



Thesis results

THESIS

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Under the direction of
METABIO

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Perinatal dietary exposure to environmental chemicals and allergy in childhood

Exposure to environmental chemicals during the perinatal period has been associated in the literature with a higher risk of asthma and allergies during childhood. However, very few studies have examined the effect of multiple exposures, and diet represents a significant source of exposure for pregnant women and children. The aim of this thesis was to investigate the link between dietary exposure to environmental chemicals, considered individually and in mixtures, during the pre- and postnatal periods, and the onset of asthma and allergies in children. This research was based on data from two French studies that followed children from birth (EDEN and ELFE), and existing data on food contamination (EAT¹ from ANSES).

Our results highlight the importance of taking the effects of multiple dietary exposures to contaminants on population health into account, particularly during this critical phase of an individual's development. For example, they showed that exposure to a mixture consisting mainly of furans, trace elements and polycyclic aromatic hydrocarbons was associated with a higher risk of eczema up to age 5.5 years in the ELFE study, and of allergic rhinitis up to age 8 years in the EDEN study. This mixture was not associated with the consumption of any specific food or food group. In these studies, the consumption of organic foods was not considered, whereas this should be possible using data on contamination levels in organically- and conventional foods, which will be included in the next EAT survey (EAT3).

¹ Total Diet Survey

