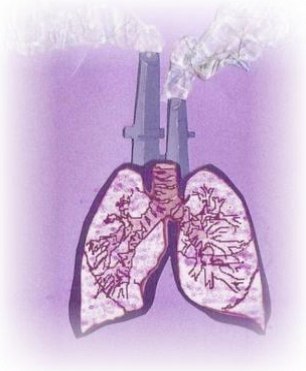
Occupational Asthmagens

Occupational Asthmagens



Most people with asthma have irritable, swollen air passages, partly blocked with too much sticky mucus. This narrowing of the air passages leads to the symptoms of wheeze, breathlessness and cough.

Work and non-work factors can cause this narrowing or make it worse:

- Dusts and fumes (both at work and at home, including cigarette smoke)
- Exercise
- Cold air.

People with asthma in the workplace may notice a number of symptoms including:

- Either a dry cough or one that produces sputum. Often people whose asthma is caused or made worse by work will notice the cough predominantly at night
- Shortness of breath or chest tightness
- Wheezing.

All of these symptoms may improve when the person isn't at work.

Asthma can result as an allergic reaction to a substance used in the work process such as TDI (toluene diisocyanate), or western red cedar.

The person has become 'sensitised' to the substance and this can occur after weeks, months or even years of being exposed without any ill effect. Sometimes the allergic reaction (and the symptoms) can develop some hours after the exposure. This can make the workplace factor difficult to identify.

Other people develop irritant asthma for the first time after a very heavy single exposure to an airway irritant in the workplace such as welding fume or an irritant gas such as sulphur dioxide.

Pre-existing asthma may also be made worse by factors in the workplace, such as dusts or fumes, and the symptoms tend to follow the exposure closely. The worker will often be very aware of the area of the worksite or of the substance which makes their problem worse.

Occupational Asthmagens

Advice for people with asthma

Talk to your doctor or occupational health nurse if you suspect something at work is causing asthma or is making your asthma worse.

They will:

- Ask you to note what substances or processes you are exposed to in your workplace
- Ask you to note if your symptoms worsen during each shift or over the shift period
- Ask you to note if there is any improvement away from work
- Teach you how to measure and record a peak flow measurement. (This is a measurement of the amount of irritability of the air passages in your lungs.)

In New Zealand the substances or processes recognised as most likely to cause asthma problems are:

- Working with chemicals such as isocyanates (TDI, MDI, two-pot paints and glues, foam manufacture, etc.) or epoxy resins.

Common industries include spray painting, boat building and working with wood dusts.

Problem dusts include:

- Western red cedar
- Some particle-boards (building and joinery industries)
- Metal fumes or dusts (aluminium smelting, welding)
- Dusts from organic materials such as flour (bakers) animals (veterinarians) and insects.

Occupational Asthmagens

Selected occupational asthmagens by occupation*

Workers at risk	Agents
Animal handlers	Animal urine, dander
Bakers	Enzymes, flour/grain dust/mites
Carpenters	Acrylate, amines, diisocyanates, epoxy resins, wood dusts
Cleaners/Janitors	Cleaning materials, dusts, moulds
Day care providers	Cleaning materials, dusts, latex (natural), moulds
Electronics workers	Amines, colophony, metals, soldering flux
Farmers	Animal urine, grain dusts, mites, insects
Hairdressers	Henna, persulfate
Health care workers	Formaldehyde, glutaraldehyde, latex, methyldopa, penicillin
Laboratory workers	Animal urine, dander, feathers, enzymes, formaldehyde, glutaraldehyde, insects, latex
Machinists/Tool setters	Metal working fluids, oil mists
Office workers	Cleaning materials, dusts, moulds
Pharmaceutical workers	Cephalosporins, pancreatin, papain, pepsin, psyllium
Photographers	Complex amines
Plastics/Rubber workers	Anhydrides, diisocyanates
Sawmill workers	Wood dusts
Seafood processors	Crabs, prawns
Teachers	Cleaning materials, dusts, moulds
Textile workers	Dyes, gums
Welders	Welding fumes