

Understanding Science News About Exposure To Toxic Substances

(NAPSA)—If you're like many Americans, you're concerned about the health effects—to yourself and the environment—of exposure to toxic substances.

Fortunately, when you see news reports on scientific research, there are some simple ways to figure out what the new research means for you. When evaluating scientific studies regarding chemicals and toxic substances, you should ask the following questions:

- Has the study been reproduced or is this a one-time reporting event? If it hasn't been reproduced, the results may not be predictive of the response in most people.

- Was the study conducted on experimental animals, cell cultures, or based on human evidence? If it's one of the first two, the results might be informative, but don't always directly translate to responses in people.

- How do the dose levels in the study compare to actual or predicted human use levels? Frequently, because toxicologists are interested in determining the ability of a substance to cause harm (e.g. the worst-case scenario), they use experimental doses that are much higher than the amounts humans or the environment will experience.

- What was the route of exposure used in the study; that is, did the study employ one of the three basic ways by which humans are often exposed—by eating or drinking, breathing, or placing the sub-



People should be aware how scientific studies relate to actual human risk or benefit.

stance on the skin—or were invasive approaches, such as intravenous injection, used? The effects of toxic substances can depend strongly on the route of exposure, an important factor that must be considered in evaluating the likelihood of harm.

The expert members of the Society of Toxicology also point out that risk is composed of two key variables: hazard (the capability of something to cause harm) and exposure (the amount of something a subject experiences over a defined period of time). Both variables need to be present for a risk to exist. A potential hazard associated with a chemical, natural toxin, or other agent needs to be accompanied by expected or actual human exposures to pose a health risk.

By answering these important questions, you'll be better able to understand the risks you may—or may not—actually face.

Learn More

For further facts, go to <http://www.toxicology.org/pubs/newsroom/relevantNews.asp>.