

HEALTH EXPECTANCY IN GERMANY

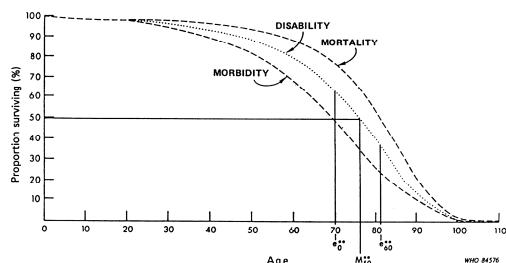
What is health expectancy?

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 synthetic measures of disability, 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.ehemu.eu.

What is in this report?

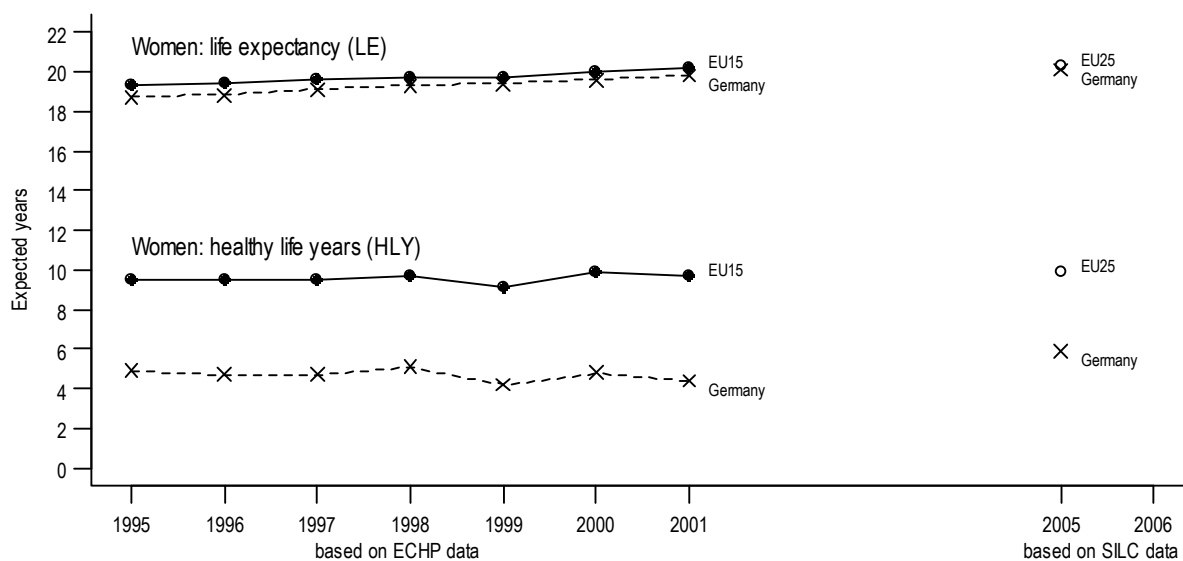
This report is produced by the European Health Expectancy Monitoring Unit (EHEMU) as part of a country series. In each report we present:

- health expectancies based on activity limitation (HLY) for the country of interest and for the overall 25 European Union member states (EU25), using the SILC 2005 question on long term activity limitation. As the SILC has been only recently initiated, to document trends 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 2005
- a global analysis of health expectancies of European countries, based on the SILC 2005

