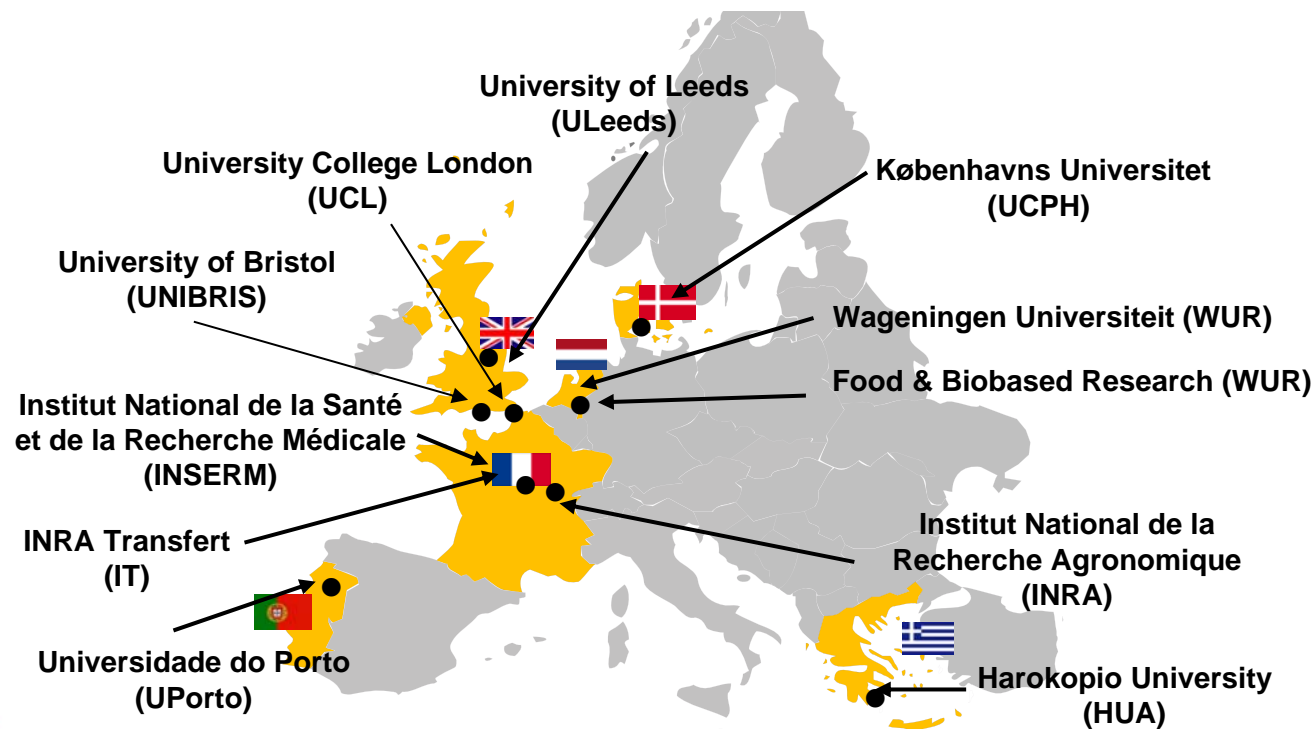




Determining factors and critical periods in food **H**abit formation and breaking in **E**arly childhood: **a** multidisciplinary approach

Sylvie Issanchou





- **Diets of young children** in many European countries **are not ideal**
- **Food preferences and eating habits develop early in infancy** and track on in childhood and up to adulthood
- **Eating habits** may have an **impact on health** in later life (obesity, diabetes, heart problems..)





- Core concepts of eating habits
 - The '**WHICH**' i.e. the qualitative dimension
 - ➔ A focus on vegetables and fruit
 - The '**HOW MUCH**' i.e. the quantitative dimension
 - ➔ Food intake regulation





- They are high in **vitamins, minerals and fibre**
- They promote a **healthy growth** and development, and protect against long-term diseases
- They are **low in energy** and can be eaten in place of energy-dense foods that may lead to overconsumption and weight gain in children
but...





