# Deemed diseases in Australia

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# RECOMMENDED AUSTRALIAN-SPECIFIC LIST OF DEEMED DISEASES

| Disease | Exposure or occupation |
|---|---|
| **Infectious disease** | |
| Anthrax | Relevant occupations involving work with animals or animal carcasses (such as animal handler, pelt handler, abattoir worker, meat inspector). |
| Avian Influenza | Relevant occupations involving work with birds (such as poultry slaughterer, poultry farm worker, pet shop worker, veterinarian, veterinary nurse) or frontline healthcare occupations with direct patient contact (such as nurse, doctor, physiotherapist). |
| Brucellosis | Relevant occupations involving work with animals or animal carcasses (such as veterinarian, farmer or farm worker, abattoir worker, laboratory worker). |
| COVID-19 | Frontline healthcare occupations with direct patient contact (such as nurse, doctor, physiotherapist). |
| Hepatitis A | Relevant occupations involving contact with human waste (such as child care workers, carers of intellectually disabled persons, workers in rural or remote indigenous communities, and sewage workers and plumbers). |
| Hepatitis B and C | Relevant occupations involving contact with human bodily secretions (such as health care worker, embalmer, person who handles body substances, clinical laboratory staff, worker in long-term correctional facilities, police, member of the armed forces, emergency services worker). |
| HIV/AIDS | Health care workers and laboratory workers who become HIV positive after a needlestick injury. |
| Influenza A (H1N1) | Frontline healthcare occupations with direct patient contact (such as nurse, doctor, physiotherapist). |
| Leptospirosis | Relevant occupations involving work with animals or animal carcasses (such as farmer or farm worker, abattoir worker, forestry worker, hunter, veterinarian, livestock transport operator) or work with animal or human waste (such as plumber). |
| Middle East Respiratory Syndrome | Frontline healthcare occupations with direct patient contact (such as nurse, doctor, physiotherapist). |
| Orf | Relevant occupations involving work with sheep or sheep carcasses (such as sheep farmer or farm worker, goat farmer or farm worker, abattoir worker, meat inspector). |

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|---|---|
| Psittacosis | Relevant occupations involving work with birds (such as poultry slaughterer, poultry farm worker, pet shop worker, veterinarian, veterinary nurse). |
| Q-fever | Relevant occupations involving contact with animals or animal parts in a rural setting (such as abattoir workers, stock workers, stock transporters, shearers, hide processors, farmers and veterinarians). |
| Tuberculosis | Relevant occupations involving contact with persons or animals in situations where tuberculosis prevalence is likely to be significantly higher than the general community (such as health worker, clinical laboratory worker, funeral parlour staff, farmer, veterinarian), or person with silicosis. |

| Disease | Exposure or occupation |
|---|---|
| **Malignancy** | |
| Salivary gland | Ionizing radiation |
| Nasopharynx | Formaldehyde, wood dust |
| Oesophagus | Ionizing radiation |
| Stomach | Ionizing radiation |
| Colon and rectum | Ionizing radiation |
| Liver | HBV or HCV exposure related to occupation, vinyl chloride monomer |
| Bile duct | 1,2-Dichloropropane |
| Nasal cavity and para-nasal sinuses | Ionizing radiation, leather dust, nickel, wood dust |
| Larynx | Acid mist - strong inorganic, asbestos* |
| Lung | Arsenic, asbestos, beryllium, bis(chloromethyl)ether, cadmium, chromium VI, diesel engine exhaust, ETS, Ionizing radiation, nickel, PAHs**, Radon-222 and its decay products, Silica dust (crystalline), Soot (chimney sweeping), welding fumes |
| Bone | Ionizing radiation |
| Skin (melanoma) | Solar radiation, polychlorinated biphenyls |
| Skin (non-melanoma) | ionizing radiation, polycyclic aromatic hydrocarbons#, solar radiation |
| Mesothelioma | Asbestos |
| Breast (female) | Ionizing radiation |
| Ovary | Asbestos |
| Kidney | Ionizing radiation, tricholoroethylene |
| Bladder | 2-naphthylamine, benzidine, cyclophosphamide, ionizing radiation, ortho-toluidine, polycyclic aromatic hydrocarbons^ |
| Eye (melanoma) | Ultraviolet light from welding |
| Brain | Ionizing radiation |
| Thyroid | Ionizing radiation |
| Leukaemia+ | Benzene, butadiene, Cyclophosphamide, formaldehyde, HCV exposure related to occupation, ionizing radiation |
| Non-Hodgkin's Lymphoma | Ionizing radiation, lindane, pentachlorophenol |

*:Covers all forms of asbestos, including actinolite, amosite, anthophyllite, chrysotile, crocidolite, tremolite). Includes mineral substances that contain asbestos.

**:Includes exposure from coal gasification, coal tar pitch and coke production

#: Includes topical exposure from coal tar distillation, coal tar pitch, mineral oils (untreated or mildly treated), shale oils, soot (chimney sweeping)

