

# Occupational Asthmagens

In at least one out of every six asthmatics, their asthma is caused or made worse by workplace exposures. There are over 350 occupational asthmagens. The Association of Occupational and Environmental Clinics maintains an updated list of asthmagens located at: [www.aoc.org/aoeccode.htm](http://www.aoc.org/aoeccode.htm).

These reference tables list common occupational asthma triggers and the occupations where they are often encountered. The first table is sorted by workers at risk. The second table is sorted by agents in the workplace.

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, molds
Daycare providers	Cleaning materials, dusts, latex (natural), molds
Electronic workers	Amines, colophony, metals, soldering flux
Farmers	Animal urine, dander, grain dusts, mites, insects
Hairdressers	Henna, persulfate
Health care workers	Formaldehyde, glutaraldehyde, latex, methyldopa, penicillins, psyllium
Laboratory workers	Animal urine, dander, feathers, enzymes, formaldehyde, glutaraldehyde, insects, latex
Machinists/Tool setters	Metal working fluids, oil mists
Office workers	Cleaning materials, dusts, molds
Pharmaceutical workers	Cephalosporins, pancreatin, papain, pepsin, psyllium
Photographers	Complex amines
Plastic/Rubber workers	Anhydrides, diisocyanates
Sawmill workers	Wood dusts
Seafood processors	Crabs, prawns
Teachers	Cleaning materials, dusts, molds
Textile workers	Dyes, gums
Welders	Welding fumes

# Agents Workers at Risk

## Animal-Derived Substances

Egg protein	Egg producers
Grain mites	Farmers, grain handlers
Insects	Laboratory workers
Laboratory animals	Laboratory workers, animal handlers
Shellfish	Seafood processors

## Chemicals

Acrylates	Adhesives handlers, nail salon workers
Amines	Shellac and lacquer handlers, solderers, carpenters, photographers
Anhydrides	Users of epoxy resins, plastic/rubber workers
Dyes	Textile workers
Formaldehyde, glutaraldehyde	Hospital staff
Isocyanates	Spray painters, polyurethane foam insulation installers/manufacturers, plastic manufacturers
Persulfate	Hairdressers

## Drugs/Pharmaceuticals

Penicillins, psyllium, methyldopa, cimetidine	Pharmaceutical industry, health care workers
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## Plant-Derived Substances

Biologic enzymes	Detergent industry workers
Castor beans	Farmers, millers, oil industry workers, dock workers
Flour and grain dusts	Bakers, millers
Latex (natural rubber)	Health care workers, daycare providers, food service
Vegetable gums	Carpet makers, pharmaceutical workers
Wood dusts	Forest workers, carpenters, cabinet makers, sawmill workers

## Metal, Fluxes

Cobalt	Hard-metal grinders
Fluxes	Electronics workers
Welding fumes	Welders

## Other

Metal working fluids, oil mists	Machinists, tool setters
Dusts, molds	Teachers, cleaners, office workers, janitors
Cleaning materials	Cleaners, janitors, daycare providers

Chan-Yeung M, Malo JL. Occupational Asthma. The New England Journal of Medicine 333:107112, 1995. 333: 107-112, 1995. Venables KM, Chan-Yeung M. Occupational Asthma. Lancet 349: 1465-1469, 1997. Revised January 2005

Note: Materials have been reformatted with permission from the NY State Health Department, <http://health.state.ny.us/nysdoh/lung/lung.htm>