

# Health monitoring

*Guide for asbestos*



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# Introduction

This guide is intended to be read by a registered medical practitioner with experience in health monitoring who is engaged by person conducting a business or undertaking (PCBU) to carry out or supervise health monitoring. It provides practical guidance to registered medical practitioners about requirements under the work health and safety (WHS) laws for health monitoring.

This guide applies to all workplaces covered by the WHS Regulations where health monitoring is required.

## **How to use this guide**

This guide includes references to the legal requirements under the WHS Act and WHS Regulations. These are included for convenience only and should not be relied on in place of the full text of the WHS Act or WHS Regulations.

The words 'must', 'requires' or 'mandatory' indicate a legal requirement exists that must be complied with. The word 'should' is used in this guide to indicate a recommended course of action, while 'may' is used to indicate an optional course of action.

This guide provides information for those registered medical practitioners engaged by a PCBU to carry out or supervise health monitoring for workers. This guidance should be read in conjunction with the following:

- *Health monitoring guide for registered medical practitioners*
- *Health monitoring guides for hazardous chemicals*
- *Health monitoring guide for workers*
- *Health monitoring guide for persons conducting business or undertakings (PCBUs).*

## **Health monitoring under the WHS Regulations**

In certain circumstances, the model WHS Regulations place duties on a PCBU to provide health monitoring to workers. These requirements arise if the worker is carrying out work with hazardous chemicals including lead and asbestos. In addition, the work being carried out must be the kind of work specified in the WHS Regulations. A PCBU has the duty to determine if health monitoring is required.

The WHS Regulations prescribe that health monitoring is carried out by or supervised by a registered medical practitioner with experience in health monitoring.

## Asbestos

Asbestos is the asbestiform varieties of mineral silicates belonging to the serpentine or amphibole groups of rock forming minerals including the following:

- actinolite asbestos (CAS 77536-66-4)
- grunerite (or amosite) asbestos (brown or grey asbestos; CAS 12172-73-5)
- anthophyllite asbestos (CAS 77536-67-5)
- chrysotile asbestos (white asbestos; CAS 12001-29-5)
- crocidolite asbestos (blue asbestos; CAS 12001-28-4), and
- tremolite asbestos (CAS 77536-68-6).

Asbestos is a naturally occurring mineral and can typically be found in rock, sediment or soil. It has strong fibres that are heat resistant and have good insulating properties. Because of these properties asbestos was seen as being very useful for building products.

In some mining, site excavation and road building activities, amphiboles (tremolite and anthophyllite) may be present as geological contaminants.

### Work activities that may represent a high risk exposure

Under the Work Health and Safety (WHS) Regulations a person conducting a business or undertaking (PCBU) must not carry out, direct or allow a worker to carry out work involving asbestos. This includes manufacture, supply, transport, store, remove, use, install, handle, treat, dispose of or disturb asbestos or asbestos containing materials (ACMs).

There are exemptions to this prohibition that in turn have stringent restrictions including:

- genuine research or analysis
- sampling and identification in accordance with the regulations
- maintenance of or service work on friable asbestos or ACM, fixed or installed before 31 December 2003 in accordance with the regulations
- removal or disposal of asbestos or ACM in accordance with the regulations
- transport and disposal of asbestos in accordance with the regulations
- demonstrations, education or practical training in relation to asbestos or ACM
- display, preparation or maintenance for display of an artefact or thing that is asbestos or ACM
- management of *in situ* asbestos installed or fixed before 31 December 2003 in accordance with the regulations
- work that disturbs asbestos during mining operations that involve the extraction of or exploration for a mineral other than asbestos, and
- laundering of asbestos contaminated clothing in accordance with the regulations

Examples of work activities involving asbestos that require special attention when assessing exposure include:

- asbestos removal and demolition work in buildings, power stations, boilers and ships, and
- maintenance workers like electricians, and computer cabling installers and air-conditioning installers working in ceiling spaces of buildings where sprayed asbestos has not been removed, sealed or encapsulated.

