

Lifespan Exercise – Instructions

The objective of this exercise is to build insightful charts, using the ggplot2 and extension packages, of a public dataset. This data comes from [a study in The Lancet](#), a medical journal, predicting the lifespan of men and women in 25 rich countries. The results are summarised in the Economist article [here](#). The source data is in file Longevity Data.xlsx.

The original Lancet data is in a PDF and looks like this

Appendix Table 2: Life expectancy at birth in 2010 and 2030.

Country	Men		Women	
	2010	2030	2010	2030
Australia	80.10 (79.89-80.19)	84.00 (80.27-87.95)	84.53 (84.46-84.64)	87.57 (84.86-90.43)
Austria	77.73 (77.50-77.87)	81.40 (78.56-85.40)	83.21 (82.90-83.33)	86.22 (81.65-88.32)
Belgium	77.35 (77.07-77.46)	80.88 (76.38-83.80)	82.76 (82.57-82.87)	85.64 (81.10-87.98)
Bulgaria	70.21 (68.56-70.34)	74.07 (67.88-80.80)	77.33 (76.93-77.45)	78.87 (77.51-84.06)
Canada	79.41 (78.70-79.50)	83.89 (80.01-87.87)	83.94 (83.40-84.04)	87.09 (84.11-90.02)
Chile	76.74 (76.09-76.86)	80.74 (76.23-84.05)	82.95 (81.73-83.08)	86.89 (80.71-90.20)
Croatia	73.10 (72.72-73.27)	77.80 (72.78-85.25)	79.80 (79.50-79.92)	83.19 (80.06-88.92)

I have extracted it into the Longevity Data.xlsx Excel file - snapshot below

	Region	Country	Men 2010	Men 2030	Women 2010	Women 2030
2	Asia & Oceania	Australia	80.10 (79.89-80.19)	84.00 (80.27-87.95)	84.53 (84.46-84.64)	87.57 (84.86-90.43)
3	Western Europe	Austria	77.73 (77.50-77.87)	81.40 (78.56-85.40)	83.21 (82.90-83.33)	86.22 (81.65-88.32)
4	Western Europe	Belgium	77.35 (77.07-77.46)	80.88 (76.38-83.80)	82.76 (82.57-82.87)	85.64 (81.10-87.98)
5	Eastern Europe	Bulgaria	70.21 (68.56-70.34)	74.07 (67.88-80.80)	77.33 (76.93-77.45)	78.87 (77.51-84.06)
6	Americas	Canada	79.41 (78.70-79.50)	83.89 (80.01-87.87)	83.94 (83.40-84.04)	87.09 (84.11-90.02)
7	Americas	Chile	76.74 (76.09-76.86)	80.74 (76.23-84.05)	82.95 (81.73-83.08)	86.89 (80.71-90.20)

There are two R scripts

- Lifespan Start. R
- Lifespan Example Solution. R

Edit the Lifespan Start R script to complete the exercise. This script already has some R code so that you can immediately start to create some charts. The script imports the dataset, removes the confidence intervals, the transforms the dataset into a tidy shape, so you can immediately start to create some charts. It then has a set of instructions and hints, as R comments, to help you build a set of charts.

The Lifespan Example Solution R script shows one way of building the charts – you may well create different and better visualisations.