

## **DIOXIN SCIENCE ASSESSMENT CONSUMER FACT SHEET**

### **INTRODUCTION**

"Dioxins" refers to a group of toxic chemical compounds that share certain chemical structures and biological characteristics. Dioxins can be released into the environment through forest fires, backyard burning of trash, certain industrial activities, and residue from past commercial burning of waste. Dioxins break down very slowly and past releases of dioxins from both man-made and natural sources still exist in the environment.

Over the past several years, EPA, state governments and industry have worked together to dramatically reduce known and measurable industrial dioxin emissions. These efforts have reduced air emissions of dioxins by 90 percent. Today, most Americans have low-level exposure to dioxins and the findings show that generally, over a person's lifetime, current exposure to dioxins does not pose a significant health risk.

### **WHAT ARE THE HEALTH EFFECTS FROM DIOXIN EXPOSURE?**

Almost every living creature has been exposed to dioxins. Studies have shown that exposure to dioxins at high enough levels may cause a number of adverse health effects, including cancer. The health effects associated with dioxins depend on a variety of factors including: the level of exposure, when someone was exposed, and for how long and how often someone is exposed.

The most obvious non-cancer health effect in people exposed to large amounts of dioxin is chloracne. Chloracne cases have typically been the result of accidents or significant contamination events. Chloracne is a severe skin disease with acne-like lesions that occur mainly on the face and upper body. Other non-cancer effects of exposure to large amounts of dioxin include developmental and reproductive effects, damage to the immune system, interference with hormones, skin rashes, skin discoloration, excessive body hair, and possibly mild liver damage.

### **SHOULD I BE CONCERNED ABOUT DIOXIN EXPOSURE?**

Most Americans have low-level exposure to dioxins. Most dioxin exposure occurs through the diet with small amounts of exposure coming from breathing air containing trace amounts of dioxins and from inadvertent ingestion of soil containing dioxins. While we all likely have some level of dioxin in our bodies, the levels are low and findings show that low-levels of exposure do not pose a significant health risk.

### **SHOULD I CHANGE MY DIET BECAUSE OF DIOXIN?**

The U.S. food supply is one of the safest and most nutritious in the world. Americans should eat a balanced diet and follow the *Dietary Guidelines for Americans, 2010*. EPA and its federal partners such as the U.S. Department of Health and Human Services and the U.S. Department of Agriculture do not recommend avoiding any particular foods because of dioxin. Each food group provides important nutrients needed for health.

### **WHAT IS EPA DOING ABOUT DIOXINS?**

EPA has taken aggressive actions to reduce dioxin emissions to the environment by placing strict regulatory controls on all of the major industrial sources of dioxin, including large and small municipal waste combustors, hospital medical waste incinerators, commercial, industrial and solid waste incinerators, and secondary aluminum smelters. As a result of efforts by EPA, state governments and industry, air emissions of dioxins have been reduced 90 percent from 1987 levels.