

Several years ago we have introduced methods for estimating the healthy life years lost (HLYL) from only mortality and population data based on the assumption that the health state information, usually investigated by questionnaires, was also included into the death-population information from the life tables. The advantage of our methods further to avoid the costly and time consuming surveys and data collection provides immediately the results from only the life table data, is more accurate with shorter confidence intervals, while may apply in any period of time as far as life tables are provided.

Thanks to the excellent and systematic work of the Human Mortality Database (HMD) group providing Life Tables for 39 countries, it was possible to construct this Excel Spreadsheet to estimate the Healthy Life Expectancy (HLE) and the Healthy Life Years Lost (HLYL) based on a theory developed and published in our Monograph (Exploring the Health State of a Population by Dynamic Modeling Methods, Springer 2018, <http://www.springer.com/us/book/9783319651415>). We use 4 methods based on a direct methodology of estimation from mx and qx and 2 non-linear regression fit methods based on mx and by applying the Gompertz and Weibull equations. The provided HLYL is the average of the 4 estimates (for high infant mortality cases the Gompertz and Weibull methods should be excluded).

By "copy and paste" the Life Tables alone data the HLE and HLYL result immediately along with the confidence intervals. The the data from a 0-100 year life table. Life countries of HMD are included in this Excel Download more data from www.mortality.org The results are comparable with the late Expectancy (HALE) provided by the World

Estimation of Healthy Life Expectancy (HLE) via 4 methods based on Direct Method (mx and qx) and Gompertz and Weibull

Healthy Life Years Lost (HLYL)

Estimates of HLYL and HLE (C H Skiadas and C Skiadas, 2016).
 Add data from A4:A116 to M4:M116 in this Excel file and do not change the supporting files Gompertz and Weibull as they run automatically

Manually complete all the Life Table from the Human Mortality Database, HMD (recommended).
 See and import data from column BE and more,...or download from www.mortality.org

HLYL Gompertz	HLYL Weibull	HLYL from mx	HLYL from qx	HLYL Average
9.12	9.12	9.37	8.75	9.09

