

# Health monitoring

*Guide for polycyclic aromatic hydrocarbons  
(PAHs)*



# Contents

Introduction .....	3
Polycyclic aromatic hydrocarbons (PAHs).....	4
1. Health monitoring for PAHs under the Work Health and Safety (WHS) Regulations	5
2. Monitoring exposure to PAHs .....	5
Other health monitoring methods.....	6
Photosensitivity.....	6
Workplace exposure standard .....	7
Removal from work.....	7
Return to work .....	7
3. Final medical examination .....	7
4. Route of occupational exposure .....	8
5. Target organ/effect .....	8
6. Acute effects .....	8
7. Chronic effects .....	9
8. Carcinogenicity.....	9
9. GHS classification .....	9
Source documents.....	9
Health monitoring report – Polycyclic aromatic hydrocarbons .....	13
Section 1 – A copy of this section to be provided to the PCBU .....	13
Section 2 – This section to be retained by the registered medical practitioner .....	16

# 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.

## Polycyclic aromatic hydrocarbons (PAHs)

Polycyclic aromatic hydrocarbons (PAHs) are organic compounds consisting of two or more fused benzene rings containing only carbon and hydrogen.

They are formed during the combustion of organic material.

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

There are several mixtures that contain PAHs including:

- asphalt fumes and bitumen (CAS 8052-42-4)
- coal tar (CAS 8007-45-2)
- coal tar pitch volatiles (CAS 65996-93-2)
- benz[*a*]anthracene (CAS 56-55-3)
- benzo[*b*]fluoranthrene (CAS 205-99-2)
- benzo[*a*]pyrene (CAS 50-32-8)
- naphthalene (CAS 91-20-3)
- creosote (CAS 8001-58-9; 8021-39-4; 8007-45-2)
- petroleum asphalt
- coke oven emissions
- diesel and gasoline engine exhaust particles, and
- mineral oil mists.

PAHs exist as contaminants in carbon black (CAS 1338-86-4) and in:

- used gasoline engine oil
- wood, tobacco and oil smoke
- polynuclear aromatics, and
- polynuclear aromatic compounds.

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

- coke plant work
- aluminium primary plants
- tar roofing
- asphalt road surfacing
- diesel emissions, and
- contaminated land remediation.

### Sources of non-occupational exposure

PAHs are released during incomplete combustion of coal, oil and gas, garbage or other organic substances including tobacco or charbroiled meat. They are found throughout the environment in the air, water and soil.

Non-occupational exposure may occur by breathing air containing PAHs from cigarette smoke, wood smoke, vehicle exhausts and agricultural burn smoke. Exposure can also occur by eating grilled or charred meats, contaminated cereals, flour, bread, vegetables, fruits or meats, or from drinking contaminated water.

Psoriasis patients treated with coal tar may also be exposed to PAHs.

Naphthalene, a simple PAH, has been used as a household fumigant and was the main ingredient of traditional mothballs.

## 1. Health monitoring for PAHs under the Work Health and Safety (WHS) Regulations

Collection of demographic, medical and occupational history  
Physical examination  
Records of personal exposure, including photosensitivity  
Health advice, including recognition of photosensitivity and skin changes  
Urinary 1-hydroxypyrene

### Health monitoring before starting work in a PAH process

Health monitoring for PAHs may be required before the worker starts work so that changes to the worker's health can be detected.

Initial discussions about a health monitoring program should include:

- possible health effects from exposure to PAHs
- 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.

Some PAHs have adverse effects on female reproduction and can be embryotoxic and counselling for females of reproductive capacity should be considered.

The following details about the worker's medical history should be collected by the registered medical practitioner:

- records of personal exposure, including photosensitivity
- presence of symptoms, and
- smoking history.

A physical examination should be carried out by the registered medical practitioner if indicated by occupational and medical history.

PAH vapours are a respiratory irritant and inhalation of PAH vapours may result in reduced lung function and it is important to investigate respiratory symptoms as indicated. However, spirometry may not be required at this stage.

There is evidence that some PAH compounds may be skin sensitisers and previous work history with PAH compounds and symptoms of sensitisation should be investigated.

