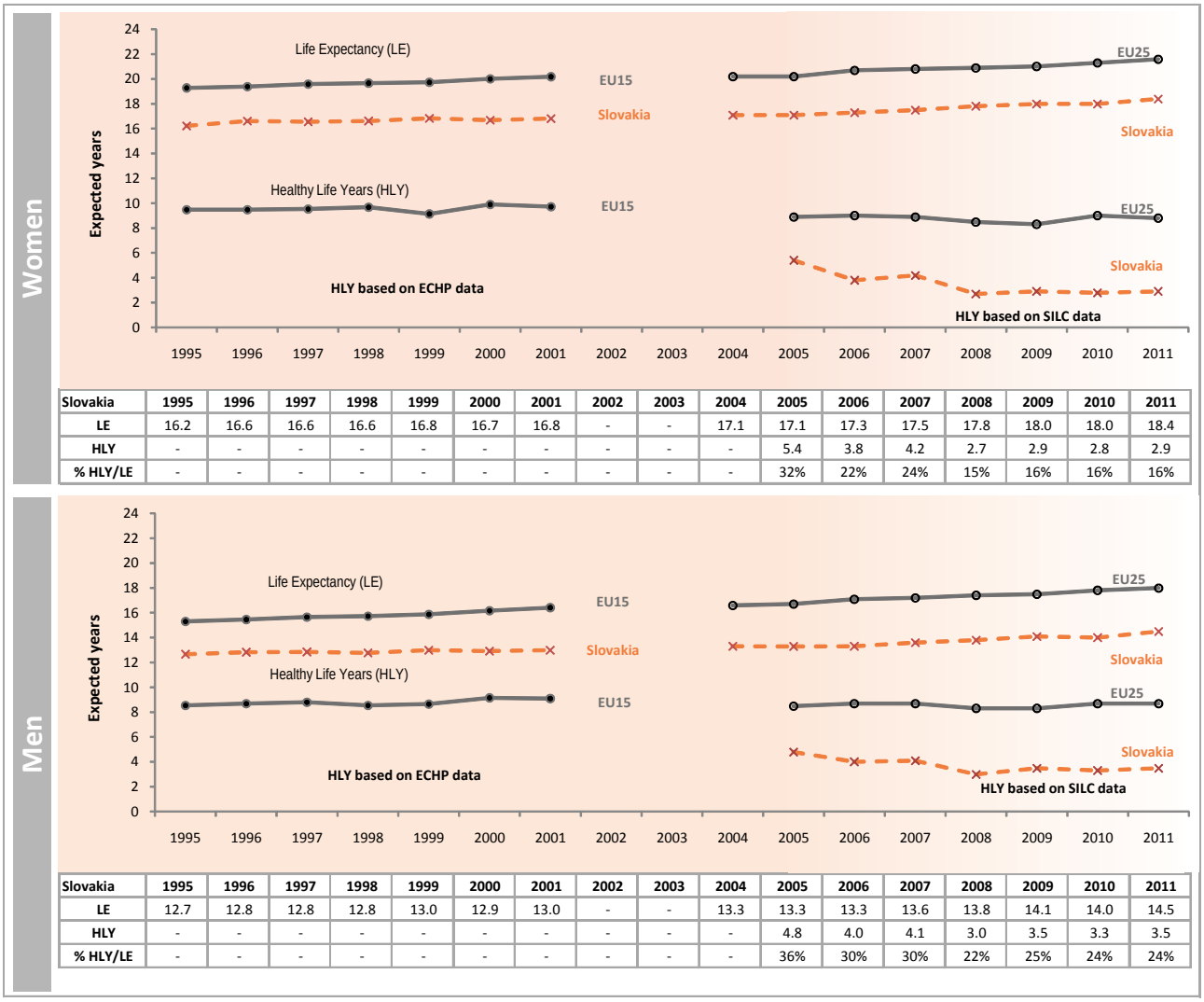

Slovakia	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	16.2	16.6	16.6	16.6	16.8	16.7	16.8	-	-	17.1	17.1	17.3	17.5	17.8	18.0	18.0	18.4
HLY	-	-	-	-	-	-	-	-	-	-	5.4	3.8	4.2	2.7	2.9	2.8	2.9
% HLY/LE	-	-	-	-	-	-	-	-	-	-	32%	22%	24%	15%	16%	16%	16%

Slovakia	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	12.7	12.8	12.8	12.8	13.0	12.9	13.0	-	-	13.3	13.3	13.3	13.6	13.8	14.1	14.0	14.5
HLY	-	-	-	-	-	-	-	-	-	-	4.8	4.0	4.1	3.0	3.5	3.3	3.5
% HLY/LE	-	-	-	-	-	-	-	-	-	-	36%	30%	30%	22%	25%	24%	24%

Key points:

Slovak life expectancy (LE) at age 65 has increased by 1.6 years for women and 1.5 years for men over the period 2001-2011: LE for both sexes between 1995 and 2001 was below the EU15 average and remained below the EU25 average (21.6 for women and 18.0 for men) by 3.5 years for men and 3.0 years for women in 2011.

Because Slovakia joined the European Union in 2004, the first series of health expectancy based on activity limitation (HLY) over the period 1995-2001 is not available.

The new HLY series, initiated in 2005 with the SILC data, shows that in 2011 women and men at age 65 can expect to spend 16% and 24% of their life without *self-reported long-term activity limitations* respectively. In 2011 the HLY values for Slovakia are below the EU25 average (8.6 for women and 8.8 for men) by 5.7 years and 5.3 years for women and men respectively. Note that the wording of the GALI question was changed in 2008 to better reflect the EU standard. This led to a clear decrease in HLY for men and women between 2007 and 2008. Then from 2008 to 2010 HLY remained almost stable for women and men and slightly increased in 2011.

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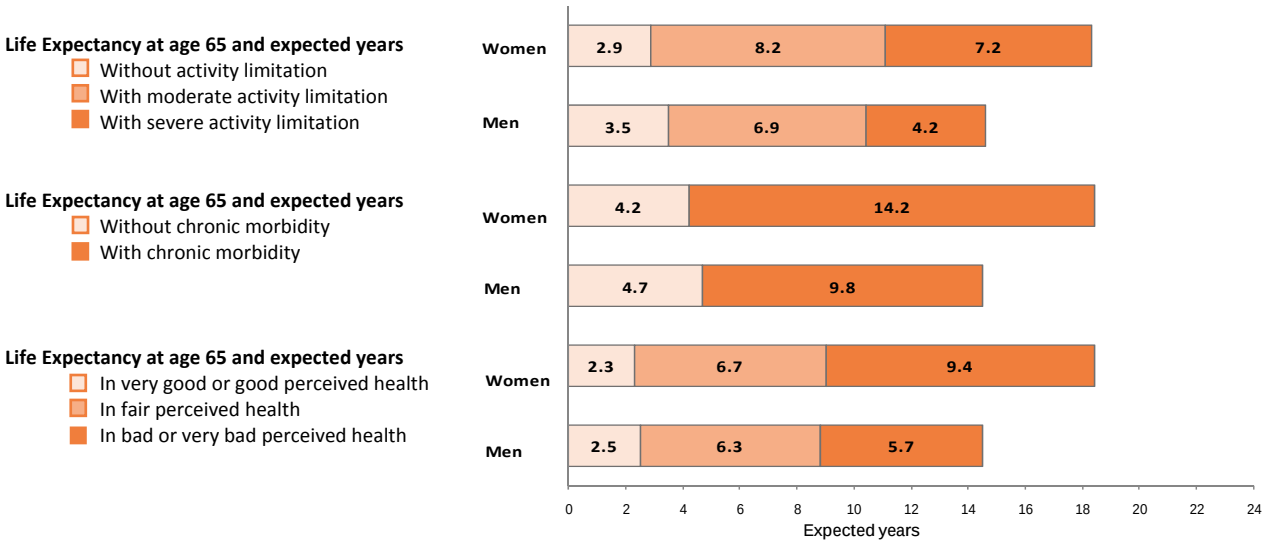

Key points:

In 2011 LE at age 65 in Slovakia was 18.4 years for women and 14.5 years for men.

