A diagnostic toolkit for physicians and primary health providers. Prevention information for workers.

Give pages 3 and 4 of this booklet to your doctor. They give your doctor information about the health risks of your job.

This booklet was prepared by the Ontario construction industry’s Occupational Disease and Research Labour-Management Health and Safety Committee with assistance from the Infrastructure Health & Safety Association (IHSA), the Ontario Ministry of Labour (MOL), the Workplace Safety and Insurance Board (WSIB), and labour and employers in Ontario construction.

The information presented here is for general information only. It should not be regarded or relied upon as a definitive guide to health risks in the trade. This information is, to the best of our knowledge, current at the time of publication. For more information, contact the Infrastructure Health & Safety Association.
Tasks and possible hazards

All tasks

► Hazardous materials from industrial worksites (coke ovens, refineries, chemical plants, glass plants, factories, cement plants, pulp and paper mills, power plants)

► Awkward postures, vibration, and hazardous noise when using power tools, grinders, saws, and mobile equipment

► Dust and insulation fibres on construction sites

► Injection injury caused by high pressure liquid can be serious.

Painting

► Painting solvents, epoxies

► Injection hazard when spray painting

► Carbon monoxide from heaters and generators.

Sanding

► Asbestos in plaster, paint or texture

► Lead in paint

► Wood dust

► Silica in drywall

► Noise and vibration from power tools.

Sandblasting

► Solvents

► Silica

► Lead

Cleanup

► Solvents

How to protect your health

► Ask your supervisor or employer for safe work instructions and training.

► Consult industrial clients on site-specific health and safety procedures.

► Ask about any hazardous materials or unknown chemicals when entering an industrial site for work.

► Ensure proper ventilation.

► Wear a proper respirator when
  • you suspect asbestos may be a hazard
  • working in dusty atmospheres
  • welding
  • using solvents.

► Wear gloves, coveralls or welding jackets, or use barrier creams to protect the skin.

► Consult material safety data sheets (MSDSs) for information about hazardous chemicals used at work, and obey workplace health and safety rules.

► Never eat, drink, smoke, or chew gum in areas contaminated with asbestos, lead, or toxic chemicals.

► Wash or wipe hands clean before eating, drinking, and smoking, and always clean up and change out of contaminated clothing before going home at the end of the shift.

► Wash work clothes separately from casual and other family members’ clothes.

► Report hazards to your employer.

Workers who are without symptoms and who have been exposed to asbestos may participate in a research study at Princess Margaret Hospital by volunteering to be screened for mesothelioma/asbestos.

Phone: 416-340-5686  Fax: 416-340-4964

For more information about health and safety in your job, contact your union or

FOR PHYSICIANS

Occupational diseases and hazardous agents encountered by painters

Job function
Painters tend to and operate machines or use brushes and spray equipment to apply paint, enamel, lacquer or other non-metallic protective and decorative coatings to surfaces of various products.

Asbestos-related Diseases
- Asbestosis
- Cancer (lung, mesothelioma, gastrointestinal) – asbestos.

Cancer
- Lung – asbestos, diesel, environmental tobacco smoke, nickel, hexavalent chromium
- Gastrointestinal – asbestos
- Skin – ultraviolet (UV) light.

Miscellaneous Disorders
- Infertility, male – lead, chlorinated solvents
- Hepatitis (chronic solvent toxicity) – chlorinated solvents
- Noise-induced hearing loss – noise, power tools, heavy machinery, grinders, industrial noise
- Renal disease – lead, degreasers, solvents.

Neurological
- Chronic solvent toxic syndrome – solvents, paints, degreasers, thinners, epoxies
- Hand-arm vibration syndrome – vibrating tools
- Lead, subacute toxic effect – lead.

Respiratory Diseases
- Silicosis – silica
- Bronchitis, chronic – silica dust, environmental tobacco smoke
- Asthma, occupational – isocyanates
- Hypersensitivity pneumonitis (HP) acute/chronic – fungi/mould, wood dust
- Metal fume fever – metallic oxide fumes such as zinc, copper or magnesium from welding.

Skin Disorders
- Dermatitis, allergic/contact – epoxies, paints, degreasers, glues.

The next page provides important diagnostic criteria for screening, early detection, and diagnosis.