### During exposure to a PAH process

## 2. Monitoring exposure to PAHs

Where workers are exposed, suspected of being exposed or are concerned about exposure to PAHs, the person conducting the business or undertaking (PCBU) has a duty to arrange a health monitoring appointment with the registered medical practitioner. For example, an appointment should be arranged following spills or loss of containment of PAHs resulting in excessive exposure to workers or when workers develop symptoms of PAH exposure.

The assessment of work-related exposure to PAHs is difficult because workers are exposed to a mixture of compounds which can undergo a variety of metabolic reactions.

The main toxicological concern regarding PAHs is carcinogenesis. Workers exposed to PAHs are at a greater risk of lung, pleura, bladder and kidney tumours.

Several studies have indicated a correlation of urinary 1-hydroxypyrene (1-HP), a metabolite of pyrene (a chemical prominent in PAH mixtures), levels with urinary 8-hydroxydeoxyguanosine, a marker of DNA damage. Therefore, 1-HP in urine, is most often used as the biomarker for PAH exposure. The following test may be used to test the worker's exposure levels:

- urinary 1-hydroxypyrene.

As 1-HP is primarily excreted in urine as a mixture of glucuronide and sulfate conjugates, hydrolysis of these conjugates should be performed prior to analysis.

Where urinalysis is undertaken, the following exposure standard should be considered when assessing exposure to PAHs:

### **Biological exposure standard for PAHs<sup>1</sup>**

*Urinary 1-hydroxypyrene:*

0.5 µmol/mol creatinine (1 µg/L)

**NOTE:** 1.0 µg of 1-HP/L urine = 1.4 µmol of 1-HP/mol creatinine.

This level is intended to be protective for carcinogenic effects.

As several PAHs are readily absorbed through the skin as well as through respiratory passages, urinary 1-HP levels should be an indicator of total exposure, regardless of route.

The levels of 1-HP in the urine can increase during the course of a work day, reaching maximum levels three to nine hours after the end of exposure. Urine samples should be collected at the end of shift towards the end of the working week.

PAHs may accumulate within lipids. Recent weight loss may increase urinary levels of 1-HP due to metabolism and redistribution.

### **Other health monitoring methods**

Other hydroxylated metabolites of PAHs have been proposed as markers of PAH exposure. In particular, urinary levels of 3-hydroxybenzo[a]pyrene (3-HBAP), a metabolite of benzo[a]pyrene, has been considered. As 3-HBAP is present in urine at very low concentrations, a very sensitive analytical method is required for this method. Samples should be collected at the end of shift at end of the work week.

While analysis of this metabolite correlates with exposure to benzo[a]pyrene, a known carcinogenic PAH, it does not take into account exposure to other carcinogenic PAHs and there is currently no recognised biological exposure guidance value.

### **Photosensitivity**

Photosensitivity is a known symptom of exposure to PAHs. Where workers report photosensitivity, an appointment should be arranged with the registered medical practitioner and workers should receive additional counselling on the potential health effects of PAHs on the skin.

---

<sup>1</sup> See [Chemical analysis branch handbook, 9th Edition, Workplace and biological monitoring exposure analysis, WorkCover NSW \(PDF 3.39MB\)](#) for more details

### **Workplace exposure standard**

Various PAHs have workplace exposure standards. See Safe Work Australia's [Workplace exposure standards for airborne contaminants](#).

A physical examination and urinary testing may be indicated if the results of air monitoring indicate frequent or potentially high exposure (half of the eight hour time weighted average (TWA) or above).

**NOTE:** Some PAHs are readily absorbed through the skin and air monitoring results may not be a true indication of exposure.

### **Removal from work**

Where a medical examination indicates the worker is displaying symptoms of exposure to PAHs or where results of workplace air monitoring or biological monitoring indicate exposure that may cause adverse health effects, the registered medical practitioner should consider recommending the worker be removed from PAH-related work.

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

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

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

### **Return to work**

Should a worker be removed from PAH-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 PAH-related work.

This assessment should take into consideration the clinical condition of the worker, the resolution of symptoms, satisfactory urine 1-HP levels and remediation of the circumstances that led to the symptoms if possible.

## **At termination of work in a PAH process**

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

A final medical examination should be carried out by the registered medical practitioner and should include health advice including the identification of photosensitivity symptoms and skin changes.