Based on the SILC 2011, at age 65, women spent 2.9 years (16% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 8.2 years (45%) with moderate activity limitation and 7.2 years (39%) with severe activity limitation.*

Men of the same age spent 3.5 years (24% of their remaining life) without activity limitation compared to 6.9 years (48%) with moderate activity limitation and 4.2 years (29%) with severe activity limitation.*

Although total years lived by men were less than those for women, for all the health expectancies the number of years of life spent in positive health were greater for men and women. Therefore 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, and the size of the samples varying from 1204 in Denmark to 10419 in Italy. The sample size for Slovakia comprised 1375 women and 831 men aged 65+ years in 2011.

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Publications and reports on health expectancies for Slovakia

- Meszaros J. Ako dlho žije populácia Slovenskej republiky v zdraví? [For how long the population of the Slovak Republic live in health?]. *Slovenská štatistika a demografia*. 2007(1-2): 133-140.
- Jagger C., Gillies C., Mascone F., Cambois E., Van Oyen H., Nusselder W.J., Robine J.-M., EHLEIS team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008; 372(9656):2124-2131.
- Jagger C., Robine J.-M., Van Oyen H., Cambois E. *Life expectancy with chronic morbidity*. In: European Commission, editor. *Major and chronic diseases - report 2007*. Luxembourg: European Communities; 2008. p. 291-304.
- Mészáros J. Stredná dĺžka života v zdraví podľa EHIS 2009. INFOSTAT Bratislava nov. 2010
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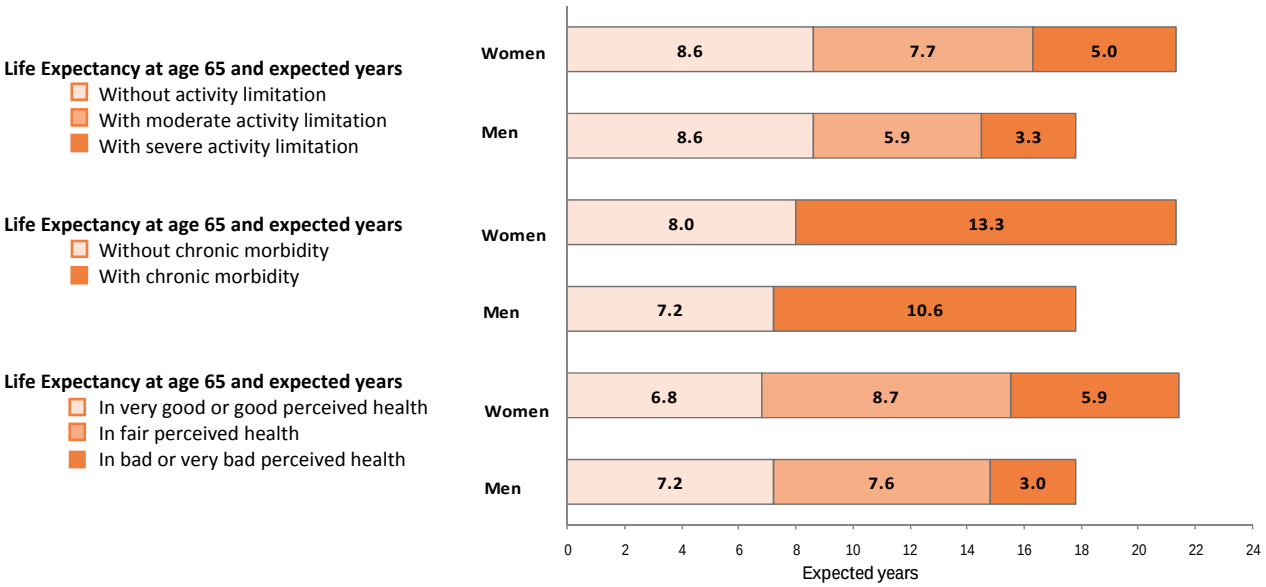

Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

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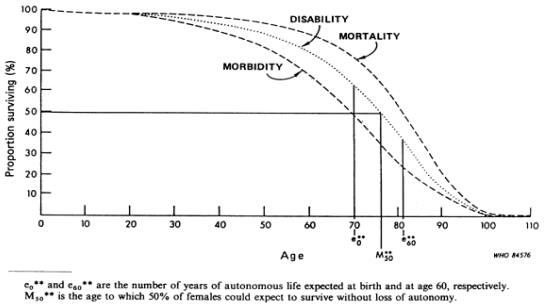

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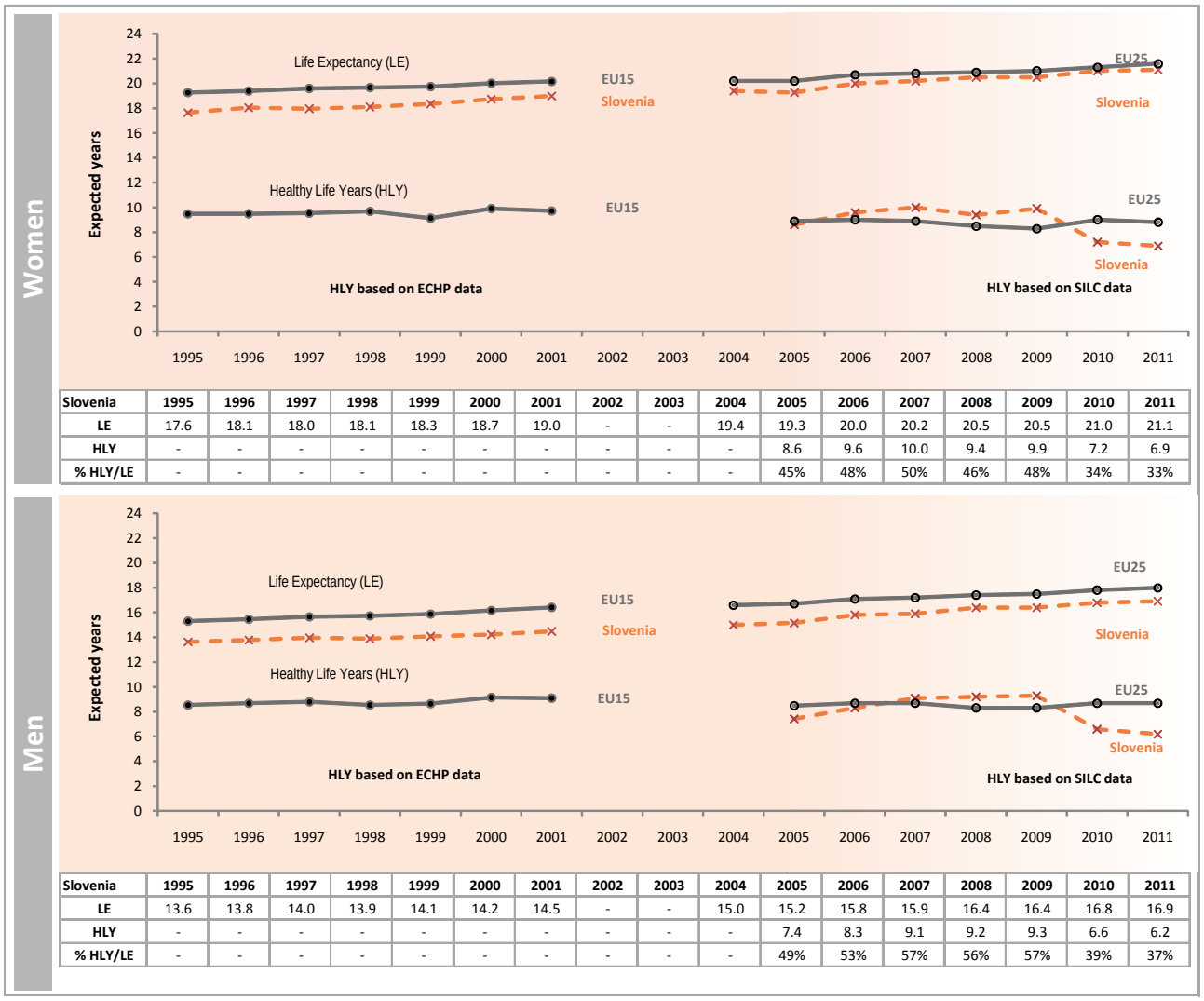


