

# **Health monitoring**

Guide for creosote





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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.

## Creosote

Creosote (CAS 8001-58-9; 8021-39-4; 8007-45-2) is the name used for a variety of products that are mixtures of many chemicals.

Creosotes are created by high-temperature treatment of beech and other woods (beechwood creosote) or coal (coal tar creosote). Creosote from coal tar is the most common form of creosote in the workplace.

Creosote is a mixture of several hundred chemicals but only a limited number are present in amounts of more than one per cent. There are six major classes of compounds in creosote:

- aromatic hydrocarbons, including polycyclic aromatic hydrocarbons (PAHs) and alkylated PAHs (that can constitute up to 90 per cent of creosote)
- tar acids
- phenolics
- cresols
- tar bases/nitrogen-containing heterocycles
- aromatic amines
- sulfur-containing heterocycles, and
- oxygen-containing heterocycles, including dibenzofurans.

Generally, phenolic compounds, low-molecular-weight PAHs, and some heterocycles tend to exist predominantly in the gaseous phase. Creosote constituents may also occur in the atmosphere as particulate matter.

Coal tars are by-products of the high temperature treatment of coal to produce coke or natural gas. Coal tar creosote is a distillation product of coal tar and is a thick, oily liquid that is typically amber to black in colour. Coal tar pitch is a residue produced during the distillation of coal tar and is usually a thick, black or dark brown liquid or semisolid with a smoky or aromatic odour. Coal tar pitch volatiles are compounds given off from coal tar pitch when it is heated. Coal tar creosote, coal tar and coal tar pitch are mixtures of similar compounds and are rarely formed in nature.

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

Coal tar creosote is used as a wood preservative and as a pesticide (insecticide, animal dip, fungicide). Coal tar, coal tar pitch and coal tar pitch volatiles are used or produced in several industries: road paving, roofing, aluminium smelting, rubber producing and coking.

Those who may become exposed to creosote:

- workers who use creosote-treated wood in building fences, bridges or railroad tracks or installing telephone poles, or those who inspect or maintain these materials may be exposed to creosote
- farmers or landscapers who apply coal tar creosote to wood
- workers who apply asphalt or other coal tar pitch-containing materials, or
- workers in the natural gas, rubber, aluminium, iron, steel or tyre industries.

Workers may become exposed by breathing in the vapours or through direct skin contact with wood preservation solutions, freshly treated wood, asphalt mixtures or other products of coke-producing industries.

#### Sources of non-occupational exposure

Coal tar products are used as ingredients in medicines, such as those to treat skin diseases (for example psoriasis or eczema). Herbal remedies that contain leaves from the creosote bush may also provide a source of creosote exposure. Coal tar creosote may be released into the environment from creosote sources (most commonly from the use as a

wood preservative) and may enter the food supply. An individual may be exposed from eating contaminated shellfish.

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

Collection of demographic, medical and occupational history

Health advice, including recognition of photosensitivity and skin changes

Physical examination with emphasis on the neurological system and skin, noting any abnormal lesions and evidence of skin sensitisation

Records of personal exposure, including photosensitivity

Urinary 1-hydroxypyrene

Health monitoring under the WHS Regulations is applicable to coal tar creosote, coal tar and coal tar pitch as they are all mixtures of similar compounds.

In this guide, 'creosote' is used to refer to all three mixtures.

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

Health monitoring for creosote 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 creosote
- 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.

In particular, workers should be aware of the occurrence and recognition of photosensitivity and skin changes, and the need to report them to the registered medical practitioner as soon as possible, even if they occur between regular monitoring. Creosote compounds may be sensitisers and previous work history with the chemical and symptoms of sensitisation should be investigated.

Photosensitivity is a known symptom of exposure to creosote. 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 creosote on the skin.

Any abnormal lesions, in particular, squamous cell carcinoma and hyperkeratosis, should be recorded on a body outline form showing both front and back views and note the size.

Creosote is a respiratory irritant and it is important to investigate respiratory symptoms. However, spirometry may not be required at this stage.

#### During exposure to a creosote process

#### 2. Monitoring exposure to creosote

Where workers are exposed, suspected of being exposed or are concerned about exposure to creosote, the person conducting a business or undertaking (PCBU) may have a duty to arrange a health monitoring appointment with a registered medical practitioner. For example, an appointment should be arranged following spills or loss of containment of

creosote resulting in excessive exposure to workers or when workers develop symptoms of creosote exposure

A physical examination should be carried out annually.

The assessment of work-related exposure to creosote is difficult because workers are exposed to a mixture of compounds. As PAHs constitute a significant portion of creosote, the biological monitoring method for PAHs may be considered appropriate as an indicator of creosote exposure.