### Sources of non-occupational exposure

Asbestos is found in nature in multiple forms. Low levels of asbestos fibres are present in the environment from the breakdown of asbestos containing products.

Non-occupational exposure to asbestos can occur around asbestos removal works and during home renovations.

Environmental weathering of asbestos-cement sheets in roofing and wall cladding, disturbance of asbestos from a variety of building materials like insulation, ceiling tiles and floor tiles, and asbestos release to air from clutches and brakes in cars and trucks results in asbestos fibres being widespread in the environment.

The typical environmental background level of asbestos in outdoor air is 0.0005 fibres/mL and 0.0002 fibres/mL in indoor air. The daily inhalation volume for an average adult is 22 m<sup>3</sup> or 22,000 litres. This means 5500 fibres are inhaled/day by the average person (proportion of time spent indoors = 20 hours/day). Despite this the general population does not contract asbestos-related disease in significant numbers. The background rate of mesothelioma is less than one per million per year. By comparison, the annual death rate for a 40 year old male in 2008 was 1.6 per thousand or 1600 per million.

## 1. Health monitoring for asbestos under the WHS Regulations

Collection of demographic, medical and occupational history  
Records of personal exposure  
Physical examination with emphasis on the respiratory system

### Health monitoring before starting asbestos-related or asbestos removal work

Health monitoring for workers is required before the worker starts licensed asbestos removal work and is at risk of exposure to asbestos when carrying out the work.

Initial discussions about a health monitoring program should include:

- possible health effects from exposure to asbestos
- how to recognise and report symptoms, and
- what is involved in the health monitoring program, for example the frequency of testing and the tests that may be needed.

An initial physical examination should place emphasis on the respiratory system, including baseline spirometry.

### During asbestos-related or asbestos removal work

## 2. Monitoring exposure to asbestos

Where workers are exposed, suspected of being exposed or are concerned about exposure to asbestos, the PCBU has a duty to arrange a health monitoring appointment with a registered medical practitioner. For example, an appointment should be arranged if the worker is carrying out licensed or other ongoing asbestos removal work or asbestos-related work and is at risk of exposure to asbestos when carrying out the work.

Health monitoring should be carried out at regular intervals, for example once every two years. The frequency of health monitoring should be determined by a risk assessment and the significance and frequency of past or future exposure.

Monitoring during asbestos-related or removal work should include administration of the standardised respiratory questionnaire.

It would not ordinarily include respiratory function tests, chest X-ray or physical examination unless clinical indications are present or they are recommended by the medical practitioner.

### **Workplace exposure standard**

The workplace exposure standard for asbestos (all forms and mixtures) is:

- eight hour time weighted average (TWA) of 0.1 f/mL.

A physical examination and pulmonary function testing may be indicated if the results of air monitoring indicate exposure at or greater than half the TWA value.

### **Incidental exposure**

Workers who may have been exposed to asbestos are often anxious and concerned about the possible effects on their health. There is at present no post-exposure prophylaxis for the effects of inhaled asbestos fibres, though in smokers the risk of asbestos-induced lung cancer (but not mesothelioma) can be reduced by stopping smoking. There are also no generally available techniques for determining individual lung burdens of asbestos fibres, other than post-mortem.

Asbestos-related damage to the lungs takes years to develop and become visible on chest X-rays, and X-ray examinations cannot indicate whether or not asbestos fibres have been inhaled. Given this, and the long latency period, there is no reason to subject individuals with a suspected incidental exposure to even a small dose of ionizing radiation.

### **Removal from work**

Where the results of a medical examination indicate the worker is displaying symptoms of exposure to asbestos the registered medical practitioner should consider recommending the worker be removed from asbestos-related work.

When removal from asbestos-related work is indicated the registered medical practitioner must provide the PCBU with the following recommendations:

- the worker should be removed from work with asbestos, and
- the PCBU should review control measures and carry out recommended remedial action.