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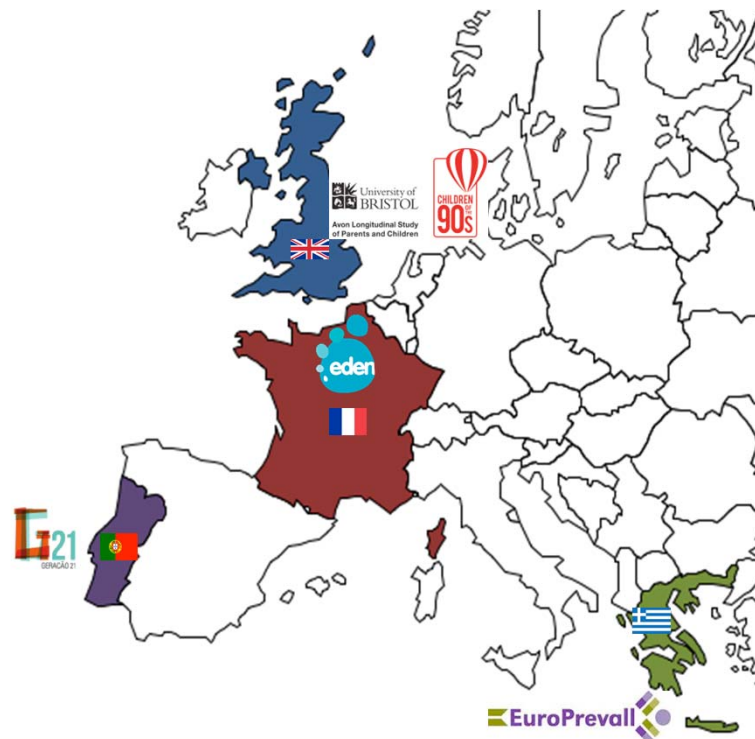
but...

- Fruit & vegetable **consumption** by children is **below the recommended levels**





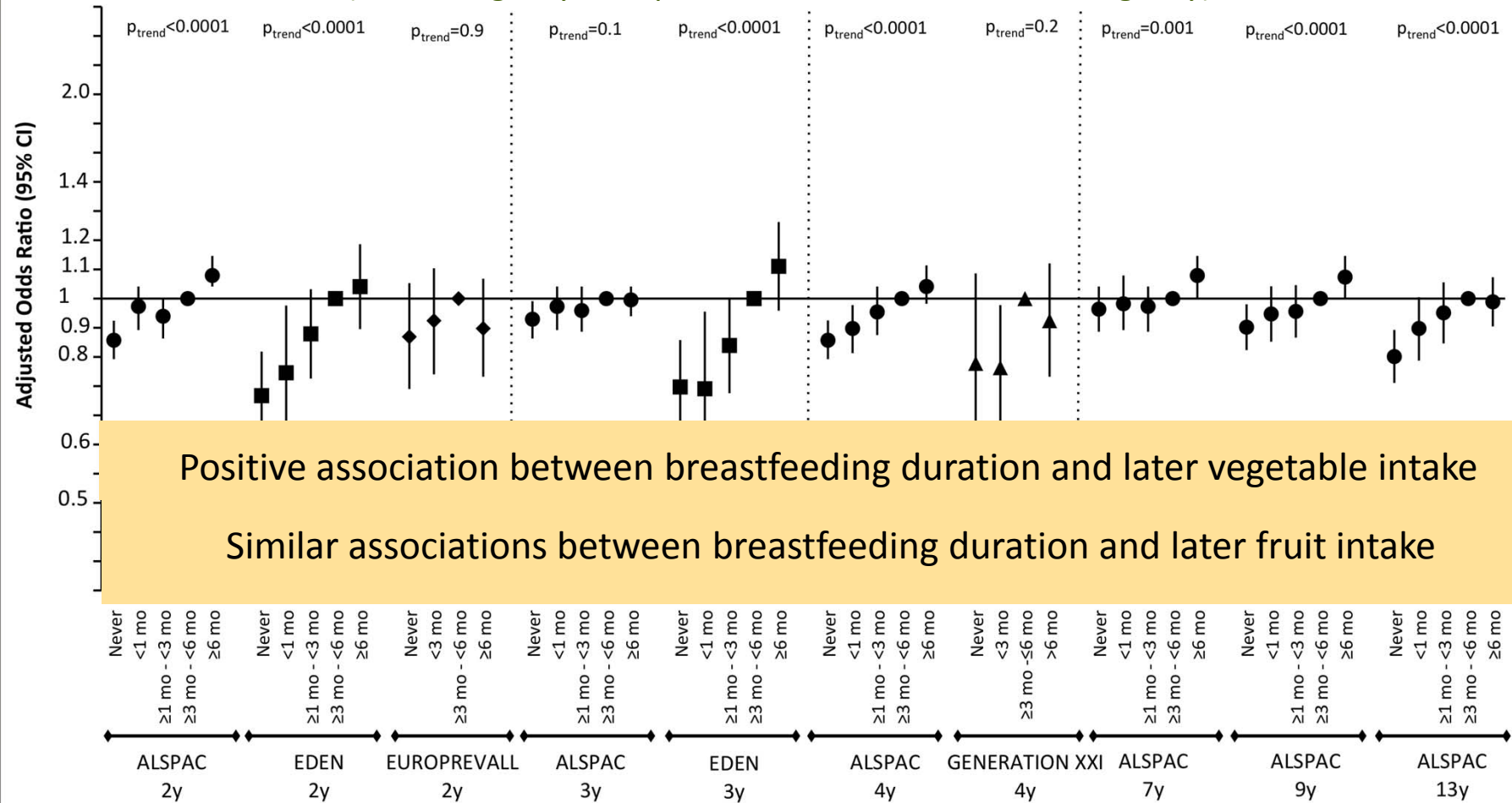
To examine association **between**
breastfeeding duration, age at complementary feeding
and eating habits in young children
from 4 European countries with different feeding practices





