



---

## Uploaded to VFC Website

▶▶ **November 2012** ◀◀

---

This Document has been provided to you courtesy of Veterans-For-Change!

Feel free to pass to any veteran who might be able to use this information!

For thousands more files like this and hundreds of links to useful information, and hundreds of "Frequently Asked Questions, please go to:

[Veterans-For-Change](#)

---

*Veterans-For-Change is a 501(c)(3) Non-Profit Corporation  
Tax ID #27-3820181*

***If Veteran's don't help Veteran's, who will?***

We appreciate all donations to continue to provide information and services to Veterans and their families.

[https://www.paypal.com/cgi-bin/webscr?cmd=\\_s-xclick&hosted\\_button\\_id=WGT2M5UTB9A78](https://www.paypal.com/cgi-bin/webscr?cmd=_s-xclick&hosted_button_id=WGT2M5UTB9A78)

---

**Note:**

VFC is not liable for source information in this document, it is merely provided as a courtesy to our members.



**Item ID Number** 05426  **Not Scanned**

**Author** Brandt, Edward N., Jr.

**Corporate Author**

**Report/Article Title** Statement by Edward N. Brandt, Jr., M. D., Assistant Secretary for Health, Department of Health and Human Services, before the Subcommittee on Natural Resources, Agriculture Research, and Environment, Committee on Science and Technology, House of Representatives, July 28, 1983

**Journal/Book Title**

**Year** 1983

**Month/Day** July 28

**Color**

**Number of Images** 0

**Description Notes**



Office of the Assistant Secretary  
for Health  
Washington DC 20201

FOR RELEASE ONLY UPON DELIVERY

STATEMENT

BY

EDWARD N. BRANDT, JR., M.D.

ASSISTANT SECRETARY FOR HEALTH

DEPARTMENT OF HEALTH AND HUMAN SERVICES

BEFORE THE

SUBCOMMITTEE ON NATURAL RESOURCES, AGRICULTURE

RESEARCH, AND ENVIRONMENT

COMMITTEE ON SCIENCE AND TECHNOLOGY

HOUSE OF REPRESENTATIVES

JULY 28, 1983

I am Dr. Edward N. Brandt, Jr, Assistant Secretary for Health, Public Health Service, Department of Health and Human Services. I am accompanied by Dr. Vernon N. Houk, Director, Center for Environmental Health, CDC, Atlanta, Georgia; Dr. Philip J. Landrigan, Director, Division of Surveillance, Hazard Evaluations, and Field Studies, CDC/NIOSH, Cincinnati, Ohio; and Dr. Marilyn Fingerhut, CDC/NIOSH, Cincinnati, Ohio.

It is important to recognize that there are 75 related compounds generally referred to as dioxin. Our testimony today relates specifically to the toxicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD), the most toxic. Exposure to dioxin is a very important public health problem, and the Public Health Service is doing a considerable amount of work relating to the known and potential health effects of exposure to this compound.

Most of the information on health effects comes from extensive animal studies and from some studies of workers inadvertently exposed to dioxin-containing products. It is generally agreed that dioxin can cause chloracne. In addition, porphyria cutanea tarda, an acquired form of porphyria characterized by chronic skin lesions and other symptoms, has been observed in some instances after dioxin exposure. Industrial workers inadvertently exposed to dioxin have complained of weight loss, easy fatigability, aching muscles, insomnia, irritability, and loss of libido but these complaints are very difficult to evaluate. Also, after such exposure, abnormal liver function

tests have been reported in association with tender liver and liver enlargement. Neurological changes in sensory function have been observed. There is an increasing body of evidence that there may be an association in workers between exposure to products containing dioxin and soft tissue sarcomas; however, further studies are necessary before we can determine whether or not this association is causal. Results thus far do not establish a cause and effect relationship.

A great deal of research on the health effects of dioxin is under way in the Public Health Service.

The National Institutes of Health's National Cancer Institute (NCI)'s studies have indicated that although dioxin was carcinogenic by oral administration, when applied to the skins of mice it was not carcinogenic for male mice; however, it was for female mice. Currently, NCI is conducting epidemiological studies in groups of workers who were exposed to various herbicides which may have been contaminated with dioxin. These studies are investigating the incidence of soft tissue sarcoma in farmers and others who have used herbicides.

