

CDC: Ethylene oxide may have more health effects than cancer

October 1, 2020 By Nancy Crotti

The Centers for Disease Control and Prevention yesterday released a draft toxicity profile of **ethylene oxide** (EtO) that treats it as a more far-reaching health threat than the Environmental Protection Agency does.

The EPA and the federal Department of Health and Human Services both consider EtO a human carcinogen. The medical device industry relies on EtO to sterilize about 50% of all devices sold in the U.S. that require sterilization — more than 20 billion medical devices per year, according to the FDA.



Ethylene oxide

Although most studies of EtO's health effects focus on cancer, the CDC's **Toxicological Profile for Ethylene Oxide** draft tackles other possible health effects of the gas that is used to sterilize millions of medical devices annually. The CDC's systematic review of non-cancer hazards includes presumed respiratory, neurotoxicity, genotoxicity, reproductive toxicity and developmental toxicity and suspected hematological and endocrine health effects. The agency relied on numerous animal and human studies of inhalation and oral consumption of EtO to reach its conclusions.

It also detailed the results of several studies linking EtO to cancer in humans, including breast cancer, leukemia, multiple myeloma, non-Hodgkin's lymphoma and lymphohematopoietic cancers. And it delved into the effects of the gas on children and other vulnerable populations, including those at risk of potentially high exposures to the gas.

Medical device sterilization and microbial reduction in spices accounted for 12% of EtO consumption in the U.S. in 2019, according to the American Chemistry Council. The rest was used in producing other chemicals, the CDC report said. Medtech sterilization accounted for 7.4 million lb of U.S. EtO consumption as of 2008, according to an EPA report.

1 of 7





packaging from damage. It can also penetrate different types of device packaging, enabling sterilizers to process truckloads' worth of devices simultaneously.

The CDC is accepting public comments on the draft toxicological report through December 29, 2020. Comments may be made **here**.

RELATED ARTICLES

READ MORE >



Dymax releases 1040-M adhesive for repeated sterilizations



Steris launches two new vaporized hydrogen peroxide biodecontamination systems





2 of 7 1/12/2022, 1:35 PM