The worker must be informed of the results of the health monitoring.

### **Return to work**

Should a worker be removed from asbestos-related work, they must not return until the registered medical practitioner has:

- assessed them as medically fit, and
- made a recommendation to the PCBU that the worker can return to remediated asbestos-related work.

This assessment should take into consideration the clinical condition of the worker, the worker's lung function tests and remediation of the circumstances that led to the symptoms if possible.

## **At termination of asbestos-related work or removal work**

### **3. Final medical examination**

A final medical examination should be carried out with emphasis on the respiratory system.

Workers with health conditions or continuing symptoms due to asbestos exposure should be advised to seek continuing medical examinations as organised by the registered medical practitioner supervising the health monitoring program.

A health monitoring report from the registered medical practitioner should be provided to the PCBU as soon as practicable after the completion of the monitoring program, and at regular intervals for longer term or ongoing health monitoring processes. The report must include:

- the name and date of birth of the worker
- the name and registration number of the registered medical practitioner
- the name and address of the PCBU who commissioned the health monitoring
- the date of the health monitoring
- any advice that test results indicate that the worker may have contracted an injury, illness or disease as a result of carrying out the work that triggered the requirement for health monitoring
- any recommendation that the PCBU take remedial measures, including whether the worker can continue to carry out the type of work that triggered the requirement for health monitoring, and
- whether medical counselling is required for the worker in relation to the work that triggered the requirement for health monitoring.

## Potential health effects following exposure to asbestos

### 4. Route of occupational exposure

Asbestos can only pose a risk to health if the asbestos fibres become airborne and are inhaled.

Inhalation is the primary route of entry to the body.

Small fibrous particles may become airborne and inhaled. Respirable fibres are fibres that are more likely to reach the small airways and alveolar region of the lung and are defined as having a length of more than five microns, and an aspect ratio (length/width) greater than 3:1.

### 5. Target organ/effect

The target organs and potential effects of asbestos exposure include:

**Table 1** Target organs and potential effects of asbestos exposure

Target organ	Effect
Lungs	<ul style="list-style-type: none"> <li>• Pleural plaques</li> <li>• Pleural fibrosis</li> <li>• Rounded atelectasis</li> <li>• Asbestosis</li> <li>• Lung cancer</li> <li>• Mesothelioma</li> </ul>

The risk of contracting an asbestos-related disease depends on factors including:

- fibre type
- size and shape of fibres
- concentration of asbestos fibres in the inhaled air, and
- period of time when the person was exposed.

Long fibres of asbestos have more potential to cause disease than short fibres and a high aspect ratio has also been implicated as an important factor in the pathogenesis of asbestos-related disease, particularly mesothelioma.

Much of the current burden of asbestos-related disease is a result of past heavy industrial exposure among those who manufactured and installed asbestos products. Mesothelioma can result from brief periods of exposure and a pattern of repeated exposure can lead to a substantial cumulative exposure.

## **6. Diseases and symptoms of asbestos exposure**

### **Pleural plaques**

Pleural plaques are an indicator of exposure to asbestos. They are diagnosed with a high degree of accuracy on high-resolution computed tomography (HRCT) imaging. Latency period is usually 20 or more years after the onset of exposure to airborne asbestos.

### **Benign asbestos pleural effusion**

Benign asbestos pleural effusion is an exudative pleural effusion that usually resolves spontaneously but may be followed by progressive pleural fibrosis.

### **Progressive pleural fibrosis (diffuse pleural thickening)**

Progressive pleural fibrosis can be recognised on a plain radiograph as pleural thickening that obliterates a costophrenic angle, and is present on HRCT by definition when a lesion equals or exceeds 8 cm in height and 5 cm in width. It may result in impaired lung function, particularly reduced lung volumes, with elevation of the diffusion constant.

### **Transpulmonary bands (crow's feet)**

Crow's feet are an extension of subpleural fibrosis along bronchovascular sheaths and arise from visceral pleural plaques and evident on computed tomography (CT).

