



## The Report on Carcinogens

### Key Points

# 13<sup>th</sup> Edition

## Report on Carcinogens

- Scientific, public health document identifying substances that pose a cancer hazard
- Lists substances as either known or reasonably anticipated to be human carcinogens
- Includes information on 243 substances, including four newly reviewed listings
- Prepared by the National Toxicology Program for the Secretary of the U.S. Department of Health and Human Services

### What is the Report on Carcinogens?

The Report on Carcinogens is a scientific and public health document that identifies substances that pose a cancer hazard for people in the United States. It is intended to help people make informed decisions about their own health. It is a congressionally mandated document prepared by the National Toxicology Program (NTP) for the Secretary of the U.S. Department of Health and Human Services.

*Nearly everyone's life has been directly or indirectly affected by cancer. The Report on Carcinogens identifies environmental substances, such as some chemicals and biological agents, that pose a potential cancer hazard.*

### How are substances listed?

Agents, substances, mixtures, or exposures, collectively called substances, can be listed in the Report on Carcinogens, either as *known to be a human carcinogen* or as *reasonably anticipated to be a human carcinogen*. See <http://ntp.niehs.nih.gov/go/15209> for specific listing criteria.

#### **Known to be a human carcinogen**

This category is used primarily when there is sufficient evidence of cancer from human studies showing a cause-and-effect relationship between exposure to the substance and human cancer. Occasionally, substances are listed in this category based on human studies showing that the substance causes biological effects known to lead to the development of cancer.

#### **Reasonably anticipated to be a human carcinogen**

This category includes substances where there is limited evidence of cancer in humans or sufficient evidence of cancer in experimental animals showing a cause-and-effect relationship between exposure to the substance and cancer. Additionally, a substance can be listed in this category if there is evidence that it is a member of a class of substances already listed in the Report on Carcinogens or causes biological effects known to lead to the development of cancer.

Expert, scientific judgment, with consideration given to all relevant information, is used to review all cancer studies and to reach conclusions.

### What's New in the Report on Carcinogens?

Four substances have been newly reviewed for inclusion in the 13th Report on Carcinogens. *ortho*-Toluidine is a chemical used to make rubber chemicals, pesticides, and textile dyes. It is also found in consumer and medical products, and tobacco smoke. Since 1983, *ortho*-toluidine has been listed in the Report on Carcinogens as *reasonably anticipated to be a human carcinogen*. However, new cancer studies and evaluations have led NTP to reevaluate and reclassify *ortho*-toluidine, and it will now be added to the category of *known to be a human carcinogen*.

Three other substances have been added to the new report as *reasonably anticipated to be a human carcinogen*.

Access the 13th Report on Carcinogens at <http://ntp.niehs.nih.gov/go/roc13>.





## Summary of Newly Reviewed Substances

Substance	Listing Status	Description and Use
1-Bromopropane	<i>Reasonably anticipated to be a human carcinogen</i>	Used as a cleaning solvent and in spray adhesives
Cumene	<i>Reasonably anticipated to be a human carcinogen</i>	Used to make phenol and acetone, and found in fuel products and tobacco smoke
Pentachlorophenol and By-Products of Its Synthesis	<i>Reasonably anticipated to be a human carcinogen</i>	A complex mixture used as a wood preservative to treat utility poles
<i>ortho</i> -Toluidine	<i>Known to be a human carcinogen*</i>	Used to make rubber chemicals, pesticides, dyes, and medical and consumer products, and found in tobacco smoke

\**ortho*-Toluidine was reevaluated and reclassified for the 13th Report on Carcinogens. It was previously listed as reasonably anticipated to be a human carcinogen.

These include 1-bromopropane, a chemical used as a cleaning solvent and spray adhesive; cumene, which is used to make phenol and acetone, and is found in fuel products and tobacco smoke; and the wood preservative pentachlorophenol and by-products of its synthesis. Documents, or monographs, supporting each listing are also included in the report.

### Who decides what substances should be included?

Anyone can nominate a substance to NTP for consideration of its listing in or removal from the Report on Carcinogens. A formal evaluation is conducted for the nominated substances, and candidates are selected to proceed through the scientific review process.

### How are the substances reviewed?

A transparent process was put in place in January 2012 to guide the development of this new report. Once candidate substances are selected, an extensive scientific review process begins with multiple opportunities for public input. The review process also includes input from both external scientific experts and government scientists from federal health and regulatory agencies. All documents are peer reviewed in a public forum and finalized based on NTP's review

of the peer review comments. See detailed information on the review process at <http://ntp.niehs.nih.gov/go/727393>.

### What does a listing in the Report on Carcinogens mean?

A listing in the Report on Carcinogens does not by itself establish that a substance will cause cancer in an individual. Many factors, including the amount and duration of an exposure, and an individual's susceptibility to a substance, impact whether a person will or will not develop cancer. Consult with your physician or other appropriate specialist if you have questions concerning current or past exposure to any substance listed in the Report on Carcinogens.

### What is in the full report? What information would be most useful to me?

The 13th Report on Carcinogens contains information on 243 listings, including some classes of related chemicals or substances. These include 56 substances listed as *known to be a human carcinogen* and 187 substances listed as *reasonably anticipated to be a human carcinogen*. It is a cumulative report. It includes information on the newly reviewed substances, as well as information on all the substances listed in previous editions of the Report on Carcinogens.

A two-part document, or monograph, is also developed for each substance. The cancer evaluation component of the monograph provides all the information and scientific rationale used to make a listing decision about the substance. The substance profile portion of the monograph contains both the NTP listing recommendation and summary of the scientific information considered key to reaching that decision. It also includes information about potential sources of exposure and current federal regulations to limit exposures.

### How can people access the full report?

The 13th Report on Carcinogens can be downloaded or searched on the NTP website at <http://ntp.niehs.nih.gov/roc13>.

The National Toxicology Program (NTP) is an interagency program established in 1978. The program was created as a cooperative effort, to coordinate toxicology testing programs within the federal government, strengthen the science base in toxicology, develop and validate improved testing methods, and provide information about potentially toxic chemicals to health, regulatory, and research agencies, scientific and medical communities, and the public. NTP is headquartered at the National Institute of Environmental Health Sciences (NIEHS). For more information about NTP, visit <http://ntp.niehs.nih.gov>.

NIEHS supports research to discover how the environment affects people in order to promote healthier lives and is part of the National Institutes of Health. For more information on environmental health topics, please visit our website at <http://www.niehs.nih.gov>.