california work-related asthma prevention program

CDPH California Department of PublicHealth

WORK-RELATED ASTHMA: FINDINGS FROM STATEWIDE TRACKING

The Work-related Asthma Prevention Program (WRAPP) within the Occupational Health Branch tracks work-related asthma (WRA) throughout California. To track WRA we find and count cases of workers who have asthma because of their jobs. Then we learn more about those jobs to find ways to make the workplace safer. This fact sheet shares some of what we learned during the past 23 years.

Firefighters breathe in smoke and chemicals on the job.

WHAT IS ASTHMA AND WHEN IS IT WORK-RELATED?

Asthma is a lung disease that can make it hard for people to breathe. They can have wheezing, chest tightness, and cough. If asthma is caused or made worse by chemicals or substances at work, it is called "work-related asthma." When people who don't have asthma get it from their work, it is called "new-onset" WRA. If people already have asthma before they start their job and their job makes it worse, it is called "work-aggravated" WRA. The sooner a workplace protects a person from the problem substances at work, the better the chance of improving the person's asthma.

Cleaning and disinfecting chemicals can affect health care workers.

WHY TRACK WORK-RELATED ASTHMA?

By talking to people with WRA, we can learn what jobs and substances cause asthma or make asthma worse. This helps us come up with ways to prevent it. We track WRA by getting data from hospitals, workers' compensation claims, and doctors. Once we find a case, we talk to each person by telephone to learn more about their WRA. We group the results together and study them to better understand what is causing WRA. We never give out the personal information of people with WRA.

Tracking finds only a small number of the cases of WRA that are in California. Studies estimate there are over one million people in California with asthma that has been caused or made worse by their work. While tracking doesn't find every WRA case in California, it gives much more detailed information than is found in other studies.

WHAT HAS TRACKING OF WRA FOUND?

WRAPP found 9,075 cases of WRA between 1993 and 2015. We added new ways to find cases in 2006, which is why our number of WRA cases has gone up. People with WRA were found in every part of the state.

When we could tell which type of WRA people had, it was most often new-onset.

Many more women than men had WRA (62% compared with 38%).

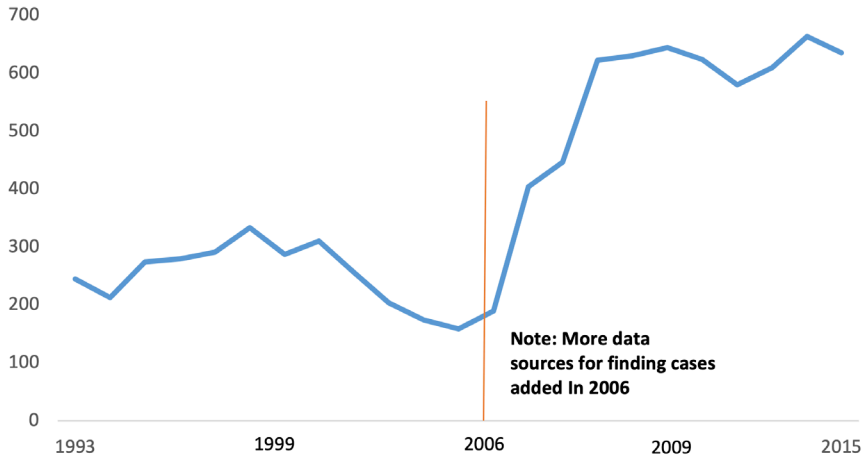
People with WRA worked in many different industries. Some of the industries most likely to have cases of WRA were local transportation, hospitals, utilities, manufacturing, and construction.

You can see the jobs most likely to have cases of WRA in the tracking data in Table 1. These jobs include firefighters and other public safety workers, chemical workers, science technicians, agricultural product workers, sewage treatment workers, certain office workers, health care workers, janitors, laborers, and teachers. The table also shows some of the most common substances that workers linked to their asthma at work.

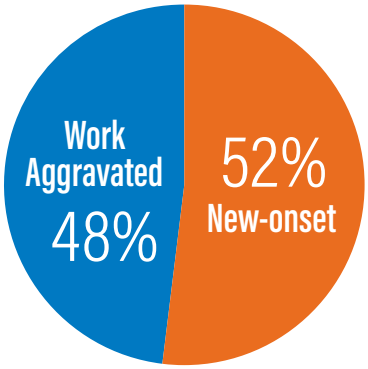
Workers reported that many different substances affected their asthma. The most common of these exposures were dust, unknown chemicals, smoke, mold, general indoor air quality problems, and cleaning chemicals. Some substances have been shown to cause new-onset asthma in people who don't have asthma. The most common of these substances were bleach, chlorine, ammonia, latex, formaldehyde, and sulfuric acid.

People can get WRA even if their job doesn't directly involve using substances that are asthma triggers. Over one third of people (34%) had asthma problems because they were nearby when other people were using a substance or chemical in their workplace.