^: Exposure during aluminium production

+: Excluding chronic lymphatic leukaemia

| Disease | Exposure or occupation |
|---|---|
| **Mental or neuropsychiatric diseases** | |
| Post-traumatic stress disorder | Occupations involved as first responders (such as police officers, ambulance officers including paramedics, fire fighters). |
| **Diseases of the nervous system** | |
| Peripheral neuropathy | Metals such as lead, mercury and arsenic; organic solvents such as n-hexane, carbon disulphide and trichloroethylene; pesticides such as organophosphates; acrylamide. |
| Noise induced hearing loss | Exposure to persistent or intermittent noise above 85db(a) |
| **Respiratory diseases** | |
| Occupational asthma[&] | Sensitising agents or irritants - arthropods or mites, biological enzymes, bioaerosols, derived from fish/shellfish, derived from animals, flour, sensitising foods, flowers, latex, wood dusts, soldering, reactive dyes, anhydrides, acrylates, epoxy, ethylene oxide, aldehydes, pesticides, amines, ammonia, industrial cleaning agents, acids, isocyanates, other reactive chemicals, sensitising metals, sensitising drugs.[*] |
| Coal workers' pneumoconiosis | Coal |
| Asbestosis | Asbestos |
| Silicosis | Silica |
| Other pneumoconiosis | Exposures known to occasionally cause pneumoconiosis, such as beryllium, tin, iron oxide, barium, aluminium, cobalt, tungsten[2] |
| Byssinosis | Cotton, flax, hemp, sisal dust |
| Extrinsic allergic alveolitis | Damp material of biological origin, such as mouldy hay, straw, grain and feathers |
| Obliterative bronchiolitis | Relevant occupations involving exposure to food flavourings thought to be associated obliterative bronchiolitis (such as some manufacturing workers involved in food production). |

| Disease | Exposure or occupation |
|---|---|
| **Hepatic diseases** | |
| Non-infectious hepatitis | Agents known to cause hepatitis (particularly organic solvents)[+] |
| Chronic active hepatitis | Persons with known HBV or HCV related to occupation |
| Hepatic cirrhosis | Persons with known HBV or HCV related to occupation |

*: The large number of occupational agents that have been shown to cause these diseases means that it is impractical to list every relevant agent

&: This includes immunologically-mediated occupational asthma and new cases of occupational asthma arising as result of workplace exposure to irritants. It excludes pre-existing asthma worsened due to exposure to workplace irritants.

+: See the entry under "Acute poisoning / toxicity" for a detailed list of specific exposures.

| Disease | Exposure or occupation |
|---|---|
| **Skin diseases** | |
| Contact dermatitis (irritant and allergic) | Sensitising agents or irritants - Irritant contact dermatitis in an occupational setting is most commonly reported as due to alcohols, cutting fluids, degreasers, disinfectants, petroleum products, soaps and cleaners, solvents and wet work. Allergic contact dermatitis in an occupational setting is most frequently reported as being due to chromates, cobalt, cosmetics and fragrances, epoxy resin, latex, nickel, plants, preservatives, resins and acrylics.[*] |
| Occupational vitiligo | Para-tertiary-butylphenol; para-tertiary-butylcatechol; para-amylphenol; hydroquinone or the monobenzyl or monobutyl ether of hydroquinone. |
| **Musculoskeletal diseases** | |
| Raynaud's disease | Vibration from powered tools and equipment |
| Bursitis (at the elbow or knee) | Prolonged external friction or pressure or repetitive motion at or about the elbow or the knee |
| Osteonecrosis | Relevant occupations involving working at significantly increased or decreased air pressure (such as professional divers, caisson divers, hyperbaric exposure chamber attendants). |

| Disease | Exposure or occupation |
|---|---|
| **Acute poisoning / toxicity (includes acute damage to the heart, lungs, liver, kidney, nervous system and blood)** | Acrylonitrile; alcohols; antimony; arsenic; benzene; beryllium; cadmium; carbon disulphide; chromium; copper; fluorine; alcohol, glycols or ketones; hexane; lead; manganese; mercury; mineral acids; nitroglycerine (or other nitric acid esters); osmium; oxides of nitrogen; ozone; pesticides (organophosphate and organochlorine compounds, herbicides and related compounds; pharmaceutical agents; phosgene; phosphorus; selenium; styrene; thallium; tin; toluene; vanadium; xylene; zinc; chemical asphyxiants (carbon monoxide, hydrogen cyanide, hydrogen sulphide, methylene chloride); irritants (benzoquinone and other corneal irritants); toxic halogen derivatives of aliphatic or aromatic hydrocarbons; toxic nitro- and amino-derivatives of benzene (and other less common, specific substances not included here)* |

*: The large number of occupational agents that have been shown to cause these diseases means that it is impractical to list every relevant agent

# GUIDANCE MATERIAL

**Infectious diseases**

| **Anthrax** | |
|---|---|
| Description | Very rare infective illness that usually causes open sores on the skin (although involvement of the lung is commonly fatal) and typically arises from contact with the hide of rural animals. |
| Exposure | Bacillus anthracis |
| High risk occupation or industry | Animal handlers, abattoir workers and people working with animal hides. |
| Latency period | Weeks to months. |
| Main external non-occupational risk factors | Non-occupational exposure very rare. |

| **Avian Influenza A** | |
|---|---|
| Description | Viral illness most commonly producing respiratory symptoms but other symptoms can occur. |
| Exposure | Avian Influenza A. |
| High risk occupation or industry | Relevant occupations involving work with birds (such as poultry slaughterer, poultry farm worker, pet shop worker, veterinarian, veterinary nurse) or frontline healthcare occupations with direct patient contact (such as nurse, doctor, physiotherapist). |
| Latency period | One to ten days. |
| Main external non-occupational risk factors | Uncommon in the general community but would be more common if the virus is circulating in the community. |

| **Brucellosis** | |
|---|---|
| Description | Generalised infective illness that usually arises from contact with reproductive tract tissues of infected cattle. |
| Exposure | Brucella sp. |
| High risk occupation or industry | Veterinarians, farmers, abattoir workers and feral pig hunters. |
| Latency period | One to two weeks. |
| Main external non-occupational risk factors | Non-occupational exposure uncommon. |

