



The Report on Carcinogens

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.

The Report on Carcinogens identifies many different types of chemicals; infectious agents, such as viruses; physical agents, such as X-rays and ultraviolet radiation; mixtures; and exposure scenarios, collectively called substances. All of these substances can pose a potential cancer hazard. Having this information may help prevent some cancers.

How are substances listed?

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, 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.

Key Points

- *Scientific, public health document identifying substances that pose a cancer hazard*
- *Lists substances as either known, or reasonably anticipated, to be a human carcinogen*
- *Includes information on 248 substances, including seven newly reviewed listings*
- *Prepared by the National Toxicology Program for the Secretary of the U.S. Department of Health and Human Services*



Reasonably anticipated to be a human carcinogen

This category includes substances where there is limited evidence of cancer in humans, or sufficient evidence 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.

Newly reviewed substances

Substance	Listing Status	Description
Human immunodeficiency virus type 1 (HIV-1)	Known to be a human carcinogen	Virus
Human T-cell lymphotropic virus type 1 (HTLV-1)	Known to be a human carcinogen	Virus
Epstein-Barr virus (EBV)	Known to be a human carcinogen	Virus
Kaposi sarcoma-associated herpesvirus (KSHV)	Known to be a human carcinogen	Virus
Merkel cell polyomavirus (MCV)	Known to be a human carcinogen	Virus
Trichloroethylene (TCE)	Known to be a human carcinogen	Industrial solvent
Cobalt and cobalt compounds that release cobalt ions in vivo	Reasonably anticipated to be a human carcinogen	A metal and its compounds





What's new in the Report on Carcinogens?

The 14th Report on Carcinogens includes seven newly reviewed substances, bringing the cumulative total to 248 listings.

Of these seven listings, five are viruses — human immunodeficiency virus type 1 (HIV-1), human T-cell lymphotropic virus type 1 (HTLV-1), Epstein-Barr virus (EBV), Kaposi sarcoma-associated herpesvirus (KSHV), and Merkel cell polyomavirus (MCV) — one is the chemical trichloroethylene (TCE), and the other is the metallic element and its compounds, cobalt and cobalt compounds that release cobalt ions *in vivo*.

All five viruses are being added to the category of *known to be a human carcinogen*. Collectively, these viruses have been linked to more than 20 different types of cancers. Trichloroethylene (TCE) is also being listed in the Report on Carcinogens as a known human carcinogen. Since 2000, TCE had been listed as *reasonably anticipated to be a human carcinogen*. However, numerous new human studies showing a causal association between TCE exposure and an increased cancer risk have led NTP to reevaluate and reclassify TCE to the category of *known to be a human carcinogen*.

Cobalt and cobalt compounds are being listed as *reasonably anticipated to be a human carcinogen*. This listing for cobalt includes different types of cobalt compounds that release cobalt ions into the body, although the listing does not include vitamin B-12, which contains cobalt.

Who decides what substances should be included in the report?

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 using systematic review methods guides the development of this report. Once candidate substances are selected, an extensive scientific review process begins with multiple opportunities for public comments. The review process also includes input from external scientific experts and government scientists from federal health and regulatory agencies. 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 means that the substance poses a potential hazard. However, it 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 14th Report on Carcinogens contains information on 248 substances — 62 *known to be a human carcinogen* and 186 *reasonably anticipated to be a human carcinogen* — including some classes of related chemicals or substances.

The Report on Carcinogens is a cumulative report. It includes information on the newly reviewed substances, as well as those listed in previous editions.

How can people access the full report?

The 14th Report on Carcinogens is available on the NTP website at <http://ntp.niehs.nih.gov/go/roc14>

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, part of the National Institutes of Health, supports research to discover how the environment affects people in order to promote healthier lives. For more information on environmental health topics, visit www.niehs.nih.gov.



National Toxicology Program
U.S. Department of Health and Human Services

The Report on Carcinogens is prepared by the National Toxicology Program, an interagency group coordinated by the U.S. Department of Health and Human Services.

The full report is available at
<http://ntp.niehs.nih.gov/go/roc14>.