

# PROTECTING UNBORN AND BREAST-FED CHILDREN FROM THE EFFECTS OF MATERNAL EXPOSURE TO CHEMICALS, BIOLOGICALS, ANIMALS AND RADIATION PROCEDURE

## SCOPE

This procedure relates to all activities under the management and control of Monash University in Australia and applies to pregnant or breast-feeding workers.

## PROCEDURE STATEMENT

This procedure sets out the appropriate measures that must be taken to control the exposure of any pregnant or breastfeeding workers working with and/or have a risk of exposure to chemicals, biologicals, animals or radiation.

### 1. Abbreviations

mSv	Millisieverts
OH&S	Monash Occupational Health and Safety team, led by the Group Manager, Health Safety & Wellbeing
OHS	Occupational Health and Safety
OSL	Optically Stimulated Luminescence dosimeter
RPO	Radiation Protection Officer
RSO	Radiation Safety Officer
SDS	Safety Data Sheet

### 2. Risk Management Process

The types of hazards that must be considered are:

- Chemicals
- Biological materials
- Animals
- Radiation

- 2.1 Determine the duration and frequency that the worker will be exposed to the identified hazard.
- 2.2 Consult with your Performance Manager/Supervisor and/or Safety Officer for an initial assessment. If needed, contact your Biosafety/Radiation Safety Officer, [OHS Consultant/Advisor](#) or the [OHS Health Team](#) to seek further advice.
- 2.3 Complete a risk assessment or review existing risk assessments following the [OHS Risk Management Procedure](#), using the [Risk Management Guidelines](#). The "Restricted Risk Assessment" option may be used for confidentiality purposes.
- 2.4 Based on the level of risk to the unborn or breast-fed child that has been identified in the risk assessment, consult with your Performance Manager/Supervisor and the [OHS Health Team](#) to determine if the level of risk associated with the activity is acceptable.

- 2.5 Implement the identified controls and monitor activities for any variation that may create a new hazard or increase a risk to the unborn or breast-fed child.

### 3. Where to Find Further Information

- 3.1 Toxicological information for a chemical can be obtained from:
- Safety Data Sheet (SDS) on [Chemwatch](#) (Hazard class, Hazard statement)
  - Labels on chemical containers (Hazard statement, pictogram)
  - [Classification and labelling for workplace hazardous chemicals](#).
- 3.2 Information on biological agents or substances derived from animals can be obtained from:
- Safety Data Sheet (SDS) on [Chemwatch](#)
  - Peer-reviewed research articles
  - Local area Safety Officer and/or Biosafety Officer
  - Health and Safety Representative
  - OHS Consultant/Advisor
  - The Occupational Health Team
  - The worker's treating doctor
- 3.3 The following definitions indicate potential effects on the unborn child:
- Embryotoxic – toxic to the embryo
  - Foetotoxic – toxic to the foetus
  - Teratogenic – causes developmental abnormalities in the foetus

### 4. Responsibility for Implementation

A comprehensive list of OHS responsibilities is provided in the [OHS Roles, Responsibilities and Committees Procedure](#). The specific responsibilities with respect to this procedure are summarised below.

**Head of Unit and Performance Manager/Supervisor:** The Head of Unit and the relevant Performance Manager/Supervisor must:

- Make it clear to workers who declare pregnancy that subject to meeting University OHS requirements, the worker may choose whether or not to:
  - Work with chemicals, biologicals, animals or radiation during the pregnancy, and/or
  - Work with chemicals, biologicals, animals or radiation during breast-feeding;without fear of this decision impacting on their career progression/continuation in accordance with the University's [Equity, Diversity and Anti-discrimination Policy](#).
- Maintain the worker's personal information in accordance with the University's [Data Protection and Privacy Procedure](#), if pregnancy is disclosed.
- Where the worker elects to continue working with:
  - Chemicals, biologicals, animals or radiation during pregnancy; or
  - Chemicals, biologicals, animals or radiation during breast-feeding;review, in conjunction with Monash Occupational Health & Safety (OH&S), appropriate risk assessments and put in place control measures to reduce these risks to a negligible level (where no significant risk is foreseeable) in accordance with this procedure.
- Facilitate, in accordance with current workplace agreements, the modification of a worker's duties in accordance with special needs during pregnancy or breast-feeding.

- Create an environment where:
  - All workers who work with chemicals, biologicals, animals or radiation understand the requirements of this procedure;
  - Workers who are able to or intend to become pregnant or are breast-feeding, and whose role entails potential and actual exposure to chemicals, biologicals, animals or radiation, feel comfortable to declare their intention to become pregnant or their pregnancy and/or breast-feeding; and
  - All co-workers and supervisors understand the special needs of a pregnant worker's unborn child or breast-fed child in relation to chemical, biological or radiation safety or work with animals.

