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Protecting susceptible populations from chemical contaminants in food

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Protecting susceptible populations from chemical contaminants in food



The following article has been penned by Dr Fitzpatrick, appearing in the FDA Voice Blog:Â

Anyone who regularly eats food containing low levels of certain chemical contaminants may be adversely affected over time. But some groups of people are more sensitive to chemical contaminants than others and thus are more likely to be harmed by long-term exposure. We call these groups "susceptible populations."

The FDA's charge to ensure the safety of the food supply is not limited to the protection of the general public. We also have a responsibility to protect susceptible populations.

Pregnant women, infants, young children, and older adults have long been recognized as susceptible populations by the scientific community.

In addition, people with cancer, diabetes, HIV/AIDS and transplant recipients may have weakened immune systems and thus may also be more vulnerable. In short, these groups may be at greater risk from a given amount of a chemical contaminant because of their age, genetics, sex, or health status.

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Committed to protect susceptible populations as best we can, the FDA convened its Food Advisory Committee on December 16-17, 2014, to help shape our efforts to understand when and how risk assessments should integrate concern for susceptible populations.

Conducted and used by regulators, risk assessments are one of the most objective and scientific ways to understand the potential adverse health effects of chemical contaminants in the food we eat. They help regulators apply science in policy and decision-making. Think of them as a foundation for risk management, a bridge between data and decisions.

At times, however, susceptible populations may require special consideration. They may even warrant separate risk assessments under certain circumstances.

If we evaluate their risk with the same broad brush that we apply to the general population, we might miss certain realities. In pregnant women, for example, metals like cadmium, lead and arsenic can cross the placenta and may harm the fetus while its neurological and immune systems are in their earliest stages of development. Similarly, senior citizens may have nutritional deficiencies or cardiovascular problems that make them more susceptible to certain contaminants.

We asked difficult questions of the Food Advisory Committee. To paraphrase a few, we asked what factors the FDA should use to define a susceptible population, what data and level of confidence are needed to initiate a separate assessment for any given susceptible population, and whether there are subpopulations or life stages of particular concern. We also asked several technical questions.

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My colleagues and I hope to make meaningful inroads toward better understanding the risks faced by susceptible populations through our risk assessments, in part with the committee's help. We are confident that we are on the right track.

In fact, our effort aligns with a recent report by the National Academy of Sciences (on inorganic arsenic), which suggests that, depending on the chemical, separate risk assessments may be warranted for certain susceptible populations.

We will study the committee's advice to consider how we can best incorporate susceptible populations into our risk assessments. Ultimately, we know that it might not always make sense to take a "one-size-fits-all" approach when it comes to food safety.