### **Rounded atelectasis**

Rounded atelectasis is the most common of the benign masses caused by exposure to asbestos. It usually occurs in the subpleural, posterior, or basal region of the lower lobes. Pleural thickening is always present and is commonly greatest near the mass.

### **Asbestosis**

Asbestosis is characterized by diffuse interstitial pulmonary fibrosis following asbestos exposure. It is recognised clinically by the presence of crackles on auscultation, small irregular opacities radiographically, and restrictive changes in lung function. CT has a higher sensitivity for minor interstitial changes compared with chest X-ray and is best seen on prone films. Prone scans abolish the gravity dependent subpleural density at the lung bases that obscures early disease.

The early changes of asbestosis are subpleural dots, subpleural lines, septal lines and small honeycomb cysts. In subjects who have had asbestos exposure, idiopathic pulmonary fibrosis (IPF) is indistinguishable from asbestosis clinically, physiologically, radiologically and pathologically except that the presence of pleural plaques increases the likelihood asbestos is responsible for the fibrosis. Rapidly progressive fibrosis is more likely in IPF than asbestosis.

Typically asbestosis causes a restrictive pattern on pulmonary function tests. A forced vital capacity (FVC), a total lung capacity (TLC) or a diffusing capacity of the lung for carbon monoxide (DLCO), that is results less than the 95 per cent confidence lower limit, suggest the presence of an interstitial fibrotic process consistent with asbestosis. Constriction of bronchioles, with decreased expiratory flow rates at low lung volumes (FEF<sub>25-75</sub>), may be the earliest functional impairment.



## Malignant mesothelioma of the pleura and peritoneum

Malignant mesothelioma has a strong association with a history of asbestos exposure often at levels less than the cumulative exposures required to induce asbestosis or lung cancer. The amphibole varieties of asbestos (crocidolite and amosite) are substantially more potent than chrysotile for mesothelioma induction. There is a long latency period from 10 to 50 years between exposure and the development of mesothelioma with mean latency 37.4 years.

Malignant mesothelioma is locally aggressive and invasive with mean survival of 17.6 months from first symptom appearing.

## Lung cancer

The relative frequencies of the large and small cell varieties are similar to those that are seen in smokers without asbestos exposure. The risk is dose dependent and the effects of tobacco smoking and asbestos are synergistic. The average latency is 20 to 30 years.

## 7. Carcinogenicity

Asbestos has been classified as a Category 1A carcinogen according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) as it has been shown to cause cancer in humans.

## 8. GHS classification

The following GHS health hazard classification for asbestos (all forms) has been taken from Safe Work Australia's Hazardous Chemicals Information System.

### Hazard category

Carcinogenicity – category 1A

Specific target organ toxicity (repeated exposure) – category 1  
(causes damage to organs through prolonged or repeated exposure)

## Source documents

Agency for Toxic Substances and Disease Registry (2001); [Toxicological profile for Asbestos](#).

Australian Bureau of Statistics at <http://www.abs.gov.au/> .

[Chemical analysis branch handbook, 9th Edition, Workplace and biological monitoring exposure analysis](#), WorkCover NSW (PDF 3.39MB).

De Klerk, N., Henderson, D., Jones, M, Leigh, J, Musk, A.W., Shilkin, K. and Williams, V. (2002) The diagnosis and attribution of asbestos-related diseases in an Australian context, Adelaide Workshop on Asbestos-Related Diseases, *J Occup Health Safety – Aust NZ*, 18(5): 443-452.

National Industrial Chemicals Notification and Assessment Scheme (1999); Chrysotile Asbestos; Priority Existing Chemical No. 9; Full Public Report.

Safe Work Australia (2013); [Workplace Exposure Standards for Airborne Contaminants](#) (PDF 873KB).

Safe Work Australia; [Hazardous Chemicals Information System](#).