| **COVID-19** | |
|---|---|
| Description | Viral illness most commonly producing respiratory symptoms but other symptoms can occur. |
| Exposure | SARS-CoV-2. |
| High risk occupation or industry | Frontline healthcare occupations with direct patient contact (such as nurse, doctor, physiotherapist). |
| Latency period | Typically five days but ranges from one to 14 days. |
| Main external non-occupational risk factors | Common in the general community when the virus is circulating in the community. |

| **Hepatitis A** | |
|---|---|
| Description | Viral infection that affects the liver and is spread between people from hand to mouth. |
| Exposure | Hepatitis A virus |
| High risk occupation or industry | People whose job brings them in contact with persons who may have Hepatitis A, such as health-care workers in high-risk areas, child care workers, carers of intellectually disabled persons, workers in rural or remote indigenous communities, sewage workers and plumbers. |
| Latency period | One to three weeks. |
| Main external non-occupational risk factors | Not common in the general Australian community. |

| **Hepatitis B and C** | |
|---|---|
| Description | Viral infection that affects the liver and is spread between people through contact with body fluids. |
| Exposure | Hepatitis B and C virus |
| High risk occupation or industry | People whose job brings them in contact with body fluids in situations where there is a considerable risk of the worker having a break in their skin through which the infection could enter, such as health care workers, persons who handle body substances, embalmers, clinical laboratory staff, workers in long-term correctional facilities, police, members of the armed forces, emergency services workers and tattooists |
| Latency period | One to three weeks. |
| Main external non-occupational risk factors | A considerable minority of Australian persons are carriers and potentially infectious. |

| **HIV/AIDS** | |
|---|---|
| Description | Immune deficiency illness due to infection with the HIV. There may be no symptoms for much of the time the person is HIV positive. |
| High risk occupation or industry | Health care workers and laboratory workers handling bodily fluids. Only known occupational transmission in these occupations is through needlestick injury. |
| Latency period | Two weeks to six weeks. |
| Main external non-occupational risk factors | Sexual transmission. |

| **Influenza A (H1N1)** | |
|---|---|
| Description | Viral illness most commonly producing respiratory symptoms but other symptoms can occur. |
| Exposure | Influenza A (H1N1). |
| High risk occupation or industry | Frontline healthcare occupations with direct patient contact (such as nurse, doctor, physiotherapist). |
| Latency period | Typically two days but ranges from one to seven days. |
| Main external non-occupational risk factors | Uncommon in the general community but would be more common if the virus is circulating in the community. |

| **Leptospirosis** | |
|---|---|
| Description | Generalised infective illness that usually arises from contact with urine of infected small animals (particularly rats), typically in a rural setting. |
| Exposure | Leptospira sp. |
| High risk occupation or industry | Farmers (especially dairy farmers), abattoir workers, forestry workers, hunters, veterinarians, plumbers and sewer worker. |
| Latency period | One to two weeks. |
| Main external non-occupational risk factors | Non-occupational exposure uncommon. |

| **Middle East Respiratory Syndrome** | |
|---|---|
| Description | Viral illness most commonly producing respiratory symptoms but other symptoms can occur. |
| Exposure | MERS-CoV. |
| High risk occupation or industry | Frontline healthcare occupations with direct patient contact (such as nurse, doctor, physiotherapist). |
| Latency period | Typically five days but ranges from two to 14 days. |
| Main external non-occupational risk factors | Uncommon in the general community but would be more common if the virus is circulating in the community. |

| **Orf** | |
|---|---|
| Description | Rare infective illness that usually causes pustules on the skin and typically arises from contact with infected sheep. |
| Exposure | Parapox virus |
| High risk occupation or industry | Sheep farmers. |
| Latency period | Weeks to months. |
| Main external non-occupational risk factors | Non-occupational exposure very rare. |

| **Psittacosis** | |
|---|---|
| Description | Bacterial illness characterized by an infection of the lung which results in respiratory symptoms. |
| Exposure | Chlamydia psittaci. |
| High risk occupation or industry | Relevant occupations involving work with birds (such as poultry slaughterer, poultry farm worker, pet shop worker, veterinarian, veterinary nurse). |
| Latency period | Typically five to 14 days. |
| Main external non-occupational risk factors | Uncommon condition in the general community. |

| **Q-fever** | |
|---|---|
| Description | Generalised infective illness that usually arises from contact with infected animals or animal parts, usually in a rural setting. |
| Exposure | Coxiella burnetii |
| High risk occupation or industry | Abattoir workers, stock workers, stock transporters, shearers, hide processors, farmers and veterinarians. |
| Latency period | One to two weeks. |
| Main external non-occupational risk factors | Non-occupational exposure uncommon. |

| **Tuberculosis** | |
|---|---|
| Description | Infection that usually affects the lungs and can be spread between persons or from animals to persons. |
| Exposure | Mycobacterium tuberculosis |
| High risk occupation or industry | Health workers, farmers and veterinarians, clinical laboratory workers and funeral parlour staff. |
| Latency period | Weeks to months. |
| Main external non-occupational risk factors | Unusual infection in Australian-born persons unless they come from very low socio-economic circumstances or have very poor health. |

