

Michael K. Peterson, M.E.M., DABT

Principal

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Mr. Peterson is a Principal at Gradient, with more than 20 years of experience specializing in human health risk assessment of cancer and non-cancer endpoints, critical analysis of human and animal toxicology and epidemiology studies, and multimedia assessment of exposure to chemicals. He has extensive experience evaluating the toxicity of asbestos and other fibers, and also has been very involved in evaluating risks from chemicals in food and food packaging, including bisphenol A and perchlorate. His previous experience includes the development of chemical toxicity profiles, evaluation of the toxicity of novel chemical and commercial products (including evaluations related to California Proposition 65), and the assessment of occupational and drift exposures to pesticides. He is an appointed member of the Washington Governor's Industrial Safety and Health Advisory Board, the Vice President of the Occupational and Public Health Specialty Section of the Society of Toxicology, and the Chairperson of the Washington Agriculture Safety Day Committee. While earning a Masters of Environmental Management degree at Duke University, Mr. Peterson researched the oral bioavailability of polycyclic aromatic hydrocarbons from soil.

Representative Projects

Synthetic Turf Recycled Rubber Risk Assessment and Science Communication:

Prepared a multipathway human health risk assessment related to potential chemical exposures for athletes and spectators using synthetic turf fields. The results of the assessment were used to prepare risk science communication pieces to present the results to interested stakeholders.

Asbestos Containing Product Evaluation: Conducted a weight of evidence causal evaluation and risk assessment for exposure to asbestos from a electrical product. Evaluated the industrial hygiene, toxicological, and epidemiological data related to asbestos and determined whether or not potential health effects would be expected.

Chemical Risk Assessment of Food Products: Used regulatory databases and other publicly available sources to evaluate chemical constituents in a variety of foods (dairy products, fruits and vegetables, and soy-based products). The evaluation included assessing both natural chemicals as well as those that were added during processing.

Evaluation of Herbicide Application: Prepared multi-pathway risk assessment for the application of herbicides to roadsides in Washington state. Results were used to evaluate potential alternatives for the pesticide spray program.

Nanomaterial Safety Assessment: Used current literature to develop state-of-the-science techniques for evaluating worker risks and exposures to engineered and other nanoparticles. The end goal was the development of an appropriate strategy for managing environmental health and safety risks associated with nanomaterials, including the development of guideline levels for these materials and exposure assessment methodologies.

Areas of Expertise

- Human Health Risk Assessment
- Product Safety Evaluation
- Applied Toxicology
- Toxic Tort Litigation Support
- Pesticide Toxicology

Education

M.E.M., Environmental Toxicology and Risk Assessment, Duke University

B.S., Chemistry and Environmental Science, Bradley University

Diplomate of the American Board of Toxicology

Selected Presentations and Publications

Peterson, MK; Lemay, JC; Pacheco Shubin, S; Prueitt, RL. 2018. "Comprehensive multipathway risk assessment of chemicals associated with recycled ("crumb") rubber in synthetic turf fields." *Environ. Res.* 160:256-268.

Goodman, JE; **Peterson, MK;** Hixon, ML; Pacheco Shubin, S. 2017. "Derivation of an oral maximum allowable dose level for bisphenol A." *Regul. Toxicol. Pharmacol.* 86:312-318.

Lewandowski, TA; **Peterson, MK;** Charnley, G. 2015. "Iodine supplementation and drinking-water perchlorate mitigation." *Food Chem. Toxicol.* 80:261-270.

Hixon, ML; Mayfield, DB; **Peterson, MK;** Dubé, EM; Beyer, LA. 2015. "Development of a Noncancer Toxicity Criterion Using Developmental Toxicity Data as the Most Sensitive Endpoint in Estimating Health Risk(s) from TEG-Contaminated Coffee." Presented at the 55th Teratology Annual Meeting, Montreal, Québec, June 27-July 1.

Goodman, JE; **Peterson, MK;** Bailey, LA; Kerper, LE; Dodge, DG. 2014. "Electricians' chrysotile asbestos exposure from electrical products and risks of mesothelioma and lung cancer." *Regul. Toxicol. Pharmacol.* 68 (1):8-15.