# Health monitoring report

*Asbestos*

This form contains confidential information and must not be disclosed to another person except in accordance with the Work Health and Safety Regulations or with consent of the worker

## Health monitoring report – Asbestos

This health monitoring report is a confidential health record and must not be disclosed to another person except in accordance with the Work Health and Safety Regulations or with the consent of the worker.

There are two sections. Complete both sections and all questions if applicable.

**Section 1** A copy of this section should be forwarded to the person conducting the business or undertaking (PCBU) who has engaged your services.

**Section 2** may contain confidential health information. Information that is required to be given to the PCBU should be summarised in Section 1.

### Section 1 – A copy of this section to be provided to the PCBU

#### Person conducting a business or undertaking

**Company/organisation name:** Click here to enter text.

**Site address:** Click here to enter text.

**Suburb:** Click here to enter text.

**Postcode:** Click here to enter text.

**Site Tel:** Click here to enter text.

**Site Fax:** Click here to enter text.

**Contact Name:** Click here to enter text.

#### Other businesses or undertakings engaging the worker (include a separate section for each PCBU)

N/A

**Company/organisation name:** Click here to enter text.

**Site address:** Click here to enter text.

**Suburb:** Click here to enter text.

**Postcode:** Click here to enter text.

**Site Tel:** Click here to enter text.

**Site Fax:** Click here to enter text.

**Contact Name:** Click here to enter text.

#### Worker details (tick all relevant boxes)

**Surname:** Click here to enter text.

**Given names:** Click here to enter text.

**Date of birth:** Click here to enter a date.

**Sex:**  Male  Female

**Address:** Click here to enter text.

**Suburb:** Click here to enter text.

**Postcode:** Click here to enter text.

**Current job:** Click here to enter text.

**Tel (H):** Click here to enter text.

**Mob:** Click here to enter text.

**Date started employment:** Click here to enter a date.

#### Employment in asbestos risk work (tick all relevant boxes) (information provided by the PCBU)

Type of asbestos (if known; please specify): Click here to enter text.

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- New to asbestos work
- New worker but not new to asbestos work
- Current worker continuing in asbestos work

**Worked with asbestos since:** [Click here to enter a date.](#)

**Number of days per week worked:** [Click here to enter text.](#)

**Number of hours per day worked:** [Click here to enter text.](#)

**Risk assessment completed:**  Yes  No

**Work environment assessment** (tick all relevant boxes)  
(information provided by the PCBU)

**Date of assessment:** [Click here to enter a date.](#)

**Before this work, did you work in any other dusty environment or in a job with potential exposure to asbestos?**  Yes  No

**Asbestos Work**

- Class A removal
- Class B removal

**Asbestos-related work (specify):**

- Mining
- Construction
- Demolition
- Disposal
- Transport
- Other (specify): [Click here to enter text.](#)

**Other chemicals the worker may be exposed to:** [Click here to enter text.](#)

**Controls**

Wear gloves	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Respirator use	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Respirator type	<a href="#">Click here to enter text.</a>	
Local exhaust ventilation	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Negative pressure decontamination unit	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Overalls/work clothing	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Laundering by employer	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Use of asbestos vacuum with HEPA filter	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Wash basins and showers (with hot and cold water)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Other please specify		

**Occupational history**

Include/attach test results that indicate whether or not the worker has been exposed

Dates	PCBU and occupations	Note any exposures to dust, fibres, mists, fumes, chemicals
<a href="#">Click here to enter a date.</a>	<a href="#">Click here to enter text.</a>	<a href="#">Click here to enter text.</a>

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<b>Dates</b>	<b>PCBU and occupations</b>	<b>Note any exposures to dust, fibres, mists, fumes, chemicals</b>
Click here to enter a date.	Click here to enter text.	Click here to enter text.
Click here to enter a date.	Click here to enter text.	Click here to enter text.

### Health monitoring results

**Comments about health monitoring results (for example any early indications or diagnosis of injury, illness or disease):** Click here to enter text.

