

Health monitoring

Guide for thallium



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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.

Thallium

Elemental thallium (CAS 7440-28-0) is a bluish-white, very soft metal. Metallic thallium oxidises in air to form a superficial layer of thallic oxide (Tl_2O). Thallium forms alloys with other metals and readily amalgamates with mercury. Examples of thallium (Tl) compounds include:

- the soluble Tl(I) compounds – thallium oxide (Tl_2O), thallium nitrate ($TlNO_3$), thallium acetate ($TlC_2H_3O_2$), thallium sulfate ($TlSO_4$) and thallium carbonate (Tl_2CO_3), and
- the insoluble compounds – thallic oxide (Tl_2O_3 ; Tl[III]), thallic iodide (TlI; Tl[I]) and elemental thallium (Tl)

Work activities that may represent a high risk exposure

Thallium is found as a by-product from smelting copper, lead or zinc. Thallium is used in small quantities in the manufacture of optical lenses, imitation jewellery, in dyes and pigments and thallium sulfate has been used as a rodenticide.

Examples of work activities involving thallium and its compounds that require special attention when assessing exposure include:

- laboratory analysis where thallium malonate-formate (Clerici's reagent) is used for mineralogic analysis of rocks, ores and sand, and separation of diamonds
- production of pigments, luminous paints, artificial gems, coloured glass, and special optical glasses for lenses and prisms, electronic devices and switches
- smelters, power plants, cement factories, with a risk of exposure from cleaning fossil fuel furnaces or flues and metal machining.
- manufacture of special alloy anode plates for use in magnesium sea water batteries, and
- manufacture of fireworks (green colour).

Thallium sulfate has been used as a poison for ants, cockroaches, rats and other rodents.

Sources of non-occupational exposure

Thallium is present in the environment mainly combined with other elements (primarily oxygen, sulphur and the halogens). Thallium is quite stable in the environment. Thallium tends to adsorb to soils and sediments and to bioconcentrate in aquatic plants, invertebrates and fish.

Environmental exposures mainly occur due to emissions from mineral smelters, coal-burning power-generating plants, brickworks and cement plants as thallium is a trace element of the raw materials.

Exposure to the general population occurs mostly through ingestion of thallium-containing foods, especially home-grown fruits and vegetables.

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

Collection of demographic, medical and occupational history

Physical examination

Urinary thallium

Health monitoring under the WHS Regulations is applicable to thallium and its compounds. The toxic effects of thallium compounds are primarily attributed to the thallium ion. Hence, thallium and its compounds are considered to have a similar hazard and toxicity profile.

In this guide, 'thallium' is used to refer to thallium and its compounds.

Health monitoring before starting work in a thallium process

Health monitoring for thallium 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 thallium
- 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.

A physical examination should be carried out if work and medical history indicates this is necessary, for example through the presence of symptoms.

A spot urine test for thallium should be used to test the worker's baseline levels.

During exposure to a thallium process

2. Monitoring exposure to thallium

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

Thallium is rapidly absorbed (up to 80 to 100 per cent) by the mucous membranes, after ingestion, inhalation or contact with intact skin. The primary route of excretion is via the urine, with smaller amounts excreted through the hair, gastrointestinal tract and skin.

Urinary thallium levels have been used as an indicator of occupational exposure. However, no biological exposure guidance values have been published. There have been reports of urinary levels of thallium less than 1.1 µg/g creatinine (0.6 µmol/mol creatinine) in non-occupationally exposed individuals. Levels above this may indicate occupational exposure.

Urinary excretion of thallium is slow, with a half-life estimated to range from 10 to 30 days. A measure of the cumulative dose is best obtained by measuring thallium in urine samples collected at the end of the shift at the end of the working week.

Care should be taken during sample collection to avoid contamination from air and exposed skin and clothing.

Urine testing should occur every 90 days.

A correlation of exposure level with adverse health effects has not been established. Therefore, an individual with an exposure level greater than the background level should be monitored for signs and symptoms of thallium exposure, with particular attention to the nervous system and noting any hair loss. Additional medical examinations may be warranted.

