This multinational and multidisciplinary consortium consists of 18 partners from 11 different countries.

- Erasmus University Medical Center Rotterdam, The Netherlands
  Vincent Jaddoe (Coordinator), Janine Felix, Liesbeth Duijts
- Vall d’Hebron, Barcelona, Spain
  Marine Wijga, Jordi Sunyer
- University of Turin, Italy
  Anna Maria Vola-Altamura
- University of Southampton, United Kingdom
  Debbie Lawlor
- University of Bristol, United Kingdom
  John Wright
- University of Copenhagen, Denmark
  Anne-Marie Nybo Andersen
- Bradford Teaching Hospitals NHS Foundation Trust, United Kingdom
  John Wright
- University Medical Center Groningen, The Netherlands
  Morris Swertz
- University of Crete, Greece
  Leda Chatzi
- Norwegian Institute of Public Health, Oslo, Norway
  Gun-Høge Rydberg, Per Magnus
- French National Institute of Health and Medical Research (INSERM), Paris, France
  Marie-Aline Charles
- University of Malmo, Sweden
  Lena Ekberg
- Samfundet Folkhälsan, Helsinki, Finland
  Anne Schuller
- University of Western Australia, Perth, Australia
  Rae-Chi Huang
- University of Oulu, Finland
  Marjo-Riitta Järvelin, Sylvain Sebert
- Ludwig Maximilians University of Munich, Germany
  Berthold Koletzko
- VU University Amsterdam, The Netherlands
  Maarten Lindeboom
- Slimmere Zorg B.V., Bussum, The Netherlands
  Arno Bisschop
- Concentris Research Management GmbH, Fürstenfeldbruck, Germany
  Ameli Schwalber
- University Medical Center Utrecht, The Netherlands
  Paul Overvliet
- University of Copenhagen, Denmark
  ChristenRaunøren
- University of Tuebingen, Germany
  Lilli Schierbeck
- University of Houston, School of Public Health, United States
  Zachary J. Hurlburt
- University of Western Australia, Perth, Australia
  Clare Maclean
- University College London, United Kingdom
  Joan Sallan
- University of Leeds, United Kingdom
  Andrew Sedgewick
- University of Copenhagen, Denmark
  Carina Sillesen-Hansen
- University of Birmingham, United Kingdom
  David Stirling
- University of Oxford, United Kingdom
  Brian P. Lawlor
- University of Aarhus, Denmark
  Malte Brockenbrough

Participating cohorts

- Number of participants
  - <1,000
  - 1,000 - 5,000
  - 5,000 - 20,000
  - >20,000

Participants

- NFBC1966
- NFBC1986
- GECKO
- Generation R
- Generation R Next
- ALSPAC
- ALSPAC G2
- BiB
- SWS
- EDEN
- ELFE
- INMA
- NINFEA
- RHEA
- MoBa
- HBCS
- DNBC

This project received funding from the European Union’s Horizon 2020 Research and Innovation programme under grant agreement No 733206 (LifeCycle).
The LifeCycle objectives

1. Establish a new, open and long-term multidisciplinary EU CHILD Cohort Network, which brings together existing data from pregnancy and childhood cohort studies. We will develop a governance structure, a safe data sharing platform and strategies for data harmonization.

2. Enrich the EU CHILD Cohort Network with novel integrated data on early-life stressors related to socio-economic, migration, urban environment and lifestyle determinants.

3. Identify early-life stressors influencing cardio-metabolic, respiratory and mental developmental adaptations and health trajectories during the full lifecycle.

4. Develop analytical methods for causal inference and longitudinal modelling in observational cohort studies and develop tutorials, organise methodological workshops and develop e-learning modules that will be widely disseminated to the research community.

5. Identify DNA methylation markers mediating the relations of early-life stressors and health trajectories during the full lifecycle.

6. Review findings from research, and develop recommendations for public health strategies on individual and population level on modification of early-life stressors (socio-economic, migration, urban environment and lifestyle determinants), related to lifecycle health trajectories.

7. Develop models to predict the onset and evolution of risk factors for cardio-metabolic, respiratory and mental outcomes throughout the life course. These models will be translated into mobile eHealth applications to provide individually customized advice for pregnant women and young children.

Project details

Start date: 01/01/2017
Duration: 60 months

Coordinator
Prof. Vincent Jaddoe, MD, PhD
Erasmus University Medical Center Rotterdam

Essential University Medical Center Rotterdam

The LifeCycle is organized in 5 themes and 13 work packages

Theme 1 (WP1-3) will focus on establishing and maintaining the EU CHILD Cohort Network, including data harmonization and development of the data management and analysis platform. In addition, theme 1 will construct integrated exposure indices for early-life stressors, including the overall integrated exposure measure.

Theme 2 (WP4-6) will perform integrated hypothesis driven research on early-life stressors and lifecycle trajectories of cardio-metabolic, respiratory and mental health.

Theme 3 (WP7-8) will focus on novel analytical methods and epigenetic programming as a potential underlying mechanism.

Theme 4 (WP9-11) will focus on impact of LifeCycle through development of recommendations for interventions on early-life stressors and for public health strategies. In addition, theme 4 will develop eHealth applications for personalized prevention, and manage effective dissemination, exploitation and training programmes.

Theme 5 (WP12-13) will provide management and coordination of LifeCycle and will monitor the ethical aspects of the project.

LifeCycle will bring together pregnancy and child cohort study researchers into a new, open and sustainable network, the EU CHILD Cohort Network. This network will be used to identify novel markers of early-life stressors which may affect health trajectories throughout the lifecycle. This ambitious project combines data on over 250,000 children and their parents from Europe and Australia to provide robust scientific evidence on lifecycle health.