### Recommendations (by registered medical practitioner) (tick all relevant boxes)

#### Further/additional health monitoring for worker

- This is the final health monitoring report
- Repeat health assessment in Click here to enter text. month(s) / Click here to enter text. week(s)
- Counselling required
- Medical examination by registered medical practitioner. On Click here to enter a date.
- Referred to Medical Specialist (respiratory/dermatology/other). On Click here to enter a date.

#### Recommendations to PCBU

- The worker is suitable for work with asbestos
- Review workplace controls
- The worker should be removed from work with asbestos. On Click here to enter a date.
- The worker is fit to resume work. On Click here to enter a date.
- Biological monitoring results indicate unacceptably high exposure levels

**Specialist's name:** Click here to enter text.

**Additional comments or recommendations:** Click here to enter text.

### Registered medical practitioner (responsible for supervising health monitoring)

**Name:** Click here to enter text.

**Signature:**

**Date:** Click here to enter a date.

**Tel:** Click here to enter text.

**Fax:** Click here to enter text.

**Registration Number:** Click here to enter text.

**Medical Practice:** Click here to enter text.

**Address:** Click here to enter text.

**Suburb:** Click here to enter text.

**Postcode:** Click here to enter text.

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## Section 2 – This section to be retained by the registered medical practitioner

### Person conducting a business or undertaking

**Company/organisation name:** Click here to enter text.

**Site address:** Click here to enter text.

**Suburb:** Click here to enter text.

**Postcode:** Click here to enter text.

**Site Tel:** Click here to enter text.

**Site Fax:** Click here to enter text.

**Contact Name:** Click here to enter text.

### Other businesses or undertakings engaging the worker

N/A

**Company/organisation name:** Click here to enter text.

**Site address:** Click here to enter text.

**Suburb:** Click here to enter text.

**Postcode:** Click here to enter text.

**Site Tel:** Click here to enter text.

**Site Fax:** Click here to enter text.

**Contact Name:** Click here to enter text.

### Worker details (tick all relevant boxes)

**Surname:** Click here to enter text.

**Given names:** Click here to enter text.

**Date of birth:** Click here to enter a date.

**Sex:**  Male  Female  Pregnant/breastfeeding

**Address:** Click here to enter text.

**Suburb:** Click here to enter text.

**Postcode:** Click here to enter text.

**Current job:** Click here to enter text.

**Tel (H):** Click here to enter text.

**Mob:** Click here to enter text.

**Date started employment:** Click here to enter a date.

**Type of asbestos (if known; please specify):** Click here to enter text.

### Past employment and exposure details (tick all relevant boxes)

#### Have you ever worked in any of the following jobs?

If you answered 'yes' to any of the questions, please advise if you experienced any symptoms such as cough or wheeze or asthma when working.

			Comments (all 'yes' answers)
Class A removal	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Class B removal	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Asbestos-related work (specify):	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Mining	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Construction	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.

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			Comments (all 'yes' answers)
Demolition	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Disposal	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Transport	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Other (please specify)	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.

### General health questionnaire (tick all relevant boxes)

Did you suffer any incapacity lasting two weeks or longer in the last two years	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	Click here to enter text.
Have you ever had any operations or accidents or been hospitalised for any reason	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Are you currently being treated by a doctor or other health professional for any illness or injury	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Are you currently receiving any medical treatment or taking any medications Please detail.	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Do you currently smoke	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Do you practice personal hygiene at work, for example nail biting, frequency of hand washing, eating or smoking, clean shaven, shower and change into clean clothes at end of shift	<input type="checkbox"/> No	<input type="checkbox"/> Yes	

### Specific health questions (tick all relevant boxes)

#### Do you have or have you ever had:

Shortness of breath on exertion	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Wheezing, bronchitis or asthma now or in the past	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Any other lung or respiratory conditions (emphysema, pneumonia or sinusitis)	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Allergies, hay fever, or allergic bronchitis	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Does anyone in your immediate family (blood relatives only) have asthma, hay fever or eczema	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Significant weight loss	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Any form of cancer	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.

