

## **Chemical Hazards**

Animals may be presented at slaughter with violative levels of chemical residues. This hazard includes chemical residues resulting from use of, or exposure to, drugs, pesticides, and other compounds. Bob veal (calves slaughtered at 21 days or less) and cull cow slaughter operations have historically had the highest rate of residue violations. For example, dairy cows may be given antibiotics by the producer to treat infections like mastitis, and failure to observe the required withdrawal time may result in violative residues. Some examples of environmental contaminants that may be consumed by animals include lead, cadmium, mercury, arsenic, dioxins, or polychlorinated biphenyls or PCBs.

The potential health consequences of exposures to chemicals in food can be serious, are often inadequately understood, and deserve serious consideration. The long-term and cumulative effects of exposure associated with chemicals in food pose special difficulties in identifying and addressing these risks. It is apparent that at least some of the identified chemical hazards are of concern because they exert particular effects. For example, industrial chemicals such as dioxins may be of concern because they have the potential to cause endocrine effects and/or interfere with the immune system. Some hazards such as lead contamination can affect a certain population- infants or young children causing toxic effects.

Lead, in addition to being a chemical hazard, may be a physical hazard which will be discussed below. Chemical residues have been linked through research to various types of cancers. The public health concerns associated with the long-term effects of exposure to chemicals from ingestion of food is not well understood or well documented.