## Malignancies

| **Salivary gland cancer** | |
|---|---|
| Description | Malignant disease of the salivary glands. |
| Exposure | Ionizing radiation. |
| High risk occupation or industry | Ionizing radiation would be expected to be very well controlled in Australia but is relevant for anyone whose occupation potentially exposes them to x-rays on a regular basis, which can occur in a range of settings - health (radiographers, radiologists, radiotherapists, dentists), manufacturing and industry (various specific jobs), security (customs officers), nuclear industry (work with isotopes). |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | Smoking and alcohol. |

| **Nasopharyngeal cancer** | |
|---|---|
| Description | Malignant disease of the nasopharynx |
| Exposure | Formaldehyde, wood dust |
| High risk occupation or industry | Formaldehyde exposure is most likely in embalmers, forensic/hospital mortuary workers, pathology laboratory workers, formaldehyde resin manufacturers, users and packers.<br>Wood dust exposure is most likely in workers involved in wood processing (workers in pulp and paper mills, sawmills, veneer and plywood plants, woodchip operations), people who use wood (joineries, furniture manufacturing, other timber product manufacturing, carpentry, roofing, flooring, maintenance work) and people who otherwise work with wood (tree-loppers and chainsaw operators) |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | Smoking and alcohol. |

| **Oesophageal cancer** | |
|---|---|
| Description | Malignant disease of the oesophagus. |
| Exposure | Ionizing radiation. |
| High risk occupation or industry | Ionizing radiation would be expected to be very well controlled in Australia but is relevant for anyone whose occupation potentially exposes them to x-rays on a regular basis, which can occur in a range of settings - health (radiographers, radiologists, radiotherapists, dentists), manufacturing and industry (various specific jobs), security (customs officers), nuclear industry (work with isotopes). |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | Smoking and alcohol. |

| **Stomach cancer** | |
|---|---|
| Description | Malignant disease of the stomach |
| Exposure | Ionizing radiation |
| High risk occupation or industry | Ionizing radiation would be expected to be very well controlled in Australia but is relevant for anyone whose occupation potentially exposes them to x-rays on a regular basis, which can occur in a range of settings - health (radiographers, radiologists, radiotherapists, dentists), manufacturing and industry (various specific jobs), security (customs officers), nuclear industry (work with isotopes) |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | Smoking. |

| **Colo-rectal cancer** | |
|---|---|
| Description | Malignant disease of the colon or rectum |
| Exposure | Ionizing radiation |
| High risk occupation or industry | Ionizing radiation would be expected to be very well controlled in Australia but is relevant for anyone whose occupation potentially exposes them to x-rays on a regular basis, which can occur in a range of settings - health (radiographers, radiologists, radiotherapists, dentists), manufacturing and industry (various specific jobs), security (customs officers), nuclear industry (work with isotopes) |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | Diet. |

| **Liver cancer** | |
|---|---|
| Description | Primary malignant disease of the liver (it excludes metastases to the liver from primary cancers elsewhere in the body.) |
| Exposure | HBV or HCV exposure related to occupation, vinyl chloride monomer |
| High risk occupation or industry | People whose job brings them in contact with body fluids in situations where there is a considerable risk of the worker having a break in their skin through which the infection could enter, such as health care workers, persons who handle body substances, embalmers, clinical laboratory staff, workers in long-term correctional facilities, police, members of the armed forces, emergency services workers and tattooists.<br>Exposure to vinyl chloride monomer occurs through manufacturing of polyvinyl chloride and especially cleaning of autoclaves. |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | Alcohol (cirrhosis). |

| **Cholangiocarcinoma** | |
|---|---|
| Description | Malignant disease of the gall bladder and biliary tree. |
| Exposure | 1,2-Dichloropropane. |
| High risk occupation or industry | Occupations involved in printing. |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | All not common; primary hepatobiliary disease such as primary sclerosing cholangitis is the most common of these. |

| **Cancer of the nasal cavity and para-nasal sinuses** | |
|---|---|
| Description | Malignant disease of the nasal cavity and para-nasal sinuses |
| Exposure | Ionizing radiation, leather dust, nickel, wood dust |
| High risk occupation or industry | Ionizing radiation would be expected to be very well controlled in Australia but is relevant for anyone whose occupation potentially exposes them to x-rays on a regular basis, which can occur in a range of settings - health (radiographers, radiologists, radiotherapists, dentists), manufacturing and industry (various specific jobs), security (customs officers), nuclear industry (work with isotopes).<br><br>Leather dust: workers involved in manufacture of footwear and in the leather-tanning and -processing industry.<br><br>Nickel: Workers involved with commercial and industrial machinery and equipment repair and maintenance, motor vehicle parts manufacturing, and architectural and structural metals manufacturing<br><br>Wood dust exposure is most likely in workers involved in wood processing (workers in pulp and paper mills, sawmills, veneer and plywood plants, woodchip operations), people who use wood (joineries, furniture manufacturing, other timber product manufacturing, carpentry, roofing, flooring, maintenance work) and people who otherwise work with wood (tree-loppers and chainsaw operators) |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | - |

| **Laryngeal cancer** | |
|---|---|
| Description | Malignant disease of the larynx. |
| Exposure | Acid mist - strong inorganic, asbestos. |
| High risk occupation or industry | Acid mist exposure – there is a potential for high exposure in workers involved in the manufacturing, use and transport of sulfuric acid and isopropanol and metal pickling; moderate exposure in soap and detergent production, and the manufacture of nitric acid and ethanol; low exposure in lead-acid battery manufacturing and phosphate fertilizer production<br><br>Asbestos exposure can occur through mining (no longer in Australia), transport (truck drivers, dock workers – no longer in Australia except for transport of material contaminated with asbestos), manufacturing (no longer in Australia), contact with asbestos products through construction, maintenance or demolition (carpenters, boilermakers, plumbers, demolition workers). |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | Smoking. |

