

Health monitoring for work with hazardous chemicals



What is health monitoring?



Health monitoring of a worker means monitoring the worker to identify changes in their health status because of exposure to certain substances. It involves the collection of data to measure exposure or evaluate the effects of exposure and to determine whether or not the absorbed dose is within safe levels.¹

Health monitoring allows decisions to be made about implementing ways to eliminate or minimise the worker's risk of exposure, for example improving controls or reassigning a worker to other duties that involve less exposure.²

When is health monitoring required?

The Work Health and Safety (Mines) Regulations 2022 outline (r 368) that health monitoring is required for workers engaging in tasks associated with the 4 criteria outlined below:

- hazardous chemicals listed in table 14.1 of Schedule 14 (mandatory)
- other hazardous chemicals (not listed in Schedule 14)

In addition:

- lead is referred to in r406 and table 12.2 of Schedule 14; and
- asbestos in Part 8.5 Division 1.

When considering "other hazardous chemicals" which are not listed in Schedule 14, consideration must be given to whether:

- valid techniques or tests are available to detect an effect on worker health; or
- a valid way is available to determine biological exposure and you are not sure whether the exposure to the workers is more than the biological exposure standard.

Examples of "other hazardous chemicals" include cobalt, nickel, styrene and xylene.

HAZARDOUS CHEMICALS REQUIRING HEALTH MONITORING – TABLE 14.1

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| <ul style="list-style-type: none"> • Acrylonitrile • Arsenic (inorganic) • Asbestos • Benzene • Cadmium • Chromium (inorganic) • Creosote | <ul style="list-style-type: none"> • Crystalline silica • Isocyanates • Lead (inorganic) • Mercury (inorganic) • 4,4'-Methylene bis(2-chloroaniline) (MOCA) | <ul style="list-style-type: none"> • Organophosphate pesticides • Pentachlorophenol (PCP) • Polycyclic aromatic hydrocarbons (PAH) • Thallium • Vinyl chloride |
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Regulatory requirements

In addition to the mandatory requirements described above in r.368 and Schedule 14, the Work Health and Safety (Mines) Regulations 2022 prescribe the following:

- R369, Duty to inform of health monitoring
- R370, Duty to ensure that appropriate health monitoring is provided
- R371, Duty to ensure health monitoring is supervised by a registered medical practitioner with experience
- R372, Duty to pay costs of health monitoring
- R373, Information that must be provided to registered medical practitioner
- R374, Duty to obtain health monitoring report
- R375, Duty to give health monitoring report to worker
- R376, Duty to give health monitoring report to regulator
- R377, Duty to give health monitoring report to relevant PCBUs
- R378, Health monitoring records
- Part 7.2 Lead, Division 4 -Health monitoring
- Part 8.5 Asbestos at the workplace, Division 1 – Health monitoring

COMPLIANCE



Risk assessment³

It is the mine operator's responsibility to determine if there is a risk to worker health because of exposure to a Schedule 14 hazardous chemical, or exposure to other hazardous chemicals (as per r368). The level of risk depends on the hazards of the chemicals (what type of harm they might cause) and the frequency, duration and amount of exposure (also known as dose or how much the worker might be exposed to).

The risk assessment and associated outcome must be documented as part of the site health management plan, which is a mandatory requirement for all Western Australian mine sites (r 675EA). At a minimum, the consideration for health monitoring should be provided for chemicals that have severe known health effects. This includes but is not limited to chemicals:

- known, or thought to be, carcinogenic, mutagenic or toxic to human reproduction
- respiratory or skin sensitisers
- with other known severe toxic effects.

If you are not sure if a hazardous chemical is a risk to the worker's health or if the workers are at risk of exposure, you can seek specialist advice from an occupational hygienist, registered medical practitioner, occupational physician or the regulator.

Worker consultation



Mine operators must tell workers before they are hired, or before they start work, about any health monitoring.⁴ The consultation must involve the following:

- what is expected in their health monitoring program – for example, the types and frequency of tests
- when they should see the registered medical practitioner
- how a registered medical practitioner is chosen and their qualifications
- who pays for the health monitoring
- if and how monitoring results may affect their work – for example, explaining where they may be moved to other tasks
- how the PCBU keep their health monitoring records and who they may be disclosed to and under what circumstances.