Slovenia	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	17.6	18.1	18.0	18.1	18.3	18.7	19.0	-	-	19.4	19.3	20.0	20.2	20.5	20.5	21.0	21.1
HLY	-	-	-	-	-	-	-	-	-	-	8.6	9.6	10.0	9.4	9.9	7.2	6.9
% HLY/LE	-	-	-	-	-	-	-	-	-	-	45%	48%	50%	46%	48%	34%	33%

Slovenia	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	13.6	13.8	14.0	13.9	14.1	14.2	14.5	-	-	15.0	15.2	15.8	15.9	16.4	16.4	16.8	16.9
HLY	-	-	-	-	-	-	-	-	-	-	7.4	8.3	9.1	9.2	9.3	6.6	6.2
% HLY/LE	-	-	-	-	-	-	-	-	-	-	49%	53%	57%	56%	57%	39%	37%

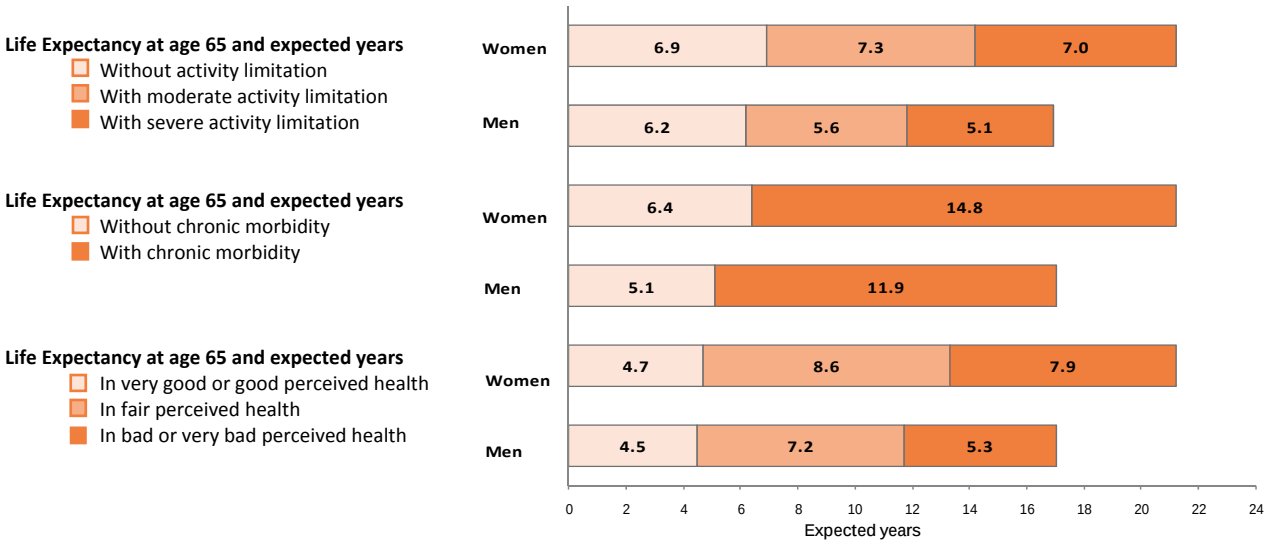
Key points:

Slovenian life expectancy (LE) at age 65 has increased by 2.1 years for women and 2.4 years for men over the period 2001-2011: LE for both sexes between 1995 and 2001 was below the EU15 average and remained below the EU25 average (21.6 for women and 18.0 for men) in 2011. However gaps are reducing.

Because Slovenia joined the European Union in 2004, the first series of health expectancy based on activity limitation (HLY) over the period 1995-2001 is not available.

The new HLY series, initiated in 2005 with the SILC data, shows that in 2011 women and men at age 65 can expect to spend 33% and 37% of their life without *self-reported long-term activity limitations* respectively. In 2011 the HLY values for Slovenia are below the EU25 average (8.6 for women and 8.8 for men) for men and women. Between 2005 and 2009 HLY increased for men in Slovenia. For women, HLY increased until 2007 then stabilized. Note that the wording of the GALI question changes in Slovenia in 2010. However, this slightly change hardly explains the strong decrease of HLY observed in 2010 and continued in 2011.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Slovenia (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Slovenia was 21.1 years for women and 16.9 years for men.

Based on the SILC 2011, at age 65, women spent 6.9 years (33% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.3 years (35%) with moderate activity limitation and 7.0 years (33%) with severe activity limitation.*

Men of the same age spent 6.2 years (37% of their remaining life) without activity limitation compared to 5.6 years (33%) with moderate activity limitation and 5.1 years (30%) with severe activity limitation.*

Although for life expectancy without chronic morbidity and for life expectancy without activity limitation the years of life spent in positive health were greater for women than 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, and the size of the samples varying from 1204 in Denmark to 10419 in Italy. The sample size of respondents for Slovenia comprised 1213 women and 787 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

Publications and reports on health expectancies for Slovenia

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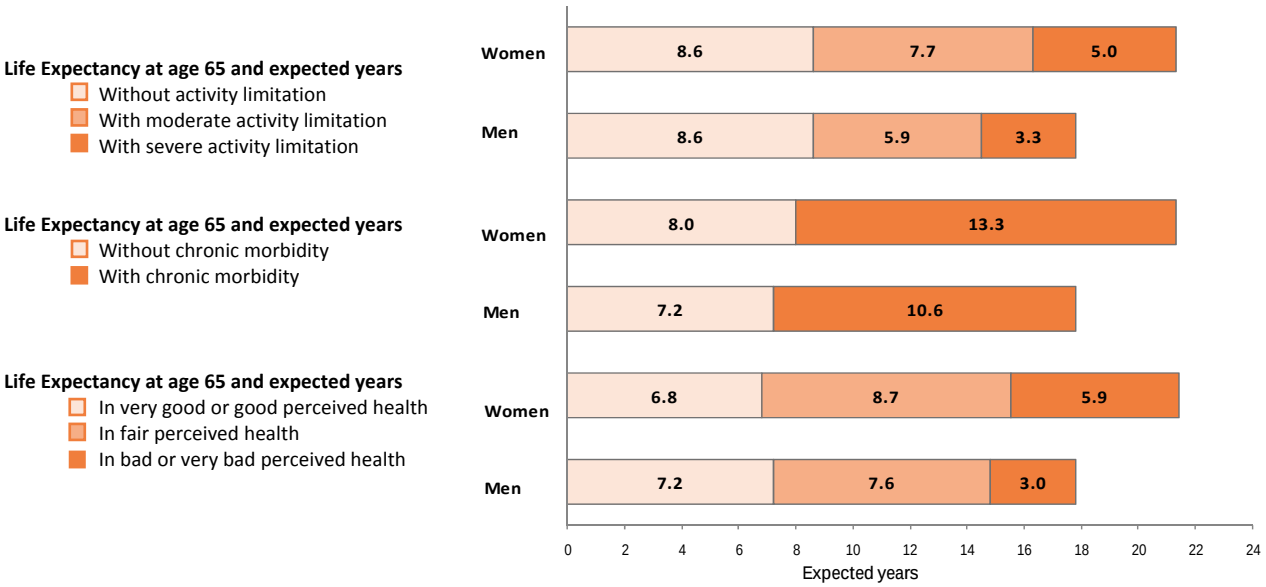

Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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Acknowledgements

Metka Zaletel and Tatjana Kofol (National Institute of Public Health) have contributed to this report and its translation.

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Tel: +33 (0)467 14 33 85 /e-mail: christine.perrier@inserm.fr

Health Expectancy in Spain

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.

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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).

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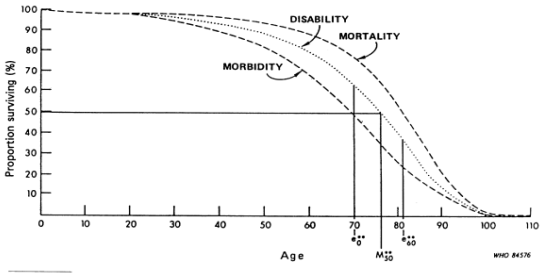

e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
M_{50}^{**} is the age to which 50% of females could expect to survive without loss of autonomy.

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.

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- Health expectancies based on the two additional dimensions of health (chronic morbidity and self-perceived health) for the country of interest, based on SILC 2011;
- Life and health expectancy at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU 27 in 2011 by gender (Health data from SILC)

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Jagger C., Gillies C., Moscone F., Cambois E., Van Oyen H., Nusselder W., Robine J.-M., EHLEIS Team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008;372(9656) 2124-2131
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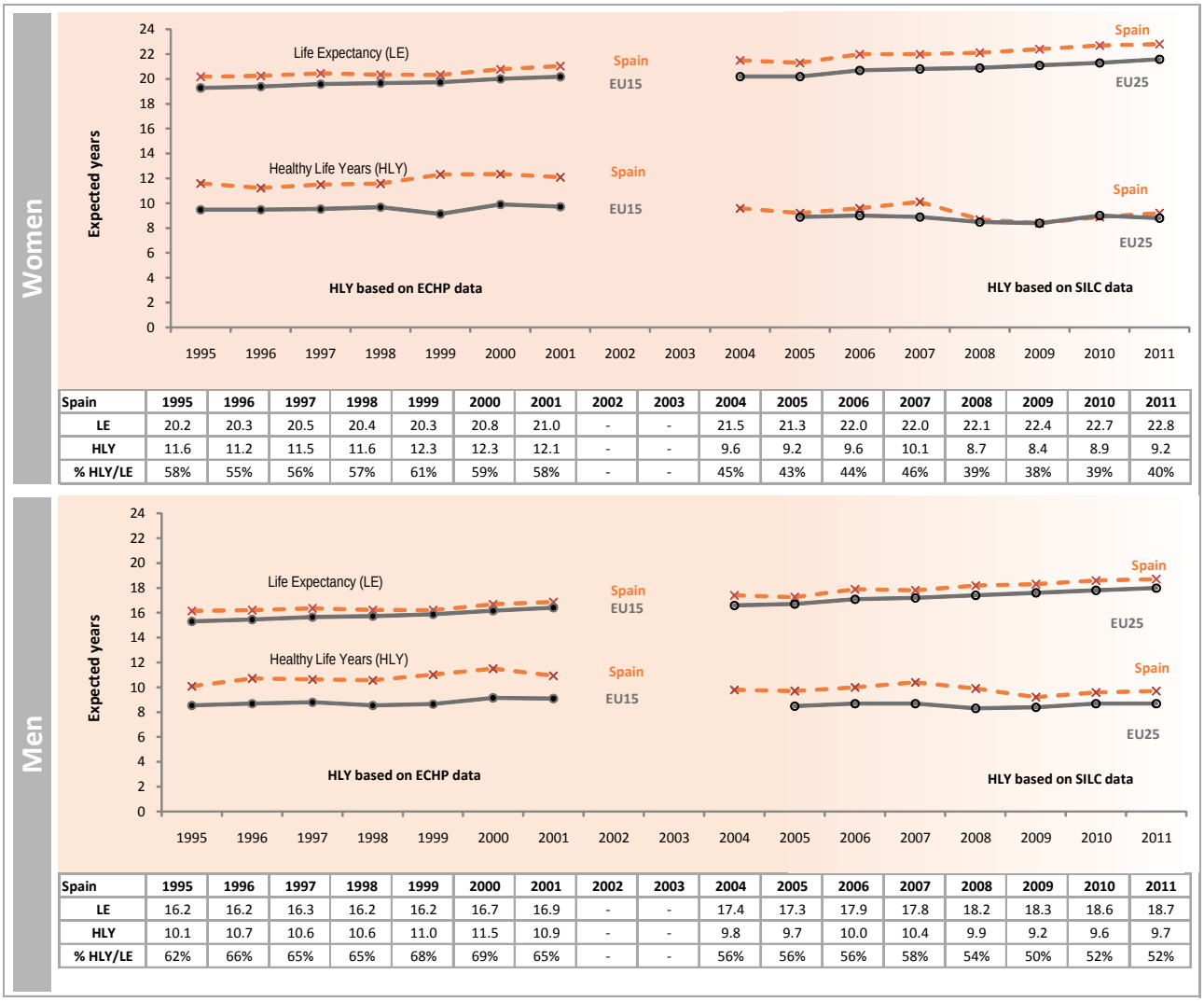
* Before the revision of 2008, the translations of the module used in some countries were not optimum (See Eurostat-EU Task Force on Health Expectancies common statement about the SILC data quality). The revision is being evaluated.

Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Spain and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2004-2011)



Spain	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	20.2	20.3	20.5	20.4	20.3	20.8	21.0	-	-	21.5	21.3	22.0	22.0	22.1	22.4	22.7	22.8
HLY	11.6	11.2	11.5	11.6	12.3	12.3	12.1	-	-	9.6	9.2	9.6	10.1	8.7	8.4	8.9	9.2
% HLY/LE	58%	55%	56%	57%	61%	59%	58%	-	-	45%	43%	44%	46%	39%	38%	39%	40%

Spain	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	16.2	16.2	16.3	16.2	16.2	16.7	16.9	-	-	17.4	17.3	17.9	17.8	18.2	18.3	18.6	18.7
HLY	10.1	10.7	10.6	10.6	11.0	11.5	10.9	-	-	9.8	9.7	10.0	10.4	9.9	9.2	9.6	9.7
% HLY/LE	62%	66%	65%	65%	68%	69%	65%	-	-	56%	56%	56%	58%	54%	50%	52%	52%

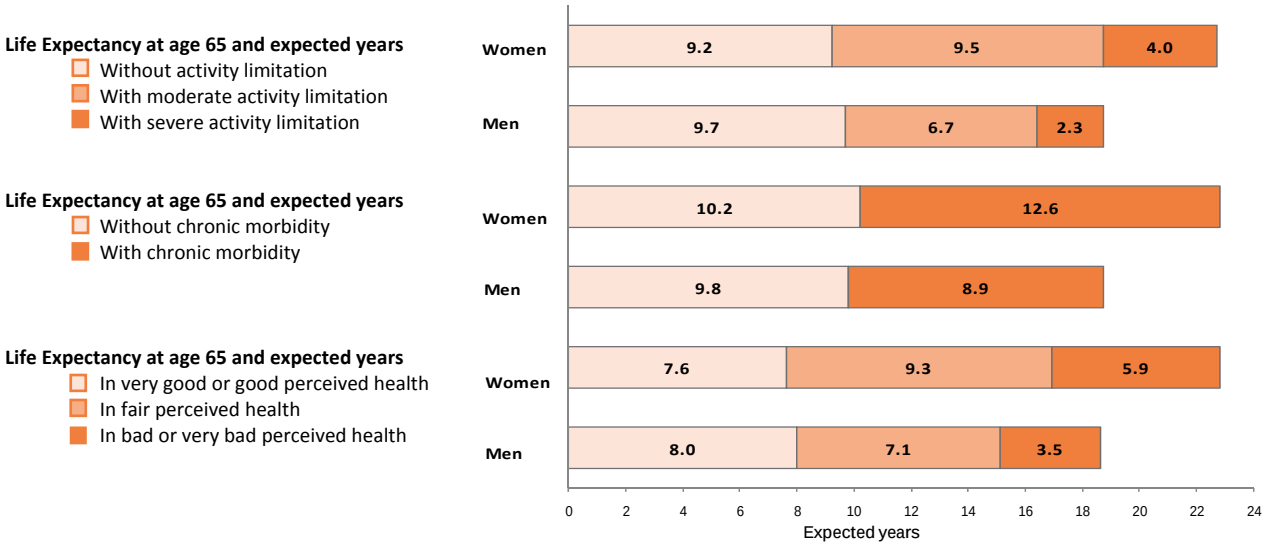
Key points:

Spanish life expectancy (LE) at age 65 has increased by 1.8 years for women and men over the period 2001 - 2011: LE for both sexes between 1995 and 2001 was above the EU15 average and remained above the EU25 average (21.6 for women and 18.0 for men) in 2011.

Over the 1995-2001 period, health expectancy based on activity limitation (HLY) at age 65 from the ECHP data increased. The proportion of HLY (or years without *self-reported limitations due to health condition or disability*), within the total expected years, remained stable for both sexes, around 58% for women and 65% for men. Between 1995 and 2001 HLY in Spain for both sexes was above the EU15 average.

The new HLY series, initiated in 2004 with the SILC data, shows values for Spain being in 2011 0.6 year above the EU25 average (8.6 for women and 8.8 for men) for women and 0.9 year above for men. In 2011 women and men at age 65 can expect to spend 40% and 52% of their life without *self-reported long-term activity limitations* respectively. Note that the wording of the GALI question was changed in Spain in 2008 to better reflect the EU standard. This may explain the strong decrease in HLY observed for men and women between 2007 and 2008. Between 2010 and 2011 HLY increased for both sexes.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Spain (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Spain was 22.8 years for women and 18.7 years for men.

Based on the SILC 2011, at age 65, women spent 9.2 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 9.5 years (42%) with moderate activity limitation and 4.0 years (18%) with severe activity limitation.*

Men of the same age spent 9.7 years (52% of their remaining life) without activity limitation compared to 6.7 years (36%) with moderate activity limitation and 2.3 years (12%) with severe activity limitation.*

Although total years lived by men were less than those for women, for life expectancy in very good or good perceived health and for life expectancy without activity limitation the years of life spent in positive health were greater for men than women. Therefore compared to men, women spent a larger number of years and a larger proportion 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, and the size of the samples varying from 1204 in Denmark to 10419 in Italy. The sample size for Spain comprised 3827 women and 3018 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

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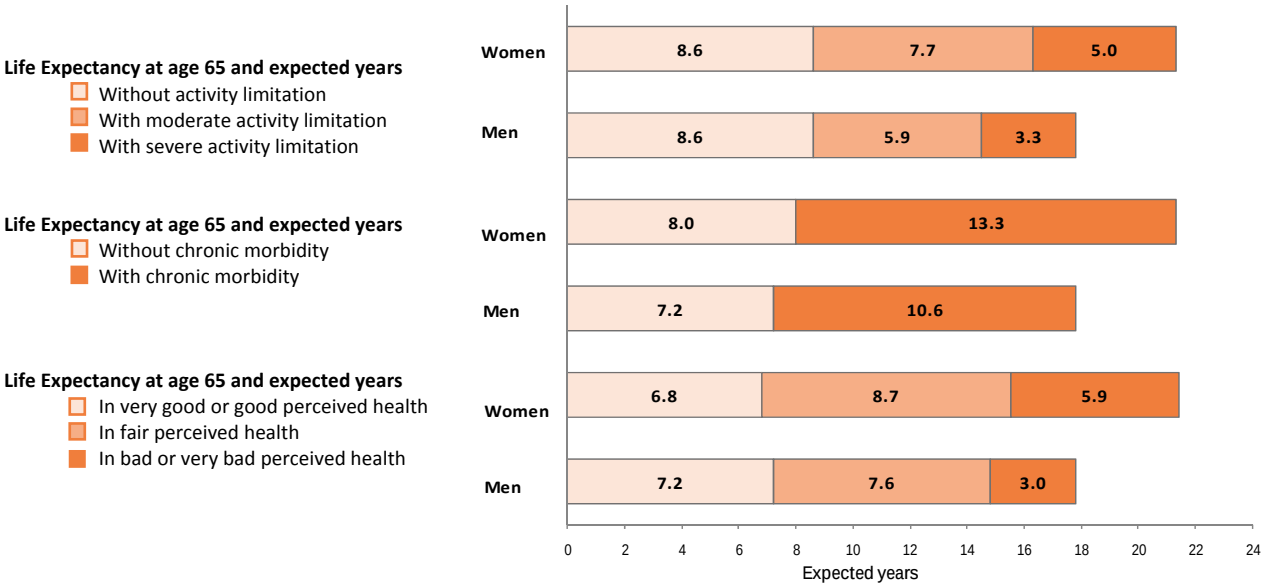

Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

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However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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Acknowledgements

Juan Luis Gutierrez Fisac (Ministry of Health) has contributed to this report and its translation.

