"What's for Dinner?": Intersection of Food Access, Dietary Chemical Exposure and other Dietary Determinants

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The foods people eat are a crucial pathway for understanding exposure to contaminants from various sources. These exposures are combined to calculate cumulative health risks. It is not uncommon for a single food item to contain residues of five or more persistent chemicals, like pesticides or heavy metals. Food access, cost of food, income, age, ethnicity, and stress are all dietary determinants that influence what people eat and, subsequently, exposure to chemicals. To fully understand the impact of these determinants, a study was conducted that considered influential factors on possible exposures to chemicals in foods. First, a comprehensive review of studies on dietary determinants, food contaminants and their impacts were conducted. Secondly, a locality in North Carolina was used to evaluate food access and the factors that influence it. The results showed that fruit and vegetable markets were the least accessible and were mainly located in and around the Durham urban center. Accessibility decreased as the distance increased from the Durham city center. Household size influenced food access; with everyone person increase, food access decreased most prominently seen for fruit and vegetable markets. Differing diets, consequential of food access disparities, could imply different dietary exposures. The development of a systematic approach to evaluate possible exposures to chemicals whilst accounting for dietary determinants such as food access will help researchers provide the necessary data to understand issues like health disparities and resolve environmental injustices.

This presentation should help the attendees:
- Understand what systematic reviews are, and how they can be used to identify chemical contaminants, dietary determinants, and associated health risks
- Understand the importance of food access in impacting dietary exposure
- Start to build an understanding of how food access is measured and impacts of other determinants.