

# AIHA Position Statement on Risk Assessment and Risk Management

The American Industrial Hygiene Association (AIHA) supports the use of human health risk assessment techniques in regulatory decision-making, the making of public health policy, and the allocation of government and private sector resources to occupational and environmental issues. Risk assessment should be conducted with the best available scientific data. In the absence of scientific data, AIHA supports the use of health protective but reasonable default values that are selected using well-defined principles.

AIHA position with respect to the practice of human health risk assessment:

1. AIHA believes that human health risk assessments should be conducted with the best available scientific data, and that uncertainties and known potential biases should be identified in the assessment.
2. AIHA emphasizes that risk assessment is a useful analytic process that can provide valuable input into risk management. However, risk assessment often falls short of providing definitive or uncontroversial answers. It must be used with other inputs, including professional judgment, principles of public health and social and other factors.
3. AIHA supports the specification of health protective default inputs (assumptions) as the only feasible approach to conducting risk assessments in the absence of scientific data. Principles for the selection of these defaults must be well defined.
4. AIHA supports the use of an iterative approach to the assessment process in which relatively simple techniques are used initially to identify the potential magnitude of the health risk, followed by more sophisticated analyses as needed. The conduct of increasingly sophisticated analysis should not preclude public health intervention where warranted.
5. AIHA supports the calculation and presentation of risk assessment results that include an assessment of uncertainty with a narrative describing the rationale and assumptions used. Quantitative uncertainty assessment in terms of probability distributions (i.e., central tendency, and upper and lower limits) or qualitative characterization of uncertainty should be presented, depending on the type and complexity of the risk assessment, and the data available. Single point estimates with no characterization of uncertainty are unacceptable. Deterministic, "bright-line" estimates imply absolute certainty where none exists and hide the true nature and level of our ignorance relative to the technical opinion of the danger.
6. AIHA supports, as an essential component of the total risk assessment process, the adoption of a performance-oriented generic exposure standard to protect all workers from workplace exposure to biological, chemical and physical hazards. Details may be found in the AIHA White Paper entitled "A Generic Exposure Assessment Standard," amended and adopted on May 18, 1997. Exposure issues continue to be the area that most involve industrial hygienists in the risk assessment process.
7. AIHA believes that exposure data for both the workplace and other environments are often collected without sufficient ancillary information or data elements to use the data effectively for exposure assessment purposes. Because uncertainty in exposure assessments is often a significant contributor to the uncertainty of risk assessments, the AIHA favors efforts to substantially improve the collection of appropriate data elements with exposure measurements. Details of specific recommendations for workplace data can be found in the joint Recommendations of the ACGIH and AIHA. (Appl.Occup.Environ.Hyg. 11(11). November, 1996)
8. AIHA believes that the risk assessment process should be open and that presentation of results should be understandable to all stakeholders, including those with alternative hypotheses conclusions.
9. AIHA endorses the concept that risk assessment should be comprehensive and accountable to all involved parties in its approach and that it should encompass all potentially exposed populations (including sensitive persons) or ecosystems.

10. AIHA supports the use of risk comparisons in risk analysis and communication only when the calculated risks being compared have similar characteristics.

AIHA encourages the following to support the development of the practice of human health risk assessment:

11. AIHA encourages increased financial support for activities which contribute to the development and refinement of epidemiology, toxicology, and exposure science to reduce the uncertainty and bias in health risk assessment, thereby increasing its utility for regulatory decision making, the making of public health policy, and the allocation of governmental resources.

12. AIHA supports the appointment of expert advisory panels (including stakeholders, regulatory authorities, and representatives from labor, industry, academia, and professional/technical organizations) to assist in the development of risk assessment guidelines and criteria. These guidelines will be used to identify and highlight key areas requiring further research and regulation.

13. AIHA endorses the findings and recommendations of the Presidential/ Congressional Commission on Risk Assessment and Risk Management (hereinafter referred to as the Commission), presented in its final report (volumes 1 and 2) published in 1997. The Commission developed an integrated, systematic, comprehensive Risk Management Framework that is a forward-looking strategy addressing multiple environmental media and multiple sources of risk.

14. The AIHA is well aware that this decade will require continuing and dedicated work on toxicology, exposure assessment, risk assessment, risk management, and risk communication. The primary issues that will be addressed include improvement of toxicological and exposure information, education of all individuals, scientists, regulators and the general public, communication of relative risk and development of methods to correlate all routes of exposure with actual dose and dose-response information.

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