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1-800-263-5024 • www.ihsa.ca
Asbestos disease

Asbestos-caused fibrosis of the lungs and pleura may lead to shortness of breath. It usually takes 15 or more years from the onset of exposure for radiographic abnormalities and symptoms to arise. Radiologists should be alerted to the suspected diagnosis. Painters occupationally exposed to asbestos are at increased risk of cancers of the lungs and pleura. Screening for cancer has not been proven to reduce mortality; however, it can result in early detection.

If there is any suspicion of asbestos-related illness (i.e., not screening scenario), patients may be referred directly to Princess Margaret Hospital's program where immediate assistance, rapid assessment and specialized treatments are available. Phone 1-877-LUNG 911 (5864 911) Fax 416-340-3353. Asbestos-exposed workers should be counseled about smoking cessation.

http://www.wsib.on.ca/files/Content/OccDiseaseAsbestos/Asbestos_Related%20Diseases.pdf

Contact dermatitis

Contact dermatitis is an inflammatory skin reaction to direct contact with noxious agents in the environment. Substances that produce this condition after single or multiple exposures may be either irritant or allergic in nature. Irritant contact dermatitis (ICD) results from contact with external agents that directly damage the epidermis, in contrast to allergic contact dermatitis (ACD) in which the damage occurs through the host's immune response as a result of a delayed type hypersensitivity reaction.

The diagnosis of contact dermatitis should be considered when there is a suspected workplace agent (allergen or irritant). Screening should include determination of the following: (A) Did the skin condition start after the worker started the job? OR Did the skin condition become worse after the worker started the job? AND (B) Are symptoms better on weekends or holidays off work? Referral to a specialist with experience diagnosing and treating occupational contact dermatitis should be considered when any of the following are suspected; all cases of possible ACD; ICD with allergic features; chronic ICD; complicated ICD (e.g., not improving, deteriorating, confounded by another skin disease such as psoriasis).

http://www.wsib.on.ca/en/community/WSIB/ArticleDetail?vgnextoid=ff4de35c819d7210VgnVCM100000449c710aRCRD

Hand-arm vibration syndrome (HAVS) and vibration-induced white finger (VWF)

HAVS and VWF are the major health hazards related to the use of vibrating tools. If workers develop symptoms of tingling or numbness, or if their fingers occasionally become white, blue, or painful—especially when cold—they should be examined by a doctor who knows about the diagnosis and treatment of these conditions. Diagnostic tests which can be used include plethysmography, arteriography, skin thermography, and sensory tests such as two-point discrimination depth sense, pinprick touch, and temperature sensation. The Occupational Medicine Clinic at St. Michael's hospital in Toronto has diagnostic facilities.

http://www.wsib.on.ca/en/community/WSIB/OPMDetail?vgnextoid=1486fcea9bfc7210VgnVCM100000449c710aRCRD

Inhalation disease: Silicosis

Silicosis an occupational lung disease caused by inhalation of crystalline silica dust. Silica inflammation and scaring is manifested as nodular lesions in the upper lobes of the lungs. Silicosis is progressive and signs may not appear until years after exposure has begun. Symptoms include: dyspnea on exertion, dry cough, and fatigue. The diagnosis is made by radiographic examination. It is preferred that the films be interpreted by a radiologist with experience with occupational lung disease since the finding may be subtle.

Ref: http://www.wsib.on.ca/wsib/wsibsite.nsf/LookupFiles/OccDiseaseSilicosis/$File/Silicosis.pdf

Neurologic effects

CoAcute toxic effect of solvents: Organic solvents are volatile substances commonly used in the workplace as cleaners and degreasers. The systemic symptoms of acute solvent poisoning resemble those of intoxication from alcoholic beverages.

Toxic Neuropathy: Chemicals that can cause toxic polyneuropathy include lead and N-hexane. Most symmetrical, sensorimotor neuropathies caused by exposure to chemicals are indistinguishable from similar effects caused by systemic diseases such as diabetes or B12 deficiency. The diagnosis of toxic polyneuropathy is usually made on the basis of symptoms following exposure to the chemical and the resolution of symptoms months to years after cessation of exposure.

Noise-induced hearing loss

Noise-induced hearing loss (NIHL), is diagnosed by audiometric testing. With NIHL, there is a characteristic dip (notch) at 4 kHz on the audiogram. This contrasts with presbycusis where there is a continuous dropoff as frequency increases.

Ref: http://www.wsib.on.ca/en/community/WSIB/OPMDetail?vgnextoid=9956fcea9bfc7210VgnVCM100000449c710aRCRD

For more info about occupational disease and workplace health and safety, contact the Workplace Safety and Insurance Board: 1-877-202-0008