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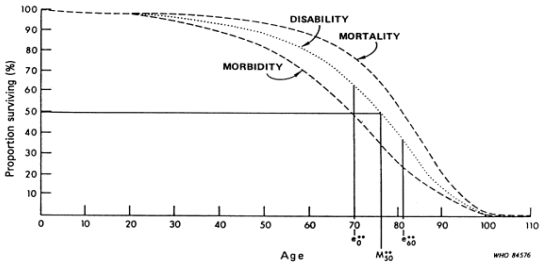

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References

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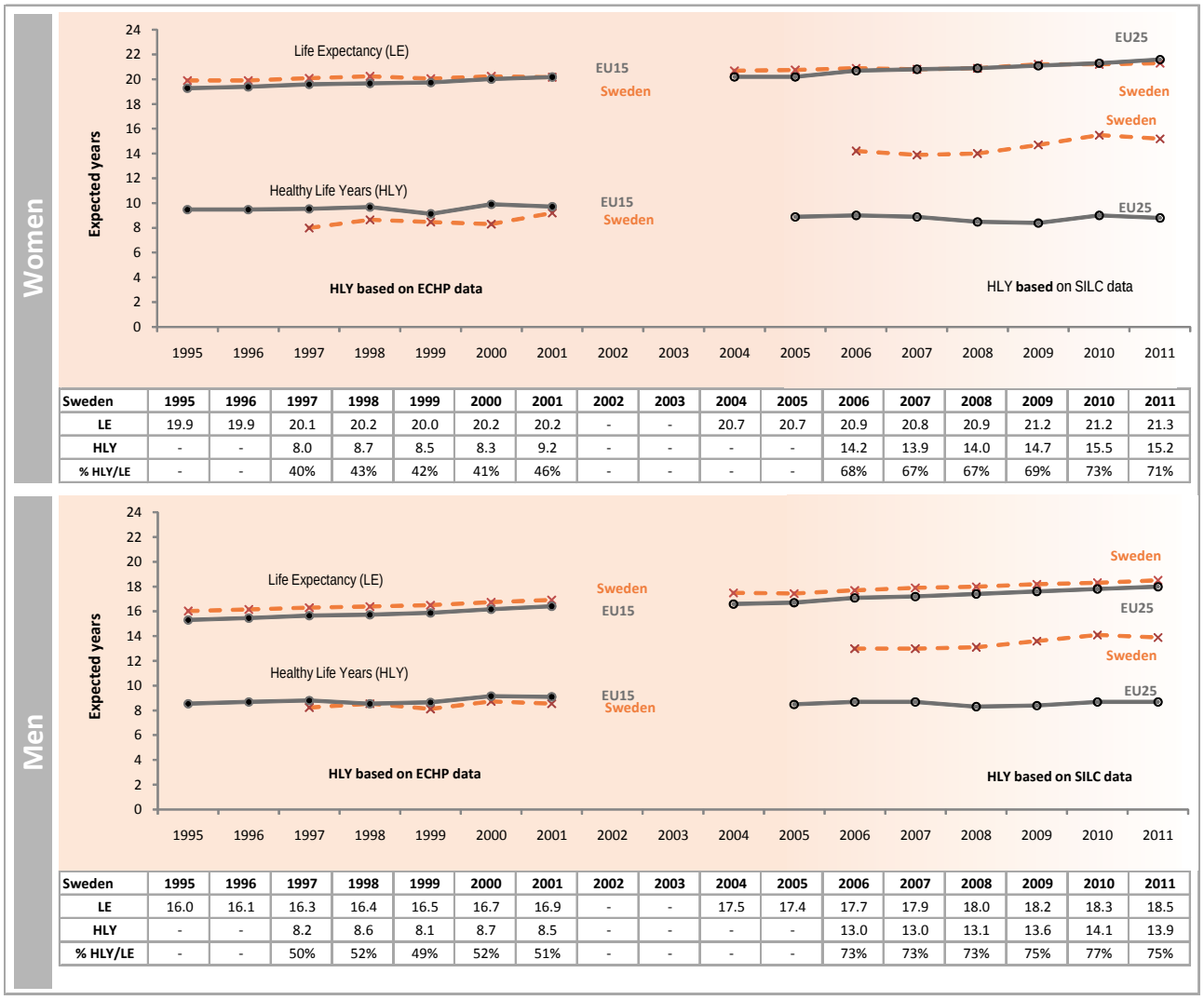
Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Sweden and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2004-2011)



Sweden	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	19.9	19.9	20.1	20.2	20.0	20.2	20.2	-	-	20.7	20.7	20.9	20.8	20.9	21.2	21.2	21.3
HLY	-	-	8.0	8.7	8.5	8.3	9.2	-	-	-	-	14.2	13.9	14.0	14.7	15.5	15.2
% HLY/LE	-	-	40%	43%	42%	41%	46%	-	-	-	-	68%	67%	67%	69%	73%	71%

Sweden	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	16.0	16.1	16.3	16.4	16.5	16.7	16.9	-	-	17.5	17.4	17.7	17.9	18.0	18.2	18.3	18.5
HLY	-	-	8.2	8.6	8.1	8.7	8.5	-	-	-	-	13.0	13.0	13.1	13.6	14.1	13.9
% HLY/LE	-	-	50%	52%	49%	52%	51%	-	-	-	-	73%	73%	73%	75%	77%	75%

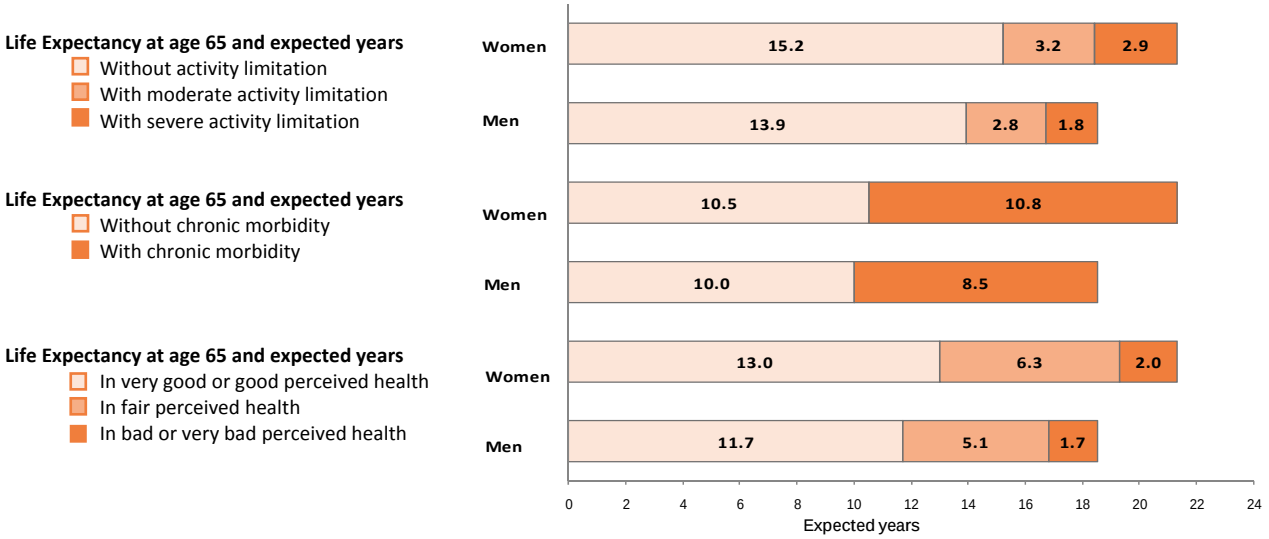
Key points:

Swedish life expectancy (LE) at age 65 has increased by 1.1 years for women and 1.6 years for men over the period 2001-2011: LE for both sexes between 1995 and 2001 was above the EU15 average and remained above the EU25 average (21.6 for women and 18.0 for men) for men but was slightly below for women in 2011.

In Sweden, health expectancies computed with ECHP data are partial health expectancies, as the ECHP sample only covers adults aged 16 to 84. Therefore, life and health expectancies computed with ECHP data for Sweden are partial life and health expectancies from age 16 to age 85.These values are not comparable with the regular life and health expectancies computed for the other countries.