Workers with health conditions or continuing symptoms due to PAH 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 test results that indicate whether or not the worker has been exposed to a hazardous chemical
- 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 PAHs

### 4. Route of occupational exposure

The routes of PAH exposure are via inhalation and skin absorption. Accidental ingestion may be possible, especially when eating or smoking with contaminated hands.

### 5. Target organ/effect

The target organs and potential effects of PAH exposure include:

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

Target organ	Effect
Blood	<ul style="list-style-type: none"> <li>• Anaemia</li> </ul>
Respiratory	<ul style="list-style-type: none"> <li>• Lung cancer</li> <li>• Irritation</li> <li>• Reduced lung function</li> </ul>
Kidney	<ul style="list-style-type: none"> <li>• Cancer</li> <li>• Haematuria</li> </ul>
Bladder	<ul style="list-style-type: none"> <li>• Cancer</li> </ul>
Gastrointestinal	<ul style="list-style-type: none"> <li>• Cancer</li> </ul>
Skin	<ul style="list-style-type: none"> <li>• Cancer</li> <li>• Photosensitivity</li> <li>• Sensitisation</li> </ul>
Eyes	<ul style="list-style-type: none"> <li>• Photosensitivity</li> <li>• Irritation</li> </ul>

### 6. Acute effects

PAH-containing mixtures generally have low acute toxicity.

The systemic effects of naphthalene are known from numerous cases of accidental intake, particularly by children. The typical effect after dermal or oral exposure is acute haemolytic anaemia.



## 7. Chronic effects

Dermal toxic effects of PAHs are enhanced by exposure to ultraviolet light. The skin is prone to erythema, photosensitivity and skin lesions on sun exposed areas with progression to skin cancer.

PAHs are irritating to the eyes and can cause photosensitivity.

Cough, chronic bronchitis and haematuria have also been noted.

Reduced lung function and pneumoconiosis has been reported. However, confounding factors such as tobacco smoke may interfere with diagnosis.

## 8. Carcinogenicity

Many PAHs have been classified as carcinogenic according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) as they have been shown, are presumed or suspected to cause cancer in humans.

Some well-known carcinogenic PAHs are:

- benzo[a]pyrene,
- benz[a]anthracene, and
- dibenz[a,h]anthracene.

Some PAH compounds can induce mutations in germ cells, DNA adducts and strand breaks and sister chromatid exchange.

For further information on specific PAHs, refer to Safe Work Australia's Hazardous Chemical Information System or the relevant safety data sheet.

There is evidence workers exposed to high airborne levels of some PAHs show an increased risk of lung, kidney, bladder, gastrointestinal and skin cancers.

Work-related exposure to soot as a cause of scrotal cancer was noted for the first time in 1775. Later, work-related exposure to tars and paraffin was reported to induce skin cancer.

Epidemiological studies have indicated an increased incidence of lung tumours in coke oven workers, asphalt workers and workers in pot rooms of aluminium reduction plants following exposure to PAHs.

The lung is considered the primary site of PAH-induced cancer; whereas skin tumours have become rarer because of improved personal hygiene practices.

## 9. GHS classification

Different PAHs may have different health hazard classifications. The specific PAHs that a worker is exposed to will need to be reviewed to ensure appropriate identification of the health hazards. For the GHS classification of a specific PAH, refer to Safe Work Australia's Hazardous Chemical Information System or the relevant safety data sheet for detailed information.

## Source documents

Agency for Toxic Substances and Disease Registry (1995) [Toxicological Profile Polycyclic Aromatic Hydrocarbons](#), Agency for Toxic Substances and Disease Registry, United States Department of Health and Human Services, Public Health Service, Atlanta.

American Conference of Governmental Industrial Hygienists (ACGIH) (2011) *Documentation of the Biological Exposure Indices*, 7th Ed, Cincinnati.

Australian Safety and Compensation Council, [Guidance Note for the Protection of Workers from the Ultraviolet Radiation in Sunlight](#), Australian Safety and Compensation Council, 2008 (PDF 299KB).

Brown, J.R., Thornton, J.L. (1957) Percivall Pott (1714 -1788) and Chimney Sweepers' Cancer of the Scrotum. *Br. J. Ind.Med.* 14(1): 68-70.

