2025 LIFE EXPECTANCY FOR TORT DAMAGE CALCULATIONS

Introduction

Life Expectancy varies not only by age and gender, but also by the year of birth. A period life expectancy assumes no improvement from current observed mortality over time. On this approach a male at birth in 1976 has a calculated life expectancy of 69.56 years whilst those born in 2021 have a life expectancy of 81.31 years. Clearly a better estimate for an individual can be produced by taking trends in mortality into account. This is called cohort life expectancy. The latest life table released in late December 2024 by the Australian Government Actuary is Australian Life Table 2020-22 (ALT2020-22). Precise technical details of how this is used in the calculations below is set out at the end of this note.

2025 Life Expectancy Values

For tort damage calculations in 2025, life expectancy can be taken as the following number of years:

Age	Male	Female
15	74.960	77.151
16	73.872	76.085
17	72.789	75.021
18	71.712	73.959
19	70.639	72.897
20	69.566	71.834
21	68.492	70.771
22	67.419	69.707
23	66.346	68.643
24	65.272	67.578
25	64.199	66.512
26	63.125	65.445
27	62.052	64.377
28	60.978	63.309
29	59.905	62.240
30	58.831	61.172
31	57.757	60.104
32	56.683	59.035
33	55.609	57.968
34	54.536	56.900

Age	Male	Female
35	53.463	55.834
36	52.390	54.768
37	51.318	53.703
38	50.247	52.639
39	49.178	51.577
40	48.110	50.516
41	47.043	49.456
42	45.979	48.398
43	44.917	47.341
44	43.858	46.287
45	42.801	45.234
46	41.747	44.184
47	40.696	43.135
48	39.648	42.089
49	38.604	41.045
50	37,564	40.003
51	36.527	38.964
52	35.495	37.927
53	34.467	36.894
54	33.443	35.863

Age	Male	Female
55	32.424	34.835
56	31.411	33.810
57	30.403	32.789
58	29.402	31.770
59	28.406	30.756
60	27.417	29.747
61	26.436	28.742
62	25.461	27.742
63	24.495	26.748
64	23.536	25.759
65	22.585	24.776
66	21.643	23.799
67	20.710	22.829
68	19.788	21.866
69	18.878	20.913
70	17.979	19.972
71	17.095	19.041
72	16.225	18.123
73	15.371	17.216
74	14.534	16.322

Technical Information and Formulae

Results are built up from the probability of a person aged exactly x dying before age (x+1) i.e. $q_x(t)$

The calculations allow for anticipated mortality improvement, a principle established in Golden Eagle International Trading Pty Ltd v Zhang [2007] HCA 15 and other judgments. I have used the latest Australian Life Table 2020-22 as published by the Australian Government Actuary and 25-year trend improvement factors. While the ABS releases their life tables in early November of the year following the end of the investigation period, given the relatively brief period between the end of the investigation period and the publication date, the ABS is required to estimate the number of late reported deaths. ALT2020–22 uses data that is extracted around one year later than the ABS, thus an estimate of late reported deaths is not required. The process of

incorporating future mortality improvements is expressed mathematically as $q_x(t) = q_x(1+I_x/100)^{(t-2021)}$ where $q_x(t)$ is the mortality rate at age x in year t and I_x is the assumed rate of improvement at age x.

The average number of years lived after age x of persons aged exactly x i.e. life expectancy is expressed as $\mathring{e}_x$. The circle indicates that fractions of a year is included – complete life expectancy. It is calculated as:

$\mathring{e}_x = \sum_{t=1}^{120} l_{x+t} + \frac{1}{2} + \frac{1}{12}\mu_x$ where

$\mu_x = [\ 7\ (d_{x-1} + d_x) - (d_{x-2} + d_{x+1})\ ] / 12l_x$

$d_x = l_x q_x$ and

$l_{x+1} = l_x - d_x$

If you need life expectancy at ages less than 15, please contact NetActuary. There are special modifications for the period after birth due to the pattern of perinatal mortality.

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