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Growing in France: The Elfe birth cohort

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Background and hypothesis: The French National Environment and Health Action Plan (NEHAP) was adopted in June 2004. This plan included a proposal to conduct a cohort to describe children's growth at different ages; assess levels of exposure to the main environmental pollutants and analyse the links between exposure and health. The purpose of this project is to build a nationally representative cohort of 20,000 children to be followed from birth to adulthood.

Methodology: The cohort will be based on the INSEE Demographic Panel (EDP) established using census data and vital records and will include children born on specific days of 2009. The mother's health and biological samples will be taken at birth to evaluate the fetal exposition to toxic substances. Emphasis will be put on the combined interactions and effects between several neurotoxic products (lead, mercury, PCB, pesticides) and endocrine disturbers. Furthermore, environmental sensors will be placed in the mother's homes and data from national bases on geographic sources of pollution will be used thanks to geocoding of the dwellings concerned.

Results: not available yet

Implications: As early as at the fetal state, the child is exposed to toxic substances that not only immediately impact his health as a child but that also his future health as an adult. Research is needed because scientific knowledge concerning the etiological role of several risk factors remain incomplete. Cohort design is the best tool for unbiased measure of numerous exposures and of their impact on health during key periods of the growth.