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

International Programme on Chemical Safety (1998) [Environmental Health Criteria 202, Selected Non-Heterocyclic Polycyclic Aromatic Hydrocarbons](#), International Programme on Chemical Safety, World Health Organization, Geneva.

Lauwerys, R.R. and Hoet, P. (2001) *Industrial Chemical Exposure Guidelines for Biological Monitoring*, 3rd Ed, Lewis Publishers, Boca Raton.

National Industrial Chemicals Notification and Assessment Scheme; Human Health Tier II Assessment for [Coal Tar and Coal Tar Pitch](#).

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

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



# Health monitoring report

*Polycyclic aromatic hydrocarbons*



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 – Polycyclic aromatic hydrocarbons

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 (WHS) Regulations or with the consent of the worker.

There are two sections. Complete both sections and all questions as 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.

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

**Employment in PAH risk work** (tick all relevant boxes)  
(information provided by the PCBU)

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

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

**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.](#)

**PAH industry/use**

- Road surfacing
- Automotive industry (diesel)
- Coke plant
- Other (specify):
- Roofing industry
- Mining industry (diesel)
- Aluminium plant

**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
Overalls/work clothing	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Laundering by employer	<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		

**Comments about health monitoring results**

**Biological monitoring results**

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

Date	Tests performed	Recommended action or comment
<a href="#">Click here to enter text.</a>	<a href="#">Click here to enter text.</a>	<a href="#">Click here to enter text.</a>
<a href="#">Click here to enter text.</a>	<a href="#">Click here to enter text.</a>	<a href="#">Click here to enter text.</a>
<a href="#">Click here to enter text.</a>	<a href="#">Click here to enter text.</a>	<a href="#">Click here to enter text.</a>
<a href="#">Click here to enter text.</a>	<a href="#">Click here to enter text.</a>	<a href="#">Click here to enter text.</a>

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

**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 PAHs
- Review workplace controls
- The worker should be removed from work with PAHs. 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.](#)

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

## 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.

### 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)
Road surfacing	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Roofing	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Automotive/mining with exposure to diesel	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Coke plant	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Aluminium plant	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.



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

**Comments (all 'yes' answers)**

Other (please specify)  No  Yes [Click here to enter text.](#)

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

**Comments (all 'yes' answers)**

Did you suffer any incapacity lasting two weeks or longer in the last two years  No  Yes [Click here to enter text.](#)

Have you ever had any operations or accidents or been hospitalised for any reason  No  Yes [Click here to enter text.](#)

Are you currently being treated by a doctor or other health professional for any illness or injury  No  Yes [Click here to enter text.](#)

Are you currently receiving any medical treatment or taking any medications. Please detail.  No  Yes [Click here to enter text.](#)

Do you currently smoke  No  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  No  Yes

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

**Do you have or have you ever had:** **Comments (all 'yes' answers)**

Photosensitivity  No  Yes [Click here to enter text.](#)

Itchy eyes, runny or congested nose  No  Yes [Click here to enter text.](#)

Shortness of breath on exertion  No  Yes [Click here to enter text.](#)

Wheezing, bronchitis or asthma now or in the past  No  Yes [Click here to enter text.](#)

Any other lung or respiratory conditions (emphysema, pneumonia or sinusitis)  No  Yes [Click here to enter text.](#)

Allergies, hay fever, or allergic bronchitis  No  Yes [Click here to enter text.](#)

Blackouts, dizziness or fainting  No  Yes [Click here to enter text.](#)

Severe headaches or migraines  No  Yes [Click here to enter text.](#)

Chronic fatigue or tiredness  No  Yes [Click here to enter text.](#)

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

Do you have or have you ever had:			Comments (all 'yes' answers)
Any neurological condition affecting nerves in your feet or hands, your coordination or balance	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Heavy use or substance abuse of drugs or alcohol	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Skin disorders or dermatitis	<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.
Any other significant health conditions	<input type="checkbox"/> No	<input type="checkbox"/> Yes	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