Workplace exposure standard

The workplace exposure standard for soluble compounds of thallium (as Tl) is:

- eight hour time weighted average (TWA) of 0.1 mg/m³.

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).

NOTE: Thallium is readily absorbed through the skin and air monitoring results may not be a true indication of exposure.

Removal from work

Where results of urine testing indicate a level of thallium in urine higher than the background level:

- a repeat spot urine test for thallium should be performed at the same time of the day to confirm results, and
- a medical examination should be performed and the registered medical practitioner should consider whether the worker should be removed from thallium-related work.

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

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

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

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

At termination of work in a thallium process

3. Final medical examination

A final medical examination should be carried out and should include a spot urine test for thallium.

Workers with health conditions or continuing symptoms due to thallium 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 thallium

4. Route of occupational exposure

Thallium and thallium salts are rapidly absorbed by intact skin, by inhalation and via the mucous membrane of the gastrointestinal tract in cases of accidental ingestion.

5. Target organ/effect

The target organs and potential effects of thallium exposure include:

Table 1 Target organs and potential effects of thallium exposure

Target organ	Effect
Central nervous system	<ul style="list-style-type: none"> • Incoordination • Tremors • Encephalopathy • Convulsions • Coma • Paralysis • Optic nerve atrophy
Peripheral nervous system	<ul style="list-style-type: none"> • Motor and sensory peripheral neuropathy
Skin	<ul style="list-style-type: none"> • Alopecia
Gastrointestinal system	<ul style="list-style-type: none"> • Anorexia • Gastroenteritis – vomiting and diarrhoea

6. Acute effects

Thallium and thallium compounds are extremely toxic. For adults, doses that have proved lethal vary between six and 40 mg/kg.

Thallium behaves as a potassium analogue and is distributed in the intracellular space of most tissues. Intracellular thallium is less rapidly released than potassium and, as such, accumulates intracellularly. In the blood it is mainly bound to the red cells and is excreted by the kidneys.

Poisoning from industrial exposure has rarely been reported, and those cases that have been reported were not fatal.

The onset of toxicity is often insidious in acute thallium poisoning, reaching a maximum in the second or third week after exposure. The triad of gastroenteritis, polyneuropathy and alopecia is regarded as the classic syndrome of thallium poisoning.

Following ingestion of a single toxic dose, symptoms of acute poisoning may occur within 12 hours to two days and include:

- severe abdominal pain
- vomiting
- diarrhoea
- gastrointestinal bleeding
- tremors
- delirium
- convulsions
- paralysis, and
- coma leading to death in one to two days.

The acute reaction may subside to be followed in 10 days by the development of:

- polyneuritis that may lead to respiratory insufficiency
- psychosis with hallucinations
- delirium
- optic nerve atrophy and blindness
- increased heart rate and blood pressure
- skin eruptions
- hepatic or renal injury, and
- hair loss (within 15 to 20 days).

Other effects may include:

- rapid heart rate and high blood pressure
- abnormal heart rhythms
- inflammation of the mouth, lips, and gums
- green discoloration of urine
- kidney damage
- breakdown of red blood cells
- severe acne, and
- dry and crusty scaling of the skin.

7. Chronic effects

Thallium may act as a cumulative poison with chronic intoxications and a sudden release from tissue stores may lead to acute toxic symptoms.

Long-term low-level exposure may give rise to symptoms of chronic poisoning that may include:

- fatigue
- headache
- sleep disorders (insomnia)
- peripheral neuropathy
- polyneuropathy including
 - paralysis of ocular muscles
 - ptosis
 - facial paralysis, or
 - paralysis of laryngeal or vagal nerve
- hair loss
- hepatic effects including altered liver enzymes

- anorexia
- pain in joints, particularly in ankles, knees and thoracic spine
- optic nerve atrophy with visual disturbances, or
- ascending neuropathy.

8. Carcinogenicity

Most thallium compounds have not been classified as carcinogenic according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). For further information on specific thallium compounds, refer to Safe Work Australia's Hazardous Chemical Information system or the relevant safety data sheet.

