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How to Interpret News About Cancer Causes

New discoveries about what causes (or might cause) cancer seem to be made nearly every day. When you see a story in the news linking something to cancer, especially if it's something you're exposed to on a regular basis, your first reaction is often to think that we need to avoid it at all costs. But it's not usually that simple.

- [What's the source of the information?](#)
- [What did the research actually find?](#)
- [What about other evidence?](#)
- [What do the experts say?](#)
- [What should I do if I find out something causes cancer?](#)

Often it's hard to get the full story. And it's not always easy to figure out what the information really means for you. Studying cancer (and what causes it) is complex. Study findings are usually not black and white – they need to be viewed in the context of other research on the subject. Even then, many times answers aren't clear. Sometimes there just isn't enough information to say for sure how the findings might apply to you. Media reports can sometimes cloud the issue even further if they don't present study results in the proper context.

Asking the right questions can help you better understand the information and decide if it's something you might need to act on.

What's the source of the information?

It's important to consider where the information is coming from.

Can the news source provide the right context?

Major news sources generally try to provide accurate, unbiased information. They tend to have reporters and journalists who have experience covering health-related issues and who understand what's important. But smaller news organizations might not have as much experience and may have a harder time providing the right context.

Are there space limitations?

the heart of the matter isn't always easy. Here are some important questions you should ask:

Is the news actually based on new research?

Often it is, especially if it's being reported in reliable news media outlets. But sometimes it's not clear where the information actually came from. Rumors passed around in chain emails are often a good example of this. If a source is cited, can it be verified?

Who conducted the research? Who paid for it?

Most cancer studies are done by researchers at universities, medical centers, or government agencies. Some research is done by other groups, such as advocacy organizations. Funding for studies can come from federal or state funds, non-profit groups, or other interests. Finding out where the study was done and who funded it can give you a better idea of how trustworthy it might be.

What kind of research was it?

Lab studies (tests done on cell cultures or animals) and studies in people can both be valuable in learning about the causes of cancer. But they both have drawbacks to be aware of.

- **Lab studies:** Results of tests done in the lab on cell cultures or on animals can often suggest something might cause cancer, but it's not always clear if the results will be the same in people. For example, effects seen in the lab using very high doses of a substance might not be the same at much lower doses, or the effects of a substance when it's inhaled may not be the same as when it's applied to the skin. Also, the bodies of lab animals and humans don't always process substances in the same way.

Studies in people (epidemiology studies): These studies look at large groups of people to try to figure out which factors might be linked to cancer. These types of

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Has this been found before?

A single study of any type is rarely enough to prove something causes cancer. Scientists often have to combine data from several studies of both types to make this assessment (see below).

Where was the research reported or published?

Usually, researchers make their findings known by publishing them in a medical journal or presenting them at a conference. Some types of research, such as government

have been a fluke, or that somehow they don't really represent what's going on. Results from other studies might help confirm or refute the new findings. Whenever possible, scientists rely on the total body of evidence from *many* studies when determine if something might cause cancer.

Unfortunately, this can be a slow process that can last years, sometimes even decades. This is understandably frustrating, as it can leave us without the answers we want for long periods of time. But research needs to be done this way so that we have a better understanding of what's truly important.

Here's an example. Let's say a new study finds some kind of link between substance X and cancer, which is widely reported in the news. But many previous studies of this substance did not find such a link. This has to be taken into account when considering whether the new findings are reliable, and if they need to be acted on. It may be that the researchers doing the new study did something slightly different that opens up a new avenue of research. Or it could be that, based on the total body of evidence, the new research won't change what most experts think about the topic.

What do the experts say?

Experts at several national and international agencies review the available evidence to try to determine the cancer-causing potential of different things we are exposed to. If you see something in the news or on social media, especially if you're unsure of the source, check the claims against what these experts say.

These agencies include:

- **International Agency for Research on Cancer (IARC):** The IARC is part of the World Health Organization (WHO). One of its major goals is to identify causes of cancer. The IARC publishes its findings, including the detailed evidence to support them, in volumes known as *monographs*.
- **National Toxicology Program (NTP):** The NTP is formed from parts of several US government agencies, including the National Institutes of Health (NIH), the Centers for Disease Control and Prevention (CDC), and the Food and Drug Administration (FDA). The NTP updates its *Report on Carcinogens* (RoC) every few years.
- **Environmental Protection Agency (EPA):** The US EPA maintains the Integrated Risk Information System (IRIS), an electronic database on human health effects from exposure to certain substances in the environment. The EPA uses a rating system similar to that of the IARC when describing the cancer-causing potential of a substance.