#### Workers:

- Pregnant workers and breast-feeding workers with potential risk of exposure to chemicals, biologicals, radiation and animals should declare their pregnancy or breastfeeding status to their Performance Manager/Supervisor and/or Head of Unit and seek advice from the [OHS Health Team](#) at the earliest possible time, particularly as the first trimester can be a period of high susceptibility to certain harmful substances. However, supervisors should respect workers' privacy rights, understanding that any disclosure of their reproductive or breastfeeding status to the University is entirely voluntary and should be free from coercion. In such cases, the worker may contact the [OHS Health Team](#) directly for confidential advice. The declaration of personal information will be handled in accordance with the [Data Protection and Privacy Procedure](#).
- Should any modifications be recommended, pregnant, potentially pregnant or breast-feeding workers are required to adhere to these suggestions to minimise their exposure to chemicals, biologicals, radiation and animals.
- Workers who are pregnant, considering pregnancy, or breast-feeding must immediately report any suspected exposure to their Performance Manager/Supervisor, Safety Officer, Biosafety Officer, Radiation Safety Officer, [OHS Consultant/Advisor](#) or the [OHS Health Team](#). An incident report must be submitted in SARAH, the online hazard and incident reporting system.

**Radiation Protection Officer (RPO):** The RPO is responsible for:

- Providing technical advice on Ionising Radiation safety issues to the pregnant or breast-feeding radiation worker;
- Routinely inspecting their workplace; and
- Examining and maintaining copies of the pregnant radiation worker's 4-weekly Optically Stimulated Luminescence dosimeter (OSL) results and instigating investigation when needed to ensure relevant dose limits are not exceeded.

**Radiation Safety Officer (RSO):** The RSO is responsible for:

- Providing any pregnant radiation worker who wears an OSL for their work with 4-weekly OSL monitoring report for the duration of their pregnancy;
- Assisting the pregnant or breast-feeding radiation worker and their supervisor with implementing any agreed changes to their work environment or practices; and
- Working with the RPO to investigate the dose obtained by a pregnant radiation worker, if necessary, to ensure relevant dose limits are not exceeded.

## 5. Tools

The following tools are associated with this procedure:

[Pregnancy and Work OHS Information Sheet](#)

## 6. Records

For OHS Records document retention please refer to:

[OHS Records Management Procedure](#)

## DEFINITIONS

A comprehensive list of definitions is provided in the [Definitions tool](#). Definitions specific to this procedure are provided below.

Key word	Definition
Breastfeeding Radiation Worker	A breast-feeding radiation worker is a person that is breastfeeding a child and still continues their duties as a radiation worker.
Occupational Exposure	Occupational exposure is the exposure of a person to radiation that occurs in the course of that person's work or study.
Pregnant Radiation Worker	A pregnant radiation worker is a radiation worker who has declared their pregnancy or their intention to become pregnant to their supervisor, RSO, Head of academic/administrative unit or to a member of <a href="#">OH&amp;S</a> .
Radiation Protection Officer	A radiation protection officer (RPO) is the OH&S worker responsible for providing and coordinating radiation protection services at Monash University.
Radiation Safety Officer	A radiation safety officer (RSO) is a designated worker in a unit responsible for approving and supervising the ionising radiation work and study of workers and students.
Radiation Worker	A radiation worker is a staff member or student who is occupationally exposed to ionising radiation source(s).
Teratogen	Teratogens are agents that cause congenital malformations, growth retardation, functional disorder and sometimes death in the embryo or foetus. As a general rule, a substance is considered to be a teratogen if it has adverse effects on the unborn child at doses below where there are adverse effects on the mother. It should be emphasised that most drugs and chemicals that are delivered in high doses under laboratory conditions can be shown to cause adverse effects to the embryo or foetus (often the only data available is on animals). However, it does not follow that most drugs or chemicals are considered to be teratogens.
Unborn Child	An unborn child may be an embryo, which is defined as an unborn child up to 8 weeks after conception, or a foetus, which is defined as an unborn child from 8 weeks to birth.

## GOVERNANCE

Parent policy	<a href="#">OHS&amp;W Policy</a>
Supporting procedures	<b>Monash University Documents:</b> <ul style="list-style-type: none"> <li>• <a href="#">Data Protection and Privacy Procedure</a></li> <li>• <a href="#">Equity, Diversity and Anti-discrimination Policy</a></li> <li>• <a href="#">Guidelines for the Development of Safe Work Instructions</a></li> <li>• <a href="#">Health Surveillance Procedure</a></li> <li>• <a href="#">OHS Roles, Responsibilities and Committees Procedure</a></li> <li>• <a href="#">OHS Risk Management Procedure</a></li> <li>• <a href="#">Risk Management Guidelines</a></li> <li>• <a href="#">Using Ionising Radiation Procedure</a></li> <li>• <a href="#">Using Chemicals Procedure</a></li> <li>• <a href="#">Using Biologicals and Animals Procedure</a></li> </ul>
Supporting schedules	N/A
Associated procedures	<b>Codes of Practice and Related Documents</b> <ul style="list-style-type: none"> <li>• Recommendations for Limiting Exposure to Ionizing Radiation (Printed 1995 - Republished 2002)</li> <li>• National Standard for Limiting Occupational Exposure to Ionizing Radiation (Printed 1995 - Republished 2002)</li> </ul>