At present, NCI maintains reference samples of dioxins. The Institute also funds two grants investigating the effects of dioxins on hepatic microsomal enzymes, and a grant studying the relationship between cancer incidence and phenoxy herbicide exposure in 13 counties of western Washington State. NCI also supports an intramural study concerning the suspected role of herbicides in causing soft tissue sarcomas.

NIH's National Institute of Environmental Health Sciences (NIEHS) has evaluated the toxicity of dioxin in animals using conventional pharmacological and toxicological procedures. Because of its biological potency, dioxin also has been employed extensively as a model toxin in a variety of basic research toxicologic studies including mutagenesis, carcinogenesis and teratogenesis studies. NIEHS has learned that, in general, dioxin produces a characteristic pattern of short term toxic effects that involves skin, liver, and the immune system in animals. In addition, when administered to pregnant animals, dioxin can cause fetal toxicity and fetal death. However, it does not appear that exposure to dioxin produces adverse genetic effects, alters fertility in male rodents, or increases the incidence of malformed offspring sired by treated males. Several independent studies in experimental animals also have revealed that dioxin is carcinogenic. In addition, two separate laboratory research techniques have shown that dioxin is a potent promoter of chemically induced cancer. The biological potency of this chemical has intrigued scientists and continues to stimulate NIEHS research into the mechanism by which it produces its effect(s).

While there are human data that document the immediate or short term effects of dioxin exposure, the long term sequelae are not as well understood. One study is being supported by NIEHS to enhance the sample size associated with industrial exposure--the International Dioxin Registry being coordinated by the International Agency for Research on Cancer, of the World Health Organization, with funding provided by NIEHS.

Recent events in Missouri, Michigan, and New Jersey demonstrate that there are dioxin contaminated environments to which the public may be exposed and that the number of contaminated sites being detected is increasing. It has been observed that dioxin has a natural tendency to bind to components of soil. Some scientists speculate that in such an instance the toxicity potential would be diminished. If dioxin bioavailability is appreciably diminished due to binding in soil, it may have practical utility in assessing risk associated with levels in the environment. A series of experiments currently is in progress at NIEHS to study dioxin bioavailability from soil.

Food and Drug Administration (FDA) involvement in the dioxin issue stems from concern over contamination of certain species of fish in the Great Lakes area. In 1981, after a thorough review of all the available human epidemiology data and animal toxicology data, FDA provided a public health advisory to the State of Michigan and to other Great Lakes states. This advisory stated that based on the animal data from several studies and data on human consumption of fish, FDA would not consider fish with residues of 25 parts per trillion (ppt) or less to pose a human health hazard. Fish which averaged 25-50ppt should not be eaten more than twice a month by individuals who usually eat locally caught fish. Fish containing more than 50 ppt should not be consumed. Should any new scientific evidence become available to change these decisions the agency is fully prepared to do so.

The Centers for Disease Control, as you know, is conducting a large-scale Agent Orange epidemiology study mandated by Public Law 96-151. This study involves three separate but related investigations: one to evaluate the possible long term health effects of exposure of U.S. ground forces to Agent Orange; a second to make an assessment of the possible health effects of service in Vietnam, a third to assess the potential association between service in Vietnam and soft tissue sarcoma and lymphoma. Each of the first two studies will include a mortality assessment to determine which veterans may have died since being discharged and the causes of their deaths; a health interview; and a comprehensive medical examination and laboratory assessment. The CDC Birth Defects Study may be able to determine whether there is an association between birth defects in children and service of their fathers in Vietnam where they may have been exposed to Agent Orange.

In response to dioxin environmental contamination incidents, such as those in Missouri, Michigan, and New Jersey, CDC has issued health advisories and is working with State and local health departments to provide studies of the affected population to help determine what, if any, human health effects have occurred as a result of exposure to dioxin.

CDC's National Institute for Occupational Safety and Health (NIOSH) has conducted studies of the health effects of dioxin on workers involved in the manufacture of products contaminated by the compound. In response to your request, Dr. Landrigan will focus on the NIOSH work in this area. We will then be happy to respond to any questions you may have.