#### Urinalysis

**Blood:**  Normal  Abnormal

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

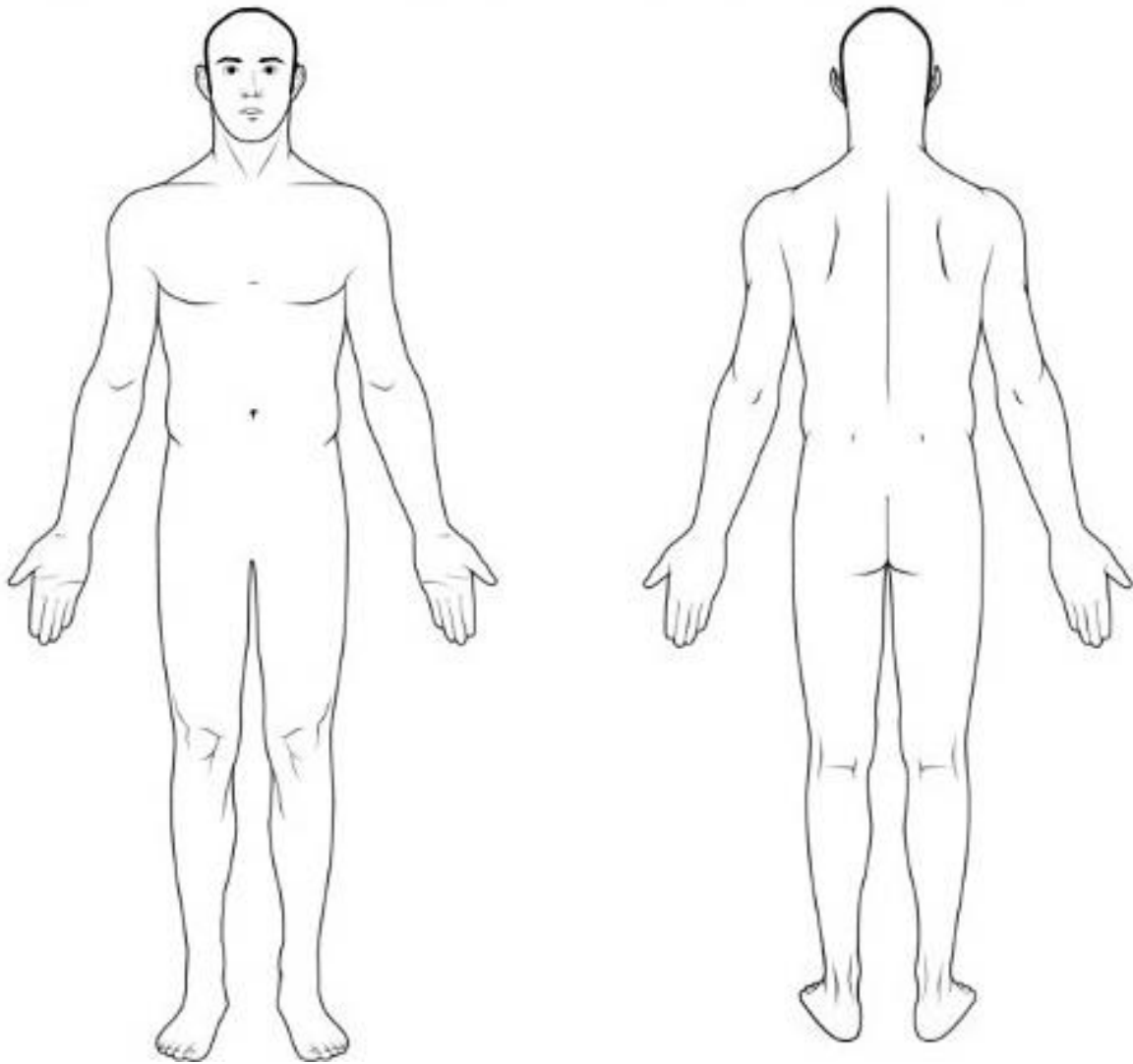
#### Referred for further testing

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

No  Yes

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.
<b>Skin</b>			
Eczema, dermatitis or allergy	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Skin cancer or other abnormality	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Evidence of nail biting	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Other	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.

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



**Figure 1** Template of the human body to indicate the location of abnormalities

<b>Eye</b>	<b>Medical comments</b> (for all abnormal)
Evidence of eye irritation <input type="checkbox"/> No <input type="checkbox"/> Yes	<a href="#">Click here to enter text.</a>

**Biological monitoring results**

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

Date	Tests performed	Recommended action or comment
<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>
<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>
<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>
<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>

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

[Click here to enter text.](#)

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

**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.