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## ARE CHEMICALS KILLING US?

### Toxicologists Say Media Overstate Risks

#### Survey Shows How Experts View Risks of Common Chemicals

May 21<sup>st</sup>, 2009, WASHINGTON DC – From baby bottles to shower curtains, iPods to lipstick, and “new car smell” to non-stick frying pans, thousands of news stories have warned the American public about the hidden dangers of toxic chemicals in everyday items. But a groundbreaking new survey of scientists specializing in toxicology calls into question the risks associated with many of these chemicals as they are routinely depicted in the media. Majorities of toxicologists rate most government agencies as accurately portraying chemical risks, but they rate leading environmental activist groups as overstating risks, according to the survey by George Mason University researchers.

This survey of 937 members of the Society of Toxicology (SOT) was administered online from Jan 27 to March 2 by Harris Interactive on behalf of the Statistical Assessment Service (STATS) and Center for Health and Risk Communication at George Mason University.

According to survey director Dr. Robert Lichter, “This survey suggests that the public doesn’t get a full and balanced picture of chemical risk.” SOT Vice-President Dr. Michael Holsapple adds, “Ultimately, the media and scientists share the responsibility for how chemical risks are portrayed to the public.”

To view the survey online, go to [http://stats.org/stories/2009/are\\_chemicals\\_killing\\_us.html](http://stats.org/stories/2009/are_chemicals_killing_us.html)

#### MAJOR FINDINGS:

##### **Toxicologists Rate Chemical Safety and Regulation --**

When asked to agree or disagree with statements about chemical safety and regulation:

- 26% believe cosmetics pose a significant health risk
- 33% believe food additives pose a significant health risk
- 55% believe pesticides pose a significant health risk

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- 53% believe chemicals cause endocrine disruption
- Only 10% believe organic or “natural” products are inherently safer
- Only 6% believe that any exposure to a harmful chemical is unacceptable
- 69% say chemicals do not need to be regulated according to the precautionary principle
- Only 23% say the U.S. regulatory system is inferior to Europe’s
- 54% say U.S. regulators are not doing a good job explaining chemical risks

### **Rate the Risks of Specific Chemicals --**

Despite recent controversies in the news over the safety of commonly used chemicals, few toxicologists believe they pose a high health risk.

- 3% see Teflon as having a high degree of risk
- 3% see genetically modified organisms as high risk
- 9% see Bisphenol A, a component of many plastics, as high risk
- 11% see phthalates, which make vinyl flexible, as high risk
- 12% see high fructose corn syrup, used in soft drinks, as high risk

By comparison, 26% rate sunlight as posing a high health risk, as do 29% for aflatoxin, a naturally-occurring fungus found in peanut butter, and 35% for mercury.

### **Rate How Organizations Portray Risks --**

Toxicologists overwhelmingly say that environmental activist groups overstate the health risks of chemicals. But they also say industry groups underplay the risks.

- 96% say Greenpeace overstates the health risks of chemicals
- 80% say the Environmental Defense Fund overstates chemical risks
- 79% say the Environmental Working Group, Natural Resources Defense Council, and Center for Science in the Public Interest overstate the risks
- 57% say the American Chemistry Council understates chemical risks
- 60% say the Pharmaceutical Research and Manufacturers of America (PhRMA) understates chemical risks
- In contrast, majorities say that most U.S. governmental agencies accurately portray risk, with only the EPA (40%) and the CPSC (47%) falling below a majority

### **Rate the Media Coverage --**

Toxicologists almost unanimously believe the media does a poor job covering basic scientific concepts and explaining risk.

- 90% say media coverage of risk lacks balance and diversity
- 97% say the media doesn’t distinguish good studies from bad studies
- 96% say the media doesn’t distinguish correlation from causation

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- 96% say the media doesn't explain that "the dose makes the poison."
- Almost three out of four toxicologists believe the news media pays too much attention to individual studies as opposed to the overall evidence (74%), and to individual scientists as opposed to the broader community (73%)
- Over two out of three toxicologists (68%) believe the news media pays too much attention to studies put out by environmental groups, compared to only 27% and 18% who see too much media attention to studies by government and private sector scientists, respectively

In a stunning finding, WebMD and Wikipedia are seen as more reliable than traditional news sources for information about chemical risks.

- 56% say WebMD accurately portrays chemical risks
- 45% say Wikipedia accurately portrays chemical risks
- By contrast, no more than 15% say that leading national newspapers, news magazines, and television networks accurately portray chemical risks
- Over 80% say that leading national newspapers, news magazines, and television networks overstate chemical risks

#### **Survey Methodology**

This survey of toxicologists was conducted by the Statistical Assessment Service (STATS) and the Center for Health and Risk Communication at George Mason University, in cooperation with the Society of Toxicology (SOT). The data collection (survey administration) was done by Harris Interactive, a leading survey research firm. The data analysis and interpretation were conducted by STATS/George Mason University researchers. The survey was administered online between January 27 and March 2, 2009. The sample consists of 1136 full members of SOT, representing a return rate of 32 percent. The initial presentation of the findings is based on the responses of 937 members, who responded to every question. The sampling error for this survey is +/- 2.4 percentage points.

The survey results will be discussed by an expert panel at the National Press Club on May 21. The speakers are S. Robert Lichter Ph.D, President of STATS and Professor of Communication at George Mason University, who will present the survey results; Gary L. Kreps Ph.D, Chair of the Dept. of Communication and Director, Center for Health & Risk Communication at George Mason University, who will address the challenges of explaining risk to the public; Michael P. Holsapple Ph.D, Vice President, Society of Toxicology, who will give a toxicologist's perspective; and Steve Ross, editor of Broadband Properties magazine, who previously headed the science reporting program at Columbia University's Graduate School of Journalism, and who will challenge journalists to do better job covering scientific research. After the panel discussion, there will be a Q & A session.

Please contact Rachel Salabes (salabesr@cmpa.com) at 1-202-223-2942 for further details, and to secure speaker comments and video of the event.

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## **ABOUT THE SOCIETY OF TOXICOLOGY**

The Society of Toxicology (SOT) is a professional and scholarly organization of scientists from academic institutions, government, and industry representing the great variety of scientists who practice toxicology in the U.S. and abroad. SOT is committed to creating a safer and healthier world by advancing the science of toxicology. The SOT promotes the acquisition and utilization of knowledge in toxicology, aids in the protection of public health, and facilitates disciplines. The SOT has a strong commitment to education in toxicology and to the recruitment of students and new members into the profession.

[www.toxicology.org](http://www.toxicology.org)

## **ABOUT STATS**

STATS is a nonprofit, nonpartisan research organization affiliated with the George Mason University. Our mission is to improve the quality of scientific and statistical information in public discourse and to act as a resource for journalists and policy makers on scientific issues and controversies.

[www.stats.org](http://www.stats.org)

## **ABOUT THE CENTER FOR HEALTH & RISK COMMUNICATION**

The Center is committed to using evidence-based strategic communication to reduce health risks and promote well being. Its goal is to stimulate innovative health and risk communication research, health promotion intervention projects, and community interventions.

<http://chrc.gmu.edu/>