

Cannabis Occupational Allergy Prevention: Program Framework¹



Prepared by: Bill Martin MD, MBA, MPH, MMCi
Medical Director | Mediprise
Chief Medical Officer | Proxima Work

06/11/2024

1. Adapted from the landmark work of Drs. Gregg Stave and Robert Bush in Laboratory Animal Allergy – Bush RK, Stave GM. Laboratory animal allergy: an update. ILAR J. 2003;44(1):28-51.

Cannabis Occupational Allergy Prevention: Program Framework

Program Development

- **Institutional Commitment**
 - Ensure organizational buy-in from all levels. Building a culture of safety begins with leadership.
- **Organization**
 - Define the structure for managing the allergy prevention program. Establish clear lines of communication for reporting exposures, conducting sentinel event investigations, and implementing corrective changes.
- **Accountability and Responsibility**
 - Assign roles and responsibilities clearly. Ensure policies, programs, and procedures define roles and responsibilities within the program, including ultimate responsibility, administration, surveillance, training, and records management.
- **Goals and Priorities**
 - Regularly evaluate and update prevention programs. Follow established continuous process improvement and organizational goal-setting strategies such as SMART goals (specific, measurable, achievable, relevant, and time-bound), OKRs (objectives and key results), and KPIs (key performance indicators).

Compliance and Governance

- **Health and Safety Regulations**
 - Adhere to state and federal health and safety laws (e.g., HAZCOM, respiratory protection program, general duty clause, exposure monitoring, and recordkeeping).
- **Workplace Laws**
 - Ensure compliance with labor laws and regulations (e.g., occupational asthma and workers' compensation, work-aggravated asthma and ADA). Implement systematic policies and procedures for handling ADA accommodation requests, workers' compensation, and management of medical restrictions and job transfer requests.
- **Regulator Guidance**
 - Compare program components against published industry-specific OSHA guidance, including OSHA Hazard Alert Letters (HAL) and NIOSH Health Hazard Evaluations (HHEs). Utilize recommendations as roadmaps toward compliance and achieving worker protection. Key recommendations from a recent Cannabis OSHA HAL include:
 - Medical surveillance and examination program
 - Job transfer options for allergic employees

- Training on occupational allergies and asthma hazards
- Exposure prevention
- Emergency response teams and their training
- Recognition of occupational allergies as work-related diseases and addressing workers' compensation challenges

Exposure Assessment

- **Characterization of Allergens**
 - Stay up to date with industry knowledge and medical research efforts to identify and characterize cannabis allergens and their sources.
- **Characterization of Exposure**
 - Assess exposure by job description, activity, and location. Compile Similarly Exposed Groups (SEGs) to characterize employees with similar job tasks and exposures.
- **Identification of At-risk Employee Populations**

Identify employees and SEGs most at risk of exposure to cannabis allergens to ensure they are included in medical surveillance and to prioritize protection efforts and control investments.

Exposure Control

- **Identification and Evaluation of Industrial Hygiene Control Methods**
 - Implement ASHRAE recommendations for particulate control.
- **NIOSH Hierarchy of Controls**
 - **Elimination:** Remove the hazard where possible.
 - **Substitution:** Replace hazardous processes with less harmful ones.
 - **Engineering Controls:** Use isolation methods, such as local exhaust ventilation.
 - **Administrative Controls:** Implement work practice controls and safety procedures.
 - **Personal Protective Equipment (PPE):** Use PPE as the final layer of protection when other control methods cannot completely control the hazard. Ensure proper use of masks, gloves, and other PPE to minimize percutaneous contact and inhalation exposures. Use respirators in accordance with the OSHA Respiratory Protection standard. Consider human factors for compliance and comfort to promote PPE use.

Facility Design and Operation

- **Integration into Facility Design**
 - Incorporate allergen management into the design and renovation of facilities.
- **Testing and Evaluation of Equipment**
 - Regularly test equipment and systems for controlling aeroallergens.
- **Preventive Maintenance**

Schedule routine maintenance for control equipment and systems.

