

Where you work can pose risks for your health. Pamela Wilson traces the offenders

asthma

is your job making it worse?

List almost any job, and there is a probably an agent used in the industry that can cause occupational asthma (OA). Everyone from hairdressers, bakers and food processors to cleaners, carpenters and health-care workers are at risk. More than 250 agents have already been identified as causing OA and the list just keeps getting longer.

"Between 10 and 15 per cent of asthma in adults is probably occupational in origin," says Sydney respiratory physician and OA expert Dr Anthony Johnson. "There is data from the UK and Scandinavian countries that suggests it is on the increase. There are new chemicals being introduced all the time to workplaces."

OA is caused when exposure to a certain agent damages the lining of the lungs and makes them more sensitive to many triggers. Some agents, such as platinum and mushrooms undergoing food processing, are so toxic that the majority of people exposed to them will develop asthma. Other agents only become a problem when

people have risk factors such as allergies, or are exposed to them over a long time, explains Dr Johnson.

When it comes to identifying OA, a key element is assessing how you feel in and out of the workplace, says Dr Janet Rimmer, a thoracic physician and allergist practising at St Vincent's Private Hospital. "There is a pattern where they are often okay on Monday, but they start going off late Monday or Tuesday, then deteriorate all week and pick up again on the weekend," she explains.

There are two types of OA: sensitised-induced and irritant-induced. In sensitised-induced asthma, the person develops allergy antibodies to the



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What can you do?

Anyone who suspects they have OA should visit their GP to gauge its severity and discuss treatment options.

Early diagnosis and complete avoidance of the agent is the only way to ensure your condition doesn't worsen, says Dr Johnson. "If someone who gets asthma keeps working with the stuff for a few years, more than 50 per cent of those people will get permanent asthma, even if they stop working and are never exposed to the stuff again," he says.

Sufferers may be entitled to compensation through their state workers compensation authority, though they must first undergo a medical investigation. Dr Johnson says that, in reality, few sufferers approach their employers or apply for retraining because professional responsibility for OA is limited. Greater acceptance and better compensation is the key to curbing OA's incidence, he says.

"The best thing is if people can move within their current job. But often that's not practicable, in which case, they can end up losing their job, which usually results in economic loss. Most of my patients, even after diagnosis has been well established, will keep working there because they can't afford not to," he says.

agent, while in irritant-induced asthma, it may take just one exposure to a noxious product to damage the respiratory system, explains Dr Rimmer.

About 90 per cent of OA cases are sensitised-induced, says Dr Susan Tarlo and Dr Gary Liss from the Department of Public Health Sciences at the University of Toronto. The pair has identified more than 250 asthma-causing agents.

In fact, many industries present hazards. Hairdressers, for example, can become allergic to products such as henna and perchlorate, cleaners are exposed to ammonia and enzymes, and photographers can develop asthma from film-processing chemicals.

The following industries and jobs also have a high OA risk.

Woodworking

Dust from Western red cedar, mahogany, California redwood, oak and mulberry is a common cause of asthma. Some Australian woods may also cause problems, but more specific research is needed.

Baking and the food industry

Many bakers develop what is coined as baker's asthma from exposure to grain dust, particularly from wheat, rye and buckwheat. In the food processing industry, those who are exposed to coffee and tea dust, mushroom moulds, egg proteins, castor beans, linseed, cottonseed, garlic powder, papain and pectinase have also been known to develop OA. Prawns, cunjevoi fluid and dust from pearl shells

and crabs can cause problems for those people involved in seafood processing.

Health-care industry

Latex gloves, or gloves coated with powder, can be a big problem. Penicillin and other aerosolised or powdered medications are identified as asthma-causing agents, as is glutaraldehyde, which is used in both the sterilisation of endoscopy equipment and the development of X-ray film. Formaldehyde is another concern. In pharmaceutical manufacturing, there are many potential problematic

exposures: common ones include pectinase, psyllium and animal-organ extracts.

Animal industry

Rat urine is problematic for animal laboratory workers. For workers in veterinary medicine and in the poultry industry, the dander, hair and serum from many animals can also be a concern. Insects can also cause respiratory problems.


Gardening and farming

Exposure to animal, plant, insect and fungal allergens may lead to asthma problems.

Spray painting, electronics and manufacturing

Isocyanates are common asthma-causing agents, and they're found in spray paints and insulation as well as in the manufacturing of electronics, plastic and foam. Acrylic glues and colophony resin in the flux used in soldering in electronics are also a problem, as are aluminium pot room fumes from metal salts, platinum, cobalt and nickel.

Postal work, printing and bookbinding

Problems can arise from the glues involved. Arabic, acacia and tragacanth vegetable gums may cause asthma. 

Prevention

Research shows that avoiding a problematic agent is the only way to prevent occupational asthma, and that wearing masks is not effective in reducing its incidence, says Dr Johnson. The Asthma Foundation of NSW lists key elements of a safe workplace:

- ✦ Smoke-free environment
- ✦ Control of dust and other chemical agents
- ✦ Safe use of substances
- ✦ Maintaining adequate ventilation
- ✦ Staff training for asthma emergencies
- ✦ Effective mechanisms for health reporting and consultation
- ✦ Provision of protective clothing



CONTACTS Locate your state's asthma foundation by calling 1800 645 130 or going to www.asthmaaustralia.org.au. The Australasian Society of Clinical Immunology and Allergy (ASCIA) can be found at www.allergy.org.au. Locate your state's workers compensation authority by going to the National Occupational Health and Safety Commission's website www.nohsc.gov.au or by calling (02) 6279 1000.