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Any other significant health conditions  No  Yes [Click here to enter text.](#)

**Possible alternative exposure (tick all relevant boxes)**

**Have you ever:**

Visited an asbestos mine or mining area  No  Yes [Click here to enter text.](#)

Undertaken do-it-yourself renovations  No  Yes [Click here to enter text.](#)

**Respiratory questionnaire (tick all relevant boxes)**

		Yes	No	Details
<b>Cough and Phlegm</b>				
1	Do you usually cough first thing in the morning	<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">Click here to enter text.</a>
2	Do you usually cough during the day or at night	<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">Click here to enter text.</a>
<b>If no go to Q9</b>				
3	Do you cough like this on most days for as much as three months of the year	<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">Click here to enter text.</a>
4	Do you usually bring up phlegm from your chest first thing in the morning	<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">Click here to enter text.</a>
5	Do you usually bring up phlegm from your chest at any other time of the day or night	<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">Click here to enter text.</a>
<b>If no go to Q9</b>				
6	Do you bring up phlegm like this on most days for as much as three months each year	<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">Click here to enter text.</a>
7	In the past three years have you had a period of increased cough and phlegm lasting for three weeks or more	<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">Click here to enter text.</a>
8	If Yes, have you had more than one such period	<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">Click here to enter text.</a>
<b>Breathlessness</b>				
9	Do you get short of breath when hurrying on level ground or walking up a slight hill	<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">Click here to enter text.</a>



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		Yes	No	Details
<b>If no go to Q13</b>				
10	Do you get short of breath walking with other people of your own age on level ground	<input type="checkbox"/>	<input type="checkbox"/>	Click here to enter text.
11	Do you have to stop for breath when walking at your own pace on level ground	<input type="checkbox"/>	<input type="checkbox"/>	Click here to enter text.
12	Have you at any time in the last 12 months been woken at night by an attack of shortness of breath	<input type="checkbox"/>	<input type="checkbox"/>	Click here to enter text.
<b>Wheezing and chest tightness</b>				
13	Have you had attacks of wheezing or whistling in your chest at any time in the last 12 months	<input type="checkbox"/>	<input type="checkbox"/>	Click here to enter text.
14	Have you ever had attacks of shortness of breath with wheezing	<input type="checkbox"/>	<input type="checkbox"/>	Click here to enter text.
15	If Yes, was your breathing absolutely normal between attacks	<input type="checkbox"/>	<input type="checkbox"/>	Click here to enter text.
<b>Smoking</b>				
16	Do you or did you smoke more than one cigarette/day; a cigar/week; two oz. pipe tobacco/month)	<input type="checkbox"/>	<input type="checkbox"/>	Click here to enter text.
<b>If no proceed to <i>General health assessment</i></b>				
17	Do (did) you inhale smoke	<input type="checkbox"/>	<input type="checkbox"/>	If yes, indicate: <input type="checkbox"/> Slightly <input type="checkbox"/> Moderately <input type="checkbox"/> Deeply
18	How old were you when you started smoking regularly			Click here to enter text.
19	Do (did) you smoke manufactured cigarettes	<input type="checkbox"/>	<input type="checkbox"/>	Click here to enter text.
<b>If no go to Q24</b>				
20	How many cigarettes do (did) you smoke per day on weekdays			Click here to enter text.
21	How many per day on weekends			Click here to enter text.
22	Do (did) you smoke plain or filtered cigarettes			Click here to enter text.
23	What brands do (did) you usually smoke			Click here to enter text.