	<p><b>Australian Standards</b></p> <ul style="list-style-type: none"> <li>• ISO 45001:2018 Occupational Health and Safety Management Systems</li> <li>• AS 2243.4:1998 Safety in Laboratories: Ionizing Radiation</li> <li>• AS 2243.3: 2010 Safety in Laboratories: Microbiological Safety and Containment</li> <li>• AS 2243.2: 1997 Safety in Laboratories: Chemical Aspects</li> </ul> <p><b>Acknowledgements</b></p> <p>The following documents were used as references in the development of this procedure:</p> <ul style="list-style-type: none"> <li>• American Conference of Governmental Industrial Hygienists (ACGIH), Documentation of the Threshold Limit Values and Biological Exposure Indices, Sixth Edition, 1996</li> <li>• Barlow, S.M. and F.M. Sullivan, Reproductive Hazards of Industrial Chemicals – An evaluation of animal and human data, Academic Press, London, 1982</li> <li>• Amdur, M.O., Doull, J. and C.D. Klaassen (eds), Casarett and Doull's Toxicology – The Basic Science of Poisons, fourth edition, McGraw Hill, 1991. Lewis, R.J., Reproductively Active Chemicals – A Reference Guide, Van Nostrand Reinhold, New York, 1991</li> <li>• NIOSH, The Effects of Workplace Hazards on Male Reproductive Health and The Effects of Workplace Hazards on Female Reproductive Health, <a href="http://www.cdc.gov/niosh/">www.cdc.gov/niosh/</a></li> <li>• Meyers, V.K. (ed), Teratogens – Chemicals Which Cause Birth Defects, Studies in Environmental Science 31, Elsevier, New York, 1988 O'Rahilly, R. and F Muller, Human Embryology and Teratology, Wiley-Liss, New York, 2001</li> </ul>
Related legislation	<ul style="list-style-type: none"> <li>• Occupational Health and Safety Act 2004 (Vic)</li> <li>• Occupational Health and Safety Regulations 2017 (Vic)</li> <li>• Fair Work Act 2009 (Cth)</li> <li>• Radiation Act 2005 (Vic)</li> <li>• Radiation Safety Regulations 2007 (Vic)</li> </ul>
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## DOCUMENT HISTORY

Version	Date Approved	Changes made to document
2.1	November 2010	Procedures for protecting unborn and breast-fed children from the effects of maternal exposure to chemicals, biologicals and animals, v.2.1
3	November 2014	<ol style="list-style-type: none"> <li>1. Removed reference to legislative compliance from purpose and added this to compliance section.</li> <li>2. Shortened wording of purpose and scope sections to align with other OHS procedures.</li> <li>3. Updated 'Definitions' section to only include definitions specific to this procedure.</li> <li>4. Deleted 'Overview' section, as this is not procedural.</li> <li>5. Removed generic information from 'Risk Management' section and included specific</li> </ol>



		<p>process for assessing risks to pregnant or breast-feeding women.</p> <p>6. Deleted reference to ionising radiation, as this is covered in a separate procedure.</p> <p>7. Added Tools section.</p> <p>8. Added Compliance section.</p>
3.1	July 2015	Updated hyperlinks throughout to new OH&S website.
3.2	August 2017	Updated logos in header
4	November 2017	<p>1. Combined the “Radiation use during pregnancy or breast-feeding procedure” with this procedure and updated all sections accordingly.</p> <p>2. Updated Definitions section.</p> <p>3. Updated Responsibility for Implementation section to include reference to radiation.</p> <p>4. Updated ‘Records’ section to refer to Records Management Procedure.</p>
4.1	December 2020	<p>1. Updated wording to incorporate gender diverse terminology</p> <p>2. Added a reference to use Chemwatch to access SDS</p> <p>3. Clarified the steps for Risk Management</p> <p>4. Added reference to the University’s Equal Opportunity Policy in section 5.</p> <p>5. Added reference to the University’s Data Protection and Privacy Procedure.</p>
4.2	July 2021	<p>1. Updated certification logo in footer to ISO 45001</p> <p>2. Updated the Standard to ISO 45001 under “Associated procedures” in the Governance table</p> <p>3. Updated OHS Policy under ‘Parent Policy’ to OHS&amp;W Policy</p>
5.0	October 2023	<p>1. All Links have been updated in the document.</p> <p>2. Throughout the document, the reference to “staff and students” was changed to “workers”.</p> <p>3. Section 3.1 – Updated sources for toxicological information for chemicals</p> <p>4. Section 3.2 - Updated sources of information</p> <p>5. Clarified</p> <p>6. Section 4 - Updated to include Workers who are able to or intend to become pregnant or are breast-feeding.</p> <p>7. Section 4 - Included the requirement to report when an incident occurs.</p>