The new HLY series, initiated in 2004 with the SILC data, shows values for Sweden in 2011 being above the EU25 average (8.6 for women and 8.8 for men) by 6.6 and 5.1 years for women and men respectively. In 2011 women and men at age 65 can expect to spend 71% and 75% of their life without *self-reported long-term activity limitations* respectively. The HLY trends should be interpreted with caution. Before 2006 (values not displayed) the wording of the GALI question was not comparable with the later years. The new wording was again changed in 2008. Between 2008 and 2010 HLY strongly increased in Sweden for women and men but slightly decreased in2011.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for Sweden (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in Sweden was 21.3 years for women and 18.5 years for men.

Based on the SILC 2011, at age 65, women spent 15.2 years (71% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 3.2 years (15%) with moderate activity limitation and 2.9 years (14%) with severe activity limitation.*

Men of the same age spent 13.9 years (75% of their remaining life) without activity limitation compared to 2.8 years (15%) with moderate activity limitation and 1.8 years (10%) with severe activity limitation.*

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

These results should be interpreted cautiously depending on response rate problems (cf. page 4). The sample size for Sweden comprised 930 women and 825 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

Publications and reports on health expectancies for Sweden

- Jagger C., Robine J.-M., Van Oyen H., Cambois E. *Life expectancy with chronic morbidity*. In: European Commission, editor. *Major and chronic diseases - report 2007*. Luxembourg: European Communities; 2008. p. 291-304.
- Jagger C., Gillies C., Mascone F., Cambois E., Van Oyen H., Nusselder W.J., Robine J.-M., EHLEIS team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008; 372(9656):2124-2131.
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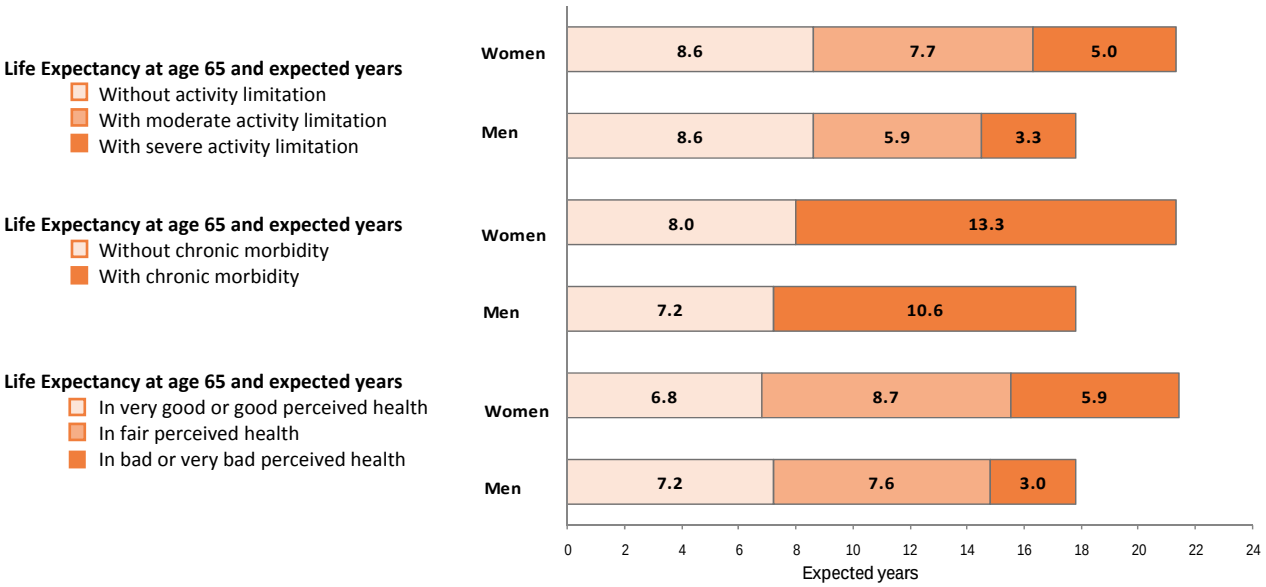
Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU27, in 2011, by gender (Health data from SILC)



Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

About the Joint Action EHLEIS

The current Joint Action EHLEIS (European Health and Life Expectancy Information System) and EurOhex (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; 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 and www.healthylife-years.eu.

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Health Expectancy in United Kingdom

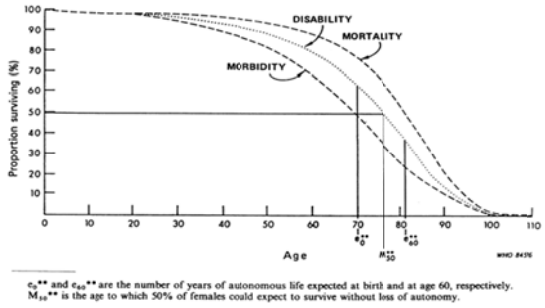
What is health expectancy?

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).

The general model of health transition (WHO, 1984) : observed mortality and hypothetical morbidity and disability survival curves for females, USA, 1980.



e_0^{**} and e_{60}^{**} are the number of years of autonomous life expected at birth and at age 60, respectively.
M_{50}^{**} is the age to which 50% of females could expect to survive without loss of autonomy.

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 2011. 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 2011;
- Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU27, in2011, by gender (Heath data from SILC)

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Jagger C., Gillies C., Moscone F., Cambois E., Van Oyen H., Nusselder W., Robine J.-M., EHLEIS Team. Inequalities in healthy life years in the 25 countries of the European Union in 2005: a cross-national meta-regression analysis. *The Lancet*. 2008;372(9656) 2124-2131 Robine J.-M., Jagger C., Mathers C.D., Crimmins E.M., Suzman R.M., Eds. *Determining health expectancies*. Chichester UK: Wiley, 2003.
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* 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.

Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for United Kingdom and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2005-2011)

UK	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	18.2	18.4	18.5	18.6	18.6	19.0	19.2	-	-	19.6	19.7	20.1	20.2	20.3	20.8	20.9	21.1
HLY	12.3	12.6	12.1	12.4	9.5	12.2	12.2	-	-	-	11.4	11.1	11.7	11.8	11.4	11.8	11.9
% HLY/LE	68%	68%	65%	67%	51%	64%	64%	-	-	-	58%	55%	58%	58%	55%	56%	56%

UK	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
LE	14.6	14.9	15.1	15.3	15.4	15.8	16.1	-	-	16.8	17.0	17.4	17.6	17.7	18.1	18.3	18.5
HLY	11.5	11.4	11.3	11.0	10.2	11.5	11.3	-	-	-	10.4	10.3	10.4	10.7	11.0	10.9	11.0
% HLY/LE	79%	77%	75%	72%	66%	73%	71%	-	-	-	61%	59%	59%	60%	61%	60%	60%