9. GHS classification

Different thallium compounds may have different health hazard classifications. The specific thallium compound to which a worker is exposed will need to be reviewed to ensure appropriate identification of the health hazards. The relevant classification can be located on the safety data sheet of the product the worker is using. For the GHS classification of a specific thallium compound, 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 (1992) [Toxicological Profile for Thallium](#). 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) (2017) *Documentation of the Threshold Limit Values and Biological Exposure Indices*, Thallium, 7th edition, Cincinnati.

Centers for Disease Control and Prevention; The National Institute for Occupational Safety and Health; [Thallium; Systemic Agent](#).

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

Department of Consumer and Employment Protection (2008) [Risk-based health surveillance and biological monitoring — guideline](#): Resources Safety, Department of Consumer and Employment Protection, Western Australia, 53 pp (PDF 885KB).

Health Council of the Netherlands (2002) [Thallium and water-soluble thallium compounds](#). Health-based reassessment of administrative occupational exposure limits (PDF 149KB).

Health and Safety Laboratory (UK) (2013) *Guidance on Laboratory Techniques in Occupational Medicine* (13th edition).

International Programme on Chemical Safety; [Thallium](#) .

International Programme on Chemical Safety (1996) *Environmental Health Criteria 182: Thallium*, 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.

PubChem Open Chemistry Database; [Compound Summary for CID 5359464 Thallium](#).

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

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



Health monitoring report

Thallium

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 – Thallium

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.

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 thallium risk work (tick all relevant boxes)
(information provided by the PCBU)

New to thallium work

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

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

Worked with thallium 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.](#)

Thallium industry/use

- Smelting copper, lead or zinc
- Pest control (rats) or manufacture of rodenticide
- Laboratory work using Clerici’s reagent
- Power industry cleaning furnaces and flues

Manufacture of:

- Optical lenses
- Dyes or pigments
- Anode plates for magnesium sea water batteries
- Glass
- Imitation jewellery and gems
- Electronic devices and switches
- Fireworks
- 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	Click here to enter text.	
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
Emergency eye wash and showers (with hot and cold water)	<input type="checkbox"/> Yes	<input type="checkbox"/> 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.

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

Date	Tests performed	Recommended action or comment
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 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 thallium
- Review workplace controls
- The worker should be removed from work with thallium. 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.

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)
Smelting copper, lead or zinc	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Pest control (rats) or manufacture of rodenticide	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Laboratory work using Clerici's reagent	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Power industry cleaning furnaces and flues	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.

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Manufacture of:			Comments (all 'yes' answers)
Optical lenses	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Imitation jewellery and gems	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Dyes or pigments	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Electronic devices and switches	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Anode plates for magnesium sea water batteries	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Fireworks	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Glass	<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)

			Comments (all 'yes' answers)
Did you suffer any incapacity lasting two weeks or longer in the last two years	<input type="checkbox"/> No	<input 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:

			Comments (all 'yes' answers)
High blood pressure or heart disease (including heart attack, heart surgery, murmurs, angina)	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Chest pains or irregular heartbeats or suffered from rheumatic fever	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.

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			Comments (all 'yes' answers)
Liver disease (including alcohol related or other hepatitis)	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Bowel disease	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Severe stomach pain or peptic ulcers	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Vomiting or passing blood	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Diarrhoea	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Kidney or bladder disease	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Chronic fatigue or tiredness	<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.
Anaemia or other blood disorders	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Psychiatric or nervous condition (including hallucinations)	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
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.
Tremors, convulsions	<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.
Problems with lips, gums and mouth	<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

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Cardiovascular system			Medical comments (for all yes/abnormal)
Blood pressure	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	Click here to enter text.
Heart rate	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	Click here to enter text.
Heart sounds	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	Click here to enter text.
Murmurs present	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Evidence of cardiac failure/oedema	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.
Respiratory system			
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.
Nervous system			
Muscular tone, co-ordination	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	Click here to enter text.
Tremor	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Click here to enter text.

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Cardiovascular system	Medical comments (for all yes/abnormal)		
Skin			
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.