de Lauzon-Guillain et al., AJCN, 2013

Breastfeeding duration and vegetable intake (>1 serving/day, except in GENERATION XXI >3 serving/day)



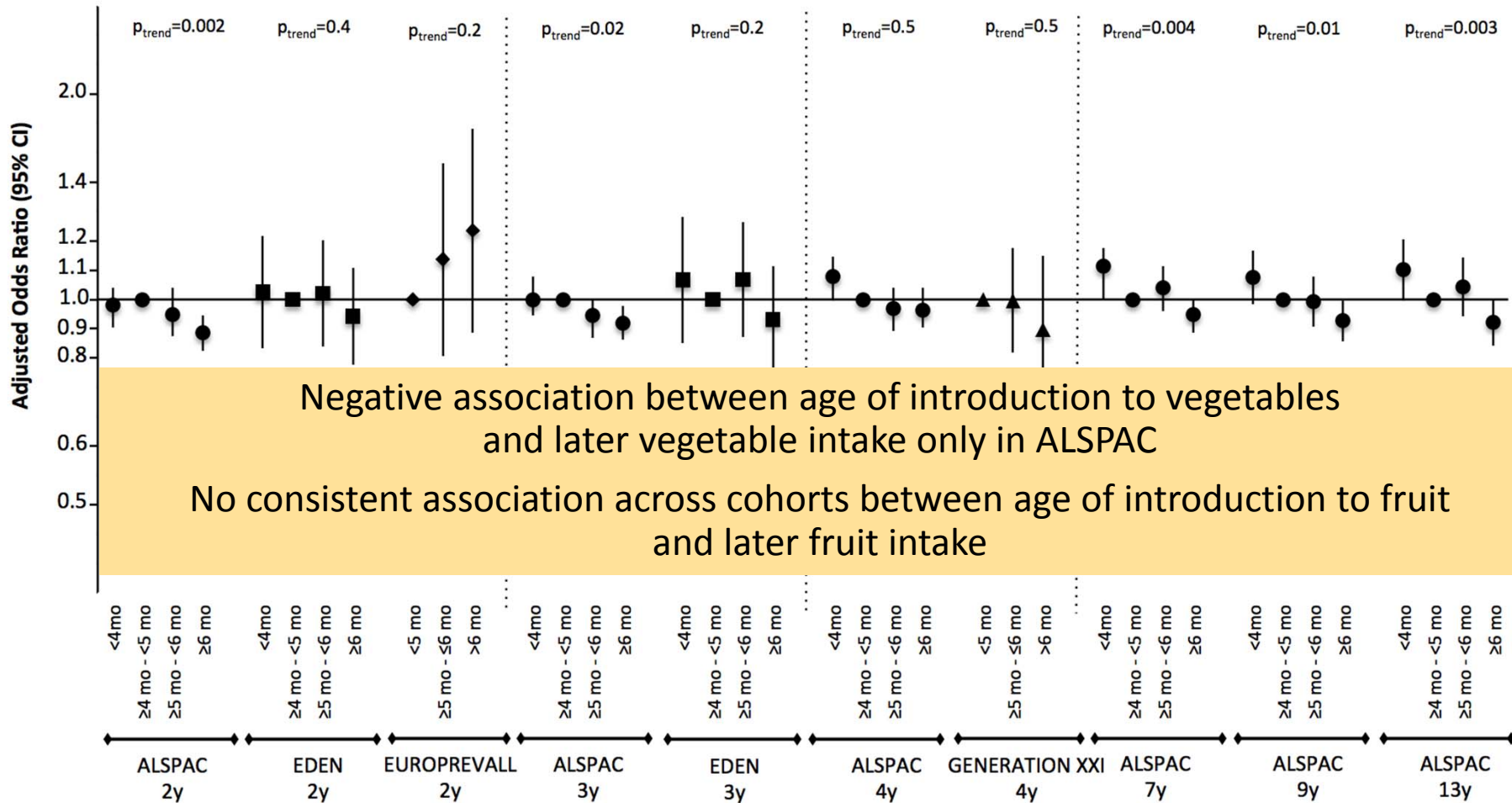
Logistic regressions adjusted for age of introduction to vegetables, age of introduction to other foods, child's age and sex, maternal education &, except in EuroPrevall, maternal age and smoking during pregnancy



de Lauzon-Guillain et al., AJCN, 2013

Complementary feeding and vegetable intake

(>1 serving/day, except in GENERATION XXI >3 serving/day)