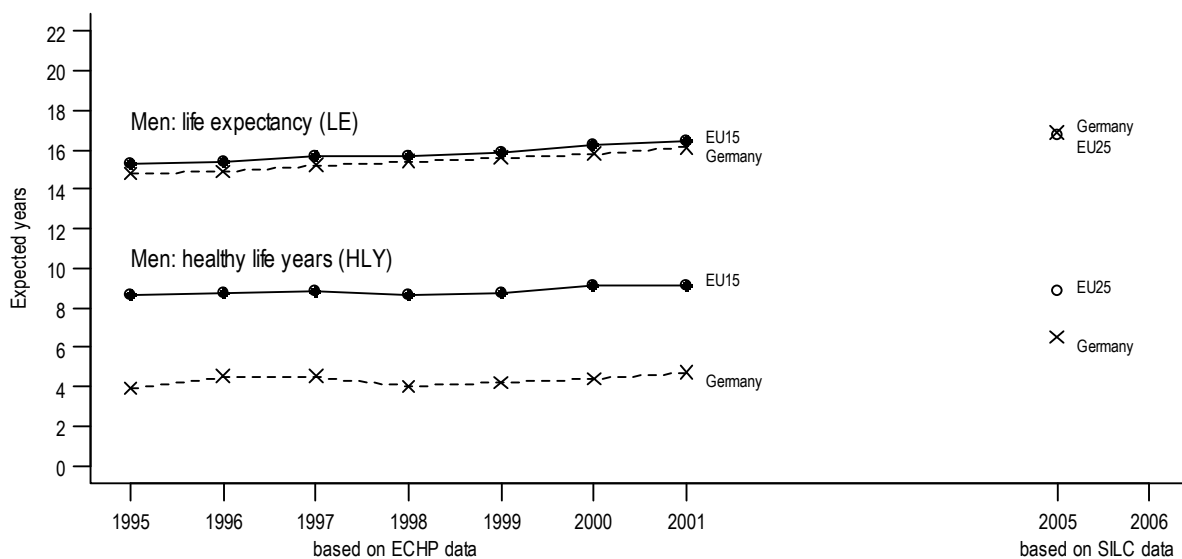
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Life expectancy (LE) and Healthy Life Years (HLY) at age 65 for Germany and the European Union (EU15 and EU25) based on ECHP (1995-2001) and SILC (2005)



Germany	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Women: LE	18.7	18.8	19.1	19.3	19.4	19.6	19.8	-	-	-	20.1	
Women: HLY	4.9	4.7	4.7	5.1	4.2	4.8	4.4	-	-	-	5.9	
%HLY/LE	27%	25%	25%	27%	22%	24%	22%	-	-	-	29%	



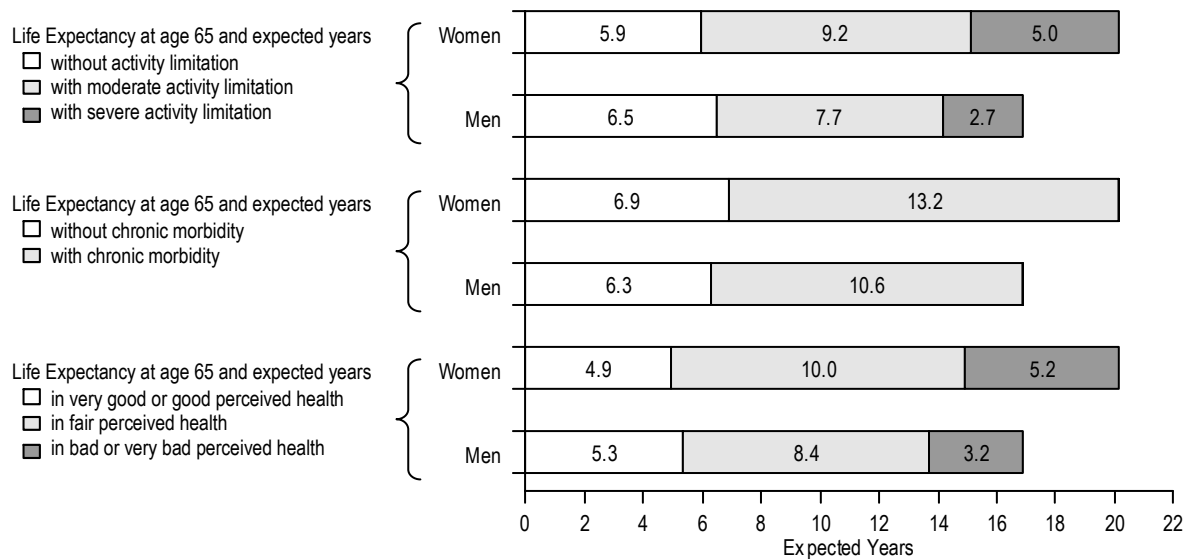
Germany	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Men: LE	14.8	14.9	15.2	15.4	15.6	15.8	16.1	-	-	-	16.9	
Men: HLY	3.9	4.5	4.5	4.0	4.2	4.4	4.7	-	-	-	6.5	
%HLY/LE	27%	30%	30%	26%	27%	28%	29%	-	-	-	38%	