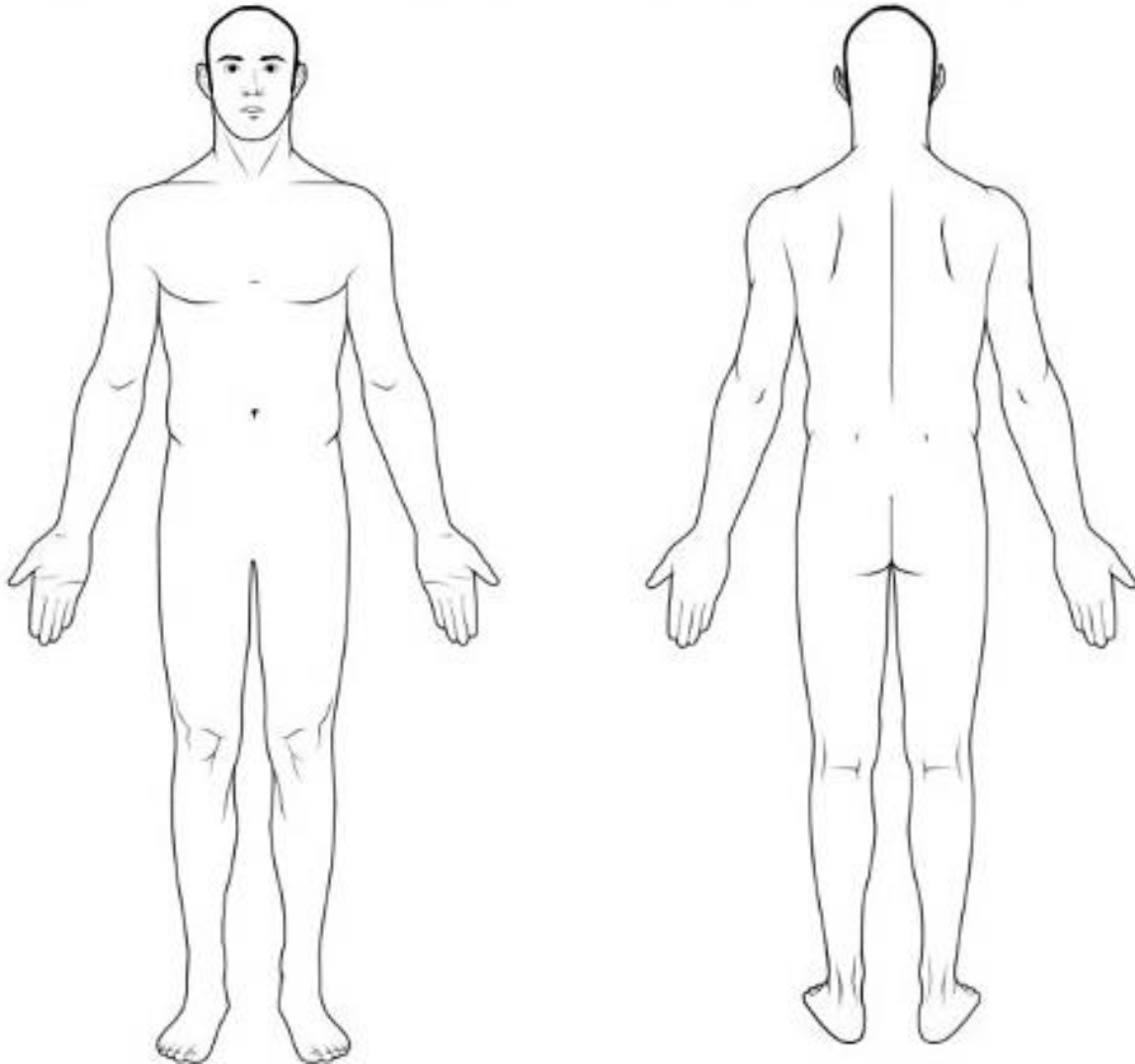


Figure 1 Template of the human body to indicate the location of abnormalities

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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:

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.