Workers exposed to creosote or PAHs are at greater risk of various types of cancer. Several studies have indicated a correlation of urinary levels of 1-hydroxypyrene (1-HP), a metabolite of pyrene (a chemical prominent in PAH mixtures), with urinary 8-hydroxyguanosine, a marker of DNA damage. As such, urinary levels of 1-HP have been used as an indicator of PAH exposure, with a biological exposure limit intended to be protective for cancer. Therefore, 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 carried out, the following values should be considered when assessing exposure to creosote:

#### Biological exposure standard for creosote<sup>1</sup>

Urinary 1-hydroxypyrene:

1 µg/L

The assessment of exposure to PAH through urinalysis does not distinguish between absorption of airborne PAH and the potential pathway of skin absorption, which can contribute significantly to the total internal dose. The levels of 1-HP in the urine can increase during the course of a workday, reaching maximum values three to nine hours after the end of exposure. Urine samples should be collected at the end of shift at end of the work week.

#### Other health monitoring methods

Other hydroxylated metabolites have been proposed as markers of PAH exposure. For more information, see the health monitoring guidance for PAHs.

Cresol is a component of creosote and urinary cresol levels have been used as an indicator of cresol exposure. How well urine cresol levels correlate with total exposure to creosote, given it consists of a complex mixture of chemicals, and potential adverse effects due to creosote exposure is not known.

#### Workplace exposure standard

There is no workplace exposure standard for creosote. However a workplace exposure standard does exist for coal tar pitch volatiles (as benzene solubles):

• eight hour time weighted average (TWA) of 0.2 mg/m<sup>3</sup>.

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

<sup>&</sup>lt;sup>1</sup> Biological exposure limit for PAHs. See <u>Chemical analysis branch handbook, 9th Edition, Workplace and biological</u> <u>monitoring exposure analysis</u>, WorkCover NSW (PDF 3.39MB) for more details.

**NOTE:** Creosote compounds 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 creosote or where results of biological monitoring indicate exposure that may cause adverse health effects (e.g. urinary 1-HP levels greater than 1  $\mu$ g/L), the registered medical practitioner should consider recommending the worker be removed from creosote-related work.

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

- the worker should be removed from work with creosote, 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 creosote-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 creosote-related work.

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

#### At termination of work in a creosote process

#### 3. Final medical examination

A final medical examination should be carried out and include a physical examination with emphasis on the neurological system and skin, noting abnormal lesions and evidence of skin sensitisation.

Workers with skin disease, other health conditions or continuing symptoms due to creosote 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 creosote

#### 4. Route of occupational exposure

The primary routes of creosote exposure are via inhalation and skin absorption.

#### 5. Target organ/effect

The target organs and potential effects of creosote exposure include:

Table 1 Target organs and potential effects of creosote exposure

Target organ	Effect			
Central nervous system	<ul> <li>Depression</li> <li>Weakness</li> <li>Headache</li> <li>Vertigo</li> <li>Nausea</li> <li>Confusion</li> <li>Convulsions</li> </ul>			
Skin	<ul> <li>Irritation</li> <li>Blistering</li> <li>Hyperpigmentation</li> <li>Warts</li> <li>Photosensitivity</li> <li>Cancer</li> </ul>			
Respiratory system	Irritation			
Eyes	<ul> <li>Irritation</li> <li>Chemical burns</li> <li>Corneal damage</li> <li>Photosensitivity</li> </ul>			

#### 6. Acute effects

Contact with creosote or creosote vapour may cause irritation of the skin. The skin may become red, papular, vesicular or ulcerated, depending on the period of exposure.

Vapours and contact can produce an intense burning of the membranes of the eyes and respiratory tract. Eye contact can lead to conjunctivitis and keratitis.

The following summarises the effects that may be evident on short-term exposure to high concentrations of creosote:

- nausea or vomiting
- diarrhoea
- salivation
- respiratory distress

Creosote

- cyanosis
- pupillary changes
- damage to the cornea
- rash or severe irritation of the skin
  - reddening, blistering, peeling
- increased sensitivity to sunlight
- convulsive movements
- rapid pulse or vascular collapse
- headaches
- fainting
- vertigo, or
- mental disturbances.

#### 7. Chronic effects

Chronic exposure may lead to:

- irritation of the respiratory tract
- skin cancer, or
- other cancers, especially through direct contact
  - o for example cancer of the scrotum has been reported in chimney sweeps.

#### 8. Carcinogenicity

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

Increased risks of developing lip, skin and scrotal cancers have been observed in studies of wood impregnators and round timber workers. It was believed that the significantly elevated risk for lip and skin cancer could probably be attributed to the combination of exposure to creosote and sunlight. The mortality for cancer of the scrotum was elevated among brick makers exposed to creosote. Prolonged skin exposure to soot and coal tar creosote has been associated with cancer of the scrotum in chimney sweeps.