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 1995-2005 period: it had almost reached the EU15 average by 2001 and was close to the EU25 average by 2005.
- Over the 1995-2001 period, health expectancy based on activity limitation (HLY) at age 65 from the ECHP data decreased slightly for women and increased slightly 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 22% for women and 29% for men in 2001. Between 1995 and 2001 HLY in Germany was below the EU15 average.
- The new HLY series, initiated in 2005 with the SILC data, shows a higher value for Germany than previously but remaining below the EU average, being 4 years and 2.3 years below the EU25 average (and below the EU15 average) for women and men respectively. Women and men at age 65 can expect to spend 29% and 38% of their life without *self-reported long-term activity limitations* respectively. Compared to earlier trends, the SILC question may result in people reporting limitations of different severity than previously and German women and men may be less likely to report minor problems than previously but more likely than the EU25 as a whole.

These results should be interpreted cautiously because the German data used between 1995 and 2001 came from a national survey: The German Socio-Economic Panel (GSOEP) and not from the European survey (ECHP).

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 2005)



Key points:

- In 2005, LE at age 65 in Germany was 20.1 years for women and 16.9 years for men.
- Based on the SILC 2005, at age 65, women spent 29% (5.9 years) of their remaining life without activity limitation (corresponding to Healthy Life Years (HLY)), 46% (9.2 years) with moderate activity limitation and 25% (5.0 years) with severe activity limitation.*
- Men of the same age spent 38% (6.5 years) of remaining life without activity limitation compared to 46% (7.7 years) with moderate activity limitation and 16% (2.7 years) 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 similar.
- 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 and in some countries the small sample size. The sample size for Germany comprised 2612 women and 2272 men aged 65+ years.

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

Published results and other reports of health expectancies for Germany

Lievre A, Jusot F, Barnay T, Sermet C, Brouard N, Robine J-M, et al. Healthy working life expectancies at age 50 in Europe: a new indicator. *J Nutr Health Aging*. 2007;11(6):508-514.

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Stürzer M, Cornelißen W. *Lebenserwartung im internationalen Vergleich, im Zeitvergleich sowie im regionalen Vergleich. Gender datenreport*. München: Bundesministerium für Familie, Senioren, Frauen und Jugend; 2005. p. 474-480.