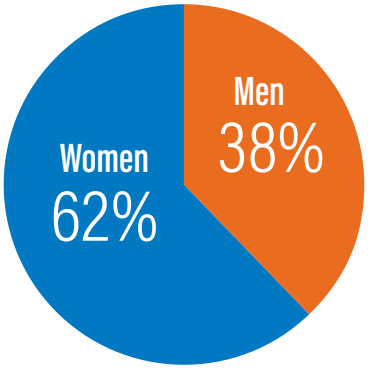
Annual Number of California WRA Cases Over Time



Type of Work-related Asthma



Sex of Confirmed Cases



Cleaning chemicals can be in the air in any work space.

Table 1. Most Common Exposures for Jobs with WRA* 1993–2015

JOBS	EXPOSURES REPORTED BY WORKERS
Firefighters	Smoke, chemicals
Chemical Processing Machine Operators	Chemicals, bleach, acids, solvents, sulfur dioxide
Registered Nurses	Cleaning products, latex, dust, smoke, Indoor Air Quality (IAQ), perfume, chemicals, floor strippers
Correctional Officers and Bailiffs	Pepper spray/mace, smoke, mold, cleaning chemicals
Office Clerks	Dust, mold, chemicals, perfume, IAQ, smoke, paint, cleaning products
Chemical Technicians	Chemicals, solvents, acids
Janitors	Cleaning products, chemicals, dust, bleach, chlorine, floor strippers, cigarette smoke, graffiti removers, disinfectant cleaners
Miscellaneous Science Technicians	Animal antigens, dust, acids, chemicals
Laborers & Material Movers	Dust, chemicals, cold, smoke, anhydrous ammonia, mold, pesticides
Eligibility Interviewers, Government Programs	Indoor air pollutants, smoke, paint
Medical Assistants & Healthcare Support	Smoke, dust, glutaraldehyde, chemicals, paint, IAQ from construction, latex, perfume
Ushers, Lobby Attendants, and Ticket Takers	Smoke, indoor air pollutants
Police and Sheriffs	Smoke, chemicals, pepper spray, dust, mold
Graders and Sorters, Agricultural Products	Chlorine, pesticides, cleaning materials, bleach
Customer Service	Chemicals, dust, IAQ, perfume, smoke, roofing asphalt, mold
Telephone Operators	Dust, chemicals, perfume
Teachers	Mold, dust, IAQ, perfume, chemicals, smoke, pesticides
Wastewater Treatment Plant and System Operators	Chemicals, dust, indoor air pollutants from building renovation
Secretaries	Dust, mold, IAQ, chemicals, perfume, smoke, IAQ from construction, glues

** Jobs in white have high numbers of cases, jobs in blue have high rates; firefighters have both*

IMPACT OF WRA

The impact of WRA can be high for people who have it.

- Almost one-third (32%) had to leave their job because of their WRA.
- 41% reported days in the last year when they couldn't work or do their usual activities.
- More than half (61%) had been to an emergency room since their breathing problems started at work.
- One out of every seven (15%) had to be in the hospital overnight since their breathing problems began at work.
- Most (85%) had to take either new asthma medicine or more of their medicine because of their WRA.
- More than half (55%) still had breathing problems more than a year later.
- More than half (54%) knew other people at work who had similar breathing problems.

USING OUR FINDINGS TO PREVENT WRA

Tracking WRA helps us come up with ways to prevent other workers from suffering with WRA. Examples of successful prevention efforts include:

- helping factories improve air flow so that workers are not breathing in chemicals
- providing carpenters, cabinet makers, and other wood shops statewide with information about how to protect workers from asthma-causing wood dust
- offering workplaces sample policies to keep offices fragrance-free; and
- helping schools use cleaning methods and products that protect both workers and students from asthma-causing chemicals

We also offer every worker we interview information about substances that are a problem for them at work. We have developed materials about many different WRA exposures and how to prevent them (cdph.ca.gov/wrappfactsheets).

Workers around chemicals can breathe them in.

WRAPP is not a rule-enforcing agency and is not part of Cal/OSHA. We partner with workers, employers, and organizations to prevent WRA by providing information, technical assistance, and recommendations.

MORE RESOURCES

For more information, call 1-800-970-6680 (toll-free to California callers). California Relay Service: 711, or go to the WRAPP website (cdph.ca.gov/wrapp).

Information about work-related asthma from the Centers for Disease Control/National Institute for Occupational Health (cdc.gov/niosh/topics/asthma/default.html)

Cal/OSHA Information about Worker Rights in California (dir.ca.gov/dosh/documents/health-and-safety-rights-for-workers.pdf)

Information about workers' compensation in California (dir.ca.gov/dwc/WCFaqIW.html)

To get a copy of this fact sheet in another format, please call (510) 620-5757. Allow at least 10 days.