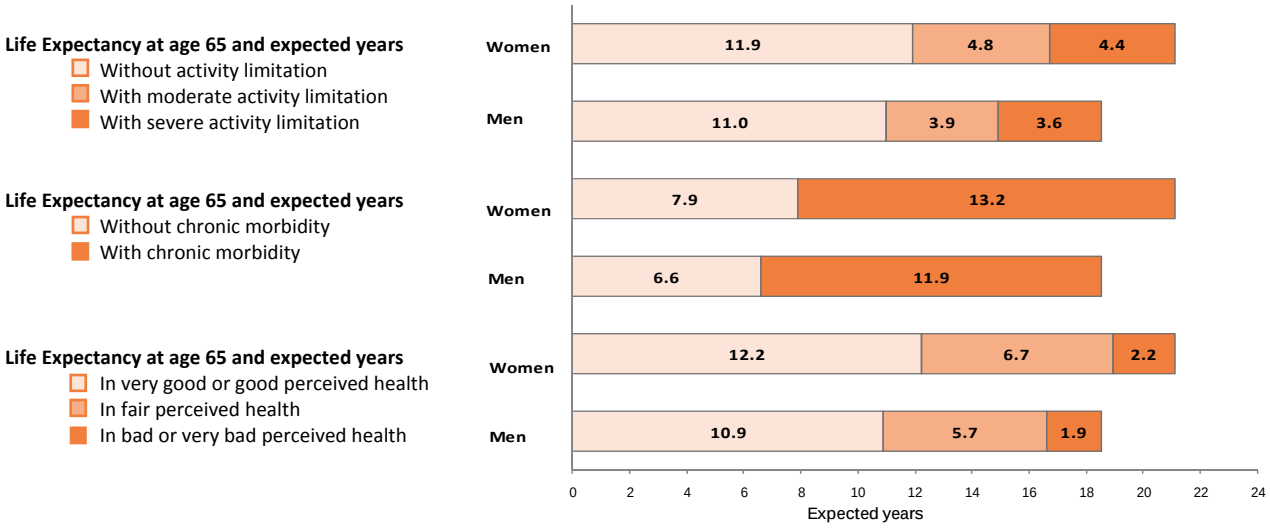
Key points:

UK life expectancy (LE) at age 65 has increased by 1.9 years for women and 2.4 years for men over the 2001-2011 period: LE for both sexes between 1995-2001 was below the EU15 average. In 2011 LE was slightly above the EU25 average of 18.0 for men and slightly below the EU25 average of 21.6 for women.

Over the 1995-2001 period, health expectancy based on activity limitation (HLY) at age 65 was mostly stable, although lower estimates were observed in 1999: the slight change to the question on activity restriction in 1999, which captured severity of restriction in this year but not in other years during the period, may have influenced the reporting of activity limitation. 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 64% for women and 71% for men by 2001. Between 1995 and 2001 HLY in the UK was above the EU15 average. These results should be interpreted cautiously because the UK data used between 1995 and 2001 came from the British Household Panel Survey (BHPS) and not from the European survey (ECHP).

The new HLY series, initiated in 2005 with the SILC data, shows values for the UK being in 2011 above the EU25 average (8.8 for women and 8.7 for men) by 3.1 and 2.3 years for women and men respectively. Women and men at age 65 can expect to spend 56% and 60% of their life without *self-reported long-term activity limitations* respectively. HLY increased for men in the UK between 2005 and 2009, stabilized between 2009 and 2010 and increased in 2011. For women HLY remained almost stable between 2005 and 2010 with small yearly fluctuations but a trend to increase between 2009 and 2011. The wording of the GALI question was not revised in UK in 2008.

Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for United Kingdom (Health data from SILC 2011)



Key points:

In 2011, LE at age 65 in United Kingdom was 21.1 years for women and 18.5 years for men.

Based on the SILC 2011 at age 65, women spent 11.9 years (56% of their remaining life) without activity limitation (corresponding to Healthy Life Years, HLY), 4.8 years (23%) with moderate and 4.4 years (21%) with severe activity limitation.*

Men of the same age spent 11.0 years (60% of their remaining life) without activity limitation, 3.9 years (21%) with moderate and 3.6 years (19%) with severe activity limitation.*

For all the health expectancies the years of life spent in positive health were greater for women than men; however, because women have longer life expectancies than men, they experience a slightly higher proportion of their lives in unfavourable health states than men.

These results should be interpreted cautiously given both the lack of the institutional population, such as people living in residential and nursing homes, which constitute a higher proportion of those aged 65+ years, and in some countries the size of the samples varying from 1204 in Denmark to 10419 in Italy. The sample size for the United Kingdom comprised 2073 women and 1814 men aged 65+ years in 2011.

* *These may not sum to Life Expectancy due to rounding*

Publications and reports on health expectancies for United Kingdom

- Sub-national health expectancies summary podcast. Available on the ONS website at: http://www.ons.gov.uk/ons/rel/disability-and-health-measurement/sub-national-health-expectancies/subnational-health-expectancies-summary/subnational-health-expectancies-summary-podcast.html
- Video summary: Inequalities in DFLE by area deprivation 2002-05 and 2006-09. Available on the ONS website at: http://www.ons.gov.uk/ons/rel/disability-and-health-measurement/sub-national-health-expectancies/2007-2009/video-summary.html
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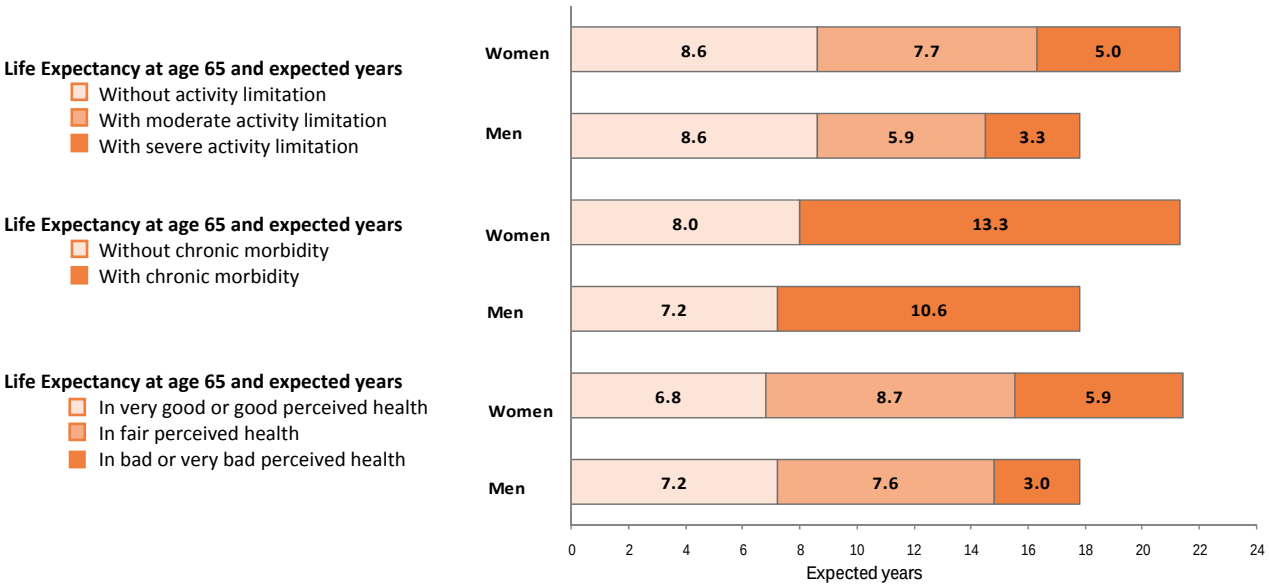
Life and health expectancies at age 65 based on activity limitation (Healthy Life Years), chronic morbidity and perceived health for EU27, in 2011, by gender (Health data from SILC)



Key points

In 2011, LE at age 65 in the EU 27 was 21.3 years for women and 17.8 years for men.

Based on SILC 2011 data, women at age 65 spent 8.6 years (40% of their remaining life) without activity limitation (corresponding to Healthy Life Years (HLY)), 7.7 years (36%) with moderate activity limitation and 5.0 years (24%) with severe activity limitation.

Men of the same age spent the same amount of time8.6 years (48% of their remaining life) without activity limitation compared to 5.9 years (33%) with moderate activity limitation and 3.3 years (19%) with severe activity limitation.

However women can expect to live a little bit longer without chronic morbidity and men a little bit longer in good perceived health.

In total, life expectancy is greater for women than for men (+3.5 years) but 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.

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