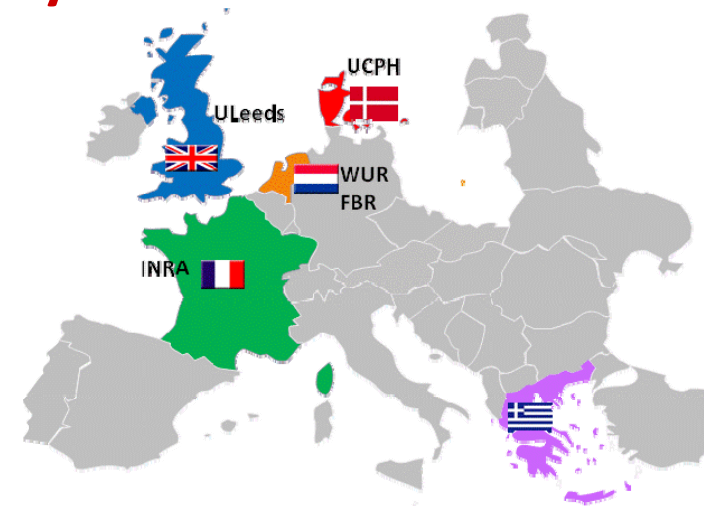
Logistic regressions adjusted for any breastfeeding duration, age of introduction to other foods, child's age and sex, maternal education &, except in EuroPrevall, maternal age and smoking during pregnancy



- To study **learning by experience in infants and children up to 3 years old**



- To study the **efficiency of different strategies in 3-6-year-old children**



- To examine the **individual reactions** and the impact of
 - Maternal feeding practices
 - Maternal characteristics
 - Children's eating traits





- **Early variety** of different vegetables increases later acceptance of novel vegetables
- **Older** children are more **food avoidant**
- **Repeated exposure**: a powerful learning strategy to increase novel vegetable intake in children, **even for food avoidant children**
- Increasing intake of relatively familiar vegetables seems a great challenge in children aged 2-6y
- **Choice-offering** may have some potential





- To study children's self-ability to regulate their intake in two challenging situations

When offered an energy-dense food before a lunch



When offered palatable foods after a lunch



- To examine the impact of parental practices
- To examine if it is possible to train children to focus on their internal cues of hunger/satiation





- When offered an energy-dense food before a lunch, children ate less. But, on average, they only **reduced their lunch intake by half the calories represented by the snack**
- When offered palatable foods after a lunch the average intake was the equivalent of 25% of the energy intake of the lunch
- Mothers who used **'Food as a reward'** were **more likely** to have **children who ate in the absence of hunger**
- Teaching children to pay attention to their hunger and satiation cues is not easy as we did not observe any **impact of an intervention**





1. To understand if **breastfeeding duration** is related to **higher diet quality** in early childhood (as shown in our cohorts) in populations from **low and middle-income populations**, where breastfeeding duration is longer in disadvantaged rather than in advantaged families.
2. To confirm that the association of **breastfeeding** with **higher diet quality** persists **throughout childhood** and to clarify the **effect of maternal diet** during breastfeeding.





3. To understand why a specific group of children do not respond to repeated exposure
4. To explore the **optimal serving size** and the **optimal frequency** of the **repeated exposure** technique for increasing intake of a novel vegetable and of a relatively familiar vegetable
5. To investigate whether **role modelling strategies in a home** situation are effective for increasing intake of relatively familiar vegetables
6. To conduct research to understand better the **development of attraction for sweet and fatty** foods





Evidence-based recommendations for the formation of healthy eating habits in children from infancy to 6 years old.

HabEat aimed to identify strategies to promote healthy eating habits in infants and young children. We investigated strategies to facilitate preferences for healthy foods, particularly vegetables, and examined the impact of individual differences in child eating behaviour and parental feeding practices.



This document presents the findings from HabEat based on the analyses of data from birth cohort studies and experimental work among infants, toddlers and children up to 6 years of age. HabEat has developed recommendations for both policy makers and stakeholders, which promote the formation of healthy eating habits.



VEGETABLES AND FRUIT
Help your child to like them



A guide for parents of young children

Thanks for your attention

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