| **Carcinoma of the lung** | |
|---|---|
| Description | Malignant disease of the respiratory tree and gas exchange areas of the lung. |
| Exposure | Arsenic, asbestos, beryllium, bis(chloromethyl) ether, cadmium, chromium VI, diesel engine exhaust, ETS, Ionizing radiation, nickel, PAHs, Radon-222 and its decay products, silica dust (crystalline), soot (chimney sweeping), welding fume. |
| High risk occupation or industry | Arsenic: workers exposed through mining, manufacturing (treated timbers, non-ferrous metal production and processing, iron and steel milling), or use of products containing arsenic (carpenters, oil and gas extraction, water and sewage).<br><br>Asbestos: Asbestos exposure can occur through mining (no longer in Australia), transport (truck drivers, dock workers—no longer in Australia except for transport of material contaminated with asbestos), manufacturing (no longer in Australia), contact with asbestos products through construction, maintenance or demolition (carpenters, boilermakers, plumbers, demolition workers).<br><br>Beryllium: Uncommon exposure. Workers most at risk of exposure are construction trades workers, welders, electricians, and dental technologists.<br>Bis(chloromethyl)ether: Exposure is uncommon but can occur during chemical manufacturing. |

| | |
|---|---|
| | Cadmium: Exposure can occur to welders, automotive service technicians and saw-filers.<br><br>Chromium VI: Exposure can occur to welders, machinists, automotive service technicians and workers in saw mills treating timbers.<br><br>Diesel engine exhaust: Exposure can occur to workers operating equipment with diesel engines or working near where diesel equipment operates— truck and bus drivers, heavy equipment operators, forklift operators, non-metal miners, car mechanics.<br><br>ETS: Hospitality workers, outdoor workers. Ionizing radiation: Ionizing radiation would be expected to be very well controlled in Australia but is relevant for anyone whose occupation potentially exposes them to x-rays on a regular basis, which can occur in a range of settings— health (radiographers, radiologists, radiotherapists, dentists), manufacturing and industry (various specific jobs), security (customs officers), nuclear industry (work with isotopes).<br><br>Nickel: Workers involved with commercial and industrial machinery and equipment repair and maintenance, motor vehicle parts manufacturing, and architectural and structural metals manufacturing.<br><br>PAHs: There are a wide range of potential exposure circumstances. Exposures mainly occur through cooking (chefs and cooks); use of fuels (mechanics); and in heavy industry (coal tar production and distillation, coal gasification, coke production); and in a range of other work circumstances (paving and roofing using coal tar, creosote wood preservation, aluminium production, carbon electrode manufacture, mining, metal working, calcium carbide production, petroleum industries, chemical production and transportation, electrical industries and chimney sweeping).<br><br>Radon-222 and its decay products: Rare in Australia. Exposure can occur to workers involved in underground mining or other underground work.<br><br>Silica dust (crystalline): Exposure can occur to workers involved in construction, especially excavators; mining; brick, concrete or stone cutting; abrasive blasting; foundry casting.<br><br>Soot (chimney sweeping): Chimney sweeps.<br><br>Welding fume: Exposure occurs when welding (or when in close proximity to welding). |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | Smoking. |

| **Bone cancer** | |
|---|---|
| Description | Malignant disease of the bone. |
| Exposure | Ionizing radiation. |
| High risk occupation or industry | Ionizing radiation would be expected to be very well controlled in Australia but is relevant for anyone whose occupation potentially exposes them to x-rays on a regular basis, which can occur in a range of settings - health (radiographers, radiologists, radiotherapists, dentists), manufacturing and industry (various specific jobs), security (customs officers), nuclear industry (work with isotopes). |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | - |

| **Skin cancer (melanoma)** | |
|---|---|
| Description | Malignant disease of the melanin-producing cells in the skin. |
| Exposure | Solar radiation, polychlorinated biphenyls (PCBs). |
| High risk occupation or industry | Solar radiation: Outdoor workers are at most at risk.<br>PCBs: Uncommon exposure. Exposure can occur to workers coming into contact with electrical fittings (industrial electricians, electrical power line and cable workers, electrical mechanics, and electricians); workers involved in disposal of such material (waste storage, incineration and contaminated site remediation); welders and general maintenance workers; fire-fighters. |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | Non-occupational sun exposure. |

| **Skin cancer (non-melanoma)** | |
|---|---|
| Description | Malignant disease of the cells making up the skin. |
| Exposure | Solar radiation. |
| High risk occupation or industry | Solar radiation: Outdoor workers are at most at risk. |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | Non-occupational sun exposure. |

| **Malignant mesothelioma** | |
|---|---|
| Description | Malignant disease of the inside lining of the chest wall (pleura), pericardium and abdomen (peritoneum). |
| Exposure | Asbestos. |
| High risk occupation or industry | Asbestos: Asbestos exposure can occur through mining (no longer in Australia), transport (truck drivers, dock workers – no longer in Australia except for transport of material contaminated with asbestos), manufacturing (no longer in Australia), contact with asbestos products through construction, maintenance or demolition (carpenters, boilermakers, plumbers, demolition workers). |
| Latency period | Minimum five years; commonly at least 20 to 25 years. |
| Main external non-occupational risk factors | - |

| **Breast cancer** | |
|---|---|
| Description | Malignant disease of the breast. |
| Exposure | Ionizing radiation. |
| High risk occupation or industry | Ionizing radiation would be expected to be very well controlled in Australia but is relevant for anyone whose occupation potentially exposes them to x-rays on a regular basis, which can occur in a range of settings - health (radiographers, radiologists, radiotherapists, dentists), manufacturing and industry (various specific jobs), security (customs officers), nuclear industry (work with isotopes). |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | Alcohol, female hormones. |

| **Ovarian cancer** | |
|---|---|
| Description | Malignant disease of the ovary. |
| Exposure | Asbestos. |
| High risk occupation or industry | Asbestos: Asbestos exposure can occur through mining (no longer in Australia), transport (truck drivers, dock workers – no longer in Australia except for transport of material contaminated with asbestos), manufacturing (no longer in Australia), contact with asbestos products through construction, maintenance or demolition (carpenters, boilermakers, plumbers, demolition workers). |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | - |

| **Renal cancer (cancer of the kidney)** | |
|---|---|
| Description | Malignant disease of the kidney. |
| Exposure | Ionizing radiation, tricholoroethylene. |
| High risk occupation or industry | Ionizing radiation would be expected to be very well controlled in Australia but is relevant for anyone whose occupation potentially exposes them to x-rays on a regular basis, which can occur in a range of settings - health (radiographers, radiologists, radiotherapists, dentists), manufacturing and industry (various specific jobs), security (customs officers), nuclear industry (work with isotopes).<br>Trichloroethylene: Exposure occurs particularly to workers involved in degreasing - metal product manufacturing, electroplating, metal spraying, metal fabrication. |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | Smoking. |

| **Bladder cancer** | |
|---|---|
| Description | Malignant disease of urothelial tissue lining the urinary tract. |
| Exposure | 2-naphthylamine, benzidine, cyclophosphamide, ionizing radiation, ortho-toluidine, PAHs. |
| High risk occupation or industry | 2-naphthylamine, benzidine and ortho-toluidine: Workers involved in the production of azo dyes (this no longer occurs in Australia).<br><br>Cyclophosphamide: Oncology nurses and pharmacists involved in preparing or administering cyclophosphamide for use with patients.<br><br>Ionizing radiation would be expected to be very well controlled in Australia but is relevant for anyone whose occupation potentially exposes them to x-rays on a regular basis, which can occur in a range of settings - health (radiographers, radiologists, radiotherapists, dentists), manufacturing and industry (various specific jobs), security (customs officers), nuclear industry (work with isotopes).<br><br>PAHs: There are a wide range of potential exposure circumstances. Exposures mainly occur through cooking (chefs and cooks); use of fuels (mechanics); and in heavy industry (coal tar production and distillation, coal gasification, coke production); and in a range of other work circumstances (paving and roofing using coal tar, creosote wood preservation, aluminium production, carbon electrode manufacture, mining, metal working, calcium carbide production, petroleum industries, chemical production and transportation, electrical industries and chimney sweeping). |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | Smoking. |

| **Ocular melanoma** | |
|---|---|
| Description | Malignant disease of the eye. |
| Exposure | Ultraviolet light from welding. |
| High risk occupation or industry | Occupations involved in welding. |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | History of dysplastic nevus syndrome; a family history of melanoma; the presence of fair skin and light-coloured eyes. |

| **Brain cancer** | |
|---|---|
| Description | Malignant disease of the brain. |
| Exposure | Ionizing radiation. |
| High risk occupation or industry | Ionizing radiation would be expected to be very well controlled in Australia but is relevant for anyone whose occupation potentially exposes them to x-rays on a regular basis, which can occur in a range of settings - health (radiographers, radiologists, radiotherapists, dentists), manufacturing and industry (various specific jobs), security (customs officers), nuclear industry (work with isotopes). |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | - |

| **Thyroid cancer** | |
|---|---|
| Description | Malignant disease of the thyroid. |
| Exposure | Ionizing radiation. |
| High risk occupation or industry | Ionizing radiation would be expected to be very well controlled in Australia but is relevant for anyone whose occupation potentially exposes them to x-rays on a regular basis, which can occur in a range of settings - health (radiographers, radiologists, radiotherapists, dentists), manufacturing and industry (various specific jobs), security (customs officers), nuclear industry (work with isotopes). |
| Latency period | Minimum five years; commonly at least 15 to 20 years. |
| Main external non-occupational risk factors | - |

| **Leukaemia** | |
|---|---|
| Description | Malignant disease of a subset of white blood cells. |
| Exposure | Benzene, butadiene, cyclophosphamide, formaldehyde, HCV exposure related to occupation, ionizing radiation. |
| High risk occupation or industry | Benzene: Exposure is primarily through exposure to fuels (automotive service technicians and mechanics, delivery and courier drivers, taxi, and firefighters) and through manufacturing or use of products with small amounts of benzene (steel workers, printers, rubber workers, shoe makers)<br><br>Butadiene: Exposure is primarily to machine operators in the rubber and plastic processing industry.<br><br>Cyclophosphamide: Oncology nurses and pharmacists involved in preparing or administering cyclophosphamide for use with patients.<br><br>Formaldehyde: Formaldehyde exposure is most likely in embalmers, forensic/hospital mortuary workers, pathology laboratory workers, formaldehyde resin manufacturers, users and packers.<br><br>HCV: People whose job brings them in contact with body fluids in situations where there is a considerable risk of the worker having a break in their skin through which the infection could enter, such as health care workers, persons who handle body substances, embalmers, clinical laboratory staff, workers in long-term correctional facilities, police, members of the armed forces, emergency services workers and tattooists.<br><br>Ionizing radiation: Ionizing radiation would be expected to be very well controlled in Australia but is relevant for anyone whose occupation potentially exposes them to x-rays on a regular basis, which can occur in a range of settings - health (radiographers, radiologists, radiotherapists, dentists), manufacturing and industry (various specific jobs), security (customs officers), nuclear industry (work with isotopes). |
| Latency period | Minimum one year; commonly at least 10 to 15 years. |
| Main external non-occupational risk factors | Smoking. |

| **Non-Hodgkins Lymphoma** | |
|---|---|
| Description | Malignant disease of a subset of white blood cells. |
| Exposure | Ionizing radiation, lindane, pentachlorophenol. |
| High risk occupation or industry | Ionizing radiation: exposure would be expected to be very well controlled in Australia but is relevant for anyone whose occupation potentially exposes them to x-rays on a regular basis, which can occur in a range of settings—health (radiographers, radiologists, radiotherapists, dentists), manufacturing and industry (various specific jobs), security (customs officers), nuclear industry (work with isotopes).<br>Lindane: Exposure should no longer occur in Australia but it may still be relevant for some pesticide workers.<br>Pentachlorophenol: Exposure should be uncommon in Australia but may occur through contact with treated timber (e.g. sawmill workers, timber products manufacturing worker). |
| Latency period | Minimum one year; commonly at least 10 to 15 years. |
| Main external non-occupational risk factors | Smoking. |