Equipment Performance

- **Performance Standards and Certifications.**
 - Establish standards for new and existing equipment. Certify equipment according to national standards.
- **Equipment Monitoring**
 - Regularly monitor HEPA filtration units and ventilation system performance.
- **Environmental Surveillance**
 - Conduct regular environmental assessments.
- **Evaluation of Control Methods' Effectiveness**
 - Continuously evaluate and improve control methods, guided by environmental measurements (e.g., air sampling) and medical surveillance (e.g., number of symptomatic employees).

Administrative Controls

- **Goals**
 - Reduce the number of employees at risk and minimize exposure.
- **Management of Room Occupancy**
 - Control the number of people and activities in high-risk areas.
- **Facility Zoning**
 - Create zones to separate high-risk and low-risk areas. Contain high-risk activities and products to designated zones to reduce risk of introducing allergens into low-risk areas (e.g., administrative space).
- **Monitoring of Work Environment**
 - Continuously monitor the work environment for allergens.
- **Training and Education of Workers**
 - Provide comprehensive training on risk assessment, hazard recognition, and proper safety practices.

Medical Surveillance

- **Goals**
 - Implement a proactive strategy that includes a series of medical examinations designed to monitor potential health effects from exposure to hazardous substances. The objective for the individual worker is early detection and treatment of health issues and enhanced protection from hazards, such as providing respirators or job reassignment.
- **Occupational Medicine Physician**
 - Ensure examinations are implemented under the direction of a healthcare provider with expertise in occupational allergies and asthma, and medical surveillance

program development and oversight. Have policies and procedures for handling and referrals of potential occupational allergies to the occupational medicine provider.

- **Surveillance Examinations**
 - Include preplacement, periodic, and termination examinations. Preplacement examinations establish a baseline health status, identify workers with increased risk of harm from exposures, and conduct periodic examinations to assess early signs of disease and potential sensitization. Use medical history and surveillance questionnaires to detect early signs of occupational allergies.
- **Population Health**
 - Analyze health data (e.g., incidence rates) on a population level to guide program evaluations.
- **Policy and Practices for Diagnosed Employees**
 - Develop policies for managing employees diagnosed with allergies, including handling medical restrictions and accommodation requests.

Education and Training

- **Formal Orientation and Periodic Refresher Training**
 - Introduce new employees to risk assessment and hazard recognition. Offer ongoing training to keep employees informed.
- **Written Guidelines and Codes of Practice**
 - Provide clear, written safety protocols. Train employees in safe work practices.
- **Hazard Communication**
 - Use signs, posters, and pamphlets to communicate hazards.
- **Recognition of Signs and Symptoms of Occupational Allergies**
 - Train employees and supervisors to recognize and report signs and symptoms of occupational allergies, ensuring follow-up evaluations.
- **Written Emergency Response Procedures**
 - Develop and distribute emergency response guidelines, especially for handling breathing difficulties such as anaphylaxis and asthma attacks. Ensure compliance with the Bloodborne Pathogen standard for emergency response employees.

Emergency Procedures

- **Written Emergency Response Plans**
 - Create detailed plans for emergency situations.
- **Medical Preparedness for Anaphylactic Reactions**
 - Prepare for immediate medical response to severe allergic reactions.

Program Evaluation

- **Periodic Program Audit**
 - Regularly audit the program for effectiveness, compliance, and worker experience.
- **Trend Analysis**
 - Analyze trends to identify areas for improvement.
- **Ongoing Review of Goals and Status**
 - Continuously review and adjust program goals and status.
- **Annual Report**
 - Prepare an annual report summarizing program activities and outcomes
- **Recordkeeping**
 - Maintain accurate training records, occupational health, and exposure sampling records in accordance with OSHA HAZCOM and recordkeeping standards.