Welcome to the first issue of Occupational Airways, the quarterly newsletter of the Occupational Health Surveillance Program. The main focus of this newsletter is occupational asthma. It is designed to address current issues around occupational asthma and to be a reference for health care providers. The newsletter will also include information about other work-related respiratory diseases and disorders.

This introductory issue discusses the Occupational Disease Surveillance System, the recently initiated asthma interview protocol, surveillance data, and a worker case review. Thank you for your continued support and reporting of occupational diseases!

### Occupational Disease Surveillance System (ODSS)

The Occupational Disease Surveillance System (ODSS) is managed by the Environmental Epidemiology and Occupational Health Division (EEOH) of Department of Public Health (DPH) in collaboration with the Department of Labor (DOL) and the Workers’ Compensation Commission (WCC). The surveillance system stems from passage of the 1990 Occupational Health Clinics Bill, which provides funding of occupational health clinics and the establishment of an integrated surveillance system. The purpose of the surveillance system is:

- to monitor work-related diseases in CT’s work force
- to identify clusters of disease
- to monitor trends over time
- to target public health education efforts
- to identify the need for workplace interventions

DPH began the ODSS in 1991 and completed its first full year of surveillance in 1992. Surveillance data is acquired through information recorded on the Physician’s Report of Occupational Disease form. Title 3, Sec. 31-40a of the CT General Statutes requires reporting of occupational disease to DOL, which in turn sends the reports to DPH. For more information, call DPH at (860) 240-9029.

### DATABASE OVERVIEW

As of May 1995, 917 occupational disease reports were submitted for 1994. Respiratory diseases and disorders were the fourth most commonly reported disease category in 1994, following repetitive trauma, poisonings due to toxic materials and skin diseases and disorders. Asbestos-related diseases, Silicosis, Bronchitis, Berylliosis, Asthma and Reactive Airway Dysfunction Syndrome (RADS) are the majority of diseases reported in this category.

<table>
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<th>Summary of Asthma and RADS Reports</th>
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<tr>
<td>CT DPH Occupational Disease Surveillance Data</td>
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<td>11/91-12/93</td>
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<td>Asthma</td>
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Assemblers, auto technicians, carpenters, salesmen, maintenance workers, correctional officers, spray painters, factory workers, machinists, solderers, HVAC technicians...
and meat packers. Overall, seventy-three (73) reports have been received for patients who were diagnosed with occupational asthma or RADS from November 1991 to the first half of 1995 (see Table 1). These figures are not an accurate representation of the number of work-related asthma cases in CT because of physician underreporting.

**MARK YOUR CALENDARS!!!**  
May 8, 1996  
*Turning Diagnosis into Prevention*  
an occupational medicine seminar  
Look for further details in the next issue.

**Occupational Asthma Interview Protocol**

In the spring of 1995, the DPH occupational asthma interview protocol was initiated. The goal of the interview protocol is to learn more about workplace practices and conditions leading to exposures that may cause asthma in workers. The interview protocol entails contacting both the reporting physician and the patient. Initially, a letter and packet of information is sent to the reporting physician discussing the asthma interview protocol. Secondly, the physician is contacted by telephone to obtain permission to administer a questionnaire to the patient. Lastly, the patient is contacted by letter explaining the project and, subsequently, the questionnaire is administered by telephone. Currently, DPH is in the process of conducting the telephone interviews.

**CASE REVIEW**

**Worker A** is a 27 year old female who was employed as a solderer at a small metal parts manufacturer for 11 months. After 3 months, she began experiencing wheezing, coughing, chest tightness and shortness of breath throughout the day. Colophony solder was identified as the causative agent. It is known to cause asthma. Worker A was diagnosed with occupational asthma based on the timing of her symptoms in the setting of an exposure to a known asthma agent.

Between 30-50 people work in the soldering section at that plant. Several workers in her section and other sections (molding) had symptoms similar to Worker A’s. Worker A said that she and other workers would retreat into the restroom throughout the day to use their inhalers. She described the factory as an open room which allowed all the soldering fumes and chemical vapors from various sections to mix together. Worker A had to leave her job because of her condition and is currently unemployed. Since removal from the exposure, her symptoms have improved. DPH received another report of asthma for an employee working with colophony at this same company.

Colophony is a common base in organic soldering fluxes. Colophony is made from turpentine (a pine tree resin). The active material in organic rosin-based flux is abietic acid. Alcohol, organic solvents and glycols may be added to rosin flux to make activated rosin flux, which provides active corrosive cleaning of the base metal to be soldered. Some of the activators, when heated, liberate acids such as hydrochloric acid that are mucosal irritants and can cause bronchoconstriction. Some colophony fluxes also contain aminoethylthanolamine, which is a sensitizer. The employer was advised that the colophony exposure during soldering can be controlled with local exhaust ventilation.

Case studies indicate exposure to colophony can be insidious, with symptom-free periods lasting one to six years before the onset of asthma. The American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) Committee recommends that employers achieve concentrations as low as possible through the use of engineering controls and appropriate personal protective equipment. Introduction of workplace controls will prevent the onset of new asthma cases.

In addition to soldering flux, colophony is also used as hot melt glue (especially as adhesives for can labels), in hair sprays, paints, pine-essence cleaners and in cigarettes (as adhesives and filter fillings). Patients have also been reported to develop symptoms upon exposure to pine dust.3,4,5

**REFERENCES**


The **New Physician’s Report of Occupational Disease form is now available**

Report your cases of occupational asthma now!

The ***Physician’s Report of Occupational Disease*** form has been revised (10/95) to be more user-friendly. To obtain a copy of the new report form or for more information on occupational asthma, please call DPH at (860) 240-9029.

Your suggestions, comments, and contributions are most welcome! Please consider submitting a short article, case study or paper review for inclusion in future issues of Occupational Airways. All correspondence can be sent to DPH at the attention of Juanita Estrada.

**HAPPY HOLIDAYS!!**

*Connecticut Department of Public Health*  
December 1995