# Research-Based Justification for Life Expectancy Dataset Construction

This document compiles authoritative research and statistical references used to simulate realistic life expectancy values based on demographic and lifestyle factors. Each reference supports one or more data generation rules implemented in the dataset.

## Country and Gender-based Life Expectancy

* Worldometers – Life Expectancy by Country: https://www.worldometers.info/demographics/life-expectancy/

## Exercise and Physical Activity

* Lancet – Physical activity reduces mortality: https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(11)60749-6/abstract
* PMC – Exercise increases lifespan: https://pmc.ncbi.nlm.nih.gov/articles/PMC3395188/#B25
* WHO – Global inactivity statistics: https://www.who.int/news-room/fact-sheets/detail/physical-activity

## Age Distribution

* Wikipedia – World Population Demographics: https://en.wikipedia.org/wiki/World\_population#:~:text=Global%20demographics

## Diet and Nutrition

* Nature – Longevity gains from diet improvements: https://www.nature.com/articles/s43016-023-00868-w

## Smoking Impact on Life Expectancy

* CBS – Heavy smoking cuts lifespan by 13 years: https://www.cbs.nl/en-gb/news/2017/37/heavy-smokers-cut-their-lifespan-by-13-years-on-average

## Alcohol Consumption Effects

* Harvard Health – Alcohol and life expectancy: https://www.health.harvard.edu/blog/sorting-out-the-health-effects-of-alcohol-2018080614427

## BMI and Life Expectancy

* The Lancet – Obesity, underweight and life expectancy: https://www.thelancet.com/journals/landia/article/PIIS2213-8587(18)30288-2/fulltext

## Sleep and Longevity

* Mayo Clinic – Quality sleep extends lifespan: https://mcpress.mayoclinic.org/healthy-aging/how-quality-sleep-impacts-your-lifespan/

## Work Stress

* ResearchGate – Job stress effects: https://www.researchgate.net/publication/230564274\_The\_effect\_of\_job\_stress\_on\_smoking\_and\_alcohol\_consumption

## Social Life and Health

* PMC – Longevity benefits from social relationships: https://pmc.ncbi.nlm.nih.gov/articles/PMC11026051/

## Medical History Impact

* Asthma – Reduces life expectancy by 18.6 years: https://pmc.ncbi.nlm.nih.gov/articles/PMC6219138/
* Diabetes – Reduces life expectancy by 10 years: https://pubmed.ncbi.nlm.nih.gov/37708900/
* Cancer – Reduces life expectancy by ~30 years: https://pmc.ncbi.nlm.nih.gov/articles/PMC5672926/#:~:text=Estimates%20for%20loss%20in%20expectation
* HIV/AIDS – ~30 years loss: https://www.medicalnewstoday.com/articles/324321
* Heart Disease – ~12 years loss: https://www.heart.org/en/news/2019/07/25/heres-how-many-years-you-could-gain-by-keeping-heart-disease-at-bay
* Kidney Disease – ~7 years loss: https://www.griswoldcare.com/blog/kidney-disease-life-expectancy-the-5-stages/#:~:text=According%20to%20the%20National%20Kidney%20Foundation
* Liver Cirrhosis – Life expectancy loss: https://www.medicalnewstoday.com/articles/cirrhosis-of-the-liver-life-expectancy