### Mental or neuropsychiatric diseases

| **Post-traumatic stress disorder** | |
|---|---|
| Description | Psychological distress following exposure to highly stressful circumstances. Clear diagnostic criteria are provided by the Fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5)[68] and in the International Classification of Diseases[69]. |
| Exposure | Highly stressful circumstances during emergency response work. |
| High risk occupation or industry | Occupations involved in emergency response (such as police officers, ambulance officers including paramedics, fire fighters). |
| Latency period | Weeks to months. |
| Main external non-occupational risk factors | Various non-occupational highly stressful exposures. |

### Neurological diseases

| **Peripheral neuropathy** | |
|---|---|
| Description | A group of diseases characterised by temporary or permanent damage to nerves outside the central nervous system. |
| Exposure | Metals such as lead, mercury and arsenic; organic solvents such as n-hexane, carbon disulphide and trichloroethylene; pesticides such as organophosphates; acrylamide. |
| High risk occupation or industry | Exposures can occur in a wide range of industrial settings, particularly manufacturing. |
| Latency period | Weeks to years |
| Main external non-occupational risk factors | Alcohol. |

### Noise-induced hearing loss

| **Noise-induced hearing loss** | |
|---|---|
| Description | A permanent, degenerative disease of the inner ear characterised by loss of auditory acuity, particularly in the high frequency range. |
| Exposure | Noise above 85dB(A). |
| High risk occupation or industry | Any occupation which involves sustained exposure to loud noise. |
| Latency period | Years. |
| Main external non-occupational risk factors | Non-occupational noise. |

## Respiratory diseases

| **Occupational asthma** | |
|---|---|
| Description | Reversible narrowing of the small and medium airways in the lung which causes shortness of breath as a result of exposure to one or more workplace agents. |
| Exposure | Sensitising agents or irritants - arthropods or mites, biological enzymes, bioaerosols, derived from fish/shellfish, derived from animals, flour, sensitising foods, flowers, latex, wood dusts, soldering, reactive dyes, anhydrides, acrylates, epoxy, ethylene oxide, aldehydes, pesticides, amines, ammonia, industrial cleaning agents, acids, isocyanates, other reactive chemicals, sensitising metals, sensitising drugs* |
| High risk occupation or industry | A wide range of occupations, particularly involving manufacturing, construction and agriculture |
| Latency period | Variable, from days to months. |
| Main external non-occupational risk factors | Asthma is a common condition in the general community. |

*: The large number of occupational agents that have been shown to cause these diseases means that it is impractical to list every relevant agent.

| **Pneumoconioses** | |
|---|---|
| Description | Fibrotic lung disease caused by exposure to dusts |
| Exposure | Coal, asbestos, silica and a range of other dusts. |
| High risk occupation or industry | Coal: Coal miners.<br>Asbestos: Exposure can occur through mining, transport (truck drivers, dock workers), manufacturing, construction, maintenance or demolition (carpenters, boilermakers, plumbers, demolition workers).<br>Silica dust (crystalline): Exposure can occur to workers involved in construction, especially excavators; mining; brick, concrete or stone cutting; abrasive blasting; foundry casting.<br>Other dusts: Exposure to other dusts can occur in a range of occupations, usually in manufacturing. |
| Latency period | Years. |
| Main external non-occupational risk factors | - |

| **Byssinosis** | |
|---|---|
| Description | Asthma-like condition (reversible narrowing of the small and medium airways in the lung which causes shortness of breath). |
| Exposure | Cotton, hemp, flax or sisal dust. |
| High risk occupation or industry | Exposure is most likely in manufacturing workers working with these agents. |
| Latency period | Variable, from days to months. |
| Main external non-occupational risk factors | Very rare. |

| **Extrinsic allergic alveolitis** | |
|---|---|
| Description | Disease of the alveoli (the gas-exchange spaces in the lung), causing shortness of breath. Initially can be cured but can develop a chronic component. |
| Exposure | A wide range of occupational exposures. |
| High risk occupation or industry | A wide range of occupations, particularly involving manufacturing, construction and agriculture. |
| Latency period | Variable, from days to months. |
| Main external non-occupational risk factors | A wide range possible but not common. |

| **Obliterative bronchiolitis** | |
|---|---|
| Description | Respiratory disorder causing shortness of breath on exertion and cough. |
| Exposure | Food flavourings thought to be associated obliterative bronchiolitis. |
| High risk occupation or industry | Relevant occupations involving exposure to food flavourings thought to be associated obliterative bronchiolitis (such as some manufacturing workers involved in food production). |
| Latency period | Weeks to months. |
| Main external non-occupational risk factors | Rare in the general community. |