SWEDEN Males 2000- Life Table **Import**

Px	Dx	Year	Age	mx	qx	ax	lx	dx	Lx	Tx	ex	HALE	HLYL	HLE	100% free disability	Var(qx)		
45309	186	2000	0	0.00404	0.00402	0.06	100000	402	99620	7737658	77.38	68.3	9.1	68.29	88.3	8.82E-08	5312642	3.8E+07
46291	13	2000	1	0.00028	0.00028	0.5	99598	28	99584	7638038	76.69		9.1	67.62	88.2	6.05E-09	348341	3.3E+07
46652	4	2000	2	0.00009	0.00009	0.5	99570	9	99565	7538455	75.71		9.0	66.69	88.1	1.93E-09	108202	3.3E+07
48893	4	2000	3	0.00008	0.00008	0.5	99561	8	99557	7438889	74.72		9.0	65.75	88.0	1.64E-09	89332.9	3.3E+07
53295	4	2000	4	0.00008	0.00008	0.5	99553	8	99549	7339333	73.72		8.9	64.79	87.9	1.5E-09	79769.7	3.2E+07
57477	3	2000	5	0.00005	0.00005	0.5	99545	5	99542	7239784	72.73		8.9	63.85	87.8	8.7E-10	44969.4	3.2E+07
60109	6	2000	6	0.0001	0.00010	0.5	99540	10	99534	7140242	71.73		8.8	62.89	87.7	1.66E-09	83644.7	3.2E+07
63588	5	2000	7	0.00008	0.00008	0.5	99529	8	99525	7040707	70.74		8.8	61.93	87.6	1.26E-09	61497.1	3.2E+07
65113	2	2000	8	0.00003	0.00003	0.5	99521	3	99520	6941182	69.75		8.8	60.98	87.4	4.61E-10	21882.8	3.2E+07
65406	14	2000	9	0.00021	0.00021	0.5	99518	21	99508	6841662	68.75		8.7	60.02	87.3	3.21E-09	148116	3.2E+07
61972	6	2000	10	0.00009	0.00009	0.5	99497	9	99492	6742154	67.76		8.7	59.06	87.2	1.45E-09	65050.6	3.2E+07
60506	8	2000	11	0.00013	0.00013	0.5	99488	13	99481	6642662	66.77		8.7	58.10	87.0	2.15E-09	93404.2	3.2E+07
56490	7	2000	12	0.00012	0.00012	0.5	99475	12	99469	6543181	65.78		8.6	57.14	86.9	2.12E-09	89588.6	3.2E+07
55876	9	2000	13	0.00016	0.00016	0.5	99463	16	99455	6443713	64.79		8.6	56.18	86.7	2.86E-09	117094	3.2E+07
54329	11	2000	14	0.0002	0.00020	0.5	99447	20	99437	6344258	63.80		8.6	55.22	86.6	3.68E-09	145880	3.2E+07
52138	15	2000	15	0.00028	0.00028	0.5	99427	28	99413	6244821	62.81		8.5	54.26	86.4	5.37E-09	206169	3.2E+07
50992	16	2000	16	0.00031	0.00031	0.5	99399	31	99384	6145408	61.83		8.5	53.31	86.2	6.08E-09	225896	3.1E+07
51514	19	2000	17	0.00037	0.00037	0.5	99368	37	99350	6046024	60.84		8.5	52.35	86.0	7.18E-09	258328	3.1E+07
51417	35	2000	18	0.00068	0.00068	0.5	99332	67	99298	5946674	59.87		8.5	51.40	85.9	1.32E-08	460105	3.1E+07
53036	38	2000	19	0.00073	0.00073	0.5	99264	72	99228	5847376	58.91		8.4	50.47	85.7	1.37E-08	462838	3E+07
52080	46	2000	20	0.00087	0.00087	0.5	99192	87	99149	5748148	57.95		8.4	49.53	85.5	1.67E-08	542713	3E+07
50558	37	2000	21	0.00072	0.00072	0.5	99105	71	99070	5649000	57.00		8.4	48.60	85.3	1.42E-08	446659	2.9E+07
52339	43	2000	22	0.00083	0.00083	0.5	99034	82	98993	5549930	56.04		8.4	47.67	85.1	1.58E-08	480036	2.9E+07
53620	37	2000	23	0.0007	0.00070	0.5	98952	69	98917	5450937	55.09		8.3	46.74	84.8	1.3E-08	380950	2.8E+07
56529	38	2000	24	0.00069	0.00069	0.5	98883	68	98849	5352020	54.12		8.3	45.80	84.6	1.22E-08	343299	2.8E+07
59958	45	2000	25	0.00077	0.00077	0.5	98815	76	98777	5253171	53.16		8.3	44.87	84.4	1.28E-08	347863	2.8E+07
59699	57	2000	26	0.00095	0.00095	0.5	98739	94	98692	5154394	52.20		8.3	43.94	84.2	1.59E-08	414893	2.7E+07
61147	28	2000	27	0.00046	0.00046	0.5	98645	46	98622	5055702	51.25		8.2	43.01	83.9	7.52E-09	188559	2.7E+07
61921	54	2000	28	0.00088	0.00088	0.5	98600	86	98557	4957079	50.27		8.2	42.07	83.7	1.42E-08	342478	2.7E+07
59900	38	2000	29	0.00062	0.00062	0.5	98513	61	98483	4858523	49.32		8.2	41.15	83.4	1.03E-08	239484	2.6E+07
60083	41	2000	30	0.00068	0.00068	0.5	98452	67	98419	4760040	48.35		8.1	40.22	83.2	1.13E-08	251230	2.6E+07
63142	39	2000	31	0.00063	0.00063	0.5	98385	62	98354	4661621	47.38		8.1	39.29	82.9	9.97E-09	212325	2.6E+07
67572	58	2000	32	0.00089	0.00089	0.5	98323	87	98279	4563267	46.41		8.1	38.36	82.7	1.32E-08	268488	2.6E+07