Engaging a registered medical practitioner

Mine operators must use a registered medical practitioner with experience in health monitoring to carry out or supervise health monitoring. The registered medical practitioner should prepare a health monitoring programme and either carry it out themselves or supervise other suitably qualified people, like an occupational health nurse, to deliver the programme. The registered medical practitioner has overall responsibility for the health monitoring programme.

The registered medical practitioner may visit the workplace to better understand the relevant control measures, work processes and exposure scenarios. They may also seek advice from other professionals like an occupational hygienist, occupational physician, or other work health and safety professionals working for a given organisation.

All relevant information must be provided to the registered medical practitioner, including but not limited to:

- the work that the worker is, or will be, carrying out that triggered the health monitoring
- if the worker has already started, how long they have been carrying out the work
- relevant risk assessment reports, details of workplace exposure standards, and results of workplace air monitoring
- a list of the hazardous chemicals the worker is or will be exposed to and the dates the worker last used the chemicals
- the SDS for the chemical(s).



Health monitoring reports



The registered medical practitioner completes the health monitoring report and provides a copy to the PCBU. The registered medical practitioner also has a duty to give a copy of the report to the regulator if the results are consistent with exposure to the hazardous chemical. This means that most health monitoring reports are sent to the regulator.

The content of the health monitoring report should follow the template provided in health monitoring guides for hazardous chemicals for each hazardous chemical listed in Schedule 14, and asbestos to assist registered medical practitioners in providing the relevant information and recommendations to the mine operator. Other templates, forms and formats for health monitoring reports are acceptable and may also be used if they meet the requirements set out in the relevant regulations.

Actioning a health monitoring report



The registered medical practitioner will provide specific recommendations to the PCBU based on the worker's health monitoring results that may include:

- details for an extra medical examination, repeat assessment and/or appointment
- counselling required
- whether the worker is fit for work with the hazardous chemical
- whether the worker is fit to resume work with the hazardous chemical
- biological monitoring results that show unacceptably high exposure levels
- if a review of workplace control measures is appropriate
- whether the worker should be removed from work with the hazardous chemical.

If the registered medical practitioner recommends that the PCBU removes the worker from work, the PCBU should remove them from work with the hazardous chemical that triggered the need for health monitoring.

REVIEW CONTROL MEASURES IN THE WORKPLACE

The PCBU should, and in some cases must review, and revise if necessary, the control measures in the workplace. The registered medical practitioner will make this recommendation:

- if test results show the worker has been exposed and has elevated levels of metabolites or break-down products, of a hazardous chemical in their body, or
- if test results show the worker may have contracted a disease, injury or illness as a result of working with the chemical that triggered health monitoring.

The PCBU should examine the work practices and procedures to see if tasks are being done correctly and if controls are not effective or being bypassed. If necessary, the PCBU should review and revise worker training programs. The PCBU must regularly review and revise the control measures they have in place for hazardous chemicals. More information on the review of control measures is available in the *Code of Practice: Managing risks of hazardous chemicals in the workplace*.

The registered medical practitioner must provide a copy of the health monitoring report to the regulator. The PCBU must provide a copy to the worker.

Record keeping for health monitoring report

The PCBU must keep health monitoring reports as confidential records and must not disclose them to another person without the worker's written consent, except where the PCBU must provide the records under a law. For example, the WHS Regulations require disclosure to any of the following:

- the WHS regulator
- another PCBU who has a duty to monitor the health of the worker
- a person who must keep the record confidential under a duty of professional confidentiality, for example, another doctor.

The PCBU must keep workers' health monitoring records for hazardous chemicals and lead for at least 30 years after the record is made, even if the worker no longer works at your workplace. There is a requirement for asbestos health monitoring records to be stored for at least 40 years.

Resources and further information

- 1 Safe Work Australia (2018) Health monitoring Guide for registered medical practitioners
- 2 DMIRS (2018), Preparation of a Health and Hygiene Management Plan
- 3 DMIRS (2023) Guide Health monitoring duties for persons conducting a business or undertaking
- 4 Safe Work Australia (2020) Health monitoring when you work with hazardous chemicals guide for workers