

*Scientific Studies:****In the Face of Scientific Uncertainty***

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When it comes to chemical product safety, the United States often endangers the public. Citizens serve as guinea pigs. Instead of adequately testing chemical products before they are manufactured and sold, the norm is to release chemical products, such as DDT, for sale and use without testing and then pull them from the shelves after a rash of negative reports.

Unfortunately, this sell now and worry later approach has left many people harmed and permanently injured. Without scientific backing for products, public safety is uncertain.

Researchers Myers, Rabe, and Silberman cite two conditions that establish the threshold for protective action in the presence of scientific uncertainty (i.e. untested chemical products).

First, credible evidence must exist that a synthetic chemical can cause biological changes. These changes must also be known to result in unintended harmful outcomes to human health or the environment.

This requires years of testing after the product is questioned and puts the public in danger while costly and lengthy studies are performed and replicated. The bottom line of this policy is “innocent until proven guilty”. While that may work in a court of law, it is not a good public policy for often dangerous chemical substances.

Second, the chemical must be present where it does not belong and where it can cause damage. Essentially this

means that as long as a product is used as directed, it is deemed safe regardless of toxicity. Sadly, the history of DDT and other highly toxic chemicals, which have been banned year after year, shows us this is not good public policy either.

We should act with foresight to prevent toxic chemical injuries to citizens. The researchers cite that acting with foresight takes the form of creating human health and wildlife monitoring programs, monitoring novel technologies, considering clusters of problems to be early warnings, and opening toxic tort records.

This sounds reasonable, except the final “foresight” involves taking steps to prevent, eliminate, and mitigate exposure “when credible evidence of harm is found”. By the time harm is suspected, innocent people have already been injured. By the time years of research has been done after harm is suspected, more innocent people have been harmed.

This innocent until proven guilty approach is inadequate. The public must hold lawmakers accountable. The chemical industry must be required by lawmakers to prove the safety of chemical products through independent studies and review *before* they are sold! Only then can citizens trust what is on store shelves. We must follow the precautionary principal! As medical doctors believe, “first do no harm”.

**Reference**

Myers N, Rabe A, Silberman K. Act on early warnings. *New Solut.* 2007;17(3):219-31.