## Hepatic diseases

| **Non-infectious hepatitis** | |
|---|---|
| Description | Acute inflammation of the liver due to non-infectious agents. |
| Exposure | Agents known to cause hepatitis (particularly organic solvents). |
| High risk occupation or industry | A wide range of occupations, particularly involving manufacturing and construction. |
| Latency period | Variable, from days to months. |
| Main external non-occupational risk factors | Uncommon. |

| **Chronic active hepatitis** | |
|---|---|
| Description | Prolonged (greater than six months) on-going inflammation of the liver. |
| Exposure | Persons with known HBV or HCV related to occupation. |
| High risk occupation or industry | People whose job brings them in contact with body fluids in situations where there is a considerable risk of the worker having a break in their skin through which the infection could enter, such as health care workers, persons who handle body substances, embalmers, clinical laboratory staff, workers in long-term correctional facilities, police, members of the armed forces, emergency services workers and tattooists. |
| Latency period | Months to years |
| Main external non-occupational risk factors | A considerable minority of Australian persons are carriers of HBV or HCV and potentially infectious. The main cause of on-going liver disease is alcohol. |

| **Hepatic cirrhosis** | |
|---|---|
| Description | Chronic fibrotic disease of the liver where damaged liver cells have been replaced by scar tissue. |
| Exposure | Persons with known HBV or HCV related to occupation. |
| High risk occupation or industry | People whose job brings them in contact with body fluids in situations where there is a considerable risk of the worker having a break in their skin through which the infection could enter, such as health care workers, persons who handle body substances, embalmers, clinical laboratory staff, workers in long-term correctional facilities, police, members of the armed forces, emergency services workers and tattooists. |
| Latency period | Years. |
| Main external non-occupational risk factors | A considerable minority of Australian persons are carriers of HBV or HCV and potentially infectious. The main cause of cirrhotic liver disease is alcohol. |

## Skin diseases

| **Irritant and allergic contact dermatitis** | |
|---|---|
| Description | Dermatitis is an inflammatory disease of the skin. In an occupational setting it mainly occurs on the hands. |
| Exposure | A wide range of sensitising agents or irritants. Irritant contact dermatitis in an occupational setting is most commonly reported as due to alcohols, cutting fluids, degreasers, disinfectants, petroleum products, soaps and cleaners, solvents and wet work. Allergic contact dermatitis in an occupational setting is most frequently reported as being due to chromates, cobalt, cosmetics and fragrances, epoxy resin, latex, nickel, plants, preservatives, resins and acrylics. |
| High risk occupation or industry | Exposure can occur in many occupations, but particularly agricultural workers, beauticians, chemical workers, cleaners, construction workers, cooks and caterers, electronics workers, hairdressers, health care workers, machine operators, mechanics, metalworkers and vehicle assemblers. |
| Latency period | Variable, from days to months. |
| Main external non-occupational risk factors | Dermatitis is a common condition in the general community. |

| **Vitiligo** | |
|---|---|
| Description | A disease where the melanin-producing cells in the skin, mucous membranes and/or eye are damaged, with loss of pigment resulting in white patches on the skin or other affected areas. |
| Exposure | Para-tertiary-butylphenol; para-tertiary-butylcatechol; para-amylphenol; hydroquinone or the monobenzyl or monobutyl ether of hydroquinone. |
| High risk occupation or industry | Exposure is unusual but most common in manufacturing workers. |
| Latency period | Variable; weeks to years |
| Main external non-occupational risk factors | - |

## Musculoskeletal diseases

| **Raynaud's disease** | |
|---|---|
| Description | Intermittent spasm of the arteries of the hands or feet, causing pain due to decreased blood flow to the affected area. |
| Exposure | Vibration, hammer drills, hand-held portable grinders and jigsaws. |
| High risk occupation or industry | A wide range of occupations that involve the relevant exposures. |
| Latency period | Weeks to years. |
| Main external non-occupational risk factors | Uncommon condition with no other clear external causes. |

| **Bursitis (at the elbow or knee)** | |
|---|---|
| Description | Pain, tenderness and sometimes swelling just above or below the knee or behind the elbow, worse with movement, due to inflammation of the relevant bursa. |
| Exposure | Prolonged external friction or pressure or repetitive motion at or about the elbow or the knee. |
| High risk occupation or industry | A wide range of occupations that involve the relevant movements. |
| Latency period | Weeks to years. |
| Main external non-occupational risk factors | Occurs occasionally in the general community. |

| **Osteonecrosis** | |
|---|---|
| Description | Death of bone, usually resulting in pain. |
| Exposure | Work in significantly increased or decreased air pressure. |
| High risk occupation or industry | Relevant occupations involving working at significantly increased or decreased air pressure (such as professional divers, caisson divers, hyperbaric exposure chamber attendants). |
| Latency period | Months to years. |
| Main external non-occupational risk factors | Various |

| **Acute poisoning / toxicity** | |
|---|---|
| Description | Poisoning causing damage to one or more of the heart, lungs, liver, kidney, nervous system and blood). |
| Exposure | Acrylonitrile; alcohols; antimony; arsenic; benzene; beryllium; cadmium; carbon disulphide; chromium; copper; fluorine; alcohol, glycols or ketones; hexane; lead; manganese; mercury; mineral acids; nitroglycerine (or other nitric acid esters); osmium; oxides of nitrogen; ozone; pesticides (organophosphate and organochlorine compounds), herbicides and related compounds; pharmaceutical agents; phosgene; phosphorus; selenium; styrene; thallium; tin; toluene; vanadium; xylene; zinc; chemical asphyxiants (carbon monoxide, hydrogen cyanide, hydrogen sulphide, methylene chloride); irritants (benzoquinone and other corneal irritants); toxic halogen derivatives of aliphatic or aromatic hydrocarbons; toxic nitro- and amino-derivatives of benzene (and other less common, specific substances not included here). |
| High risk occupation or industry | A wide range of occupations, particularly in manufacturing. |
| Latency period | Minutes to hours (typically). |
| Main external non-occupational risk factors | Instances due to non-occupational exposure are uncommon. |