- **Other federal agencies**, such as the CDC's National Institute for Occupational Safety and Health (NIOSH) and the Food and Drug Administration (FDA), may comment on whether a substance or exposure might cause cancer and/or what levels of exposure to the substance might be considered acceptable.
- **Some state agencies** also keep lists of known or probable carcinogens. For example, the California Environmental Protection Agency (CalEPA) maintains a list of "chemicals known to the state to cause cancer or reproductive toxicity." (Much of this list is based on the IARC and NTP lists.)

Some organizations, such as the American Cancer Society and the US National Cancer Institute (NCI), also conduct or fund research in this area, but they don't maintain their own lists of substances or exposures that cause cancer. Instead, they look to expert organizations such as the NTP and IARC. The ACS and NCI often offer information and guidance to the public on possible causes of cancer, especially when new findings generate a great deal of interest.

Keep in mind that even information from expert groups has limitations. Their information is usually written for scientists and might be hard to interpret. Often, substances have multiple names, and the name you see in the news might be different from what's used by one or more agencies. In addition, these agencies cannot review every claim, and it might take several months for a new substance or exposure to be evaluated.

If you're having trouble finding information on whether something might cause cancer, contact a trusted group such as the American Cancer Society or the National Cancer Institute. They can tell you whether a particular exposure is on one of these expert agency's lists, and may also be able to give you some context about what the research findings might mean for you.

To learn more about these agencies and how carcinogens are studied and classified, see [Determining if Something Is a Carcinogen¹](#).

For current lists of carcinogens from IARC and NTP, see [Known and Probable Human Carcinogens²](#).

What exactly does it raise the risk of?

Some exposures clearly raise a person's risk of one or more types of cancer. But **even the strongest carcinogens don't raise the risk of all types of cancer.**

This could affect how important it is to you. For example, something that raises the risk of breast cancer is more likely to be a concern for women than for men, as they're much more likely to get breast cancer in the first place.

Is the risk tied to a certain type or amount of exposure?

Carcinogens don't cause cancer at all times, under all circumstances. **Some may only be carcinogenic if a person is exposed in a certain way** (for example, swallowing it as opposed to touching it).

In the same way, **the amount of exposure is usually important.** Some carcinogens

Even if a substance or exposure is known or suspected to cause cancer, this doesn't necessarily mean that it should be avoided at all costs. In fact, this might not even be possible. Sunlight is a good example. It's the major source of [ultraviolet](#)

1. www.cancer.org/cancer/risk-prevention/understanding-cancer-risk/determining-if-something-is-a-carcinogen.html
2. www.cancer.org/cancer/risk-prevention/understanding-cancer-risk/known-and-probable-human-carcinogens.html
3. www.cancer.org/cancer/risk-prevention/understanding-cancer-risk/lifetime-probability-of-developing-or-dying-from-cancer.html
4. www.cancer.org/cancer/risk-prevention/sun-and-uv/uv-radiation.html
5. www.cancer.org/cancer/risk-prevention/tobacco.html
6. www.cancer.org/cancer/risk-prevention/diet-physical-activity/body-weight-and-cancer-risk.html
7. www.cancer.org/cancer/risk-prevention/diet-physical-activity/get-active.html
8. www.cancer.org/cancer/risk-prevention/diet-physical-activity/alcohol-use-and-cancer.html
9. www.cancer.gov/
10. www.iarc.fr/
11. ntp.niehs.nih.gov/
12. www.epa.gov/
13. www.fda.gov/
14. www.cdc.gov/niosh/

Additional resources

Along with the American Cancer Society, other sources of information and support include:

National Cancer Institute (NCI) Toll-free number: 1-800-422-6237 (1-800-4-CANCER)
TTY: 1-800-332-8615 Website: www.cancer.gov⁹

International Agency for Research on Cancer (IARC) Website: www.iarc.fr¹⁰

National Toxicology Program (NTP) Website: <http://ntp.niehs.nih.gov>¹¹

Environmental Protection Agency (EPA) Website: www.epa.gov¹²

Food and Drug Administration (FDA) Toll-free number: 1-888-463-6332
Website: www.fda.gov¹³

National Institute for Occupational Safety and Health (NIOSH) Toll-free number: 1-

800-232-4636 Website: www.cdc.gov/niosh¹⁴

**Inclusion on this list does not imply endorsement by the American Cancer Society.*

References

American Cancer Society. *Cancer Facts & Figures 2019*. Atlanta, Ga: American Cancer Society; 2019.

International Agency for Research on Cancer (IARC). *Agents Classified by the IARC Monographs, Volumes 1–123*. 2019. Accessed at <https://monographs.iarc.fr/agents-classified-by-the-iarc/> on March 12, 2019.

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