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		Yes	No	Details
24	Do (did) you smoke hand rolled cigarettes	<input type="checkbox"/>	<input type="checkbox"/>	Click here to enter text.
<b>If no go to Q27</b>				
25	How much tobacco do (did) you usually smoke per week in this way			Click here to enter text.
26	Do (did) you put filters in these cigarettes	<input type="checkbox"/>	<input type="checkbox"/>	
27	Do (did) you smoke a pipe	<input type="checkbox"/>	<input type="checkbox"/>	
<b>If no go to Q29</b>				
28	How much tobacco do (did) you usually smoke per week in this way			Click here to enter text.
29	Do (did) you smoke cigars	<input type="checkbox"/>	<input type="checkbox"/>	
<b>If no go to Q31</b>				
30	How many of these do (did) you usually smoke per week in this way			Click here to enter text.
31	If you are a present smoker have you been cutting down in the past year	<input type="checkbox"/>	<input type="checkbox"/>	
32	If you are a past smoker when did you give up smoking altogether			Click here to enter text.

**Registered medical practitioner to provide comments for any 'Yes' responses (reference Question number):**

Click here to enter text.

### General health assessment (if applicable)

**Height:** Click here to enter text. cm

**Weight:** Click here to enter text. kg

**BP:** Click here to enter text. / Click here to enter text. mmHg

Respiratory system			Medical comments (for all abnormal)
Breathing normal and regular in character	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Click here to enter text.
Auscultation normal	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Click here to enter text.
Signs of past/present respiratory disease	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.

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### Spirometry

At least three technically acceptable manoeuvres should be obtained with the highest and second highest FEV<sub>1</sub> and FVC within 0.15 L (within 0.100 L for those with an FVC of equal to or less than 1.0 L)<sup>1</sup>. Use best result for FEV<sub>1</sub> and FVC, even if from different tests.

	Actual	Predicted	% Predicted	
<b>FEV<sub>1</sub></b>	Click here to enter text. L/min	Click here to enter text. L/min	Click here to enter text. %	Click here to enter text.
<b>FVC</b>	Click here to enter text. L/min	Click here to enter text. L/min	Click here to enter text. %	Click here to enter text.
<b>FEV<sub>1</sub>/FVC</b>	Click here to enter text. L/min	Click here to enter text. L/min	Click here to enter text. %	Click here to enter text.
		<b>Yes</b>	<b>No</b>	
Spirometry quality acceptable		<input type="checkbox"/>	<input type="checkbox"/>	Click here to enter text.
Spirometry normal		<input type="checkbox"/>	<input type="checkbox"/>	Click here to enter text.

### Chest X-ray (if required)

All chest X-rays undertaken by a specialist radiology clinic and must be read by registered medical radiation practitioner (radiologist).

**Date of X-ray:** Click here to enter text.

**Meets quality criteria?**  Yes  No

**X-ray reported as:** Click here to enter text.

**ILO Classification:** Click here to enter text.

### Biological monitoring results

Include/attach at least the previous two test results (if available)

Date	Tests performed	Recommended action or comment
Click here to enter a date.	Click here to enter text.	Click here to enter text.
Click here to enter a date.	Click here to enter text.	Click here to enter text.
Click here to enter a date.	Click here to enter text.	Click here to enter text.
Click here to enter a date.	Click here to enter text.	Click here to enter text.

### Other medical history, family medical history, current medication, comments, tests or recommendations (use separate sheet if necessary)

Click here to enter text.

### Registered medical practitioner (responsible for supervising health monitoring)

**Name:** Click here to enter text.

**Signature:**

\_\_\_\_\_

<sup>1</sup> Miller MR, Hankinson J, et al, 'Standardisation of spirometry', Series 'ATS/ERS Task Force: Standardisation of Lung Function Testing', Brusasco V, Crapo R, Viegi G (eds), Number 2 in this series, Eur Respir J, vol. 26, pp 319-338, 2005. <http://www.thoracic.org/statements/resources/pfet/PFT2.pdf>.

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**Date:** Click here to enter a date.

**Tel:** Click here to enter text.

**Fax:** Click here to enter text.

**Registration Number:** Click here to enter text.

**Medical Practice:** Click here to enter text.

**Address:** Click here to enter text.

**Suburb:** Click here to enter text.

**Postcode:** Click here to enter text.