Epidemiological studies suggested a possible risk for bladder cancer, multiple myeloma, and lung cancer due to exposure to creosote. Case control studies have suggested an increased risk of brain tumours and neuroblastoma among offspring of male workers with possible creosote exposure.

All of the epidemiological studies were based on qualitative estimations of exposure rather than on measurements. There is consistent evidence from human studies that creosote causes skin cancer, but the studies do not allow dose-response analysis.

#### 9. GHS classification

The following GHS health hazard classification for creosote has been taken from Safe Work Australia's Hazardous Chemicals Information System.

#### Hazard category

Carcinogenicity - category 1B

#### Source documents

Agency for Toxic Substances and Disease Registry (2002) <u>Toxicological Profile for</u> <u>Creosote</u>, Agency for Toxic Substances and Disease Registry, US Department of Health and Human Services, Public Health Service, Atlanta.

Australian Safety and Compensation Council (2008) *Guidance Note for the Protection of Workers from the Ultraviolet Radiation in Sunlight*, Australian Safety and Compensation Council, Canberra.

<u>Chemical analysis branch handbook, 9th Edition, Workplace and biological monitoring</u> <u>exposure analysis</u>, WorkCover NSW (PDF 3.39MB).

Karlehagen, S., Andersen, A. and Ohlson, C. (1992) Cancer incidence among creosoteexposed workers, *Scandinavian Journal of Work, Environment and Health*18: 26-29.

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

Pukkala, E. (1995) Cancer Risk by Social Class and Occupation: A Survey of 109,000 Cancer Cases among Finns of Working Age, Karger, Basel.

Safe Work Australia (2013); <u>Workplace Exposure Standards for Airborne Contaminants</u> (PDF 873KB).

Safe Work Australia; Hazardous Chemicals Information System.

Worksafe Australia (1990) <u>Occupational Diseases of the Skin</u>, Australian Government Publishing Service, Canberra (PDF 919KB).

World Health Organisation/International Program on Chemical Safety (2004) *Concise International Chemical Assessment Documents* (CICAD) 62, WHO Geneva <u>www.inchem.org.</u>



# **Health monitoring report**

Creosote



### Health monitoring report – Creosote

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 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.

Site Tel: Click here to enter text.

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

Postcode: 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. Site Tel: 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.
Data started employments Click have to enter a	adata

Date started employment: Click here to enter a date.

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

Creosote compound used (if known; please specify): Click here to enter text.

- $\Box$  New to creosote work
- $\hfill\square$  New worker but not new to creosote work
- □ Current worker continuing in creosote work

Worked with creosote 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.

#### Creosote industry/use

- □ Marine piles
- Sea walls
- □ Power or telecommunication line poles
- $\Box$  During manufacture, transport, or disposal of creosote or creosoted wood products

□ Jetty bracing

Railway sleepers

- $\hfill\square$  Clean-up of creosote contaminated sites
- □ Anti-fouling applications on concrete marine pilings
- □ Roofing pitch □ Fuel oil
- □ Lubricant for die moulds □ Rubber or tyre industry
- □ Steel plant work □ Aluminium smelters (pot room)
- $\hfill\square$  Coke or gas manufacturing plants
- □ Other (specify): Click here to enter text.

#### Other chemicals the worker may be exposed to: Click here to enter text.

Controls		
Wear gloves	□ Yes	🗆 No
Respirator use	□ Yes	□ No
Respirator type	Click here	to enter text.
Local exhaust ventilation	□ Yes	□ No
Overalls/work clothing	□ Yes	🗆 No
Laundering by employer	□ Yes	🗆 No
Wash basins and showers (with hot and cold water)	□ Yes	🗆 No
Other please specify		

#### 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
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.

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

#### **Recommendations** (by Medical Practitioner) (tick all relevant boxes)

#### Further/additional health monitoring for worker

- $\hfill\square$  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**

- $\hfill\square$  The worker is suitable for work with creosote
- □ Review workplace controls
- □ The worker should be removed from work with creosote. 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.

 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.

# 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 Site address: Click here to enter text. Suburb: Click here to enter text. Site Tel: Click here to enter text. Contact Name: Click here to enter text.	Postcode: Click here to enter text. Site Fax: Click here to enter text.				
Other businesses or undertakings engaging	ng the worker	□ <b>N/A</b>			
Company/organisation name: Click here to enter text.         Site address: Click here to enter text.         Suburb: Click here to enter text.         Site Tel: Click here to enter text.         Site Tel: 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.       Given names: Click here to enter text.					
Sex:       Male       Female       Pregnant/brea         Address:       Click here to enter text.         Suburb:       Click here to enter text.         Current job:       Click here to enter text.	Postcode: 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.Creosote compound used (if known; please specify): Click here to enter text.					
· · · · ·					

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

Were you were exposed to creosote or other sources of polycyclic aromatic hydrocarbons in any of the following circumstances?

