

Surgical Smoke Plume Research & Respiratory Protection Best Practice

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Over 500,000 operating room personnel are exposed to surgical smoke every year and numerous studies have documented dangerous atmospheric contaminants in the plume causing a range of adverse health symptoms and effects. Global and national evidence-based consensus standards, professional guidelines, recommended practices and regulations recognize that the presence of smoke plume is a workplace hazard and the daily exposure is an occupational risk for perioperative personnel. This session will highlight research evidence for why the proper use of local exhaust ventilation (LEV) augmented by the use of properly fitted filtering facepiece respirators are the recommended and effective controls to mitigate surgical smoke plume exposures. The particulate performance differences between facemasks and respiratory protective equipment for selected inhalation hazards will be emphasized. Gaps in practice compliance with recommended controls will be addressed. The presentation will conclude with suggested strategies for how to reduce smoke plume exposures and heighten worker safety in surgical settings.