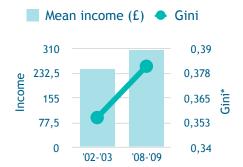


From social inequities to health inequities. A global challenge

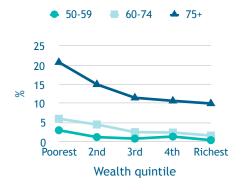
Socioeconomic status has a strong influence on the quality of life and life expectancy. Improving wellbeing and health conditions is an achievable goal for society, as individuals belonging to higher socioeconomic groups already experience it.

Facing the dramatic health inequities, and their underlying social and economic differences, is thus a major societal challenge for Europe. Taking up such a challenge is the main purpose of **Lifepath**.

Inequalities



The income distribution is more unequal in 2008/09 than in 2002/03 (ELSA) | * Gini coefficient: measure of inequality



Deaths between waves, by wealth (ELSA)

Lifepath is an EU-funded project aimed to provide updated, relevant and innovative evidence for the relationship between social disparities and healthy ageing, in order to lay ground for the development of future health policies and strategies.

Lifepath project stems from three main hypotheses:

- Healthy ageing begins at conception, if not before
- Ageing involves a progressive differentiation across social groups
 - Biological changes underpin the effect of complex environmental, behavioural and social patterns and can be traced with **-omic technologies**.



What does healthy ageing mean?

Lifepath defines healthy ageing as the optimal state of performance and wellbeing capable for any particular phase of the life course that can be expected in a society, across all social and cultural groups of a population. Such a definition comes from a new concept of health, which is represented as a trajectory, more than a static status.

Life and ageing are continuous processes, made up by two main stages: a build-up phase and a decline phase.

The former begins at conception and ends at late adolescence, and is an extremely sensitive periods, both biologically and socially.

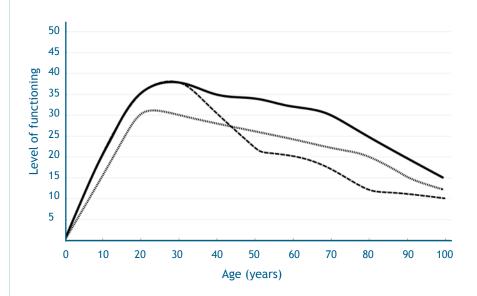
Build-up | Decline

Being exposed to low socio-economic circumstances in this stage may negatively impact the maximum attained health.

A maximum that is slowly eroded during the decline stage, starting in early adulthood.

And again,
socioeconomic
status is a strong
determinant of the rate
of such decline.

Life trajectory



The curve of life course (<u>solid line</u>), with the "build-up" and the "decline" stages. Social exposures during the first stage can influence the proportion of optimum growth attained, (<u>dotted line</u>). Social exposures during the second stage can influence the rate at which functioning is lost (<u>dashed line</u>).



Our objectives

- Showing that **healthy ageing** is an achievable goal for society, as it is already experienced by individuals of high socio-economic status (SES)
- Improving the understanding of the mechanisms through which healthy ageing pathways diverge by SES, by investigating life course biological pathways using **-omic technologies**.
- Examining the consequences of the current economic recession on health and the biology of ageing (and the consequent increase in social inequalities).
- Providing evidence on the reversibility of the poorer ageing trajectories experienced by individuals exposed to the strongest adversities and analysing the health consequences of the current economic recession in Europe.
- Providing updated, relevant and innovative evidence for underpinning healthy ageing policies (particularly "health in all policies") that address social disparities in ageing and the social determinants of health, using both observational studies as well as an experimental approach.





Unveiling the biological roots of health inequities

To achieve these objectives, **Lifepath** experts developed an original study design that integrates social science approaches with biology and big data analysis, using existing population cohorts and **-omics measurements**.

This dynamic approach to life-course analyses will be central in **Lifepath** through the integrated use of longitudinal cohorts capturing different life stages with repeat measures and biological samples.

Specifically, data will be gathered from four different sources

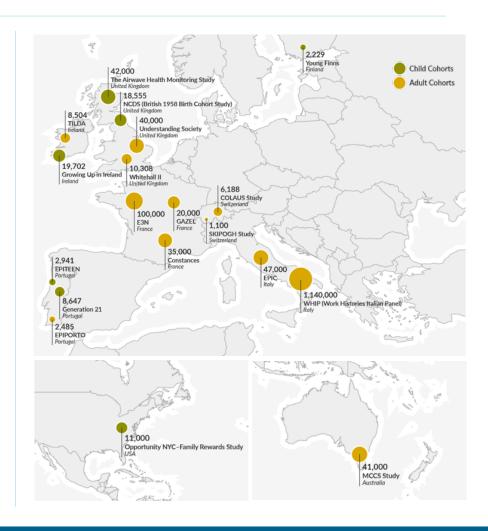
Europe-wide and national surveys, including EU-27.

Longitudinal cohorts (across EU) with intense

phenotyping and repeat biological samples.

Other large cohorts with biological samples and a large registry dataset with over a million individuals and very rich information on work trajectories and health.

A randomized experiment on conditional cash transfer for poverty reduction in NY City.





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