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.

#### Construction, maintenance or disposal of:

			Comments (all 'yes' answers)
Marine piles	🗆 No	□ Yes	Click here to enter text.
Jetty bracing	🗆 No	□ Yes	Click here to enter text.
Sea walls	🗆 No	□ Yes	Click here to enter text.

			Comments (all 'yes' answers)
Railway sleepers	🗆 No	□ Yes	Click here to enter text.
Power or telecommunication line poles	🗆 No	□ Yes	Click here to enter text.
During:			
Manufacture, transport, or disposal of creosote or creosoted wood products	□ No	□ Yes	Click here to enter text.
Clean-up of creosote contaminated sites	🗆 No	□ Yes	Click here to enter text.

#### When using creosote or products containing polycyclic aromatic hydrocarbons as or in:

Anti-fouling applications on concrete marine pilings	□ No	□ Yes	Click here to enter text.
A component of roofing pitch or fuel oil	□ No	□ Yes	Click here to enter text.
Lubricant for die moulds	🗆 No	□ Yes	Click here to enter text.
Rubber or tyre industry	🗆 No	□ Yes	Click here to enter text.
Steel plant work	🗆 No	□ Yes	Click here to enter text.
Aluminium smelters (pot room)	🗆 No	□ Yes	Click here to enter text.
Coke or gas manufacturing plants	□ No	□ Yes	Click here to enter text.
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	□ No		

Comments (all 'yes' answers)

and change into clean clothes at end of shift

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

Do you have or have you ever ha	Comments (all 'yes' answers)		
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.
Breathing problems, nasal blockage, nose bleeds or lump in nose	□ No	□ Yes	Click here to enter text.
Any neurological condition affecting nerves in your feet or hands, your coordination or balance	□ No	□ Yes	Click here to enter text.
Liver disease (including alcohol related or other hepatitis)	🗆 No	□ Yes	Click here to enter text.
Heavy use or substance abuse of drugs or alcohol	🗆 No	□ Yes	Click here to enter text.
Skin disorders or dermatitis	🗆 No	□ Yes	Click here to enter text.
Any form of cancer	🗆 No	□ Yes	Click here to enter text.
Itchy eyes, runny or congested nose	🗆 No	□ 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.

Sugar: Click here to enter text.

#### **Referred for further testing**

 $\Box$  No  $\Box$  Yes

Cardiovascular system			Medical comments (for all yes/abnormal)
Blood pressure	Normal	🗆 Abnorma	Click here to enter text.
Heart rate	Normal	🗆 Abnorma	Click here to enter text.
Heart sounds	Normal	🗆 Abnorma	Click here to enter text.
Murmurs present	□ No	□ Yes	Click here to enter text.
Evidence of cardiac failure/oedema	□ No	□ Yes	Click here to enter text.
Respiratory system			
Breathing normal and regular character	in 🗆 Y	′es □ No	Click here to enter text.
Auscultation normal	□ Y	′es 🗆 No	Click here to enter text.
Signs of past/present respirat disease	ory 🗆 N	lo 🗆 Yes	Click here to enter text.

Cardiovascular system			Medical comments (for all yes/abnormal)
Skin			
Eczema, dermatitis or allergy	🗆 No	$\Box$ Yes	Click here to enter text.
Skin cancer or other abnormality	🗆 No	□ Yes	Click here to enter text.
Evidence of nail biting	🗆 No	□ Yes	Click here to enter text.
Other	🗆 No	□ Yes	Click here to enter text.

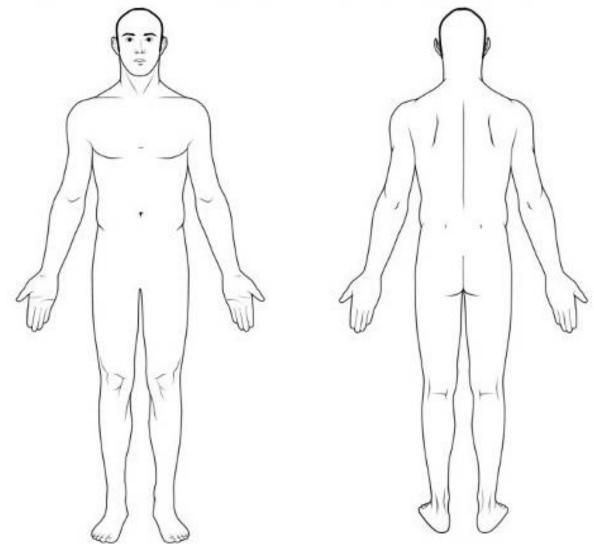


Figure 1 Template of the human body to indicate the location of abnormalities

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:

**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.