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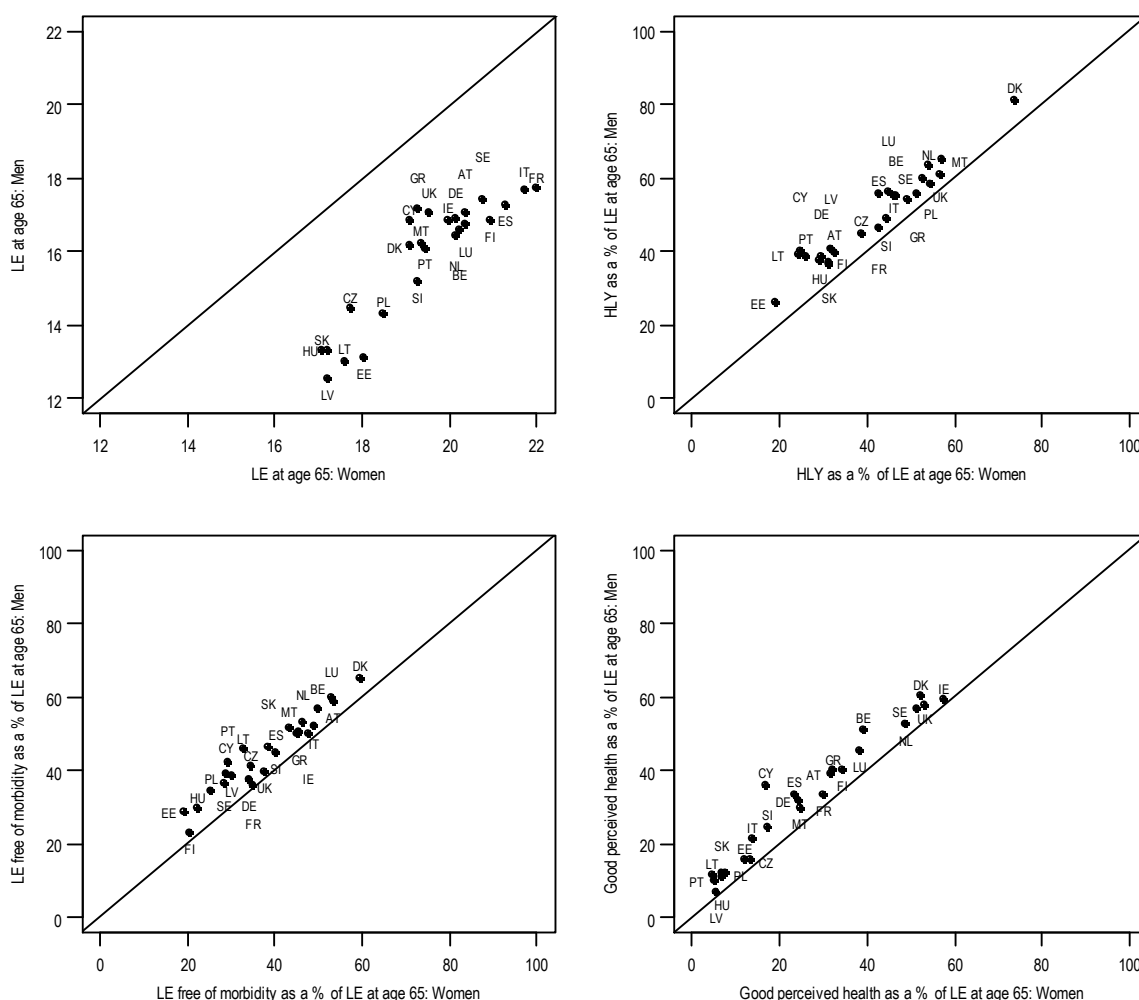
Klein T, Unger R. Aktive Lebenserwartung in Deutschland und in den USA. Kohortenbezogene Analysen auf Basis des Sozio-ökonomischen Panel [Active life expectancy in Germany and in the United States. A cohort analysis based on the "German Socio-Economic Panel" (GSOEP) and the "Panel Study of Income Dynamics" (PSID)]. *Z Gerontol Geriatr*. 2002;35(6):528-539.

European health expectancies at age 65 for 2005

The figure below shows life expectancy at age 65 and different health expectancies as a proportion of life expectancy at age 65 for the EU25 in 2005 with the values for men plotted against those for women. The key points are:

- LE at age 65 varies by 8 years in Europe from 12.5 years for men in Latvia to 21.5 years for women in France. LE for women is always higher than that for men – around 3 years on average.
- The proportion of LE free of activity limitation (corresponding to the HLY, in good perceived health and free from chronic morbidity) varies by country from 19% to 81%, 4% to 60% and 19% to 65% respectively, providing other perspectives of health in Europe. Even ignoring potential outliers there still appears to be considerable cross-national variation.
- Whatever the health expectancy considered men and women give the same picture of their country in terms of proportion of life spent healthy.
- In all countries women live longer but spend less of their life healthy, a difference of 7% on average.

Health expectancies as a proportion of life expectancy at age 65 based on activity limitation (Healthy Life Years), perceived health and chronic morbidity for the EU25 (Source: SILC 2005)



About EHEMU

The European Health Expectancy Monitoring Unit (EHEMU) is funded by the European Public Health Programme (2004-2007) and is a collaboration between: French National Institute for Health and Medical Research (INSERM) and CRLC (Montpellier, France), University of Leicester (UK), the Scientific Institute of Public Health (ISP Belgium) and the French National Institute of Demography (INED). EHEMU aims 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 EHEMU can be found on the website: www.ehemu.eu.